Table 1: Annual Respondent Burden and Cost – NESHAP for Industrial, Commercial, ar

Boiler Type	Number of Respondents per Year (Average)	Number of Units (Average)	Number of Responses Per Year (Average)
Existing Large Solid Units	121	1,040	242
New Large Solid Units	3	26	12
Existing Small and Limited Use Solid Units	5	41	3
New Small Solid Units	1	2	3
Existing Large Liquid Units	66	570	132
New Large Liquid Units	0	0	0
Existing Small and Limited Use Liquid Units	45	385	23
New Small Liquid Units	0	0	0
Existing Large Gaseous Units	669	5,733	1,530
New Large Gaseous Units	33	261	99
Existing Small and Limited Use Gaseous Units	1,027	8,811	514
New Small Gaseous Units	41	326	103
Subtotals (all types)	2,012	17,196	**2,661**
GRAND TOTAL (rounded)[1]			
Total Private Sector	1,891		2,501
Total Public Sector	121		160

[1] Totals have been rounded to 3 significant figures. Figures may not add exactly due to rounding.

ıd Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD) (Renewal)

TOTAL LABOR BURDEN AND COSTS				
Reporting	Recordkeeping	Total Labor Hours	Total Labor Cost	Total Annual O&M and Annualized Capital Costs per year
135,217	61,410	196,627	$21,531,254.93	$74,866,304
3,857	1,603	5,460	$597,908.52	$3,223,948.00
347	156	503	$55,093.72	$98,032.00
74	48	122	$13,348.42	$4,456.00
77,487	33,638	111,125	$12,168,470.96	$17,695,826
0	0	0	$0	$0
3,045	1,220	4,265	$467,037.32	$857,780
0	0	0	$0.00	$0
142,506	22,654	165,160	$18,085,504.87	$18,867,183
6,258	3,546	9,804	$1,073,571.94	$750,375
69,654	27,358	97,012	$10,623,107.89	$13,921,380.00
4,725	2,027	6,752	$739,326.22	$726,328.00
443,169	**153,660**	**596,829**	**65,354,625**	**$131,011,612**
		597,000	**$65,400,000**	**$131,000,000**
		Rounded by Sector[1]		
416,579	144,441	561,000	$61,400,000	$123,000,000
26,590	9,220	35,800	$3,920,000	$7,860,000

Total Costs	No. Response per Respondent	Total Annual Response
$96,397,558.93	1.99	242
$3,821,856.52	4.00	12
$153,125.72	0.56	3
$17,804.42	3.00	3
$29,864,296.96	2.00	132
$0.00	0.00	0
$1,324,817.32	0.51	23
$0.00	0.00	0
$36,952,687.87	2.29	1530
$1,823,946.94	2.97	99
$24,544,487.89	0.50	514
$1,465,654.22	2.50	103
$196,366,237	**1.32**	**2661**
$196,000,000	224	hours per response
$185,000,000		
$11,800,000		

Table 2: Average Annual EPA Burden and Cost – NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD) (Renewal)

Burden Item	EPA hours per occurrence (A)	Number of occurrences per year (B)	EPA hours per occurrence per year (C=AxB)	Technical hours per year (D=C)	Mangmt hours per year (E=Dx0.05)	Clerical hours per year (F=Dx0.1)	(H) Costs, $ [k]	Footnotes
1. Familiarization with rule requirements	10	0	0	0	0	0	$0.00	a
2. Enter and update information into agency recordkeeping system	2	156	312	312	15.6	31.2	$16,823.66	b
3. Required activities								
A. Review and approve monitoring plan	20	3	60	60	3	6	$3,235.32	n
B. Review and approve fuel monitoring plan	20	418	8,360	8,360	418	836	$450,787.92	o
C. Observe initial stack/performance test	40	21	840	840	42	84	$45,294.48	c
D. Observe repeat performance test	40	117	4,680	4,680	234	468	$252,354.96	d
E. Review operating parameters	2	104	208	208	10.4	20.8	$11,215.78	e
F. Review continuous parameter monitoring	2	1,714	3,428	3,428	171.4	342.8	$184,844.62	f
4 Excess Emissions Enforcement Activities and Inspections	24	10	0	0	0	0	$0	g
5 Notification requirements								
A. Review initial notification that sources are subject to the standard	2	78	156	156	7.8	15.6	$8,411.83	b
B. Review notification of initial performance tests and review test plan	20	104	2,080	2,080	104	208	$112,157.76	e
C. Review notification of compliance status	2	78	156	156	7.8	15.6	$8,411.83	b
6. Reporting requirements			0	0	0	0	$0.00	
A. Review semiannual compliance report	4	398	1,592	1,592	79.6	159.2	$85,843.82	h
B. Review annual compliance report	2	660	1,320	1,320	66.0	132.0	$71,177.04	i
C. Review biennial compliance report	1	560	560	560	28	56	$30,169.36	j
B. Review initial report on results of energy audit	2	0	0	0	0	0	$0	L
7. Travel Expenses for Tests Attended	3 days * ($201 hotel + $93 meals/incidentals) + ($600 round trip) = $1482 per trip						$204,516	m
TOTAL BURDEN AND COST (rounded)				**27,300**			**$1,490,000**	p

a Number of hours for agency staff to refamiliarize themselves with the rule requirements.

b Number of occurences is based on the total number of affected facilities that are required to submit initial notifications (all new boilers in the large and small solid, liquid, and gaseous subcategories).

c Number of occurences is based on the assumption that EPA personnel will observe 20% of the initial performance tests that occur.

d Number of occurences is based on the assumption that of the units that test, 10% will have to retest and EPA personnel will observe all these retests. In addition solid fuel units are expected to re-test to obtain worst-case conditions for both Hg and HCl emissions.

e Number of occurences is based on the number of units that will test and set/submit operating limits.

f Number of occurences is based on the number of units maintaining records of control device parameters.

g Number of occurences is based on the assumption that of the units that test, 10% of them will have exceedances and need enforcement.

h Number of occurences is the number of units that will submit these semi-annual compliance reports, 2 reports per year per respondent.

i. Number of occurences is the number of units that will submit these annual compliance reports.

j. Number of occurences is the number units that will submit these biennial compliance reports.

k These rates are from the Office of Personnel Management (OPM), 2010 General Schedule, which excludes locality rates of pay. The rates have been increased by 60 percent to account for the benefit packages available to government employees. These rates can be obtained from the OPM web site, http//www.opm.gov/oca/payrates/index/htm.

L Energy audits only occur at existing facilities.

m Total cost is based on the number of trips taken by EPA to observe performance tests in year 1 (4.A. & 4.B.) multiplied by $1482 per trip. The source for hotel and meals/incidental costs is based on FY18 per diem rates, averaged across all locations in the United States. Airfares are estimated based on experience from other rulemakings. See: https://www.perdiem101.com/conus/2018

Table 3: Respondents and Units by Subcategory – NESHAP for Industrial, Commercial, and In

					Year 1	
Boiler Type	Respondents per Year (Current)	Units per Year (Current)	New Respondents per Year	New Units Per Year	Total Respondents	Total Units
Large Solid Units	118	1,014	3	26	121	1,040
Small and Limited Use Solid Units[a]	5	40	1	2	5	42
Large Liquid Units	66	570	0	0	66	570
Small and Limited Use Liquid Units	45	385	0	0	45	385
Large Gaseous Units	636	5,472	33	261	669	5,733
Small and Limited Use Gaseous Units	986	8,485	41	326	1,027	8,811
Subtotals	1,856	15,966	78	615	1,934	16,581

a For new small solid-fuel units, only one new respondent is anticipated for the duration of the three year period.

stitutional Boilers and Process Heaters

Year 2		Year 3	
Total Respondents	Total Units	Total Respondents	Total Units
125	1,066	128	1,092
6	44	6	46
66	570	66	570
45	385	45	385
703	5,995	736	6,256
1,068	9,137	1,109	9,463
2,012	17,197	2,090	17,812

Number of Respondents	New	Existing	Total
Year 1	78	1856	1934
Year 2	78	1934	2012
Year 3	78	2011	2090
Total	234	5801	6036
Average	**78**	**1934**	**2012**

ICRAS SUMMARY	REPORTING			RECORDKEEPING	
	Annual Burden Hours	Number of Respondents (Facilities)	Number of Responses	Annualized Capital/Start-up and O&M	Annual Burden Hours
Annual Burden	443,169	2,012	2,661	$ 131,011,612	153,660
Cost per Response				$ 73,808	
Burden Hours per Response				224	

INDUSTRY	3- year period	Average per year	Public Sector	Private Sector
Reporting Hours		443,169	26,590	416,579
Recordkeeping Hours		153,660	9,220	144,441
Total HOURS	596,829	**198,943**	11,937	187,007
TOTAL COSTS (non-labor)	$ 131,011,612	**$ 43,670,537**	$ 2,620,232	$ 41,050,305
Total LABOR COSTS	$ 65,354,625	**$ 21,784,875**	$ 1,307,092	$ 20,477,782
TOTAL LABOR AND NON-Labor COSTS	$ 196,366,237	**$ 65,455,412**	$ 3,927,325	$ 61,528,088
Total Responses		**2,661**	160	2,501
Small Entity Respondents per year			11	170
Total Respondents per year			121	1,891

AGENCY	Average per year	Average per year (rounded)
Hours	27,300	27,300
Costs (labor + travel)	$ 1,490,000	$ 1,490,000

Labor Rates

Category	Rate	Note
Technical	$112.98	June 2017 Labor Rates
Clerical	$54.81	June 2017 Labor Rates
Managerial	$149.35	June 2017 Labor Rates
General Contractor	$80.00	
Certfied Energy Audit Contractor	$56.78	

Existing Boiler Data

ADJUSTED UNIT COUNTS IN COLUMN D TO ACCOUNT FOR SUBCATEGORY CHANGES

Sum of Unit Count

Mact Floor Fuel Category	Size Category	Total
Biomass	Limited Use	4
	<10	21
	>=10 to 100	277
	100 to 250	115
	>250	171
Coal	Limited Use	15
	<10	0
	>=10 to 100	104
	100 to 250	196
	>250	151
Gas 1 (NG Only)	Limited Use	333
	<10	8101
	>=10 to 100	3732
	100 to 250	1119
	>250	543
Gas 1 (Other Gases)	Limited Use	
	<10	
	>=10 to 100	
	100 to 250	
	>250	
Gas 2	Limited Use	4
	<10	47
	>=10 to 100	28
	100 to 250	22

Sum of Facility Count

Mact Floor Fuel Category	Size Category
Biomass	Limited Use
	<10
	>=10 to 100
	100 to 250
	>250
Coal	Limited Use
	<10
	>=10 to 100
	100 to 250
	>250
Gas 1 (NG Only)	Limited Use
	<10
	>=10 to 100
	100 to 250
	>250
Gas 1 (Other Gases)	Limited Use
	<10
	>=10 to 100
	100 to 250
	>250
Gas 2	Limited Use
	<10
	>=10 to 100
	100 to 250

	A	B	C	D	E	F	G
40			>250	28			>250
41			Limited Use	125			Limited Use
42			<10	260			<10
43		Liquid	>=10 to 100	359		Liquid	>=10 to 100
44			100 to 250	147			100 to 250
45			>250	64			>250
46		Grand Total		15966		Grand Total	
47							
48		Mercury Fuel Spec Analysis (for other Gas 1 units)				Number which will repeat stack test due to switc	
49		Number estimated to test	387			1014	(applicable to sol
50							
51		Notification of Alternative fuel use (15.8% reported the use of liquid, large gas 1 units)					
52		852					
53							
54		Notes:					
55		PM CEMS required for all units >250 that are firing liquid or solid fuels					
56		Tune-ups required for all units <10 and all gas 1 units, regardless of size					
57							
58		**New Boiler Data**			ASSUMPTIONS: Assume constant growth same as prior proposal (no coal, no li		
59							
60		Sum of 2013- Estimated number of new boilers				Sum of 2013- Estimated number of Facilities	
61		**Standard Fuel Category**	**SizeCategory**	**Total New/3-Year Pd**		**Standard Fuel Category**	**SizeCategory**
62			<10	4			<10
63		Biomass	>=10 to 100	47		Biomass	>=10 to 100
64			>100 to 250	18			>100 to 250
65			>250	13			>250
66			<10	0			<10
67		Coal	>=10 to 100	0		Coal	>=10 to 100
68			>100 to 250	0			>100 to 250
69			>250	0			>250
70			<10	978			<10
71		Gas 1	>=10 to 100	553		Gas 1	>=10 to 100
72			>100 to 250	165			>100 to 250
73			>250	66			>250
74			<10	0			<10
75		Gas 2	>=10 to 100	0		Gas 2	>=10 to 100

	A	B	C	D	E	F	G
76		Gas 2	>100 to 250	0		Gas 2	>100 to 250
77			>250	0			>250
78		Liquid	<10	0		Liquid	<10
79			>=10 to 100	0			>=10 to 100
80			>100 to 250	0			>100 to 250
81			>250	0			>250
82		Grand Total		1844		Grand Total	
83							
84		Mercury Fuel Spec Analysis (for other Gas 1 units)				Number which will repeat stack test due to switc	
85		Number estimated to test				(applicable to sol	
86							
87							
88							

	5_AffectedSector	8_Small Entity	Count
89			
90	Not-for-Profit	False	22
91	Not-for-Profit	True	6
92	Not-for-Profit	Unknown	3
93	Private Enterprise	False	1276
94	Private Enterprise	True	131
95	Private Enterprise	Unknown	80
96	Public Sector	False	82
97	Public Sector	True	14
98	Public Sector	Unknown	6
99	Did not use these unknowns:		
100	Unknown	False	3
101	Unknown	Unknown	78
102			
103	5_AffectedSector	8_Small Entity	Count
104	Not-for-Profit	False	22
105	Not-for-Profit	True	6
106			
107	Private Enterprise	False	1276
108	Private Enterprise	True	131
109			
110	Public Sector	False	82
111	Public Sector	True	14

% of Total	
0.94	Private %
0.06	Public %

	% Small Entity
Private Sector	0.1
Public Sector	0.15

	A	B	C	D	E	F	G
112							
113		Did not use these unknowns:					
114		Unknown	False	3			
115		Unknown	Unknown	78			
116		Not-for-Profit	Unknown	3			
117		Private Enterprise	Unknown	80			
118		Public Sector	Unknown	6			
119							
120							
121		Fuel Monitoring Plan					
122		For facilities which have emission limits or for Gas facilities which perform the Hg gas spec					
123		830					
124							

NEW ASSUMPTIONS:
Updated existing unit counts to reflect 3 years of growth from prior renewal (Cells
Assumed 22% of existing coal-fired boilers have been converted to natural gas (
Assumed 18 of existing coal-fired boilers have been shutdown, adjust by subcate
Updated facility counts by subcategory using revised unit counts and assuming n
Updated read and understand rule req's to familiarization with rule requirements
Updated labor rates for industry and agency to 2017 values.

Additional assumptions updated in following spreadsheets (see comments)

Total
1
2
32
13
20
2
0
12
23
18
39
942
434
130
63
[redacted]
0
5
3
3

Count of Limited Use Units

Mact F	Size Category	Total
iomas	<10	0
	>=10 to 100	1
	100 to 250	3
	>250	0
Coal	<10	0
	>=10 to 100	7
	100 to 250	7
	>250	1
1 (NG	<10	7
	>=10 to 100	215
	100 to 250	89
	>250	22
(Other	<10	[redacted]
	>=10 to 100	
	100 to 250	
	>250	
Gas 2	<10	0
	>=10 to 100	0
	100 to 250	4

Sum of Unit Count

Mact Floor Fuel Categ	Size Category
Biomass	<10
	>=10 to 100
	100 to 250
	>250
Coal	<10
	>=10 to 100
	100 to 250
	>250
Gas 1 (NG Only)	<10
	>=10 to 100
	100 to 250
	>250
Gas 1 (Other Gases)	<10
	>=10 to 100
	100 to 250
	>250
Gas 2	<10
	>=10 to 100
	100 to 250

	H	I	J	K	L	M	N	O	P	Q	R
40	3						>250	0			>250
41	15										
42	30						<10	13			<10
43	42					Liquid	>=10 to 100	57		Liquid	>=10 to 100
44	17						100 to 250	40			100 to 250
45	7						>250	15			>250
46	1856				Grand Total			481		Grand Total	
47											
48	ching fuels						<10	20 x			<10
49	id units)						>=10 to 100	280 x			>=10 to 100
50							100 to 250	143 x			100 to 250
51							>250	38 x			>250
52											
53											
54											
55											
56											
57											
58	quid, no gas 2)										
59											
60											
61	**Total New/3-Year Pd**										
62	1										
63	6										
64	2										
65	2										
66	0										
67	0										
68	0										
69	0										
70	123										
71	70										
72	21										
73	9										
74	0										
75	0										

New Respondents/Year

Small Biomass		1
Large Biomass		3
Small Coal		0
Large Coal		0
Small Gas 1		41
Large Gas 1		33
Small Gas 2		0
Large Gas 2		0
Small Liquid		0
Large Liquid		0
Total New		78

Existing Respondents/Year

Large Solid
Large Liquid
Large Gas
Small Solid
Small Liquid
Small Gas
Total Existing

	H	I	J	K	L	M	N	O	P	Q	R
76	0		average # of boilers per facility								
77	0		8								
78	0										
79	0										
80	0										
81	0										
82	231										
83											
84	ching fuels										
85	id units)										
86											
87											
88											
89											
90											
91											
92											
93											
94											
95											
96											
97											
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102											
103											
104											
105											
106											
107											
108											
109											
110											
111											

	S	T	U	V	W
1					
2					
3	D62-D82, added to Cells S17-S46)				
4	decrease # of coal-fired boilers by 22% and increase gas-fired by 22%) (Cells W22-W25_				
5	gory (cells V22-V25)				
6	ew facility count of 1,856 based on three year growth (cells D46 and H46) - see H16-H46				
7	(10 hrs) for lg existing sources (5 hrs) for sm existing categories (left at 40 hrs for new)				
8					
9					
10					
11					
12					
13					
14					
15	UPDATED COLUMN TO ADJUST UNIT CATEGORY TOTALS TO ADD 3-YEAR GROWTH TO EXISTING VALU				
16	Total + 3-year gr	Prior Total			
17	21	17			
18	278	231			
19	118	100			
20	171	158		ADJUSTMENTS TO NEW COAT AND NG UNIT COUNT	
21				#Units Shutdown	# Units Converted to NG
22	0	0	0	0	0
23	147	147	0.236714975845411	4	32
24	271	271	0.436392914653784	8	60
25	203	203	0.326892109500805	6	45
26	621			18	137
27	8108	7130			
28	3915	3362			
29	1148	983			
30	520	454			
31					
32	[redacted]				
33					
34					
35					
36					
37	47	47			
38	28	28			
39	26	26			

	S	T	U	V	W
40	28	28			
41					
42	273	273			
43	416	416			
44	187	187			
45	79	79			
46	15984	14140			
47					
48	8449				
49	4784				
50	1750				
51	1001				
52					
53					
54					
55					
56					
57					
58					
59					
60					
61					

	Yr1	Yr 2	Yr 3	Avg
62	118	121	124	121
63	66	66	66	66
64	636	669	702	669
65	5	6	6	6
66	45	45	45	45
67	986	1027	1068	1027
68	1856	1934	2011	1934
69				
70				
71				
72				
73				
74				
75				

	X
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14	
15	**ES**
16	
17	
18	
19	
20	**TS BASED ON SUBCATEGORY CHANGES:**
21	**Total Number of Units Removed**
22	0
23	36
24	68
25	51
26	155
27	
28	
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Agency Labor Rates

Managerial	$64.80	Updated Labor rates to 2017 General Schedule
Clerical	$26.02	
Technical	$48.08	

Per Diem Info

Hotel	$201	average 2018 rates, https://www.perdiem101.com/conus/2018
Meals	$93	average 2018 rates, https://www.perdiem101.com/conus/2018
Airfare	$600	
Trip Length	3	

Other Data

Percent of Stack Tests Observed	20%
Estimated Percent Retesting	10%
Estimated Percent Emission Exceedences	10%

Table 1.B.: Annual Respondent Burden and Cost – NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD) (Renewal)

Existing Large Solid Fuel Units

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Certified Energy Audit Cost per Occurrence	(C) Stack Testing and Fuel Analysis Cost Per Occurrence	(D) Other Non-Labor Costs Per Occurrence	(E) Number of Occurrences Per Respondent Per Year	(F) Technical Hours per Respondent Per Year (A X E)	(G) Number of Respondents Per Year	(H) Technical Hours per Year @ $99.16 (F X G)	(I) Clerical Hours per Year @ $50.88 (H X 0.1)	(J) Management Hours per Year @ $127.43 (H X .05)	(K) Total Labor Costs Per Year	(L) Total Non-Labor Capital Costs Per Year [(B+C+D)xExG]	(M) Total Number of Responses per Year (E X G)	Footnotes
1. Applications	na													
2. Surveys and Studies	na													
3. Reporting Requirements														
A. Familiarization with Rule Requirements	10	$0	$0	$0	1	10	121	1,210	121	61	$152,373	$0	121	a
B. Required Activities														
1. Conduct Energy Audit														
a) Commerical	20	$854	$0	$0	1	20	0	0	0	0	$0	$0	0	b, c, d
b) Industrial	20	$18,292	$0	$0	1	20	0	0	0	0	$0	$0	0	b, c, d
2. Initial Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	0	0	0.0	0.0	$0	$0	0	c,h
3. Initial Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	c
4. Initial Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	c
5. Initial Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	0	0	0	0	$0	$0	0	c
6. Annual Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	1,040	12,480	1,248.0	624.0	$1,571,588	$5,200,000	0	c,h,i
7. Annual Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	1,040	12,480	1,248.0	624.0	$1,571,588	$8,320,000	0	c, i
8. Annual Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	1,040	12,480	1,248.0	624.0	$1,571,588	$8,320,000	0	c, i
9. Annual Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	1,040	12,480	1,248.0	624.0	$1,571,588	$7,280,000	0	c, i
10. Repeat Stack Test and Report if Switch Fuels (for Hg and HCl)	24	$0	$16,000	$0	1	24	1,040	24,960	2,496	1,248	$3,143,175	$16,640,000	0	c,j
11. Initial Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	1	5	0	0	0	0	$0	$0	0	c,g
12. Monthly Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	12	60	0	0	0	0	$0	$0	0	c,g
13. Annual Tune-up	12	$0	$2,875	$0	1	12	1,040	12,480	1,248.0	624.0	$1,571,588	$2,990,000	0	c,k
14. Continuous Parameter Monitoring														m
Establish Site-specific monitoring plan (all)	40	$0		$0	1	40	0	0	0	0	$0	$0	0	c
Opacity														
a) initial	10	$0	$0	$43,100	1	10	0	0	0.0	0.0	$0	$0	0	c,m
b) annual	10	$0	$0	$14,700	1	10	528	5,280	528.0	264.0	$664,902	$7,761,600	0	c,m
PM (only sources greater than 250 mmBtu/hr)														
a) initial	10	$0	$0	$158,000	1	10	0	0	0.0	0.0	$0	$0	0	c,L,m
b) annual	10	$0	$0	$56,100	1	10	207	2,070	207.0	103.5	$260,672	$11,612,700	0	c,L,m
O2														
a) initial	10	$0	$0	$8,523	1	10	0	0	0	0	$0	$0	0	c,m
b) annual	10	$0	$0	$1,436	1	10	1,114	11,140	1,114	557	$1,402,843	$1,599,704	0	c,m
Scrubber System Monitoring and Operation (for units with wet scrubbers)														
a) initial	10	$0	$0	$24,300	1	10	0	0	0	0	$0	$0	0	c,m
b) annual	10	$0	$0	$5,600	1	10	401	4,010	401	201	$504,973	$2,245,600	0	c,m
Bag Leak Detection System Operation (sources that have fabric filters)														
a) initial	10	$0	$0	$25,500	1	10	0	0	0	0.0	$0	$0	0	c,m
b) annual	10	$0	$0	$9,700	1	10	61	610	61	30.5	$76,816	$591,700	0	c,m
DIFF Monitor														
a) initial	10	$0	$0	$43,500	1	10	0	0	0	0.0	$0	$0	0	c,m
b) annual	10	$0	$0	$26,500	1	10	76	760	76	38.0	$95,706	$2,014,000	0	c,m
Carbon Injection Monitoring System (all sources that use ACI to control Hg)														
a) initial	10	$0	$0	$115,000	1	10	0	0	0	0.0	$0	$0	0	c,m
b) annual	10	$0	$0	$9,700	1	10	30	300	30	15.0	$37,779	$291,000	0	c,m
C. Create Information	na													
D. Gather Information	na													
E. Report Preparation														
1) Initial Notification that Source is Subject	2	$0	$0	$0	1	2	0	0	0	0	$0	$0	0	a
2) Notification of Compliance Status	8	$0	$0	$0	1	8	0	0	0.0	0.0	$0	$0	0	c
3) Initial Report on results of Energy Audit	5	$0	$0	$0	1	5	0	0	0.0	0.0	$0	$0	0	c
4) Semi-annual Compliance Report	20	$0	$0	$0	2	40	121	4,840	484	242	$609,494	$0	242	a
Reporting Subtotal									**135,217**		**$14,806,673**	**$74,866,304**	**242**	
4. Recordkeeping Requirements														
A. Familiarization with Rule Requirements	Included in 3a													
B. Implement Activities	na													
C. Develop Record System	na													e
D. Record Information														
1) Records of Operating Parameter Values	20	$0	$0	$0	1	20	1,040	20,800	2,080	1,040	$2,619,313	$0	0	c
2) Records of Startup, Shutdown, Malfunction	15	$0	$0	$0	1	15	1,040	15,600	1,560.0	780.0	$1,964,485	$0	0	c,n
3) Records of Stack Tests	2	$0	$0	$0	1	2	1,040	2,080	208.0	104.0	$261,931	$0	0	c
4) Records of Monitoring Device Calibrations	2	$0	$0	$0	1	2	1,040	2,080	208.0	104.0	$261,931	$0	0	c
5) Records of All Compliance Reports Submitted	2	$0	$0	$0	2	4	1,040	4,160	416.0	208.0	$523,863	$0	0	c
6) Records of Monthly Fuel Use	0.5	$0	$0	$0	12	6	1,040	6,240	624.0	312.0	$785,794	$0	0	c
E. Personnel Training	40	$0	$0	$0	1	40	61	2,440	244	122	$307,266	$0	0	f
F. Time for Audits	na													
Recordkeeping Subtotal									**61,410**		**$6,724,582**	**$0**	**0**	
Totals									**196,627**		**$21,531,255**	**$74,866,304**	**242**	

a The burden on existing sources to refamiliarize themselves with the rule requirements is assumed at 10 hours.

b Cost includes taking an inventory of facility equipment including age, operating schedules, square feet of the facility and other details necessary for preparing for the audit pre-screening, attending the energy audit, and reviewing audit report from the audit professional. Based on the distribution of facilities with affected boilers or process heaters, 88% of facilities are in the industrial sector while the remaining 12% of facilities are in the commercial sector.

c It is assumed that the affected existing units have conducted an audit, developed an initial site-specific testing and monitoring plan, and submitted initial notifications following the compliance date of January 31, 2016. It is assumed that all existing units are submitting semi-annual reports and conducting the required recordkeeping.

d Cost per occurrence for energy audit professionals including an phone screening to discuss the facility prior to a visit, a 2 to 4 hour site visit, and an additional 2-4 hours to prepare a follow-up report on recommendations and findings. These site visits are assumed to be conducted by certified energy professionals.

f For on-going training activities to keep personnel updated in order to implement compliance activities. Assumes half of respondents will conduct training each year.

e Assumes facility must already maintain records on boiler insurance and/or maintenance schedule. No new record system would be required.

g Existing large solid units are expected to determine compliance through stack testing and not fuel analysis

h Units not equipped with PM CPMS wil perform stack testing for PM.

i Annual testing is based on the average number of existing units.

j Only applies to large solid fuel boilers, because solid fuel boilers may fire a mix of non-homogeneous fuels. Assumed all solid fuel units would perform a repeat stack test.

k Tune-ups are required as work practice standards in lieu of dioxin/furan testing. While the rule provides flexibility to conduct less frequent tune-ups for large units that have a continuous oxygen trim system that maintains an optimum air to fuel ratio, the number of units with this configuration is unknown and the ICR conservatively assumes all large units will conduct tune-ups annually.

L PM CPMS is only required for coal boilers, biomass boilers which are not 100% biomass, and residual oil boilers which are >= 250 mmBtu/hr that were construction prior to June 4, 2010. This affects approximately 207 units.

m Estimated number of units expected to require each type of parameter monitoring are consistent with the estimated number of units expected to install controls, as outlined in the memorandum: "Revised (November 2011) Methodology for Estimating Cost and Emissions Impacts for Industrial, Commercial, Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants – Major Source." Small edits to the MACT floor dataset were made after the impacts analysis and ICR burden estimates were prepared. These edits are not reflected in the ICR or impacts analysis, but the changes are incorporated into the burden estimates for the final rule.

n Includes enhanced recordkeeping provisions for demonstration of compliance with the alternative definition of "startup" (paragraph (2) of the definition) that document when useful thermal energy is provided, what fuels are used during startup, parametric monitoring data to verify relevant controls are engaged, and the time when PM controls are engaged. It is assumed that no one is using the compliance alternatives at this time.

Table 2.A. Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers - Year 0, Existing Large Liquid Fuel Units

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Certified Energy Audit Cost per Occurrence	(C) Stack Testing and Fuel Analysis Cost Per Occurrence	(D) Other Non-Labor Costs Per Occurrence	(E) Number of Occurrences Per Respondent Per Year	(F) Technical Hours per Respondent Per Year (A X E)	(G) Number of Respondents Per Year	(H) Technical Hours per Year @ $98.20 (F X G)	(I) Clerical Hours per Year @ $48.53 (H X 0.1)	(J) Management Hours per Year @ $114.49 (H X .05)	(K) Total Labor Costs Per Year	(L) Total Non-Labor Capital Costs Per Year [(B+C+D)xExG]	(M) Total Number of Responses per Year (E X G)	Footnotes
1. Applications	na													
2. Surveys and Studies	na													
3. Reporting Requirements														
A. Read and Understand Rule Requirements	40	$0	$0	$0	1	40	66	2,640	264	132	$332,451	$0	66	a
B. Required Activities														
1. Conduct Energy Audit														
a) Commerical	20	$854	$0	$0	1	20	0	0	0	0	$0	$0	0	b, c, d
b) Industrial	20	$18,292	$0	$0	1	20	0	0	0	0	$0	$0	0	b, c, d
2. Initial Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	0	0	0	0	$0	$0	0	c,h
3. Initial Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	c
4. Initial Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	c
5. Initial Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	0	0	0	0	$0	$0	0	c
6. Annual Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	0	0	0	0	$0	$0	0	c,h,i
7. Annual Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	c,i
8. Annual Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	c,i
9. Annual Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	0	0	0	0	$0	$0	0	c,i
10. Repeat Stack Test and Report if Switch Fuels (for Hg and HCl)	24	$0	$16,000	$0	1	24	0	0	0	0	$0	$0	0	c,f
11. Initial Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	1	5	0	0	0	0	$0	$0	0	c,g
12. Monthly Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	12	60	0	0	0	0	$0	$0	0	c,g
13. Annual Tune-up	12	$0	$2,875	$0	1	12	0	0	0	0	$0	$0	0	c,L
14. Continuous Parameter Monitoring														n
Establish Site-specific monitoring plan (all)	40	$0		$0	1	40	0	0	0	0	$0	$0	0	c
Opacity														
a) initial	10	$0	$0	$43,100	1	10	0	0	0	0	$0	$0	0	c
b) annual	10	$0	$0	$14,700	1	10	0	0	0	0	$0	$0	0	c
PM (only sources greater than 250 mmBtu/hr)														
a) initial	10	$0	$0	$158,000	1	10	0	0	0	0	$0	$0	0	c,m
b) annual	10	$0	$0	$56,100	1	10	0	0	0	0	$0	$0	0	c,m
O2														
a) initial	10	$0	$0	$8,523	1	10	0	0	0	0	$0	$0	0	c
b) annual	10	$0	$0	$1,436	1	10	0	0	0	0	$0	$0	0	c
Scrubber System Monitoring and Operation (for units with wet scrubbers)														
a) initial	10	$0	$0	$24,300	1	10	0	0	0	0	$0	$0	0	c
b) annual	10	$0	$0	$5,600	1	10	0	0	0	0	$0	$0	0	c
Bag Leak Detection System Operation (sources that have fabric filters)														
a) initial	10	$0	$0	$25,500	1	10	0	0	0	0	$0	$0	0	c
b) annual	10	$0	$0	$9,700	1	10	0	0	0	0	$0	$0	0	c
DIFF Monitor														
a) initial	10	$0	$0	$43,500	1	10	0	0	0	0	$0	$0	0	c
b) annual	10	$0	$0	$9,700	1	10	0	0	0	0	$0	$0	0	c
Carbon Injection Monitoring System (all sources that use ACI to control Hg)														
a) initial	10	$0	$0	$115,000	1	10	0	0	0	0	$0	$0	0	c
b) annual	10	$0	$0	$9,700	1	10	0	0	0	0	$0	$0	0	c
C. Create Information	na													
D. Gather Information	na													
E. Report Preparation														
1) Initial Notification that Source is Subject	2	$0	$0	$0	1	2	66	132	13	7	$16,623	$0	66	a
2) Notification of Compliance Status	8	$0	$0	$0	1	8	0	0	0	0	$0	$0	0	c
3) Initial Report on results of Energy Audit	5	$0	$0	$0	1	5	0	0	0	0	$0	$0	0	c
4) Semi-annual Compliance Report	20	$0	$0	$0	2	40	0	0	0	0	$0	$0	0	a
5) Affirmative Defense	30	$0	$0	$0	1	30	0	0	0	0	$0	$0	0	k
Reporting Subtotal								2,772	277	139	$349,074	$0	66	
4. Recordkeeping Requirements														
A. Read Instructions	Included in 3a													
B. Implement Activities	na													
C. Develop Record System	na													e
D. Record Information														
1) Records of Operating Parameter Values	20	$0	$0	$0	1	20	0	0	0	0	$0	$0	0	c
2) Records of Startup, Shutdown, Malfunction	15	$0	$0	$0	1	15	0	0	0	0	$0	$0	0	c
3) Records of Stack Tests	2	$0	$0	$0	1	2	0	0	0	0	$0	$0	0	c
4) Records of Monitoring Device Calibrations	2	$0	$0	$0	1	2	0	0	0	0	$0	$0	0	c
5) Records of All Compliance Reports Submitted	2	$0	$0	$0	2	4	0	0	0	0	$0	$0	0	c
6) Records of Monthly Fuel Use	0.5	$0	$0	$0	12	6	0	0	0	0	$0	$0	0	c
E. Personnel Training	40	$0	$0	$0	1	40	0	0	0	0	$0	$0	0	j
F. Time for Audits	na													
Recordkeeping Subtotal								0	0	0	$0	$0	0	
Totals								**2,772**	**277**	**139**	**$349,074**	**$0**	**66**	

a Number of respondents based on number of existing large liquid fuel boilers which includes units greater than 10 mmBtu/hr.

b Cost includes taking an inventory of facility equipment including age, operating schedules, square feet of the facility and other details necessary for preparing for the audit pre-screening, attending the energy audit, and reviewing audit report from the audit professional. Based on the distribution of facilities with affected boilers or process heaters, 88% of facilities are in the industrial sector while the remaining 12% of facilities are in the commercial sector.

c Since existing units have three years after the publication date of the final rule to submit initial notification of compliance status, conduct compliance activities, or meet recordkeeping or reporting requirements, no burden is assumed in year 1.

d Cost per occurrence for energy audit professionals including an phone screening to discuss the facility prior to a visit, a 2 to 4 hour site visit, and an additional 2-4 hours to prepare a follow-up report on recommendations and findings. These site visits are assumed to be conducted by certified energy professionals.

e Assumes facility must already maintain records on boiler insurance and/or maintenance schedule. No new record system would be required.

f Only applies to large solid fuel boilers, because solid fuel boilers may fire a mix of non-homogeneous fuels. Assumed zero respondents for liquid and gas units.

g Existing large liquid units are expected to determine compliance for Hg and HCl through fuel analysis not stack testing.

h Units not equipped with PM CPMS wil perform stack testing for PM.

j No annual test and reporting burden is shown in year 1 as this is the same year as the initial test and report.

j For on-going training activities to keep personnel updated in order to implement compliance activities.

k Assumed 3 affirmative defense claims would be filed in the first three years after promulgation, one in each of the large subcategories (solid, liquid, gas) in year 3 of the burden estimates. If a source were to meet the notification, reporting, and recordkeeping requirements of affirmative defense, it would be approximately 30 hours in labor burden.

L Tune-ups are required as work practice standards in lieu of dioxin/furan testing.

m PM CPMS is required for coal boilers, biomass boilers which are not 100% biomass, and residual oil boilers which are >= 250 mmBtu/hr

n Estimated number of units expected to require each type of parameter monitoring are consistent with the estimated number of units expected to install controls, as outlined in the memorandum: "Revised (November 2011) Methodology for Estimating Cost and Emissions Impacts for Industrial, Commercial, Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants – Major Source." Small edits to the MACT floor dataset were made after the impacts analysis and ICR burden estimates are prepared. These edits are not reflected in the ICR or impacts analysis for this proposal, but the changes will be incorporated into the burden estimates for the final rule.

Table 2.B.: Annual Respondent Burden and Cost – NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD) (Renewal)

Existing Large Liquid Fuel Units

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Certified Energy Audit Cost per Occurrence	(C) Stack Testing and Fuel Analysis Cost Per Occurrence	(D) Other Non-Labor Costs Per Occurrence	(E) Number of Occurrences Per Respondent Per Year	(F) Technical Hours per Respondent Per Year (A X E)	(G) Number of Respondents Per Year	(H) Technical Hours per Year @ $99.16 (F X G)	(I) Clerical Hours per Year @ $50.88 (H X 0.1)	(J) Management Hours per Year @ $127.43 (H X .05)	(K) Total Labor Costs Per Year	(L) Total Non-Labor Capital Costs Per Year [(B+C+D)xExG]	(M) Total Number of Responses per Year (E X G)	Footnotes
1. Applications	na													
2. Surveys and Studies	na													
3. Reporting Requirements														
A. Familiarization with Rule Requirements	10	$0	$0	$0	1	10	66	660	66	33	$83,113	$0	66	a
B. Required Activities														
1. Conduct Energy Audit														
a) Commerical	20	$854	$0	$0	1	20	0	0	0	0	$0	$0	0	b, c, d
b) Industrial	20	$18,292	$0	$0	1	20	0	0	0	0	$0	$0	0	b, c, d
2. Initial Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	0	0	0	0	$0	$0	0	c,h
3. Initial Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	c
4. Initial Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	c
5. Initial Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	0	0	0	0	$0	$0	0	c,i
6. Annual Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	570	6,840	684	342	$861,351	$2,850,000	0	c,h,j
7. Annual Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	c,j
8. Annual Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	c,j
9. Annual Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	570	6,840	684	342	$861,351	$3,990,000	0	c,j
10. Repeat Stack Test and Report if Switch Fuels (for Hg and HCl)	24	$0	$16,000	$0	1	24	0	0	0	0	$0	$0	0	c,f
11. Initial Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	1	5	0	0	0.0	0.0	$0	$0	0	c,g
12. Monthly Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	12	60	570	34,200	3,420	1,710	$4,306,755	$2,736,000	0	c,g
13. Annual Tune-up	12	$0	$2,875	$0	1	12	570	6,840	684	342	$861,351	$1,638,750	0	c,L
14. Continuous Parameter Monitoring														n
Establish Site-specific monitoring plan (all)	40	$0		$0	1	40	0	0	0	0	$0	$0	0	c
Opacity														
a) initial	10	$0	$0	$43,100	1	10	0	0	0	0.0	$0	$0	0	c
b) annual	10	$0	$0	$14,700	1	10	30	300	30	15.0	$37,779	$441,000	0	c
PM (only sources greater than 250 mmBtu/hr)														
a) initial	10	$0	$0	$158,000	1	10	0	0	0	0.0	$0	$0	0	c,m
b) annual	10	$0	$0	$56,100	1	10	21	210	21	10.5	$26,445	$1,178,100	0	c,m
O2														
a) initial	10	$0	$0	$8,523	1	10	0	0	0	0	$0	$0	0	c,n
b) annual	10	$0	$0	$1,436	1	10	316	3,160	316	158	$397,934	$453,776	0	c,n
Scrubber System Monitoring and Operation (for units with wet scrubbers)														
a) initial	10	$0	$0	$24,300	1	10	0	0	0	0.0	$0	$0	0	c,n
b) annual	10	$0	$0	$5,600	1	10	271	2,710	271	135.5	$341,266	$1,517,600	0	c,n
Bag Leak Detection System Operation (sources that have fabric filters)														
a) initial	10	$0	$0	$25,500	1	10	0	0	0	0.0	$0	$0	0	c,n
b) annual	10	$0	$0	$9,700	1	10	262	2,620	262	131.0	$329,933	$2,541,400	0	c,n
DIFF Monitor														
a) initial	10	$0	$0	$43,500	1	10	0	0	0	0	$0	$0	0	c,n
b) annual	10	$0	$0	$9,700	1	10	28	280	28	14	$35,260	$271,600	0	c,n
Carbon Injection Monitoring System (all sources that use ACI to control Hg)														
a) initial	10	$0	$0	$115,000	1	10	0	0	0	0	$0	$0	0	c,n
b) annual	10	$0	$0	$9,700	1	10	8	80	8	4	$10,074	$77,600	0	c,n
C. Create Information	na													
D. Gather Information	na													
E. Report Preparation														
1) Initial Notification that Source is Subject	2	$0	$0	$0	1	2	0	0	0	0	$0	$0	0	a
2) Notification of Compliance Status	8	$0	$0	$0	1	8	0	0	0.0	0.0	$0	$0	0	c
3) Initial Report on results of Energy Audit	5	$0	$0	$0	1	5	0	0	0.0	0.0	$0	$0	0	c
4) Semi-annual Compliance Report	20	$0	$0	$0	2	40	66	2,640	264	132	$332,451	$0	132	c
Reporting Subtotal									**77,487**		**$8,485,062**	**$17,695,826**	**132**	
4. Recordkeeping Requirements														
A. Familiarization with Rule Requirements	Included in 3a													
B. Implement Activities	na													
C. Develop Record System	na													e
D. Record Information														
1) Records of Operating Parameter Values	20	$0	$0	$0	1	20	570	11,400	1,140	570	$1,435,585	$0	0	c
2) Records of Startup, Shutdown, Malfunction	15	$0	$0	$0	1	15	570	8,550	855	428	$1,076,689	$0	0	c,o
3) Records of Stack Tests	2	$0	$0	$0	1	2	570	1,140	114	57	$143,558	$0	0	c
4) Records of Monitoring Device Calibrations	2	$0	$0	$0	1	2	570	1,140	114	57	$143,558	$0	0	c
5) Records of All Compliance Reports Submitted	2	$0	$0	$0	2	4	570	2,280	228	114	$287,117	$0	0	c
6) Records of Monthly Fuel Use	0.5	$0	$0	$0	12	6	570	3,420	342	171	$430,675	$0	0	c
E. Personnel Training	40	$0	$0	$0	1	40	33	1,320	132	66	$166,226	$0	0	k
F. Time for Audits	na													
Recordkeeping Subtotal									**33,638**		**$3,683,409**	**$0**	**0**	
Totals									**111,125**		**$12,168,471**	**$17,695,826**	**132**	

a The burden on existing sources to refamiliarize themselves with the rule requirements is assumed at 10 hours.

b Cost includes taking an inventory of facility equipment including age, operating schedules, square feet of the facility and other details necessary for preparing for the audit pre-screening, attending the energy audit, and reviewing audit report from the audit professional. Based on the distribution of facilities with affected boilers or process heaters, 88% of facilities are in the industrial sector while the remaining 12% of facilities are in the commercial sector.

c It is assumed that the affected existing units have conducted an audit, developed an initial site-specific testing and monitoring plan, and submitted initial notifications following the compliance date of January 31, 2016. It is assumed that all existing units are submitting semi-annual reports and conducting the required recordkeeping.

d Cost per occurrence for energy audit professionals including an phone screening to discuss the facility prior to a visit, a 2 to 4 hour site visit, and an additional 2-4 hours to prepare a follow-up report on recommendations and findings. These site visits are assumed to be conducted by certified energy professionals.

e Assumes facility must already maintain records on boiler insurance and/or maintenance schedule. No new record system would be required.

f Only applies to large solid fuel boilers, because solid fuel boilers may fire a mix of non-homogeneous fuels. Assumed zero respondents for liquid and gas units.

g Existing large liquid units are expected to determine compliance for Hg and HCl through fuel analysis not stack testing.

h Units not equipped with PM CPMS wil perform stack testing for PM.

j Annual testing is based on the number of existing units in the three years following promulgation of the November 20, 2015 final rule.

k For on-going training activities to keep personnel updated in order to implement compliance activities. Assumes half of respondents will conduct training each year.

L Tune-ups are required as work practice standards in lieu of dioxin/furan testing. While the rule provides flexibility to conduct less frequent tune-ups for large units that have a continuous oxygen trim system that maintains an optimum air to fuel ratio, the number of units with this configuration is unknown and the ICR conservatively assumes all large units will conduct tune-ups annually.

m PM CPMS is required for coal boilers, biomass boilers which are not 100% biomass, and residual oil boilers which are >= 250 mmBtu/hr

n Estimated number of units expected to require each type of parameter monitoring are consistent with the estimated number of units expected to install controls, as outlined in the memorandum: "Revised (November 2011) Methodology for Estimating Cost and Emissions Impacts for Industrial, Commercial, Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants – Major Source." Small edits to the MACT floor dataset were made after the impacts analysis and ICR burden estimates were prepared. These edits are not reflected in the ICR or impacts analysis, but the changes are incorporated into the burden estimates for the final rule.

o Includes enhanced recordkeeping provisions for demonstration of compliance with the alternative definition of "startup" (paragraph (2) of the definition) that document when useful thermal energy is provided, what fuels are used during startup, parametric monitoring data to verify relevant controls are engaged, and the time when PM controls are engaged. It is assumed that no one is using the compliance alternatives at this time.

Table 3.B.: Annual Respondent Burden and Cost – NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD) (Renewal)

Existing Large Gas Fuel Units

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Certified Energy Audit Cost per Occurrence	(C) Stack Testing and Fuel Analysis Cost Per Occurrence	(D) Other Non-Labor Costs Per Occurrence	(E) Number of Occurrences Per Respondent Per Year	(F) Technical Hours per Respondent Per Year (A X E)	(G) Number of Respondents Per Year	(H) Technical Hours per Year @ $99.16 (F X G)	(I) Clerical Hours per Year @ $50.88 (H X 0.1)	(J) Management Hours per Year @ $127.43 (H X .05)	(K) Total Labor Costs Per Year	(L) Total Non-Labor Capital Costs Per Year [(B+C+D)xExG]	(M) Total Number of Responses per Year (E X G)	Footnotes
1. Applications	na													
2. Surveys and Studies	na													
3. Reporting Requirements														
A. Familiarization with Rule Requirements	10	$0	$0	$0	1	10	669	6,690	669	335	$842,462	$0	0	a
B. Required Activities														
1. Conduct Energy Audit														
a) Commerical	20	$854	$0	$0	1	20	0	0	0	0	$0	$0	0	b, c, d
b) Industrial	20	$18,292	$0	$0	1	20	0	0	0	0	$0	$0	0	b, c, d
2. Initial Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	0	0	0.0	0.0	$0	$0	0	c,j,k
3. Initial Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	0	0	0.0	0.0	$0	$0	0	c,j,k
4. Initial Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	0	0	0.0	0.0	$0	$0	0	c,j,k
5. Initial Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	0	0	0.0	0.0	$0	$0	0	c,j,k
6. Annual Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	78	936	93.6	46.8	$117,869	$390,000	0	c,j,k
7. Annual Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	0	0	0.0	0.0	$0	$0	0	c,j,k
8. Annual Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	0	0	0.0	0.0	$0	$0	0	c,j,k
9. Annual Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	78	936	93.6	46.8	$117,869	$546,000	0	c,j,k
10. Repeat Stack Test and Report if Switch Fuels (for Hg and HCl)	24	$0	$16,000	$0	1	24	0	0	0	0	$0	$0	0	c,f
11. Initial Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	1	5	0	0	0	0	$0	$0	0	c,g
12. Monthly Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	12	60	78	4,680	468	234	$589,345	$374,400	0	c,g
13. Continuous Parameter Monitoring														o
Establish Site-specific monitoring plan (all)	40	$0		$0	1	40	0	0	0	0	$0	$0	0	c
Opacity														
a) initial	10	$0	$0	$43,100	1	10	0	0	0	0	$0	$0	0	c,h
b) annual	10	$0	$0	$14,700	1	10	0	0	0	0	$0	$0	0	c,h
PM (only sources greater than 250 mmBtu/hr)														
a) initial	10	$0	$0	$158,000	1	10	0	0	0	0	$0	$0	0	c,h
b) annual	10	$0	$0	$56,100	1	10	0	0	0	0	$0	$0	0	c,h
O2														
a) initial	10	$0	$0	$8,523	1	10	0	0	0	0.0	$0	$0	0	c,o
b) annual	10	$0	$0	$1,436	1	10	78	780	78	39.0	$98,224	$112,008	0	c,o
Scrubber System Monitoring and Operation (for units with wet scrubbers)														
a) initial	10	$0	$0	$24,300	1	10	0	0	0	0.0	$0	$0	0	c,o
b) annual	10	$0	$0	$5,600	1	10	6	60	6	3.0	$7,556	$33,600	0	c,o
Bag Leak Detection System Operation (sources that have fabric filters)														
a) initial	10	$0	$0	$25,500	1	10	0	0	0	0	$0	$0	0	c,o
b) annual	10	$0	$0	$9,700	1	10	0	0	0	0	$0	$0	0	c,o
14. Annual Tune-up	12	$0	$2,875	$0	1	12	5,733	68,796	6,879.6	3,439.8	$8,663,377	$16,482,375	0	c,k
15. Mercury Fuel Spec Analysis	5	$0	$200	$0	12	60	387	23,220	2,322	1,161	$2,924,060	$928,800	0	c,i
C. Create Information	na													
D. Gather Information	na													
E. Report Preparation														
1) Initial Notification that Source is Subject	2	$0	$0	$0	1	2	0	0	0	0	$0	$0	0	a
2) Notification of Compliance Status	8	$0	$0	$0	1	8	0	0	0.0	0.0	$0	$0	0	c
3) Initial Report on results of Energy Audit	5	$0	$0	$0	1	5	0	0	0	0	$0	$0	0	c
4) Annual Compliance Report	20	$0	$0	$0	1	20	660	13,200	1,320	660	$1,662,256	$0	660	c, L
5) Semi-annual Compliance Report	20	$0	$0	$0	2	40	9	360	36	18	$45,334	$0	18	c, L
6) Notification of Alternative Fuel Use	5	$0	$0	$0	1	5	852	4,260	426.0	213.0	$536,455	$0	852	c,m
Reporting Subtotal									**142,506**		**$15,604,808**	**$18,867,183**	**1,530**	
4. Recordkeeping Requirements														
A. Familiarization with Rule Requirements	Included in 3a													
B. Implement Activities	na													
C. Develop Record System	na													e
D. Record Information														
1) Records of Operating Parameter Values	20	$0	$0	$0	1	20	78	1,560	156	78	$196,448	$0	0	c
2) Records of Startup, Shutdown, Malfunction	15	$0	$0	$0	1	15	78	1,170	117	59	$147,336	$0	0	c,p
3) Records of Stack Tests	2	$0	$0	$0	1	2	78	156	15.6	7.8	$19,645	$0	0	c
4) Records of Monitoring Device Calibrations	2	$0	$0	$0	1	2	78	156	15.6	7.8	$19,645	$0	0	c
5) Records of All Annual Compliance Reports Submitted	2	$0	$0	$0	1	2	660	1,320	132.0	66.0	$166,226	$0	0	c, L
6) Records of All Semi-Annual Compliance Reports Submitted	2	$0	$0	$0	2	4	9	36	3.6	1.8	$4,533	$0	0	c, L
7) Records of Monthly Fuel Use	0.5	$0	$0	$0	12	6	78	468	46.8	23.4	$58,935	$0	0	c
8) Records of Annual Tune-up	0.25	$0	$0	$0	1	0.25	5,733	1,433	143.3	71.7	$180,487	$0	0	c
E. Personnel Training	40	$0	$0	$0	1	40	335	13,400	1,340	670	$1,687,442	$0	0	n
F. Time for Audits	na													
Recordkeeping Subtotal									**22,654**		**$2,480,697**	**$0**		
Totals									**165,160**		**$18,085,505**	**$18,867,183**	**1,530**	

a The burden on existing sources to refamiliarize themselves with the rule requirements is assumed at 10 hours.

b Cost includes taking an inventory of facility equipment including age, operating schedules, square feet of the facility and other details necessary for preparing for the audit pre-screening, attending the energy audit, and reviewing audit report from the audit professional. Based on the distribution of facilities with affected boilers or process heaters, 87.4% of facilities are in the industrial sector while the remaining 12.6% of facilities are in the commercial sector.

c It is assumed that the affected existing units have conducted an audit, developed an initial site-specific testing and monitoring plan, and submitted initial notifications following the compliance date of January 31, 2016. It is assumed that all existing units are submitting semi-annual reports and conducting the required recordkeeping.

d Cost per occurrence for energy audit professionals including an phone screening to discuss the facility prior to a visit, a 2 to 4 hour site visit, and an additional 2-4 hours to prepare a follow-up report on recommendations and findings. These site visits are assumed to be conducted by certified energy professionals.

e Assumes facility must already maintain records on boiler insurance and/or maintenance schedule. No new record system would be required.

f Only applies to large solid fuel boilers, because solid fuel boilers may fire a mix of non-homogeneous fuels. Assumed zero respondents for liquid and gas units.

g Existing large gas 2 units are expected to determine compliance through stack testing.

h Gas units are exempt from PM CPMS and opacity monitoring.

i Number based on units which reported firing fuels other than natural or refinery gas.

j The units firing other process gases other than natural gas, refinery gases or other on-spec gas 1 fuels have limits for PM, HCl, Hg, and CO and are subject to testing and monitoring requirements for each pollutant.

k The recordkeeping and reporting requirements for natural gas fired units is to conduct an annual tune-up and document that the tune-up was completed. The documentation does not need to be submitted as a report unless requested by the Administrator. While the rule provides flexibility to conduct less frequent tune-ups for large units that have a continuous oxygen trim system that maintains an optimum air to fuel ratio, the number of units with this configuration is unknown and the ICR conservatively assumes all large units will conduct tune-ups annually.

L Only facilities with process gas (gas 2 units) subject to numerical emission limits are expected to be required to submit semi-annual compliance reports. Natural gas and refinery gas units are required to submit reports annually.

m Number based on 17.8% of the large gas 1 units using liquid instead of gas at some point.

n For on-going training activities to keep personnel updated in order to implement compliance activities. Assumes half of respondents will conduct training each year.

o Estimated number of units expected to require each type of parameter monitoring are consistent with the estimated number of units expected to install controls, as outlined in the memorandum: "Revised (November 2011) Methodology for Estimating Cost and Emissions Impacts for Industrial, Commercial, Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants – Major Source." Small edits to the MACT floor dataset were made after the impacts analysis and ICR burden estimates were prepared. These edits are not reflected in the ICR or impacts analysis, but the changes are incorporated into the burden estimates for the final rule.

p Includes enhanced recordkeeping provisions for demonstration of compliance with the alternative definition of "startup" (paragraph (2) of the definition) that document when useful thermal energy is provided, what fuels are used during startup,

parametric monitoring data to verify relevant controls are engaged, and the time when PM controls are engaged. It is assumed that no one is using the compliance alternatives at this time.

Table 4.A. Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers - Year 0, New Large Solid Fuel Units

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Certified Energy Audit Cost per Occurrence	(C) Stack Testing and Fuel Analysis Cost Per Occurrence	(D) Other Non-Labor Costs Per Occurrence	(E) Number of Occurrences Per Respondent Per Year	(F) Technical Hours per Respondent Per Year (A X E)	(G) Number of Respondents Per Year	(H) Technical Hours per Year @ $98.20 (F X G)	(I) Clerical Hours per Year @ $48.53 (H X 0.1)	(J) Management Hours per Year @ $114.49 (H X .05)	(K) Total Labor Costs Per Year	(L) Total Non-Labor Capital Costs Per Year [(B+C+D)xExG]	(M) Total Number of Responses per Year (E X G)	Footnotes
1. Applications	na													
2. Surveys and Studies	na													
3. Reporting Requirements														
A. Read and Understand Rule Requirements	40	$0	$0	$0	1	40	4	160	16	8	$20,149	$0	0	a
B. Required Activities														
1. Initial Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	26	312	31	16	$39,290	$130,000	0	a
2. Initial Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	26	312	31	16	$39,290	$208,000	0	a
3. Initial Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	26	312	31	16	$39,290	$208,000	0	a
4. Initial Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	26	312	31	16	$39,290	$182,000	0	a
5. Annual Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	0	0	0	0	$0	$0	0	a
6. Annual Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	a
7. Annual Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	a
8. Annual Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	0	0	0	0	$0	$0	0	a
9. Repeat Stack Test and Report if Switch Fuels (for Hg and HCl)	24	$0	$16,000	$0	1	24	26	624	62	31	$78,579	$416,000	0	a,d
10. Initial Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	1	5	0	0	0	0	$0	$0	0	a,e
11. Monthly Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	12	60	0	0	0	0	$0	$0	0	a,e
12. Annual Tune-up	12	$0	$2,875	$0	1	12	26	312	31	16	$39,290	$74,750	0	a,g
13. Continuous Parameter Monitoring														j
Establish Site-specific monitoring plan (all)	40	$0		$0	1	40	4	160	16	8	$20,149	$0	0	a
Opacity														
a) initial	10	$0	$0	$43,100	1	10	26	260	26	13	$32,741	$1,120,600	0	a
b) annual	10	$0	$0	$14,700	1	10	26	260	26	13	$32,741	$382,200	0	a
PM (only sources greater than 250 mmBtu/hr)														
a) initial	10	$0	$0	$158,000	1	10	0	0	0	0	$0	$0	0	a,i
b) annual	10	$0	$0	$56,100	1	10	0	0	0	0	$0	$0	0	a,i
O2														
a) initial	10	$0	$0	$8,523	1	10	26	260	26	13	$32,741	$221,598	0	a
b) annual	10	$0	$0	$1,436	1	10	26	260	26	13	$32,741	$37,336	0	a
Scrubber System Monitoring and Operation (for units with wet scrubbers)														
a) initial	10	$0	$0	$24,300	1	10	0	0	0	0	$0	$0	0	a
b) annual	10	$0	$0	$5,600	1	10	0	0	0	0	$0	$0	0	a
Bag Leak Detection System Operation (sources that have fabric filters)														
a) initial	10	$0	$0	$25,500	1	10	26	260	26	13	$32,741	$663,000	0	a
b) annual	10	$0	$0	$9,700	1	10	26	260	26	13	$32,741	$252,200	0	a
Carbon Injection Monitoring System (all sources that use ACI to control Hg)														
a) initial	10	$0	$0	$115,000	1	10	0	0	0	0	$0	$0	0	a
b) annual	10	$0	$0	$9,700	1	10	0	0	0	0	$0	$0	0	a
C. Create Information	na													
D. Gather Information	na													
E. Report Preparation														
1) Initial Notification that Source is Subject	2	$0	$0	$0	1	2	4	8	1	0	$1,007	$0	4	b
2) Notification of Compliance Status	8	$0	$0	$0	1	8	4	32	3	2	$4,030	$0	4	b
3) Semi-annual Compliance Report	20	$0	$0	$0	2	40	4	160	16	8	$20,149	$0	8	b
4) Affirmative Defense	30	$0	$0	$0	1	30	0	0	0	0	$0	$0	0	h
Reporting Subtotal								4,264	426	213	$536,959	$3,895,684	16	
4. Recordkeeping Requirements														
A. Read Instructions	Included in 3a													
B. Implement Activities	na													
C. Develop Record System	na													c
D. Record Information														
1) Records of Operating Parameter Values	20	$0	$0	$0	1	20	26	520	52	26	$65,483	$0	0	a
2) Records of Startup, Shutdown, Malfunction	15	$0	$0	$0	1	15	26	390	39	20	$49,112	$0	0	a
3) Records of Stack Tests	2	$0	$0	$0	1	2	26	52	5	3	$6,548	$0	0	a
4) Records of Monitoring Device Calibrations	2	$0	$0	$0	1	2	26	52	5	3	$6,548	$0	0	a
5) Records of All Compliance Reports Submitted	2	$0	$0	$0	2	4	26	104	10	5	$13,097	$0	0	a
6) Records of Monthly Fuel Use	0.5	$0	$0	$0	12	6	26	156	16	8	$19,645	$0	0	a,g
E. Personnel Training	40	$0	$0	$0	1	40	4	160	16	8	$20,149	$0	0	f
F. Time for Audits	na													
Recordkeeping Subtotal								1,434	143	72	$180,581	$0		
Totals								**5,698**	**570**	**285**	**$717,541**	**$3,895,684**	**16**	

a In order to calculate a per year estimate of the number of boilers and facilities required to meet these rule requirements, the number of projected boilers and facilities is each divided by 3.

b Assumed reporting activities would start the first year a boiler is applicable to rule.

c Assumes facility must already maintain records on boiler insurance and/or maintenance schedule. No new record system would be required.

d Only applies to large solid fuel boilers, because solid fuel boilers may fire a mix of non-homogeneous fuels. Assumed all solid fuel units would perform a repeat stack test.

e Existing large solid units are expected to determine compliance through stack testing and not fuel analysis

f For on-going training activities to keep personnel updated in order to implement compliance activities.

g Tune-ups are required as work practice standards in lieu of dioxin/furan testing.

h Assumed no affirmative defense claims would be filed for new sources in the first three years after promulgation. If a source were to meet the notification, reporting, and recordkeeping requirements of affirmative defense, it would be approximately 30 hours in labor burden.

i PM CPMS is required for coal boilers, biomass boilers which are not 100% biomass, and residual oil boilers which are >= 250 mmBtu/hr. It was assumed all new solid fuel boilers are firing 100% biomass.

j Estimated number of units expected to require each type of parameter monitoring are consistent with the estimated number of units expected to install controls, as outlined in the memorandum: "Revised (November 2011) Methodology for Estimating Cost and Emissions Impacts for Industrial, Commercial, Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants – Major Source." Small edits to the MACT floor dataset were made after the impacts analysis and ICR burden estimates are prepared. These edits are not reflected in the ICR or impacts analysis for this proposal, but the changes will be incorporated into the burden estimates for the final rule.

Table 4.B.: Annual Respondent Burden and Cost – NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD) (Renewal)

New Large Solid Fuel Units

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Certified Energy Audit Cost per Occurrence	(C) Stack Testing and Fuel Analysis Cost Per Occurrence	(D) Other Non-Labor Costs Per Occurrence	(E) Number of Occurrences Per Respondent Per Year	(F) Technical Hours per Respondent Per Year (A X E)	(G) Number of Respondents Per Year	(H) Technical Hours per Year @ $99.16 (F X G)	(I) Clerical Hours per Year @ $50.88 (H X 0.1)	(J) Management Hours per Year @ $127.43 (H X .05)	(K) Total Labor Costs Per Year	(L) Total Non-Labor Capital Costs Per Year [(B+C+D)xExG]	(M) Total Number of Responses per Year (E X G)	Footnotes
1. Applications	na													
2. Surveys and Studies	na													
3. Reporting Requirements														
A. Read and Understand Rule Requirements	40	$0	$0	$0	1	40	3	120	12	6	$15,111	$0	0	a
B. Required Activities														
1. Initial Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	26	312	31.2	15.6	$39,290	$130,000	0	a
2. Initial Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	26	312	31.2	15.6	$39,290	$208,000	0	a
3. Initial Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	26	312	31.2	15.6	$39,290	$208,000	0	a
4. Initial Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	26	312	31.2	15.6	$39,290	$182,000	0	a
5. Annual Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	0	0	0.0	0.0	$0	$0	0	a
6. Annual Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	0	0	0.0	0.0	$0	$0	0	a
7. Annual Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	0	0	0.0	0.0	$0	$0	0	a
8. Annual Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	0	0	0.0	0.0	$0	$0	0	a
9. Repeat Stack Test and Report if Switch Fuels (for Hg and HCl)	24	$0	$16,000	$0	1	24	26	624	62.4	31.2	$78,579	$416,000	0	a,d
10. Initial Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	1	5	0	0	0	0	$0	$0	0	a,e
11. Monthly Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	12	60	0	0	0	0	$0	$0	0	a,e
12. Annual Tune-up	12	$0	$2,875	$0	1	12	26	312	31.2	15.6	$39,290	$74,750	0	a,g
13. Continuous Parameter Monitoring														i
Establish Site-specific monitoring plan (all)	40	$0		$0	1	40	3	120	12	6	$15,111	$0	0	a
Opacity														
a) initial	10	$0	$0	$43,100	1	10	26	260	26	13	$32,741	$1,120,600	0	a
b) annual	10	$0	$0	$14,700	1	10	0	0	0	0	$0	$0	0	a
PM (only sources greater than 250 mmBtu/hr)														
a) initial	10	$0	$0	$158,000	1	10	0	0	0	0	$0	$0	0	a,h
b) annual	10	$0	$0	$56,100	1	10	0	0	0	0	$0	$0	0	a,h
O2														
a) initial	10	$0	$0	$8,523	1	10	26	260	26	13	$32,741	$221,598	0	a
b) annual	10	$0	$0	$1,436	1	10	0	0	0	0	$0	$0	0	a
Scrubber System Monitoring and Operation (for units with wet scrubbers)														
a) initial	10	$0	$0	$24,300	1	10	0	0	0	0	$0	$0	0	a
b) annual	10	$0	$0	$5,600	1	10	0	0	0	0	$0	$0	0	a
Bag Leak Detection System Operation (sources that have fabric filters)														
a) initial	10	$0	$0	$25,500	1	10	26	260	26	13	$32,741	$663,000	0	a
b) annual	10	$0	$0	$9,700	1	10	0	0	0	0	$0	$0	0	a
Carbon Injection Monitoring System (all sources that use ACI to control Hg)														
a) initial	10	$0	$0	$115,000	1	10	0	0	0	0	$0	$0	0	a
b) annual	10	$0	$0	$9,700	1	10	0	0	0	0	$0	$0	0	a
C. Create Information	na													
D. Gather Information	na													
E. Report Preparation														
1) Initial Notification that Source is Subject	2	$0	$0	$0	1	2	3	6	0.6	0.3	$756	$0	3	b
2) Notification of Compliance Status	8	$0	$0	$0	1	8	3	24	2.4	1.2	$3,022	$0	3	b
3) Semi-annual Compliance Report	20	$0	$0	$0	2	40	3	120	12	6	$15,111	$0	6	b
Reporting Subtotal									**3,857**		**$422,364**	**$3,223,948**	**12**	
4. Recordkeeping Requirements														
A. Read and Understand Rule Requirements	Included in 3a													
B. Implement Activities	na													
C. Develop Record System	na													c
D. Record Information														
1) Records of Operating Parameter Values	20	$0	$0	$0	1	20	26	520	52	26	$65,483	$0	0	a
2) Records of Startup, Shutdown, Malfunction	15	$0	$0	$0	1	15	26	390	39	20	$49,112	$0	0	a, j
3) Records of Stack Tests	2	$0	$0	$0	1	2	26	52	5.2	2.6	$6,548	$0	0	a
4) Records of Monitoring Device Calibrations	2	$0	$0	$0	1	2	26	52	5.2	2.6	$6,548	$0	0	a
5) Records of All Compliance Reports Submitted	2	$0	$0	$0	2	4	26	104	10.4	5.2	$13,097	$0	0	a
6) Records of Monthly Fuel Use	0.5	$0	$0	$0	12	6	26	156	15.6	7.8	$19,645	$0	0	a,g
E. Personnel Training	40	$0	$0	$0	1	40	3	120	12	6	$15,111	$0	0	f
F. Time for Audits	na													
Recordkeeping Subtotal									**1,603**		**$175,544**	**$0**	**0**	
Totals									**5,460**		**$597,909**	**$3,223,948**	**12**	

a In order to calculate a per year estimate of the number of boilers and facilities required to meet these rule requirements, the number of projected boilers and facilities is each divided by 3.

b Assumed reporting activities would start the first year a boiler is applicable to rule.

c Assumes facility must already maintain records on boiler insurance and/or maintenance schedule. No new record system would be required.

d Only applies to large solid fuel boilers, because solid fuel boilers may fire a mix of non-homogeneous fuels. Assumed all solid fuel units would perform a repeat stack test.

e Existing large solid units are expected to determine compliance through stack testing and not fuel analysis

f For on-going training activities to keep personnel updated in order to implement compliance activities. Assumes all new respondents will conduct training.

g Tune-ups are required as work practice standards in lieu of dioxin/furan testing. While the rule provides flexibility to conduct less frequent tune-ups for large units that have a continuous oxygen trim system that maintains an optimum air to fuel ratio, the number of units with this configuration is unknown and the ICR conservatively assumes all large units will conduct tune-ups annually.

h PM CPMS is required for coal boilers, biomass boilers which are not 100% biomass, and residual oil boilers which are >= 250 mmBtu/hr. It was assumed all new solid fuel boilers are firing 100% biomass.

i Estimated number of units expected to require each type of parameter monitoring are consistent with the estimated number of units expected to install controls, as outlined in the memorandum: "Revised (November 2011) Methodology for Estimating Cost and Emissions Impacts for Industrial, Commercial, Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants – Major Source." Small edits to the MACT floor dataset were made after the impacts analysis and ICR burden estimates were prepared. These edits are not reflected in the ICR or impacts analysis, but the changes are incorporated into the burden estimates for the final rule.

j Includes enhanced recordkeeping provisions for demonstration of compliance with the alternative definition of "startup" (paragraph (2) of the definition) that document when useful thermal energy is provided, what fuels are used during startup,

parametric monitoring data to verify relevant controls are engaged, and the time when PM controls are engaged. It is assumed that no one is using the compliance alternatives at this time.

Table 5.B.: Annual Respondent Burden and Cost – NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63, subpart DDDDD) (Renewal)
New Large Liquid Fuel Units

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Certified Energy Audit Cost per Occurrence	(C) Stack Testing and Fuel Analysis Cost Per Occurrence	(D) Other Non-Labor Costs Per Occurrence	(E) Number of Occurrences Per Respondent Per Year	(F) Technical Hours per Respondent Per Year (A X E)	(G) Number of Respondents Per Year	(H) Technical Hours per Year @ $99.16 (F X G)	(I) Clerical Hours per Year @ $50.88 (H X 0.1)	(J) Management Hours per Year @ $127.43 (H X .05)	(K) Total Labor Costs Per Year	(L) Total Non-Labor Capital Costs Per Year [(B+C+D)xExG]	(M) Total Number of Responses per Year (E X G)	Footnotes
1. Applications	na													
2. Surveys and Studies	na													
3. Reporting Requirements														
A. Read and Understand Rule Requirements	40	$0	$0	$0	1	40	0	0	0	0	$0	$0	0	a
B. Required Activities														
1. Initial Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	0	0	0	0	$0	$0	0	
2. Initial Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	
3. Initial Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	
4. Initial Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	0	0	0	0	$0	$0	0	
5. Annual Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	0	0	0	0	$0	$0	0	
6. Annual Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	
7. Annual Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	
8. Annual Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	0	0	0	0	$0	$0	0	
9. Repeat Stack Test and Report if Switch Fuels (for Hg and HCl)	24	$0	$16,000	$0	1	24	0	0	0	0	$0	$0	0	
10. Initial Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	1	5	0	0	0	0	$0	$0	0	
11. Monthly Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	12	60	0	0	0	0	$0	$0	0	
12. Annual Tune-up	12	$0	$2,875	$0	1	12	0	0	0	0	$0	$0	0	
13. Continuous Parameter Monitoring														
Establish Site-specific monitoring plan (all)	40	$0		$0	1	40	0	0	0	0	$0	$0	0	
Opacity													0	
a) initial	10	$0	$0	$43,100	1	10	0	0	0	0	$0	$0	0	
b) annual	10	$0	$0	$14,700	1	10	0	0	0	0	$0	$0	0	
PM (only sources greater than 250 mmBtu/hr)														
a) initial	10	$0	$0	$158,000	1	10	0	0	0	0	$0	$0	0	
b) annual	10	$0	$0	$56,100	1	10	0	0	0	0	$0	$0	0	
O2														
a) initial	10	$0	$0	$8,523	1	10	0	0	0	0	$0	$0	0	
b) annual	10	$0	$0	$1,436	1	10	0	0	0	0	$0	$0	0	
Scrubber System Monitoring and Operation (for units with wet scrubbers)														
a) initial	10	$0	$0	$24,300	1	10	0	0	0	0	$0	$0	0	
b) annual	10	$0	$0	$5,600	1	10	0	0	0	0	$0	$0	0	
Bag Leak Detection System Operation (sources that have fabric filters)														
a) initial	10	$0	$0	$25,500	1	10	0	0	0	0	$0	$0	0	
b) annual	10	$0	$0	$9,700	1	10	0	0	0	0	$0	$0	0	
Carbon Injection Monitoring System (all sources that use ACI to control Hg)														
a) initial	10	$0	$0	$115,000	1	10	0	0	0	0	$0	$0	0	
b) annual	10	$0	$0	$9,700	1	10	0	0	0	0	$0	$0	0	
C. Create Information	na													
D. Gather Information	na													
E. Report Preparation														
1) Initial Notification that Source is Subject	2	$0	$0	$0	1	2	0	0	0	0	$0	$0	0	
2) Notification of Compliance Status	8	$0	$0	$0	1	8	0	0	0	0	$0	$0	0	
3) Semi-annual Compliance Report	20	$0	$0	$0	2	40	0	0	0	0	$0	$0	0	
Reporting Subtotal									**0**		**$0**	**$0**	**0**	
4. Recordkeeping Requirements														
A. Read and Understand Rule Requirements	Included in 3a													
B. Implement Activities	na													
C. Develop Record System	na													
D. Record Information														
1) Records of Operating Parameter Values	20	$0	$0	$0	1	20	0	0	0	0	$0	$0	0	
2) Records of Startup, Shutdown, Malfunction	15	$0	$0	$0	1	15	0	0	0	0	$0	$0	0	
3) Records of Stack Tests	2	$0	$0	$0	1	2	0	0	0	0	$0	$0	0	
4) Records of Monitoring Device Calibrations	2	$0	$0	$0	1	2	0	0	0	0	$0	$0	0	
5) Records of All Compliance Reports Submitted	2	$0	$0	$0	2	4	0	0	0	0	$0	$0	0	
6) Records of Monthly Fuel Use	0.5	$0	$0	$0	12	6	0	0	0	0	$0	$0	0	
E. Personnel Training	40	$0	$0	$0	1	40	0	0	0	0	$0	$0	0	
F. Time for Audits	na													
Recordkeeping Subtotal									**0**		**$0**	**$0**	**0**	
Totals									**0**		**$0**	**$0**	**0**	

a There are no new large liquid units expected to be constructed/reconstructed over the next 5 years

Table 6.A. Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers - Year 0, New Large Gas Fuel Units

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Certified Energy Audit Cost per Occurrence	(C) Stack Testing and Fuel Analysis Cost Per Occurrence	(D) Other Non-Labor Costs Per Occurrence	(E) Number of Occurrences Per Respondent Per Year	(F) Technical Hours per Respondent Per Year (A X E)	(G) Number of Respondents Per Year	(H) Technical Hours per Year @ $98.20 (F X G)	(I) Clerical Hours per Year @ $48.53 (H X 0.1)	(J) Management Hours per Year @ $114.49 (H X .05)	(K) Total Labor Costs Per Year	(L) Total Non-Labor Capital Costs Per Year [(B+C+D)xExG]	(M) Total Number of Responses per Year (E X G)	Footnotes
1. Applications	na													
2. Surveys and Studies	na													
3. Reporting Requirements														
A. Read and Understand Rule Requirements	40	$0	$0	$0	1	40	34	1,360	136	68	$171,263	$0	0	a
B. Required Activities														
1. Initial Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	0	0	0	0	$0	$0	0	e
2. Initial Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	e
3. Initial Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	e
4. Initial Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	0	0	0	0	$0	$0	0	e
6. Annual Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	0	0	0	0	$0	$0	0	a
7. Annual Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	a
8. Annual Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	a
9. Annual Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	0	0	0	0	$0	$0	0	a
11. Repeat Stack Test and Report if Switch Fuels (for Hg and HCl)	24	$0	$16,000	$0	1	24	0	0	0	0	$0	$0	0	a,e
12. Initial Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	1	5	0	0	0	0	$0	$0	0	a,f
Content	5	$0	$400	$0	12	60	0	0	0	0	$0	$0	0	a,f
14. Continuous Parameter Monitoring														k
Establish Site-specific monitoring plan (all)	40	$0		$0	1	40	0	0	0	0	$0	$0	0	a
Opacity														
a) initial	10	$0	$0	$43,100	1	10	0	0	0	0	$0	$0	0	a
b) annual	10	$0	$0	$14,700	1	10	0	0	0	0	$0	$0	0	a
PM (only sources greater than 250 mmBtu/hr)														
a) initial	10	$0	$0	$158,000	1	10	0	0	0	0	$0	$0	0	a
b) annual	10	$0	$0	$56,100	1	10	0	0	0	0	$0	$0	0	a
O2														
a) initial	10	$0	$0	$8,523	1	10	0	0	0	0	$0	$0	0	a
b) annual	10	$0	$0	$1,436	1	10	0	0	0	0	$0	$0	0	a
Scrubber System Monitoring and Operation (for units with wet scrubbers)														
a) initial	10	$0	$0	$24,300	1	10	0	0	0	0	$0	$0	0	a
b) annual	10	$0	$0	$5,600	1	10	0	0	0	0	$0	$0	0	a
Bag Leak Detection System Operation (sources that have fabric filters)														
a) initial	10	$0	$0	$25,500	1	10	0	0	0	0	$0	$0	0	a
b) annual	10	$0	$0	$9,700	1	10	0	0	0	0	$0	$0	0	a
15. Annual Tune-up	12	$0	$2,875	$0	1	12	262	3,144	314	157	$395,919	$753,250	0	c
16. Mercury Fuel Spec Analysis	5	$0	$200	$0	12	60	0	0	0	0	$0	$0	0	h
C. Create Information	na													
D. Gather Information	na													
E. Report Preparation														
1) Initial Notification that Source is Subject	2	$0	$0	$0	1	2	34	68	7	3	$8,563	$0	34	a
2) Notification of Compliance Status	8	$0	$0	$0	1	8	34	272	27	14	$34,253	$0	34	a
3) Annual Compliance Report	20	$0	$0	$0	1	20	34	680	68	34	$85,631	$0	34	a, e
4) Semi-annual Compliance Report	20	$0	$0	$0	2	40	0	0	0	0	$0	$0	0	a, e
5) Notification of Alternative Fuel Use	5	$0	$0	$0	1	5	0	0	0	0	$0	$0	0	i
6) Affirmative Defense	30	$0	$0	$0	1	30	0	0	0	0	$0	$0	0	j
Reporting Subtotal								5,524	552	276	$695,629	$753,250	102	
4. Recordkeeping Requirements														
A. Read Instructions	Included in 3a													
B. Implement Activities	na													
C. Develop Record System	na													d
D. Record Information														
1) Records of Operating Parameter Values	20	$0	$0	$0	1	20	0	0	0	0	$0	$0	0	a
2) Records of Startup, Shutdown, Malfunction	15	$0	$0	$0	1	15	0	0	0	0	$0	$0	0	a
3) Records of Stack Tests	2	$0	$0	$0	1	2	0	0	0	0	$0	$0	0	a
4) Records of Monitoring Device Calibrations	2	$0	$0	$0	1	2	0	0	0	0	$0	$0	0	a
Submitted	2	$0	$0	$0	2	4	34	136	14	7	$17,126	$0	0	a, e
6) Records of All Semi-Annual Compliance Reports Submitted	2	$0	$0	$0	2	4	0	0	0	0	$0	$0	0	a, e
7) Records of Monthly Fuel Use	0.5	$0	$0	$0	12	6	262	1,572	157	79	$197,960	$0	0	a
8) Records of Annual Tune-up	0.25	$0	$0	$0	1	0.25	262	66	7	3	$8,248	$0	262	c
E. Personnel Training	40	$0	$0	$0	1	40	34	1,360	136	68	$171,263	$0	0	g
F. Time for Audits	na													
Recordkeeping Subtotal								3,134	313	157	$394,597	$0		
Totals								**8,658**	**866**	**433**	**$1,090,226**	**$753,250**	**102**	

a In order to calculate a per year estimate of the number of boilers and facilities required to meet these rule requirements, the number of projected boilers and facilities is each divided by 3.

b A one-time requirement.

c All large boilers require annual tune-ups.

d Assumes facility must already maintain records on boiler insurance and/or maintenance schedule as part of their operations. No new record system would be required.

e Only facilities with process gas (gas 2 units) subject to numerical emission limits are expected to be required to submit semi-annual compliance reports and conduct testing and monitoring (There will not be any new process gas units). Natural gas and refinery gas units are required to submit reports annually and conduct a tune-up.

f Process gas units are expected to demonstrate compliance with a stack test instead of a fuel analysis.

g For on-going training activities to keep personnel updated in order to implement compliance activities.

Table 6.B.: Annual Respondent Burden and Cost – NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD) (Renewal)

New Large Gas Fuel Units

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Certified Energy Audit Cost per Occurrence	(C) Stack Testing and Fuel Analysis Cost Per Occurrence	(D) Other Non-Labor Costs Per Occurrence	(E) Number of Occurrences Per Respondent Per Year	(F) Technical Hours per Respondent Per Year (A X E)	(G) Number of Respondents Per Year	(H) Technical Hours per Year @ $99.16 (F X G)	(I) Clerical Hours per Year @ $50.88 (H X 0.1)	(J) Management Hours per Year @ $127.43 (H X .05)	(K) Total Labor Costs Per Year	(L) Total Non-Labor Capital Costs Per Year [(B+C+D)xExG]	(M) Total Number of Responses per Year (E X G)	Footnotes
1. Applications	na													
2. Surveys and Studies	na													
3. Reporting Requirements														
A. Read and Understand Rule Requirements	40	$0	$0	$0	1	40	33	1,320	132	66	$166,226	$0	0	a
B. Required Activities														
1. Initial Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	0	0	0	0	$0	$0	0	e
2. Initial Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	e
3. Initial Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	e
4. Initial Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	0	0	0	0	$0	$0	0	e
6. Annual Stack Test and Report (for PM)	12	$0	$5,000	$0	1	12	0	0	0	0	$0	$0	0	a
7. Annual Stack Test and Report (for Hg)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	a
8. Annual Stack Test and Report (for HCl)	12	$0	$8,000	$0	1	12	0	0	0	0	$0	$0	0	a
9. Annual Stack Test and Report (for CO)	12	$0	$7,000	$0	1	12	0	0	0	0	$0	$0	0	a
11. Repeat Stack Test and Report if Switch Fuels (for Hg and HCl)	24	$0	$16,000	$0	1	24	0	0	0	0	$0	$0	0	a,e
12. Initial Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	1	5	0	0	0	0	$0	$0	0	a,f
13. Monthly Fuel Analysis for Mercury and HCL Content	5	$0	$400	$0	12	60	0	0	0	0	$0	$0	0	a,f
14. Continuous Parameter Monitoring														j
Establish Site-specific monitoring plan (all)	40	$0		$0	1	40	0	0	0	0	$0	$0	0	a
Opacity														
a) initial	10	$0	$0	$43,100	1	10	0	0	0	0	$0	$0	0	a
b) annual	10	$0	$0	$14,700	1	10	0	0	0	0	$0	$0	0	a
PM (only sources greater than 250 mmBtu/hr)														
a) initial	10	$0	$0	$158,000	1	10	0	0	0	0	$0	$0	0	a
b) annual	10	$0	$0	$56,100	1	10	0	0	0	0	$0	$0	0	a
O2														
a) initial	10	$0	$0	$8,523	1	10	0	0	0	0	$0	$0	0	a
b) annual	10	$0	$0	$1,436	1	10	0	0	0	0	$0	$0	0	a
Scrubber System Monitoring and Operation (for units with wet scrubbers)														
a) initial	10	$0	$0	$24,300	1	10	0	0	0	0	$0	$0	0	a
b) annual	10	$0	$0	$5,600	1	10	0	0	0	0	$0	$0	0	a
Bag Leak Detection System Operation (sources that have fabric filters)														
a) initial	10	$0	$0	$25,500	1	10	0	0	0	0	$0	$0	0	a
b) annual	10	$0	$0	$9,700	1	10	0	0	0	0	$0	$0	0	a
15. Annual Tune-up	12	$0	$2,875	$0	1	12	261	3,132	313	157	$394,408	$750,375	0	c
16. Mercury Fuel Spec Analysis	5	$0	$200	$0	12	60	0	0	0	0	$0	$0	0	h
C. Create Information	na													
D. Gather Information	na													
E. Report Preparation														
1) Initial Notification that Source is Subject	2	$0	$0	$0	1	2	33	66	6.6	3.3	$8,311	$0	33	a
2) Notification of Compliance Status	8	$0	$0	$0	1	8	33	264	26.4	13.2	$33,245	$0	33	a
3) Annual Compliance Report	20	$0	$0	$0	1	20	33	660	66	33	$83,113	$0	33	a, e
4) Semi-annual Compliance Report	20	$0	$0	$0	2	40	0	0	0	0	$0	$0	0	a, e
5) Notification of Alternative Fuel Use	5	$0	$0	$0	1	5	0	0	0	0	$0	$0	0	i
Reporting Subtotal									**6,258**		**$685,303**	**$750,375**	**99**	
4. Recordkeeping Requirements														
A. Read and Understand Rule Requirements	Included in 3a													
B. Implement Activities	na													
C. Develop Record System	na													d
D. Record Information														
1) Records of Operating Parameter Values	20	$0	$0	$0	1	20	0	0	0	0	$0	$0	0	a
2) Records of Startup, Shutdown, Malfunction	15	$0	$0	$0	1	15	0	0	0	0	$0	$0	0	a
3) Records of Stack Tests	2	$0	$0	$0	1	2	0	0	0	0	$0	$0	0	a
4) Records of Monitoring Device Calibrations	2	$0	$0	$0	1	2	0	0	0	0	$0	$0	0	a
5) Records of All Annual Compliance Reports Submitted	2	$0	$0	$0	2	4	33	132	13.2	6.6	$16,623	$0	0	a, e
6) Records of All Semi-Annual Compliance Reports Submitted	2	$0	$0	$0	2	4	0	0	0	0	$0	$0	0	a, e
7) Records of Monthly Fuel Use	0.5	$0	$0	$0	12	6	261	1,566	157	78.3	$197,204	$0	0	a
8) Records of Annual Tune-up	0.25	$0	$0	$0	1	0.25	261	65	6.53	3.26	$8,217	$0	261	c
E. Personnel Training	40	$0	$0	$0	1	40	33	1,320	132	66	$166,226	$0	0	g
F. Time for Audits	na													
Recordkeeping Subtotal									**3,546**		**$388,269**	**$0**		
Totals									**9,804**		**$1,073,572**	**$750,375**	**99**	

a In order to calculate a per year estimate of the number of boilers and facilities required to meet these rule requirements, the number of projected boilers and facilities is each divided by 3.

b A one-time requirement.

c Energy Audits are a requirement for existing units only.

d Assumes facility must already maintain records on boiler insurance and/or maintenance schedule as part of their operations. No new record system would be required.

e Only facilities with process gas (gas 2 units) subject to numerical emission limits are expected to be required to submit semi-annual compliance reports and conduct testing and monitoring (There will not be any new process gas units). Natural gas and refinery gas units are required to submit reports annually and conduct a tune-up. While the rule provides flexibility to conduct less frequent tune-ups for large units that have a continuous oxygen trim system that maintains an optimum air to fuel ratio, the number of units with this configuration is unknown and the ICR conservatively assumes all large units will conduct tune-ups annually.

f Process gas units are expected to demonstrate compliance with a stack test instead of a fuel analysis. However no new process gas units were estimated.

g For on-going training activities to keep personnel updated in order to implement compliance activities. Assumes all new respondents will conduct training.

h Assume all units will fire natural gas, so fuel spec analysis not necessary.

i Assumed no units would fire an alternative fuel.

j Estimated number of units expected to require each type of parameter monitoring are consistent with the estimated number of units expected to install controls, as outlined in the memorandum: "Revised (November 2011) Methodology for Estimating Cost and Emissions Impacts for Industrial, Commercial, Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants – Major Source." Small edits to the MACT floor dataset were made after the impacts analysis and ICR burden estimates were prepared. These edits are not reflected in the ICR or impacts analysis, but the changes are incorporated into the burden estimates for the final rule.

Table 7.B.: Annual Respondent Burden and Cost – NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD) (Renewal)
Existing Small and Limited Use Solid Fuel Units

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Certified Energy Audit Cost per Occurrence	(C) Annual Tune-Up Cost per Occurrence	(D) Other Non-Labor Costs Per Occurrence	(E) Number of Occurrences Per Respondent Per Year	(F) Technical Hours per Respondent Per Year (A X E)	(G) Number of Respondents Per Year	(H) Technical Hours per Year @ $99.16 (F X G)	(I) Clerical Hours per Year @ $50.88 (H X 0.1)	(J) Management Hours per Year @ $127.43 (H X .05)	(K) Total Labor Costs Per Year	(L) Total Non-Labor Capital Costs Per Year ((B+C+D)x ExG)	(M) Total Number of Responses per Year (E X G)	Footnotes
1. Applications	na													
2. Surveys and Studies	na													
3. Reporting Requirements														
A. Familiarization with Rule Requirements	5	$0	$0	$0	1	5	5	25	3	1	$3,148	$0	0	a
B. Required Activities														
1. Conduct Energy Audit														
a) Commerical	20	$854	$0	$0	1	20	0	0	0	0	$0	$0	0	b,c, d
b) Industrial	20	$18,292	$0	$0	1	20	0	0	0	0	$0	$0	0	b,c, d
2. Biennual Tune-Up	12	$0	$2,228	$0	0.5	6	44	264	26.4	13.2	$33,245	$98,032	0	c,i
C. Create Information	na													
D. Gather Information	na													
E. Report Preparation														
1) Initial Notification that Source is Subject	2	$0	$0	$0	1	2	0	0	0	0	$0	$0	0	a
2) Notification of Compliance Status	8	$0	$0	$0	1	8	0	0	0	0	$0	$0	0	c
3) Biennial Compliance Report	5	$0	$0	$0	0.5	2.5	5	13	1.25	0.63	$1,574	$0	3	f
4) Initial Report on results of Energy Audit	5	$0	$0	$0	1	5	0	0	0.00	0.00	$0	$0	0	c
								302	**30**	**15**				
Reporting Subtotal									**347**		**$37,967**	**$98,032**	**3**	
4. Recordkeeping Requirements														
A. Familiarization with Rule Requirements	Included in 3a													
B. Implement Activities	na													
C. Develop Record System	na													e
D. Record Information														
1) Records of All Notifications and Compliance Reports Submitted	2	$0	$0	$0	0.5	1	5	5	0.50	0.25	$630	$0	0	c
2) Records of Startup, Shutdown, Malfunction	15	$0	$0	$0	1	15	0	0	0	0	$0	$0	0	g
3) Biennial Tune-Up Records	0.5	$0	$0	$0	0.5	0.25	44	11	1.10	0.55	$1,385	$0	0	c
E. Personnel Training	40	$0	$0	$0	1	40	3	120	12	6	$15,111	$0	0	h
F. Time for Audits	na													
Recordkeeping Subtotal									**156**		**$17,126**	**$0**	**0**	
Totals									**503**		**$55,094**	**$98,032**	**3**	

Should this be 5 existing respondents, see year 1 totals in table 3

a The burden on existing sources to refamiliarize themselves with the rule requirements is assumed at 5 hours for small units.

b Cost includes taking an inventory of facility equipment including age, operating schedules, square feet of the facility and other details necessary for preparing for the audit pre-screening, attending the energy audit, and reviewing audit report from the audit professional. Based on the distribution facility NAICS codes in the 2008 combustion unit survey database, 12% of facilities are in the commercial sector while the remaining 88% of facilities are in the industrial sector.

c It is assumed that the affected existing units have conducted an audit, developed an initial site-specific testing and monitoring plan, and submitted initial notifications following the compliance date of January 31, 2016. It is assumed that all existing units are submitting reports and conducting the required recordkeeping. Annualized cost of $2228 for a tune-up is calculated considering a biennual schedule.

d Cost per occurrence for energy audit professionals including an phone screening to discuss the facility prior to a visit, a 2 to 4 hour site visit, and an additional 2-4 hours to prepare a follow-up report on recommendations and findings. These site visits are assumed to be conducted by certified energy professionals. It is assumed that all will be industrial facilities since industrial is the vast majority of projected units.

e Assumes facility must already maintain records on boiler insurance and/or maintenance schedule. No new record system would be required.

f Since a tune-up is required biennially, every two years, the compliance reports for small units are also due every two years. Records of the tune-ups will be submitted to the Administrator upon request.

g Small units are not required to maintain records on startup, shutdown and malfunction.

h For on-going training activities to keep personnel updated in order to implement compliance activities. Assumes half of respondents will conduct training each year.

i Assumes a biennial tune-up is conducted on half of all units each year. Some very small boilers (<5mmBtu/hr) or limited use boilers which operate less than 100 hours annually qualify for tune-ups every five years, however they would still incur an initial tune-up. For the time period of this ICR, there will not be a difference in burden associated with biennial vs 5-year tune-ups for existing units.

Table 8.B.: Annual Respondent Burden and Cost – NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD) (Renewal)
Existing Small and Limited Use Liquid Fuel Units

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Certified Energy Audit Cost per Occurrence	(C) Annual Tune-Up Cost per Occurrence	(D) Other Non-Labor Costs Per Occurrence	(E) Number of Occurrences Per Respondent Per Year	(F) Technical Hours per Respondent Per Year (A X E)	(G) Number of Respondents Per Year	(H) Technical Hours per Year @ $99.16 (F X G)	(I) Clerical Hours per Year @ $50.88 (H X 0.1)	(J) Management Hours per Year @ $127.43 (H X .05)	(K) Total Labor Costs Per Year	(L) Total Non-Labor Capital Costs Per Year ((B+C+D)xExG)	(M) Total Number of Responses per Year (E X G)	Footnotes
1. Applications	na													
2. Surveys and Studies	na													
3. Reporting Requirements														
A. Familiarization with Rule Requirements	5	$0	$0	$0	1	5	45	225	23	11	$28,334	$0	0	a
B. Required Activities														
1. Conduct Energy Audit														
a) Commerical	20	$854	$0	$0	1	20	0	0	0	0	$0	$0	0	b, c, d
b) Industrial	20	$18,292	$0	$0	1	20	0	0	0	0	$0	$0	0	b, c, d
2. Biennual Tune-Up	12	$0	$2,228	$0	0.5	6	385	2,310	231.0	115.5	$290,895	$857,780	0	c, f, i
C. Create Information	na													
D. Gather Information	na													
E. Report Preparation														
1) Initial Notification that Source is Subject	2	$0	$0	$0	1	2	0	0	0	0	$0	$0	0	a
2) Notification of Compliance Status	8	$0	$0	$0	1	8	0	0	0.0	0.0	$0	$0	0	c
3) Biennial Compliance Report	5	$0	$0	$0	0.5	2.5	45	113	11.3	5.6	$14,167	$0	23	c, f
4) Initial Report on results of Energy Audit	5	$0	$0	$0	1	5	0	0	0	0.0	$0	$0	0	c
Reporting Subtotal									**3,045**		**$333,396**	**$857,780**	**23**	
4. Recordkeeping Requirements														
A. Familiarization with Rule Requirements	Included in 3a													
B. Implement Activities	na													
C. Develop Record System	na													e
D. Record Information														
1) Records of All Notifications and Compliance Reports Submitted	2	$0	$0	$0	0.5	1	45	45	4.5	2.3	$5,667	$0	0	c
2) Records of Startup, Shutdown, Malfunction	15	$0	$0	$0	1	15	0	0	0	0	$0	$0	0	c, g
3) Biennial Tune-Up Records	0.5	$0	$0	$0	0.5	0.25	385	96	9.6	4.8	$12,121	$0	0	c, f
E. Personnel Training	40	$0	$0	$0	1	40	23	920	92	46	$115,854	$0	0	h
F. Time for Audits	na													
Recordkeeping Subtotal									**1220**		**$133,642**	**$0**	**0**	
Totals									**4,265**		**$467,037**	**$857,780**	**23**	

a The burden on existing sources to refamiliarize themselves with the rule requirements is assumed at 5 hours for small units.

b Cost includes taking an inventory of facility equipment including age, operating schedules, square feet of the facility and other details necessary for preparing for the audit pre-screening, attending the energy audit, and reviewing audit report from the audit professional. Based on the distribution of facilities with affected boilers or process heaters, 88% of facilities are in the industrial sector while the remaining 12% of facilities are in the commercial sector.

c It is assumed that the affected existing units have eonducted an audit, developed an initial site-specific testing and monitoring plan, and submitted initial notifications following the compliance date of January 31, 2016. It is assumed that all existing units are submitting reports and conducting the required recordkeeping. Annualized cost of $2228 for a tune-up is calculated considering a biennual schedule.

d Cost per occurrence for energy audit professionals including an phone screening to discuss the facility prior to a visit, a 2 to 4 hour site visit, and an additional 2-4 hours to prepare a follow-up report on recommendations and findings. These site visits are assumed to be conducted by certified energy professionals.

e Assumes facility must already maintain records on boiler insurance and/or maintenance schedule. No new record system would be required.

f Since a tune-up is required biennially, every two years, the compliance reports for small units are also due every two years. Records of the tune-ups will be submitted to the Administrator upon request.

g Small units are not required to maintain records on startup, shutdown and malfunction.

h For on-going training activities to keep personnel updated in order to implement compliance activities. Assumes half of respondents will conduct training each year.

edited footnote

i Assumes a biennial tune-up is conducted on half of all units each year. Some very small boilers (<5mmBtu/hr) or limited use boilers which operate less than 100 hours annually qualify for tune-ups every five years, however they would still incur an initial tune-up. For the time period of this ICR, there will not be a difference in burden associated with biennial vs 5-year tune-ups for existing units.

Table 9.B.: Annual Respondent Burden and Cost – NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD) (Renewal)
Existing Small and Limited Use Gas Fuel Units

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Emission Test Contractor Hours Per Occurrence	(B) Certified Energy Audit Cost per Occurrence	(C) Annual Tune-Up Cost per Occurrence	(D) Other Non-Labor Costs Per Occurrence	(E) Number of Occurrences Per Respondent Per Year	(F) Technical Hours per Respondent Per Year (A X E)	(G) Number of Respondents Per Year	(H) Technical Hours per Year @ $99.16 (F X G)	(I) Clerical Hours per Year @ $50.88 (H X 0.1)	(J) Management Hours per Year @ $127.43 (H X .05)	(K) Total Labor Costs Per Year	(L) Total Non-Labor Capital Costs Per Year ((B+C+D)xExG)	(M) Total Number of Responses per Year (E X G)	Footnotes
1. Applications	na														
2. Surveys and Studies	na														
3. Reporting Requirements															
A. Familiarization with Rule Requirements	5		$0	$0	$0	1	5	1,027	5,135	514	257	$646,643	$0	0	a
B. Required Activities															
1. Conduct Energy Audit															
a) Commerical	20		$854	$0	$0	1	20	0	0	0.00	0.00	$0	$0	0	b,c,d
b) Industrial	20		$18,292	$0	$0	1	20	0	0	0.00	0.00	$0	$0	0	b,c,d
2. Biennial Tune-Up	12		$0	$1,580	$0	0.5	6	8,811	52,866	5,286.6	2,643.3	$6,657,336	$13,921,380	0	c,f,i
C. Create Information	na														
D. Gather Information	na														
E. Report Preparation															
1) Initial Notification that Source is Subject	2		$0	$0	$0	1	2	0	0	0	0	$0	$0	0	a
2) Notification of Compliance Status	8		$0	$0	$0	1	8	0	0	0.00	0.00	$0	$0	0	c
3) Biennial Compliance Report	5		$0	$0	$0	0.5	2.5	1,027	2,568	256.75	128.38	$323,321	$0	514	c,f
4) Initial Report on results of Energy Audit	5		$0	$0	$0	1	5	0	0	0.00	0.00	$0	$0	0	c
Reporting Subtotal										**69,654**		**$7,627,300**	**$13,921,380**	**514**	
4. Recordkeeping Requirements															
A. Familiarization with Rule Requirements	Included in 3a														
B. Implement Activities	na														
C. Develop Record System	na														e
D. Record Information															
1) Records of All Notifications and Compliance Reports Submitted	2	0	$0	$0	$0	0.5	1	1,027	1,027	102.70	51.35	$129,329	$0	0	c
2) Records of Startup, Shutdown, Malfunction	15	0	$0	$0	$0	1	15	0	0	0	0	$0	$0	0	c,g
3) Biennial Tune-Up Records	0.5		$0	$0	$0	0.5	0.25	8,811	2,203	220.28	110.14	$277,389	$0	0	c,f
E. Personnel Training	40		$0	$0	$0	1	40	514	20,560	2,056	1,028	$2,589,090	$0	0	h
F. Time for Audits	na														
Recordkeeping Subtotal										**27358**		**$2,995,808**	**$0**	**0**	
Totals										**97,012**		**$10,623,108**	**$13,921,380**	**514**	

a The burden on existing sources to refamiliarize themselves with the rule requirements is assumed at 5 hours for small units.

b Cost includes taking an inventory of facility equipment including age, operating schedules, square feet of the facility and other details necessary for preparing for the audit pre-screening, attending the energy audit, and reviewing audit report from the audit professional. Based on the distribution of facilities with affected boilers or process heaters, 88% of facilities are in the industrial sector while the remaining 12% of facilities are in the commercial sector.

c It is assumed that the affected existing units have eonducted an audit, developed an initial site-specific testing and monitoring plan, and submitted initial notifications following the compliance date of January 31, 2016. It is assumed that all existing units are submitting reports and conducting the required recordkeeping. Annualized cost of $2228 for a tune-up is calculated considering a biennual schedule.

d Cost per occurrence for energy audit professionals including an phone screening to discuss the facility prior to a visit, a 2 to 4 hour site visit, and an additional 2-4 hours to prepare a follow-up report on recommendations and findings. These site visits are assumed to be conducted by certified energy professionals.

e Assumes facility must already maintain records on boiler insurance and/or maintenance schedule. No new record system would be required.

f Since a tune-up is required biennially, every two years, the compliance reports for small units are also due every two years. Records of the tune-ups will be submitted to the Administrator upon request.

g Small units are not required to maintain records on startup, shutdown and malfunction.

h For on-going training activities to keep personnel updated in order to implement compliance activities. Assumes half of respondents will conduct training each year.

edited footnote

i Assumes a biennial tune-up is conducted on half of all units each year. Some very small boilers (<5mmBtu/hr) or limited use boilers which operate less than 100 hours annually qualify for tune-ups every five years, however they would still incur an initial tune-up. For the time period of this ICR, there will not be a difference in burden associated with biennial vs 5-year tune-ups for existing units.

Table 10.B.: Annual Respondent Burden and Cost – NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD) (Renewal)

New Small Solid Fuel Units

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Certified Energy Audit Cost per Occurrence	(C) Annual Tune-Up Cost per Occurrence	(D) Other Non-Labor Costs Per Occurrence	(E) Number of Occurrences Per Respondent Per Year	(F) Technical Hours per Respondent Per Year (A X E)	(G) Number of Respondents Per Year	(H) Technical Hours per Year @ $99.16 (F X G)	(I) Clerical Hours per Year @ $50.88 (H X 0.1)	(J) Management Hours per Year @ $127.43 (H X .05)	(K) Total Labor Costs Per Year	(L) Total Non-Labor Capital Costs Per Year ((B+C+D)xExG)	(M) Total Number of Responses per Year (E X G)	Footnotes
1. Applications	na													
2. Surveys and Studies	na													
3. Reporting Requirements														
A. Read and Understand Rule Requirements	40	$0	$0	$0	1	40	1	40	4	2	$5,037	$0	0	a
B. Required Activities														
1. Biennial Tune-Up	12	$0	$2,228	$0	0.5	6	2	12	1.2	0.6	$1,511	$4,456	0	a
C. Create Information	na													
D. Gather Information	na													
E. Report Preparation														
1) Initial Notification that Source is Subject	2	$0	$0	$0	1	2	1	2	0	0	$252	$0	1	a
2) Notification of Compliance Status	8	$0	$0	$0	1	8	1	8	1	0	$1,007	$0	1	a
3) Biennial Compliance Report	5	$0	$0	$0	0.5	2.5	1	2.5	0.25	0.13	$315	$0	1	d
Reporting Subtotal									**74.2**		**$8,122**	**$4,456**	**3**	
4. Recordkeeping Requirements														
A. Read and Understand Rule Requirements	Included in 3a													
B. Implement Activities	na													
C. Develop Record System	na													b
D. Record Information														
1) Records of All Notifications and Compliance Reports Submitted	2	$0	$0	$0	0.5	1	1	1	0.10	0.05	$126	$0	0	a
2) Biennial Tune-Up Records	0.5	$0	$0	$0	0.5	0.25	2	1	0.05	0.03	$63	$0	0	a, d
E. Personnel Training	40	$0	$0	$0	1	40	1	40	4	2	$5,037	$0	0	c
F. Time for Audits	na													
Recordkeeping Subtotal									**47.7**		**$5,226**	**$0**	**0**	
Totals									**122**		**$13,348**	**$4,456**	**3**	

a Assumes one respondent with new small solid units per 3-year period, and that a tune-up is conducted on all units.

b Assumes facility must already maintain records on boiler insurance and/or maintenance schedule. No new record system would be required.

c For on-going training activities to keep personnel updated in order to implement compliance activities. Assumes all new respondents will conduct training.

d Since a tune-up is required biennially, every two years, the compliance reports for small units are also due every two years. Records of the tune-ups will be submitted to the Administrator upon request.

Table 11.B.: Annual Respondent Burden and Cost -- NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD) (Renewal) – Year 2

New Small Liquid Fuel Units

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Certified Energy Audit Cost per Occurrence	(C) Annual Tune-Up Cost per Occurrence	(D) Other Non-Labor Costs Per Occurrence	(E) Number of Occurrences Per Respondent Per Year	(F) Technical Hours per Respondent Per Year (A X E)	(G) Number of Respondents Per Year	(H) Technical Hours per Year @ $99.16 (F X G)	(I) Clerical Hours per Year @ $50.88 (H X 0.1)	(J) Management Hours per Year @ $127.43 (H X .05)	(K) Total Labor Costs Per Year	(L) Total Non-Labor Capital Costs Per Year ((B+C+D)xExG)	(M) Total Number of Responses per Year (E X G)	Footnotes
1. Applications	na													
2. Surveys and Studies	na													
3. Reporting Requirements														
A. Read and Understand Rule Requirements	40	$0	$0	$0	1	40	0	0	0	0	$0	$0	0	a
B. Required Activities														
1. Biennial Tune-Up	12	$0	$2,228	$0	0.5	6	0	0	0	0	$0	$0	0	
C. Create Information	na													
D. Gather Information	na													
E. Report Preparation														
1) Initial Notification that Source is Subject	2	$0	$0	$0	1	2	0	0	0	0	$0	$0	0	
2) Notification of Compliance Status	8	$0	$0	$0	1	8	0	0	0	0	$0	$0	0	
3) Biennial Compliance Report	5	$0	$0	$0	0.5	2.5	0	0	0	0	$0	$0	0	
Reporting Subtotal									**0**		**0**	**0**	**0**	
4. Recordkeeping Requirements														
A. Read and Understand Rule Requirements	Included in 3a													
B. Implement Activities	na													
C. Develop Record System	na													
D. Record Information														
1) Records of All Notifications and Compliance Reports Submitted	2	$0	$0	$0	0.5	1	0	0	0	0	$0	$0	0	
2) Biennial Tune-Up Records	0.5	$0	$0	$0	0.5	0.25	0	0	0	0	$0	$0	0	
E. Personnel Training	40	$0	$0	$0	1	40	0	0	0	0	$0	$0	0	
F. Time for Audits	na													
Recordkeeping Subtotal									0		$0	$0	0	
Totals									**0**		**$0**	**$0**	**0**	

a There are no new small solid units expected to be constructed/reconstructed over the next 3 years.

Table 12.B.: Annual Respondent Burden and Cost -- NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD) (Renewal) – Year 2

New Small Gas Fuel Units

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Certified Energy Audit Cost per Occurrence	(C) Annual Tune-Up Cost per Occurrence	(D) Other Non-Labor Costs Per Occurrence	(E) Number of Occurrences Per Respondent Per Year	(F) Technical Hours per Respondent Per Year (A X E)	(G) Number of Respondents Per Year	(H) Technical Hours per Year @ $99.16 (F X G)	(I) Clerical Hours per Year @ $50.88 (H X 0.1)	(J) Management Hours per Year @ $127.43 (H X .05)	(K) Total Labor Costs Per Year	(L) Total Non-Labor Capital Costs Per Year ((B+C+D)xExG)	(M) Total Number of Responses per Year (E X G)	Footnotes
1. Applications	na													
2. Surveys and Studies	na													
3. Reporting Requirements														
A. Read and Understand Rule Requirements	40	$0	$0	$0	1	40	41	1,640	164	82	$206,523	$0	0	a
B. Required Activities														
1. Biennial Tune-Up	12	$0	$2,228	$0	0.5	6	326	1,956	195.6	97.8	$246,316	$726,328	0	a,e,f
C. Create Information	na													
D. Gather Information	na													
E. Report Preparation														
1) Initial Notification that Source is Subject	2	$0	$0	$0	1	2	41	82	8.2	4.1	$10,326	$0	41	a
2) Notification of Compliance Status	8	$0	$0	$0	1	8	41	328	32.8	16.4	$41,305	$0	41	a
3) Biennial Compliance Report	5	$0	$0	$0	0.5	2.5	41	103	10.3	5.1	$12,908	$0	21	d,e
Reporting Subtotal									**4,725**		**517,377**	**726,328**	**103**	
4. Recordkeeping Requirements														
A. Read and Understand Rule Requirements	Included in 3a													
B. Implement Activities	na													
C. Develop Record System	na													b
D. Record Information														
1) Records of All Notifications and Compliance Reports Submitted	2	$0	$0	$0	0.5	1	41	41	4.1	2.1	$5,163	$0	0	a
2) Biennial Tune-Up Records	0.5	$0	$0	$0	0.5	0.25	326	82	8.2	4.1	$10,263	$0	0	a,e,f
E. Personnel Training	40	$0	$0	$0	1	40	41	1,640	164	82	$206,523	$0	0	c
F. Time for Audits	na													
Recordkeeping Subtotal									**2027**		**$221,949**	**$0**	**0**	
Totals									**6,752**		**$739,326**	**$726,328**	**103**	

a In order to calculate a per year estimate of the number of boilers and facilities required to meet these rule requirements, the number of projected boilers and facilities is each divided by 3.

b Assumes facility must already maintain records on boiler insurance and/or maintenance schedule. No new record system would be required.

c For on-going training activities to keep personnel updated in order to implement compliance activities.

d Since a tune-up is required biennially, every two years, the compliance reports for small units are also due every two years. Records of the tune-ups will be submitted to the Administrator upon request.

e Assumes for boilers which performed a tune-up in year 1, the biennial tune-up would also occur in year 3.

f Very small boilers qualify for tune-ups every five years, however they would still incur an initial tune-up when they come online. For those boilers in year 1 which were performing their initial five-year tune-up, a tune-up in year 3 is not necessary. Four boilers would qualify for 5-year tune-ups and are thus not applicable to tune-ups in year 3.

Table 13.A. Annual Federal Government Burden and Cost of Recordkeeping and Reporting for the Industrial, Commercial, and Institutional Boiler and Process Heater Major Source NESHAP Subpart DDDDD- Year 0 - First Year After Promulgation

Burden Item	EPA hours per occurrence (A)	Number of occurrences per year (B)	EPA hours per occurrence per year (C=AxB)	Technical hours per year (D=C)	Mangmt hours per year (E=Dx0.05)	Clerical hours per year (F=Dx0.1)	(H) Costs, $ k	Footnotes
1. Read and understand rule requirements	40	60	2,400	2,400	120	240	$129,413	a
2. Enter and update information into agency recordkeeping system	2	1,936	3,872	3,872	194	387	$208,786	b
3. Required activities								
A. Review and approve monitoring plan	20	4	80	80	4	8	$4,314	n
B. Review and approve fuel monitoring plan	20	4	80	80	4	8	$4,314	o
C. Observe initial stack/performance test	40	21	840	840	42	84	$45,294	c
D. Observe repeat performance test	40	13	520	520	26	52	$28,039	d
E. Review operating parameters	2	104	208	208	10	21	$11,216	e
F. Review continuous parameter monitoring	2	26	52	52	3	5	$2,804	f
4 Excess Emissions Enforcement Activities and Inspections	24	3	0	0	0	0	$0	g
5 Notification requirements								
A. Review initial notification that sources are subject to the standard	2	1,936	3,872	3,872	194	387	$208,786	b
B. Review notification of initial performance tests and review test plan	20	104	2,080	2,080	104	208	$112,158	e
C. Review notification of compliance status	2	80	160	160	8	16	$8,628	b
6. Reporting requirements			0	0	0	0	$0	
A. Review semiannual compliance report	4	8	32	32	2	3	$1,726	h
B. Review annual compliance report	2	0	0	0	0	0	$0	i
C. Review biennial compliance report	1	21	21	21	1	2	$1,132	j
D. Review initial report on results of energy audit	2	0	0	0	0	0	$0	L
7. Travel Expenses for Tests Attended	3 days * ($110 hotel + $58 meals/incidentals) + ($600 round trip) = $1104 per trip						$50,388	m
TOTAL BURDEN AND COST (SALARY)				14,217	711	1,422	**$816,997**	
TOTAL ANNUAL HOURS						**16,350**		

a Number of occurences is the number of states where affected sources will exist and each EPA Region (50 states + 10 EPA regions = 60 respondents).

b Number of occurences is based on the total number of affected facilities that are required to submit initial notifications stated they are subject to the standard (all new boilers in the large and small solid, liquid, and gaseous subcategories, plus all existing large and small solid, liquid, and gaseous subcategories). For initial notifications of compliance status, the number of occurences is based on all new boilers in the large and small solid, liquid, and gaseous subcategories, existing large and small solid, liquid, and gaseous units have until year 3 to submit this notification.

c Number of occurences is based on the assumption that EPA personnel will observe 20% of the initial performance tests that occur.

d Number of occurences is based on the assumption that of the units that test, 10% will have to retest and EPA personnel will observe all these retests. In addition solid fuel units are expected to re-test to obtain worst-case con

e Number of occurences is based on the number of units that will test and set/submit operating limits.

f Number of occurences begins in year 3 for existing units and in year 1 for new units and is based on the number of units maintaining records of control device parameters.

g Number of occurences is based on the assumption that of the units that test, 10% of them will have exceedances and need enforcement.

h Number of occurences is the number of units that will submit these semi-annual compliance reports, 2 reports per year per respondent.

i. Number of occurences is the number of units that will submit these annual compliance reports.

j. Number of occurences is the number units that will submit these biennial compliance reports.

k These rates are from the Office of Personnel Management (OPM), 2010 General Schedule, which excludes locality rates of pay. The rates have been increased by 60 percent to account for the benefit packages available to government employees. These rates can be obtained from the OPM web site, http//www.opm.gov/oca/payrates/index/htm.

L Energy audits only occur at existing facilities.

m Total cost is based on the number of trips taken by EPA to observe performance tests in year 1 (4.A. & 4.B.) multiplied by $1104 per trip. The source for hotel and meals/incidental costs is based on FY' 10 per diem rates, averaged across all locations in the United States. Airfares are estimated based on experience from other rulemakings. See: http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentId=17943&contentType=GSA_BASIC

Annual Capital/Startup vs. Operation and Maintenance (O&M) Costs

(A) Boiler Type	(B) Number of Respondents (facilities)	(C) Annual Capital/Startup Cost	(D) Annual O&M	(E) Annual O&M and Annualized Capital Costs
Existing Large Solid Units	121	$0	$74,866,304	$74,866,304
New Large Solid Units	3	$2,005,198	$1,218,750	$3,223,948
Existing Small and Limited Use Solid Units	5	$0	$98,032	$98,032
New Small Solid Units	1	$0	$4,456	$4,456
Existing Large Liquid Units	66	$0	$17,695,826	$17,695,826
New Large Liquid Units	0	$0	$0	$0
Existing Small and Limited Use Liquid Units	45	$0	$857,780	$857,780
New Small Liquid Units	0	$0	$0	$0
Existing Large Gaseous Units	669	$0	$18,867,183	$18,867,183
New Large Gaseous Units	33	$0	$750,375	$750,375
Existing Small and Limited Use Gaseous Units	1027	$0	$13,921,380	$13,921,380
New Small Gaseous Units	41	$0	$726,328	$726,328
Total	2,012	$2,005,198	$129,006,414	$131,011,612
Total (Rounded)	2,010	$2,000,000	$129,000,000	$131,000,000