

Table 1: Annual Respondent Burden and Cost – NESHAP for Oil and Natural Gas Production

	(A)	(B)	(C)	(D)
Burden item	Technical Person hours per occurrence	No. of occurrences per respondent per year	Technical Person hours per respondent per year (C=AxB)	Respondents per year ^a
1. Applications	N/A			
2. Surveys and studies	N/A			
3. Reporting requirements				
a. Familiarize with rule requirement ^c				
New sources	4	1	4	169
Existing sources (major source only)	1	1	1	596
b. Required activities	N/A			
<i>Major sources</i>				
i. Notification of construction/reconstruction ^c	2	1	2	28
ii. Notification of actual startup ^c	2	1	2	28
iii. Notification of date of CMS performance evaluation ^c	2	1	2	28
iv. Notification of date of performance test ^c	2	1	2	28
v. Notification of compliance status report ^c	4	1	4	28
vi. Affirmative Defense and malfunction reports ^e	2	2	4	596
vii. Semiannual periodic report ^e	2	2	4	596
<i>Area sources</i>				
i. Notification of intent to construct ^c	2	1	2	3
ii. Notification of actual startup date ^c	1	1	1	3
iii. Notification of intent to conduct performance test ^{c, f}	2	1	2	16
iv. Notification of date of CMS performance evaluation ^{c, f}	2	1	2	16
v. Notification of compliance status ^f	10	1	10	16
vi. First periodic report ^g	4	1	4	3
vii. Subsequent periodic reports ^g	2	1	2	78
viii. Affirmative Defense and malfunction reports ^h	2	10	20	16
c. Create information	N/A			
d. Gather existing information ^c	8	1	8	169
e. Affirmative defense ^d	N/A			
Subtotal for Reporting Requirements				
4. Recordkeeping requirements				
a. Familiarize with rule requirement				
Major source ⁱ	4	1	4	28
Area source ⁱ	4	1	4	141
b. Plan activities				
Major source	16	1	16	28
Area source				

i. Sources required to operate add-on controls ^j	16	1	16	81
ii. Sources required to implement MP ^k	4	1	4	138
c. Implement activities				
Major source	N/A			
Area source				
i. Performance test ^l	35	1	35	16
ii. Design analysis ^l	12	1	12	65
iii. Control equipment leak monitoring ^j	3	2	6	81
iv. Operate and maintain CMS ^{j, m}	2	12	24	81
d. Develop record system				
Major source				
i. Control equipment ^c	8	1	8	28
ii. Equipment inspection and monitoring ⁿ	13	1	13	596
Area source				
Control equipment ^o	8	1	8	16
e. Time to enter information				
Major source				
i. Control equipment monitoring ^{n, p}	1	2	2	596
ii. Control device CMS ^{n, p, q}	1	12	12	596
iii. Equipment inspection and monitoring ^{n, p, q}	1	12	12	596
Area source				
i. Control equipment leak monitoring ^{j, r}	1	2	2	81
ii. CMS measurements ^j	1	12	12	81
f. Time to train personnel				
Major source ^{c, s}	8	1	8	28
Area source ^{c, s}	8	1	8	3
g. Maintain records (area source) ^{j, t}	20	1	20	81
h. Retain records of emission ^u	1	1	1	3,836
i. Retrieve records/reports ^{j, v}	20	1	20	81
Subtotal for Recordkeeping Requirements				
Total Labor Burden and Costs (rounded)^w				
Total Capital and O&M Cost (rounded)^w				
GRAND TOTAL (rounded)^w				

Assumptions:

^a We assume that on average there are 4,669 existing sources (596 existing major sources and 3,914 existing area source) and 169 new respondents (28 new major source respondents and 141 new area source respondents) per year will be added to this ICR due to new construction. We assume that all 141 of the new area source respondents are newly constructed (greenfield) major sources. The remaining 10 new major source respondents are existing major sources that though they were new major source respondents.

^b This ICR uses the following labor rates for privately-owned sources: \$141.06 for managerial, \$120.27 for technical, and \$110.00 for unskilled labor. The Department of Labor, Bureau of Labor Statistics, June 2019, "Table 2. Civilian Workers, by occupational and industry group, have been increased by 110 percent to account for the benefit packages available to those employed by private industry.

^c New respondents are comprised of: 28 new major source respondents that are required to file reports, 3 new area source respondents that only maintain records, for a total of 169 new respondents per year on average. For existing respondents with the regulatory requirement. Most area source respondents only have recordkeeping requirements.

^d Not applicable.

^e We assume that affirmative defense and malfunction reports may be included as part of the semiannual periodic report. All existing major sources are subject to malfunction and semiannual reports.

^f We assume that 11% of new area sources are located within an urbanized area (UA)/urban cluster (UC) plus offset bou recordkeeping requirements.

^g We assume that 2% of existing area sources and 3 new area sources will complete this activity.

^h We assume that affirmative defense and malfunction reports may be included as part of the semiannual periodic reports will complete this activity. In addition, we estimate two hours are required to complete each report.

ⁱ We assume that it will take each of the new sources (28 major and 141 area) four hours to read instructions.

^j We assume that 2% of the 3,914 existing area sources (78 sources) and 3 new area sources will complete this activity.

^k This applies to new area sources that only keep records.

^l Performance of control devices can be evaluated with performance tests or design analysis. The estimated hours per act Number 1788.09 and 2440.02.

^m We assume that it will take each respondent two hours twelve times per year to implement this activity.

ⁿ This applies to the existing major sources.

^o The 11% of new area sources doing a performance test on control equipment need to develop a record system. The esti from EPA ICR Number 1788.09 and 2440.02.

^p We assume that all of the major sources will each take one hour to enter information.

^q We assume that each respondent will be required to enter information twelve times per year.

^r We assume that each respondent will be required to enter information two times per year.

^s We assume that new respondents subject to reporting requirements will take eight hours to train personnel in the recor

^t We assume that it will take 20 hours for each respondent to maintain records.

^u We assume that 98% of the 3,914 existing area source respondents are subject only to the recordkeeping requirements. emissions.

^v We assume that each respondent will take twenty hours once per year to retrieve records/reports.

^w Totals have been rounded to 3 significant figures. Figures may not add exactly due to rounding.

1 (40 CFR Part 63, Subpart HH) (Renewal)

(E)	(F)	(G)	(H)
Technical person- hours per year (E=CxD)	Management person hours per year (Ex0.05)	Clerical person hours per year (Ex0.1)	Total Cost Per Year ^b
676	33.8	67.6	\$90,036.44
596	29.8	59.6	\$79,381.24
56	2.8	5.6	\$7,458.64
56	2.8	5.6	\$7,458.64
56	2.8	5.6	\$7,458.64
56	2.8	5.6	\$7,458.64
112	5.6	11.2	\$14,917.28
2,384	119	238	\$317,524.96
2,384	119	238	\$317,524.96
6	0.3	0.6	\$799.14
3	0.15	0.3	\$399.57
32	1.6	3.2	\$4,262.08
32	1.6	3.2	\$4,262.08
160	8	16	\$21,310.40
12	0.6	1.2	\$1,598.28
157	8	16	\$20,852.23
320	16	32	\$42,620.80
1352	67.6	135	\$180,072.88
9,717			\$1,125,397
112	5.6	11.2	\$14,917.28
564	28.2	56.4	\$75,119.16
448	22.4	44.8	\$59,669.12

Labor Rates	
Manager	\$141.06
Technical	\$120.27
Clerical	\$58.67

2% of existing area sources

0.4% of existing area sources

1300	65	130	\$173,210.93
552	27.6	55.2	\$73,520.88
560	28	56	\$74,586.40
783	39	78	\$104,335.72
488	24	49	\$64,954.10
1951	98	195	\$259,816.40
224	11.2	22.4	\$29,834.56
7748	387	775	\$1,031,956.12
128	6.4	12.8	\$17,048.32
1192	59.6	119	\$158,762.48
7152	358	715	\$952,574.88
7152	358	715	\$952,574.88
163	8	16	\$21,651.37
975	49	98	\$129,908.20
224	11.2	22.4	\$29,834.56
24	1.2	2.4	\$3,196.56
1626	81	163	\$216,513.66
3836	192	384	\$510,879.55
1626	81	163	\$216,513.66
44,651			\$5,171,378.79
54,400			\$6,300,000
			\$1,040,000
			\$7,340,000

2% of existing area sources and 3 new

response
2,819
hr/response
19.3

as) during the three-year period of this ICR. We assume that an
become subject to new requirements under the rule over the three years
area sources, while 18 of the 28 new major source respondents are newly
perform construction or reconstruction and are required to file reports as

and \$58.67 for clerical labor. These rates are from the United States
group.” The rates are from column 1, “Total compensation.” The rates

the respondents that are required to file reports, and 138 new area sources, we assume only major source respondents will need to re-familiarize

s. In addition, we estimate two hours are required to complete each

boundary and have facilities subject to control, monitoring, and

s. We assume that 2% of existing area sources and 3 new area sources

activity and number of sources are based on estimates from EPA ICR

estimated hours per activity and number of sources are based on estimates

recordkeeping system.

. These sources will take one hour each year to process records of

7 area sources

Table 2: Average Annual EPA Burden and Cost – NESHAP for Oil and Natural Gas Production (40

Activity	(A)	(B)	(C)	(D)	(E)
	EPA person-hours per occurrence	No. of occurrences per plant per year	EPA person-hours per plant per year	Plants per year ^a	Technical person- hours per year
			(C=AxB)		(E=CxD)
Major source					
Initial notification ^c	2	1	2	28	56
Preconstruction review application ^c	4	1	4	28	112
Performance test notification ^c	2	1	2	28	56
Compliance status notification ^c	4	1	4	28	112
Affirmative Defense and malfunction reports ^d	2	2	4	596	2,384
Semiannual periodic reports ^e	2	2	4	596	2,384
Area sources					
Notification of intent to construct	2	1	2	3	6
Notification of actual startup date	2	1	2	3	6
Notification of intent to conduct performance test ^f	2	1	2	16	32
Notification of date of CMS performance evaluation	2	1	2	16	32
Notification of compliance status	4	1	4	16	64
Periodic reports - first and subsequent ^g	2	1	2	81	163
Affirmative Defense and malfunction reports ^h	2	1	2	16	32
TOTAL (rounded) ⁱ					

Assumptions:

^a We assume that on average there are 4,6698 existing sources (596 existing major sources and 3,914 existing area sources) due to an additional 169 new respondents (28 new major source respondents and 141 new area source respondents) per year will be added over the three years of this ICR due to new construction. We assume that all 141 of the new area source respondents are newly constructed (greenfield) major sources. The remaining 10 new major source respondents are for reconstruction and are required to file reports as though they were new major source respondents.

^b This ICR uses the following labor rates: \$66.62 for managerial, \$49.44 for technical, and \$26.75 for clerical labor. These rates are based on the (OPM), 2019 General Schedule, which excludes locality rates of pay. The rates have been increased by 60 percent to account for inflation.

^c We have assumed that this is a one-time only activity for each facility.

^d We have assumed that affirmative defense and malfunction reports may be included as part of the semiannual periodic report.

^e We have assumed that each respondent will take two hours two times per year to complete the semiannual periodic reports.

^f We have assumed that each of the respondents will take two hours once per year to complete requirements.

^g We assume that 2% of existing area sources and 3 new area sources will complete this activity.

^h We have assumed that it will take two hours once per year to review reports.

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

) CFR Part 63, Subpart HH) (Renewal)

(F)	(G)	(H)
Management person-hours per year	Clerical person-hours per year	Cost, \$ ^b
(Ex0.05)	(Ex0.1)	
2.8	5.6	\$3,104.98
5.6	11.2	\$6,209.95
2.8	5.6	\$3,104.98
5.6	11.2	\$6,209.95
119.2	238.4	\$132,183.26
119.2	238.4	\$132,183.26
0.3	0.6	\$332.68
0.3	0.6	\$332.68
1.6	3.2	\$1,774.27
1.6	3.2	\$1,774.27
3.2	6.4	\$3,548.54
8.1	16	\$9,013.30
1.6	3.2	\$1,774.27
6,250		\$302,000

Labor Rates	
Manager	\$66.62
Technical	\$49.44
Clerical	\$26.75

ring the three-year period of this ICR. We assume
 become subject to new requirements under the rule
 constructed area sources, while 18 of the 28 new
 re existing major sources that perform construction

ates are from the Office of Personnel Management
 or the benefit packages available to government

s.

Number of Respondents							
	(A)			(B)		(C)	(D)
Year	Number of New Respondents ^{1,2}			Number of Existing Respondents ³		Number of Existing Respondents that keep records but do not submit reports ^{3,4}	Number of Existing Respondents That Are Also New Respondents ⁵
	Major	Area	Area - Only Keep Records	Major	Area	Area	Major

ICR 1788.10

1	28	3	138	470	2,927	2,868	10
2	28	3	138	488	3,068	3,007	10
3	28	3	138	506	3,209	3,145	10
Average	28	3	138	488	3,068	3,007	10

ICR 1788.11

1	28	3	138	524	3,350	3,283	10
2	28	3	138	542	3,491	3,421	10
3	28	3	138	560	3,632	3,559	10
Average	28	3	138	542	3,491	3,421	10

ICR 1788.12

1	28	3	138	578	3,773	3,698	10
2	28	3	138	596	3,914	3,836	10
3	28	3	138	614	4,055	3,974	10
Average	28	3	138	596	3,914	3,836	10

¹ New respondents include sources with constructed or reconstructed affected facilities.

² We assume that there are 141 new area source respondents and 28 new major source respondents.

³ All major sources and 2 percent of area sources will maintain records and submit reports.

⁴ We assume that 98 percent of area sources will only be required to maintain records.

⁵ We estimate 10 of the 28 new major source respondents are existing respondents that become new respondents due to reconstruction, while 18 of the 28 new major source respondents are new facilities. Of the 10 existing respondents that become source respondents due to construction/reconstruction, we assume that all 10 of these existing respondents are already exist

(E)
Number of Respondents (E=A+B-D)
Area + Major

3,556
3,715
3,874
3,715

4,033
4,192
4,351
4,192

4,510
4,669
4,828
4,669

Correction to the 'Number of Existing Respondents That Are Also New Respondents':

1. ICR 1788.10 combined burden associated with the original rule, ICR 1788.09, and by 2440.02. However, 1788.10, and subsequently 1788.11, did not subtract out the value double counting of the number of new major sources in Column E. That is corrected here.
 2. The number of major sources subject to Subpart HH for 2018 in ECHO is 559, therefore sources from prior 1788.11 in year 3 is overestimated. To determine the growth rate for assumed 559 sources in 2018 - 470 sources in 2014 = (559-470)/5 years= ~18 new sources have retained the total number of new major sources (Column A), however, the estimate 'Existing Respondents That Are Also New Respondents' due to new construction/modification revised from 25 to 10. This revision appears to more accurately reflect the growth rate (greenfield) major sources. This is QAed below (yellow highlight).

If there are 28 new major source respondents and 141 new area source respondents and 10 respondents come from existing sources (major), then the increase in the total 'Number of Existing Respondents That Are Also New Respondents' should be (28+3+138) - 10 = 159.

Note to EPA: Data downloaded from ECHO in May 2019 (2018 data) indicates that the number of major sources subject to Subpart HH. Assuming that year 2 of ICR 1788.11 (issued in July 2016 with a revision that represents 2018 data, then the number of major sources shown for year 2 of the current rule is close to 559. Total is 542+28-10=560.

Existing	New
4510	169

instruction or
 some new major
 existing major sources.

:
burden for the amendment, ICR
s in Column D, leading to a
ere.
ore, the total number of major
or new major sources, we
rces per year. Therefore, we
ted value of the 'Number of
cation (Column D) has been
e of the industry for new

each year, and if 10 of the new
er of Respondents' each year

re are 559 major sources
renewal due in 2019) also
ent ICR (1788.11) should be

Total Annual Responses			
(A)	(B)	(C)	(D)
Information Collection Activity	Number of Respondents	Number of Responses	Number of Existing Respondents That Keep Records But Do Not Submit Reports
Major sources			
Notification of construction/reconstruction	28	1	0
Notification of actual startup	28	1	0
Notification of date of CMS performance evaluation	28	1	0
Notification of date of performance test	28	1	0
Notification of compliance status report	28	1	0
Affirmative defense and malfunction reports	596	2	0
Semiannual periodic report	596	2	0
Area sources			
Notification of intent to construct	3	1	0
Notification of actual startup date	3	1	0
Notification of intent to conduct performance test	16	1	0
Notification of date of CMS performance evaluation	16	1	0
Notification of compliance status	16	1	0
First periodic report	3	1	0
Subsequent periodic reports	78	1	0
Affirmative defense and malfunction reports	16	10	0
			Total

(E)
Total Annual Responses $E=(B \times C)+D$
28
28
28
28
28
1,192
1,192
3
3
16
16
16
3
78
160
2,819

Capital/Startup vs. Operation and Maintenance (O&M) Costs				
(A)	(B)	(C)	(D)	(E)
Continuous Monitoring Device	Capital/Startup Cost for One Respondent	Number of New Respondents	Total Capital/Startup Cost, (B X C)	Annual O&M Costs for One Respondent
THC analyzer (major source) ^a	\$10,200	28	\$285,600	\$1,020
Monitoring equipment (CMS) ^{b, c}	\$1,015	31	\$31,465	\$134
Postage cost ^d	NA	0	\$0	\$7.63
Total ^e			\$317,000	

a. Cost information for THC analyzer is from the EPA Air Pollution Control Cost Manual, January 2002, "Table 1.1. Equipment Costs for CEMS (\$)." EPA assumes all major sources utilize an organic monitoring device to measure organic compounds in the exhaust vent system. EPA estimates the cost for a TOC/HAP monitor based on the cost of a TOC/HAP monitor.

b. We assume that all new major sources (28) and 2 percent of new area sources (3) are required to purchase CMS.

c. We assume the average number of existing major sources (596), 2% of existing area sources (78), and 3 new area sources with CMS.

d. We estimate an average of 2,819 responses (reports).

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

Costs	
(F)	(G)
Number of Respondents with O&M	Total O&M, (E X F)
596	\$607,920
677	\$90,718
2,819	\$21,511
	\$720,000

**Total Capital and O&M
\$1,040,000**

Table 4.12: Default Analyzer and Monitor
 ensure the concentration level of organic
 a total hydrocarbon (THC) analyzer.

MS per year.

area sources have O&M costs associated