

Table 1: Annual Respondent Burden and Cost – NESHAP for Chemical Recovery Combustion

Burden item	(A) Person hours per occurrence	(B) No. of occurrences per respondent per year	(C) Person hours per respondent per year (C=AxB)	(D) Respondents per year ^a
1. Applications	N/A			
2. Surveys and studies	N/A			
3. Reporting requirements				
A. Familiarization with the regulatory requirements ^c	1	1	1	104
B. Required activities ^d				
Prepare for initial/periodic performance test	24	1	24	25
Attend initial/periodic performance test	24	2	48	25
Prepare for retest	24	1	24	5
Attend retest	24	2	48	5
C. Create information	See 3B			
D. Gather existing information	See 3B			
E. Write reports				
Notifications ^{e, f, g}				
Notification of construction/reconstruction	2	1	2	1
Notification of actual startup	2	1	2	1
Notification of applicability of standard	2	1	2	1
Notification of compliance status	80	1	80	1
Notification of performance test/retest	2	1	2	42
Notification of performance evaluation	2	1	2	42
Report of performance test/retest (through CEDRI using ERT) ^h	8	1	8	42
Excess emissions report (through CEDRI) ⁱ				
Semiannual reports of monitoring exceedances and periods of noncompliance	16	2	32	5
Semiannual reports of no exceedances	8	2	16	99
<i>Subtotal for Reporting Requirements</i>				
4. Recordkeeping requirements				
A. Read instructions	See 3A			
B. Plan activities	See 3B			
C. Implement activities	See 3B			
D. Develop record system ^j	40	1	40	1
E. Time to enter information				
Records and documentation of supporting calculations for compliance determinations ^k	8	1	8	42
Record of compliant monitoring parameter ranges	2	1	2	42

Records certifying that an NDCE recovery furnace equipped with a dry ESP system is used to comply with the gaseous organic HAP standard for kraft and soda recovery furnaces ¹	2	1	2	1
Records demonstrating compliance with requirement to maintain proper operation of ESP's AVC ^m	8	2	16	178
Records of failures to meet standards ⁿ	2	12	24	5
Records of black liquor solids firing rates for recovery furnaces and semichemical combustion units ^o	1.5	52	78	104
Records of lime production for lime kilns ^p	1.5	52	78	95
Records of CMS data ^q	0.5	1,050	525	104
F. Time to train personnel				
Initial training ^r	40	1	40	1
Refresher training ^s	16	1	16	104
G. Time to adjust existing ways to comply with previously applicable requirements ^t	17.8	1	17.8	0
H. Time to transmit or disclose information				
Compile data for semiannual periods ^u	96	2	192	104
Enter/verify information for semiannual reports ^v	8	2	16	104
I. Time for audits	N/A			
<i>Subtotal for Recordkeeping Requirements</i>				
TOTAL LABOR BURDEN AND COSTS (rounded)^w				
TOTAL CAPITAL AND O&M COST (rounded)^w				
GRAND TOTAL (rounded)^w				

^a We estimate that the number of existing sources subject to the rule is 104 pulp mills. We also estimate that new equipment subject to the rule over the 3 years of this ICR (two new recovery furnaces, two new SDTs, and one new lime kiln). Based on average of 104 pulp mills per year and new source requirements for an average of 1 pulp mills per year.

^b This ICR uses the following labor rates: \$149.84 per hour for Managerial labor; \$122.66 per hour for Technical labor, and United States Department of Labor, Bureau of Labor Statistics, September 2020, Table 2. Civilian Workers, by Occupator Compensation. The rates have been increased by 110% to account for the benefit packages available to those employed by

^c We have assumed that it will take 1 hour each year for existing respondents to refamiliarize themselves with rule requirements

^d We estimate that it will take the respondent 24 hours to prepare for initial/periodic performance test (e.g., prepare test plan, personnel will attend the test. We estimate that 74 mills will need to conduct a test (the rest of the 104 existing mills are already in compliance). We estimate that 74 mills will need to conduct a test (the rest of the 104 existing mills are already in compliance) will occur once during the 3-year ICR period (74 respondents/3 years = 25). In addition, we estimate that 20% of respondents will fail to failure.

^e With the exception of the notification of compliance status, we estimate that it will take the respondent 2 hours once per year to submit reports through the EPA's CEDRI.

^f We estimate that it will take the respondent 80 hours once in the initial year to prepare the notification of compliance status.

^g Hard copy report of performance test/retest is included in capital/startup costs. Submittal of performance test/retest data takes 8 hours for 43 mills (see respondent calculation in footnote g).

^h We estimate that 5% of respondents (5% x 104 respondents = 5) will each take 16 hours two times per year to complete reports on noncompliance and submit them through the EPA's CEDRI. We estimate that 95% of respondents (95% x 104 respondents = 99) will take 16 hours two times per year to complete reports on no exceedances and submit them through the EPA's CEDRI.

ⁱ We estimate that it will take one respondent 40 hours to develop a record system to comply with monitoring requirements.

^j We estimate that it will take the respondent 8 hours (1 day) each year to enter records and documentation of supporting data for record of compliant monitoring parameter ranges. We estimate that 42 mills (see footnote g) will enter this information (in addition to the 104 mills that are already in compliance).

^k We estimate that 2 existing mills will install new recovery furnaces over 3 years, for an average of 1 mill with new recovery furnace (0.67, or 1, rounded). Based on current industry trends, the new furnaces are expected to be a non-direct contact evaporator. We estimate that it will take the respondent 2 hours to record this information.

^l We estimate that it will take 8 hours per semiannual period each year to keep records demonstrating compliance with the 178 recovery furnace and lime kiln ESPs.

^m We estimate that 5% of respondents (5% x 104 respondents = 5) will fail to meet standards each year. We estimate that 5 respondents will keep records of failures to meet the standards.

ⁿ We estimate 104 existing kraft, soda, and stand-alone semichemical pulp mills have recovery furnaces or other chemical black liquor solids firing rate. We estimate that each respondent will take 1.5 hours 52 times per year to keep these records.

^o We estimate 95 existing kraft and soda pulp mills have lime kilns that will need to keep records of lime production rate.

^p We estimate that each respondent will take 0.5 hours 1,050 times per year to record wet scrubber and regenerative thermodynamic efficiency.

^q We estimate that it will take the respondent 40 hours (1 week) once per year for initial training of personnel with new software.

^r We estimate that it will take each respondent 16 hours to provide refresher training each year for personnel at all 104 existing mills.

^s Over the period October 11, 2017 through October 11, 2020, due to the RTR amendments published on October 11, 2017, we make a one-time adjustment to existing data acquisition systems to include startup and shutdown periods and the revised off-specification excess emissions reporting. This ICR includes the burden for the period January 1, 2022 through December 31, 2024, and a one-time implementation activity.

^t We estimate that each respondent will take 96 hours per semiannual period to compile data for all 104 mills.

^u We estimate that each respondent will take 8 hours two times per year to verify information for reports for all 104 mills.

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

Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills (40 CFR Part 6

(E) Technical person hr/yr (E=CxD)	(F) Management person hr/yr (Ex0.05)	(G) Clerical person hr/yr (Ex0.1)	(H) Total Cost Per year ^b	
				Tech \$122.66
				Mgmt \$149.84
				Cler \$60.88
104	5.2	10.4	\$14,168.96	
600	30	60	\$71,559	
1,200	60	120	\$163,488.00	
120	6	12	\$16,348.80	
240	12	24	\$32,697.60	
				Hours per Response
				117000 # hours
2	0.10	0.20	\$272.48	338 # responses
2	0.10	0.20	\$272.48	346 hr/resp
2	0.10	0.20	\$272.48	
80	4.00	8.00	\$10,899.20	
84	4.2	8.4	\$11,444.16	
84	4.2	8.4	\$11,444.16	
336	16.8	33.6	\$45,776.64	
160	8	16	\$21,798.40	
1,584	79.2	158.4	\$215,804.16	
5,288			\$616,247	
40	2	4.00	\$5,449.60	
336	17	33.6	\$45,806.61	
84	4.3	8.4	\$11,459.14	

2.0	0.07	0.2	\$267.98
2,848	146	284.8	\$388,550.94
120	6	12	\$16,348.80
8,112	406	811.2	\$1,105,238.82
7,410	382	741	\$1,011,261.56
54,600	2,809	5460	\$7,450,541.36
40	2	4.00	\$5,449.60
1,664	86	166.4	\$227,122.91
0	144	0	\$21,576.96
19,968	1,027	1996.8	\$2,724,725.74
1,664	86	166.40	\$227,122.91
111,694			\$13,240,923
117,000			\$13,900,000
			\$788,000
			\$14,700,000

nt will be installed at three existing pulp mills and become
on these estimates, over the 3 years of this ICR, there will be an

l \$60.88 per hour for Clerical labor. These rates are from the
ial and Industry groups. The rates are from column 1, Total
r private industry.

nents.

m) and 24 hours to attend the test. We also estimate 2 plant ready required under existing state rules to conduct tests); this nts (20% x 25 respondents =5) will repeat performance test due

year to complete the notifications and submit selected ones

us and submit it through the EPA's CEDRI.

through the EPA's CEDRI in ERT format is estimated to require

reports of monitoring exceedances and periods of
(= 99) will each take 8 hours two times per year to write reports

s.

calculation for compliance determinations and 2 hours to enter a cludes initial test and retest, for mills required to retest).

ery furnaces per year over the ICR period (2 mills/3 years=
(NDCE) recovery furnace equipped with a dry ESP system.

requirement to maintain proper operation of the ESP AVC for <--Note for EPA: Adjusting number of existing E

each respondent will take 2 hours 12 times per year to keep

recovery combustion units that will need to keep records of

We estimate that each respondent will take 1.5 hours 52 times pe<--Note for EPA: Adjusting to 95 based on GHG

ial oxidizer (RTO) parameters at all existing 104 mills.

ources (3 new respondents/3 years) = 1).

sting mills.

7, we estimated that it would take each respondent 80 hours to capacity monitoring allowances, and to transition to electronic assumes that existing sources are no longer performing this one-

3, Subpart MM) (Renewal)

ESPs downwards based on decrease in sources ($183 \text{ ESPs} / 107 \text{ sources} * 104 = 178$)

RP data (see "Count of Respondents" tab).

Table 2: Average Annual EPA Burden and Cost – NESHAP for Chemical Recovery Combustion

Activity	(A) EPA person- hours per occurrence	(B) No. of occurrences per plant per year	(C) EPA person- hours per plant per year (C=AxB)	(D) Plants per year ^a	(E) Technical person hr/yr (E=CxD)	(F) Management person hr/yr (Ex0.05)
1. Attend initial/periodic performance test ^c	24	1	24	3.5	84	4.2
2. Attend retest ^{c,d}	24	1	24	0.7	16.8	0.84
3. Report review						
Notification of construction/reconstruction ^e	2	1	2	1	2.00	0.10
Notification of actual startup ^e	2	1	2	1	2.00	0.10
Notification of applicability of standard ^e	2	1	2	1	2.00	0.10
Notification of initial/periodic performance test ^f	2	1	2	42	84	4.2
Notification of performance evaluation ^f	2	1	2	42	84	4.2
Review of notification of compliance status ^e	4	1	4	1	4.00	0.20
Review of excess emissions report						
Semiannual reports of monitoring exceedances and periods of noncompliance ^g	8	2	16	5	80	4
Semiannual reports of no exceedances ^h	2	2	4	99	396	19.8
Subtotal for Burden and Cost - Salary						868
Travel Expenses for Tests Attended ⁱ						
TOTAL ANNUAL BURDEN AND COST ^j						

^a We estimate that the number of existing sources subject to the rule is 104 pulp mills. We also estimate that new equipment existing pulp mills and become subject to the rule over the 3 years of this ICR (two new recovery furnaces, two new SDTs, a Based on these estimates, over the 3 years of this ICR, there will be an average of 104 pulp mills per year -and new source re 1 pulp mills per year.

^b This cost is based on the following labor rates which incorporate a 1.6 benefits multiplication factor to account for govern: \$69.04 Managerial rate (GS-13, Step 5, \$43.15 x 1.6), \$51.23 Technical rate (GS-12, Step 1, \$32.02 x 1.6), and \$27.73 Cleri \$17.33 x 1.6). These rates are from the Office of Personnel Management (OPM) 2021 General Schedule which excludes local

^c Assume EPA will attend tests at 3.5 plants per year. We estimate that it will take EPA personnel 24 hours once per year to performance tests at 10% of plants (0.10 x 104/3 years = 3.5), assuming 104 existing plants will test.

^d Assume EPA will attend retests at 0.7 plants per year. We estimate that 20% of respondents will repeat performance test du personnel will attend 10% of retests (0.20 x 0.10 x 104/3 years = 0.7), assuming 104 existing plants and 1 new plant will test

^e We estimate that it will take EPA personnel 2 hours once per year to complete review of the initial notifications (constructi startup, applicability of standard) and 4 hours once per year to review the notification of compliance status for new process u process units/3 years = 1).

^f We estimate that it will take EPA personnel 2 hours once per year to complete review of the initial and periodic notification and performance evaluation. We estimate that 42 mills will submit notifications of initial/periodic performance test/retest an over the 3-year ICR period (test: 104 existing respondents/3 years = 35; retest: 20% x 35 = 7; total: 35 + 7 = 42).

^g We estimate that it will take EPA personnel 8 hours two times per year to review the monitoring exceedances and periods of excess emissions report for 5% of respondents ($5\% \times 104 = 5$).

^h We estimate that it will take EPA personnel 2 hours two times per year to review the no exceedances report for 95% of respondents.

ⁱ We estimate that it will take EPA personnel 1 day per plant plus time for travel, at \$50 per diem per day, and \$400 transportation per trip. Assuming an average of 4.3 tests/retests each year ($3.5 \text{ tests} + 0.7 \text{ retests} = 4.2$) (see footnotes c and d), the annual cost for testing is $(4.2 \text{ tests/retests} * (\$400 + \$50) = \$1,890$).

^j Sum of salary and expenses. Total has been rounded to 3 significant figures. Figure may not add exactly due to rounding.

Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills (40 CFR Part 63,

(G) Clerical person hr/yr (Ex0.1)	(H) Cost, \$ ^b
8.4	\$4,826.22
1.68	\$965.24
0.20	\$114.91
0.20	\$114.91
0.20	\$114.91
8.4	\$4,826.22
8.4	\$4,826.22
0.40	\$229.82
8	\$4,596.40
39.6	\$22,752.18
	\$43,367
	\$1,890
	\$45,300

Tech	\$51.23
Mgmt	\$69.04
Cler	\$27.73

will be installed at three
and one new lime kiln).
quirements for an average of

ment overhead expenses:
ical rate (GS-6, Step 3,
ility rates of pay.

attend initial and periodic

ie to failure and that EPA

on/reconstruction, actual
nits (3 mills with new

as of performance test/retest
d performance evaluation

of noncompliance in the

pondents (95% x 104 = 99).

tation expense per round
or travel expenses is \$1,890

Subpart MM) (Renewal)

Capital/Startup Costs		
(A)	(B)	(C)
Cost Item	Capital/Startup Cost for One Respondent	Number of Respondents
Performance tests:		
Method 5 for PM	\$2,439	254
Method 25A for THC	\$3,414	5
Method 308 for methanol	\$3,414	6
Retests ^a		
Total annualized capital/startup cost ^b		

^a We estimate that 20% of respondents will repeat the performance test due to failure. Estimate as 3 existing facilities with 254 sources, and 6 new sources at 3 existing facilities, 5 of which require THC testing.

^b Annualized capital costs were estimated assuming a 5-year payment period at 7% interest for initial investment (with a capital recovery factor of 0.244).

(D)
Total Annualized Capital/ Startup Cost_b
(B x C)
\$619,482
\$17,072
\$20,487
\$131,408
\$788,000

**ERG
Notes**

Capital recovery factor:^b	0.244
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sumes 104 existing
ng.

tial performance tests

Total Annual Responses			
(A)	(B)	(C)	(D)
Information Collection Activity ^a	Number of Respondents	Number of Responses	Number of Existing Respondents That Keep Records But Do Not Submit Reports
Notification of construction/ reconstruction	1	1	0
Notification of actual startup	1	1	0
Notification of applicability of standard	1	1	0
Notification of performance test/ retest	42	1	0
Notification of performance evaluation	42	1	0
Notification of compliance status	1	1	0
Report of performance test/retest	42	1	0
Semiannual report of monitoring exceedances and periods of noncompliance	5	2	0
Semiannual report of no exceedances	99	2	0
			Total

(E)
Total Annual Responses
E=(BxC)+D
1
1
1
42
42
1
42
10
198
338

Number of Resp		
	Respondents That Submit Reports	
Year	(A) Number of New Respondents ^a	(B) Number of Existing Respondents
1	1	104
2	1	104
3	1	104
Average	1	104

Count of Existing Pulp Mills

Mill Type	Count of Existing Pulp Mills	
Kraft	62	
Kraft, Mechanical	4	
Kraft, Mechanical, Secondary	2	
Kraft, Secondary	17	
Kraft, Secondary, SemiChem	5	
Kraft, SemiChem	3	
Kraft, Sulfite-Na	1	
Soda	1	95
Secondary, Semichem	4	
SemiChem	2	6
Sulfite-Mg	1	
Sulfite-NH3	2	3
Grand Total	104	104

Respondents		
Respondents That Do Not Submit Any Reports		
(C) Number of Existing Respondents that keep records but do not submit reports	(D) Number of Existing Respondents That Are Also New Respondents	(E) Number of Respondents (E=A+B+C-D)
0	1	104
0	1	104
0	1	104
0	1	104

kraft/soda
semichem
sulfite