Table 1: Annual Respondent Burden and Cost – NESHAP for Chemical Manufacturing Area Sources (40 CFR Part 63, Subpart VVVVVV) (Renewal)

Burden Item	A Hours per occurrence	B No. of occurrences per respondent per year	C Hours per respondent per year (C = A x B)	D Respondents per year[a]	E Technical hours per year (E = C x D)	F Management hours per year (F = E x 0.05)	G Clerical hours per year (G = E x 0.10)	H Total costs per year ($)[b]
1. APPLICATIONS	N/A							
2. SURVEY AND STUDIES								
Heat exchange system monitoring plan[c]	40	1	40	0	0	0	0	$0
Metal process vent monitoring plan[d]	30	1	30	1	30	1.5	3	$3,929.76
3. REPORTING REQUIREMENTS								
A. Familiarize with Rule Requirement [e]	8	1	8	528	4,227.22	211.4	422.7	$553,731.62
B. Required Activities								
Initial Performance test[f]	24	1	24	0.2	4.8	0.24	0.48	$628.76
Design evaluation for process vent sources[f]	40	1	40	0.8	32	1.6	3.2	$4,191.74
Repeat Performance test[g]	24	1	24	0	0	0	0	$0
C. Create Information	Included in 3B							
D. Gather Existing Information	Included in 3E							
E. Write Report								
Notification of construction/reconstruction[h]	2	1	2	10	20	1.0	2.0	$2,665.53
Initial notification[i]	2	1	2	10	20	1.0	2.0	$2,665.53
Notification of compliance status[j]	8	1	8	10	81	4.1	8.1	$10,662.12
Notification of initial performance test[k]	2	1	2	0.2	0.4	0.02	0.04	$52.40
Report of performance test	Included in 3B							
Semiannual compliance reports[l]	8	2	16	105.7	1,690.89	85	169	$221,492.65
Reporting subtotal					***7,023.51***			***$800,020.11***
4. RECORDKEEPING REQUIREMENTS								
A. Familiarize with Rule Requirements[e]	Included in 3A							
B. Plan Activities	Included in 3B							
C. Implement Activities								
Initial calculations and demonstrations								
TRE calculation for continuous process vents[m]	3	1	3	1.57	4.71	0.24	0.47	$616.52
Calculation of batch process vent emissions[n]	6	1	6	4.71	28.2	1.41	2.82	$3,699.13
Calculation of metal HAP emissions[o]	2	1	2	2	4	0.2	0.4	$523.97
Capacity and MTVP calculations for storage tanks[p]	1	1	1	0	0	0	0	$0
Inspection or seal gap measurement for storage tanks[q]	2	1	2	0	0	0	0	$0
Determination of HAP concentrations in wastewater streams[r]	20	1	20	3.14	63	3.1	6	$8,220.29
Recurring calculations and tracking requirements								
Organic HAP batch process vent emissions[s]	0.5	12	6	4.71	28	1.41	2.8	$3,699.13
Metal process vent emissions[t]	0.5	12	6	1	6	0.3	0.6	$785.95
Quarterly CMPU management practice inspections[u]	3	4	12	0	0	0	0	$0
D. Develop Record System	20	1	20	10	203	10	20	$26,655.30
E. Time to Enter Information								

Operating parameters for control devices (batch and continuous process vents)[v]	0.25	52	13	22.4	291	15	29	$38,150.37
Records of CMPU leak inspections	Included in 4C							
Records of heat exchange system monitoring	Included in 2							
Information related to bag leak detection systems[w]	2	4	8	262	2,097.85	104.9	209.8	$274,801.65
Records of inspections or seal gap measurements for storage tanks equipped with floating roofs	Included in 4C							
F. Train Personnel								
Initial	N/A							
Refresher and new personnel	N/A							
G. Audits	N/A							
Recordkeeping subtotal					***3,135***			***$357,152.31***
TOTAL ANNUAL BURDEN [x]					**10,200**			**$1,160,000**
Capital and O&M Cost (see Section 6(b)(iii)): [x]								**$1,490,000**
TOTAL COST: [x]								**$2,650,000**

Assumptions:

[a] Over the next three years, approximately 518 existing respondents per year will be subject to the standard, and 10 additional respondents per year will become subject to the standard (assuming approximately 2 percent growth per year). Of these existing respondents (and new respondents), 261 have only organic HAP emissions (5 new respondents), 204 have only metal HAP emissions (4 new respondents), and 53 have both types of emissions (1 new respondent).

b. This ICR uses the following labor rates: Technical $117.92 ($56.15 + 110%); Managerial $147.40 ($70.19+ 110%); and Clerical $57.02 ($27.15 + 110%). These rates are from the United States Department of Labor, Bureau of Labor Statistics, June 2018, "Table 2. Civilian Workers, by occupational and industry group." The rates are from column 1, "Total compensation." The rates have been increased by 110 percent to account for the benefit packages available to those employed by private industry. This ICR assumes that Managerial hours are 5 percent of Technical hours, and Clerical hours are 10 percent of Technical hours.

[c] We assume 80 percent of new sources with organic HAP emissions have heat exchange systems and will need to prepare a heat exchange system inspection or monitoring plan. However, this cost was included as part of the heat exchange system monitoring program cost.

[d] All new sources with a chemical manufacturing process unit (CMPU) having uncontrolled metal HAP emissions exceeding 400 lb/yr must prepare a metal process vent monitoring plan. The generally available control technologies or management practices (GACT) analysis conducted for the NESHAP estimated there to be 27 existing sources meeting this criterion. Assuming an industry growth rate of 2%, we estimate that 1 new source per year (27 x 2% = 1, after rounding) will conduct this activity.

[e] We assume all facilities will spend an average of 8 hours per facility to read and understand monitoring, recordkeeping, and reporting requirements.

[f] Per footnote d, we estimate that 1 new source per year will have uncontrolled metal HAP emissions exceeding 400 lb/yr. Each new source must demonstrate compliance by conducting either a performance test or a design evaluation. Although a small percentage of new sources are expected to meet NESHAP emissions control requirements for process vents, we assume that none will be constructed over the 3-year period of this ICR. We also assume that source technical staff will spend 24 hours on performance tests or 40 hours on design evaluations, and that 20 percent of sources will conduct performance testing while the remaining 80 percent will opt for design evaluation instead.

[g] We assume 20 percent of performance tests must be repeated. Per footnote f, we assume that only 1 new source per year having uncontrolled metal HAP emissions exceeding 400 lb/yr will become subject to the NESHAP, and that it will opt for design evaluation instead of performance testing. Therefore, this ICR does not estimate the cost for a repeat performance test.

[h] All new sources must submit notification of construction/reconstruction.

[i] All new sources must submit initial notification.

[j] All new sources must submit notification of compliance status. We assume that none of these sources will elect to comply with the overlapping rule provisions, which means no stringency determinations will be conducted (such determinations could double the cost of preparing the notification).

[k] We assume 2 hours per notification. Also, per footnote f, we assume that 20 percent of sources will conduct performance testing.

[l] We assume 20 percent of sources will meet the conditions requiring submittal of a semiannual compliance report. Both existing and new sources must submit these reports.

[m] We assume that 25 percent of new sources with organic HAP emissions have continuous process vents, and that each source must calculate the total resource effectiveness (TRE) index.

[n] Assume 75 percent of new sources with organic HAP emissions must calculate the total emissions from batch process vents. We also assume that there are 25 steps per process and 1 batch process per facility, which corresponds to approximately 6 hours of effort per respondent.

[o] We assume 2 new source per year with metal HAP emissions must calculate total metal HAP emissions.

[p] Records of tank dimensions, capacity, and maximum true vapor pressure (MTVP) are required for all storage tanks requiring control. We also assume no storage tanks at new sources meet the thresholds for control over the 3-year period of this ICR.

[q] We assume no storage tanks at new sources meet the thresholds for control over the 3-year period of this ICR.

[r] We assume each source with organic HAP emissions has process wastewater and must determine HAP concentrations in each stream. We also assume that 50 percent of sources will use process knowledge to characterize HAP concentrations. The other 50 percent will use sampling and analysis, resulting in the incursion of capital costs but not labor costs. Capital costs are calculated separately in this ICR, see Section 6(b).

[s] We assume that 75 percent of sources with organic HAP emissions have batch process vents. All organic HAP emissions sources with batch process vents, except those using control devices, must track emissions from batch process vents or HAP usage. However, only new sources must comply during the 3 years of this ICR. We assume that none of these new sources will use control devices.

[t] All sources having uncontrolled metal HAP emissions must track those emissions from metal process vents or track HAP usage. However, only new sources must comply during the 3 years of this ICR. We estimate 1 new source per year.

[u] Only new sources must comply over the 3-year period of this ICR. We assume all new sources would be performing the required inspections in the absence of the rule; therefore, no burden is incurred as a result of the NESHAP.

[v] We estimate approximately 7% of sources of organic HAP emissions have continuous and batch process vents and are required to monitor operating parameters on control devices. We also assume that when operating parameters must be monitored, sources will collect the data automatically, so that the only burden will be 0.25 hours per week to review results and verify proper system operation.

[w] All sources using a baghouse to control metal HAP emissions must keep records of bag leak detection systems. We estimate new and existing sources with metal HAP emissions use a baghouse system.

Table 2: Average Annual EPA Burden and Cost – NESHAP for Chemical Manufacturing Area Sources (40 CFR Part 63, Subpart VVVVVV) (Re

Burden Item	A EPA Hours per Occurrence	B No. of occurrences per plant per year	C EPA hours per plant per year (C = A x B)	D Plants per year	E EPA technical hours per year (E = C x D)	F EPA managerial hours per year (F = E x 0.05)	G EPA clerical hours per year (G = E x 0.10)	H Total cost per year[a] ($)
Attendance of Initial Performance Test[b,c]	24	1	24	0.2	5	0.24	0.48	$262
Attendance of Repeat Performance Tests[d]	24	1	24	0	0	0	0	$0
Report Review								
Notification of construction/reconstruction[e]	2	1	2	10	20	1.0	2.0	$1,112.54
Initial Notification[e]	0.5	1	0.5	10	5.1	0.25	0.51	$278.14
Notification of compliance status[e,f]	2.5	1	2.5	10	25.4	1.27	2.54	$1,390.68
Notification of initial test[g]	0.5	1	0.5	0.2	0	0	0	$5.47
Review test results[g]	0.5	1	0.5	0.2	0	0	0	$5.47
Semiannual compliance reports[h]	2	2	4	105.68	423	21.1	42	$23,111.68
Subtotal					550.38			$26,166.39
Travel Expenses [i]								$130.00
TOTAL ANNUAL BURDEN [j]					**550**			**$26,300**

Assumptions:

[a] This cost is based on the average hourly labor rate as follows: Technical $48.75 (GS-12, Step 1, $30.47 + 60%); Managerial $65.71 (GS-13, Step 5, $41.07 + 60%); and Clerical $26.38 (GS-6, Step 3, $16.49 + 60%). This ICR assumes that Managerial hours are 5 percent of Technical hours, and Clerical hours are 10 percent of Technical hours. These rates are from the OPM, 2018 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.

[b] All new sources with a chemical manufacturing process unit (CMPU) having uncontrolled metal HAP emissions exceeding 400 lb/yr must prepare a metal process vent monitoring plan. The generally available control technologies or management practices (GACT) analysis conducted for the NESHAP estimated there to be 27 existing sources meeting this criterion. Assuming an industry growth rate of 2%, we estimate that 1 new source per year (27 x 2% = 1, after rounding) will conduct this activity.

[c] Per footnote b, we estimate that 1 new source per year will have uncontrolled metal HAP emissions exceeding 400 lb/yr. Each new source must demonstrate compliance by conducting either a performance test or a design evaluation. Although a small percentage of new sources are expected to meet NESHAP emissions control requirements for process vents, we assume that none will be constructed over the 3-year period of this ICR. We also assume that source technical staff will spend 24 hours on performance tests or 40 hours on design evaluations, and that 20 percent of sources will conduct performance testing while the remaining 80 percent will opt for design evaluation instead.

[d] We assume 20 percent of performance tests must be repeated. Per footnote b, we assume that only 1 new source per year having uncontrolled metal HAP emissions exceeding 400 lb/yr will become subject to the NESHAP, and that it will opt for design evaluation instead of performance testing. Therefore, this ICR does not estimate the cost for a repeat performance test.

[e] All new sources must submit notification of construction/reconstruction, initial notification, and notification of compliance status.

[f] We assume that none of these sources will elect to comply with the overlapping rule provisions, which means no stringency determinations will be conducted (such determinations could double the cost of preparing the notification).

[g] Per footnote c, we assume that 20 percent of sources will conduct performance testing.

[h] We assume 20 percent of sources will meet the conditions requiring submittal of a semiannual compliance report. Both existing and new sources must submit these reports.

[i] Travel Expenses = (1 person x 0.2 plants/year x 3 days/plant x $50 per diem) + ($500 round trip/plant x 0.2 plants/year) = $130/year.

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

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

(A)	(B)	(C)	(D)	(E)	(F)	(G)
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	Number of Respondents with O&M	Total O&M, (E X F)
Metal process vent performance tests[1,2]	$8,740	0.2	$1,748			
Fabric filter for metal process vents[1,2,3,4,5]	$17,533	0.2	$3,507	$5,464	262	$1,432,863
Batch process vent and continuous process vent performance tests[6]	$24,420	0	$0			
Temperature monitoring system for batch and continuous process vents[7]	$3,620	0	$0	$1,202	33	$39,666
Initial wastewater sampling and analysis[8]	$3,370	3.14	$10,574			
Cooling water sampling and analysis[9]			$0			0$
Total[10]			$15,800			$1,470,000

Assumptions:

[1] All new sources with a chemical manufacturing process unit (CMPU) having uncontrolled metal HAP emissions exceeding 400 lb/yr must prepare a metal process vent monitoring plan. The generally available control technologies or management practices (GACT) analysis conducted for the NESHAP estimated there to be 27 existing sources meeting this criterion. Assuming an industry growth rate of 2%, we estimate that 1 new source per year (27 x 2% = 1, after rounding) will conduct this activity.

[2] Per footnote 1, we estimate that 1 new source per year will have uncontrolled metal HAP emissions exceeding 400 lb/yr. Each new source must demonstrate compliance by conducting either a performance test or a design evaluation. We assume that 20 percent of sources will conduct performance testing while the remaining 80 percent will opt for design evaluation instead. Assumes average cost for a performance test using Method 5 is $8,740 per test.

[3] Assumes each source with a control device for metal process vents uses a fabric filter. Assumes total purchase and installation costs for a bag leak detection system is $17,533.

[4] We assume all metal HAP emissions sources will spend $1,219 per bag leak detection system per year. We estimate that each source also will spend $4,245 per year to operate and maintain these systems, assuming 36 hours per year and technical labor rate of $117.92 per hour (36 hr/yr x $117.92/hr = $4,245/yr, after rounding). The total annual O&M cost is $5,464 per source.

<-- adjust this value (in cell F6 above as well) according

[5] We estimate all new and existing sources with metal HAP emissions use a baghouse system. This includes 204 existing and 4 new sources with only metal HAP emissions and 53 existing sources and 1 new source with both metal and organic HAP emissions, for a total of 262 sources.

[6] Assumes 33 sources have a temperature monitoring system for process vents, including 5 existing sources have with continuous process vents and, 28 existing sources have with batch process vents, and (we assume no new sources in the 3 years of this ICR have subject batch or continuous process vents). Assumes average cost for a performance test using Method 18 is $24,420.

[7]Assumes a temperature monitoring system is needed for each control device used to control batch process vents or continuous process vents. Assumes the monitoring equipment cost is $3,620 per system.

Number of Respondents (.07)

Year	(A) Number of New Respondents [1]	(B) Number of Existing Respondents	(C) Number of Existing Respondents that keep records but do not submit reports
1	10	508	0
2	10	518	0
3	10	529	0
Average	10	518	0

Number of Respondents (.06)

Year	(A) Number of New Respondents [1]	(B) Number of Existing Respondents	(C) Number of Existing Respondents that keep records but do not submit reports
1	10	479	0
2	10	489	0
3	10	498	0
Average	10	489	0

Total Annual Responses

(A) Information Collection Activity	(B) Number of Respondents	(C) Number of Responses	(D) Number of Existing Respondents That Keep Records But Do Not Submit Reports
Notification of construction/reconstruction	10	1	0
Initial notification	10	1	0
Notification of compliance status	10	1	0
Notification of initial performance test	0.2	1	0
Semiannual compliance report	105.7	2	415
			Total

HAP Type Breakout

ICR Renewal	Existing Respondents	Only Organic HAP	Only metal HAP
.04	512	258	202
.05	452	228	178
.05 Calc		228	178
.06 Calc	489	246	193
.07 Calc	518	261	204

Assuming 2% industry growth:

New Sources for .07	10	5.2	4.1
		0.50	0.39

(D) Number of Existing Respondents That Are Also New Respondents	(E) Number of Respondents (E=A+B+C-D)
0	518
0	529
0	539
0	528

(D) Number of Existing Respondents That Are Also New Respondents	(E) Number of Respondents (E=A+B+C-D)
0	489
0	498
0	508
0	498

(E) Total Annual Responses E=(BxC)+D
10
10
10
0.2
626
657

Both	
52	
46	
46	0.8828125
50	0.954382552083
53	1.012163541667

1.1

0.10

Number of Respondents by Emissions		
Emissions Type	Existing Respondents	New Respondents
Only Organic HAP	246	5.2
Only Metal HAP	193	4.1
Both HAP	50	1.1
Total	489	10

Number of Respondents by Emissions		
Emissions Type	Existing Respondents	New Respondents
Only Organic HAP	261	5.2
Only Metal HAP	204	4.1
Both HAP	53	1.1
Total	518	10

Type (.06)
Existing & New
251
197
51
499

Type (.07)
Existing & New
266
209
54
529