

Polyvinyl Chloride and Copolymers (PVC) Production

Major Source NESHAP Burden Estimate

February 9, 2012

Worksheet Name	Description
PVC YR 1	NESHAP Burden Estimate for Industry in Year 1
PVC YR 2	NESHAP Burden Estimate for Industry in Year 2
PVC YR 3	NESHAP Burden Estimate for Industry in Year 3
PVC-Summary-PV	Summary of NESHAP Burden Estimate for Industry
Record&Reporting Burden Only	Calculation of Record Keeping and Reporting Burden for Industry
EPA YR 1	NESHAP Burden Estimate for EPA in Year 1
EPA YR 2	NESHAP Burden Estimate for EPA in Year 2
EPA YR 3	NESHAP Burden Estimate for EPA in Year 3
EPA Summary	Summary of NESHAP Burden Estimate for EPA
Hrs_ Responses	Summary of Hours required by responses
Process Vent - T&M Costs	Process Vent Testing and Monitoring Costs
Resin T&M Costs	Stripped Resin Testing and Monitoring Costs
Wastewater T&M Costs	Wastewater Testing and Monitoring Costs
EquipmentLeaks - T&M Costs	Equipment Leaks - Testing and Monitoring Costs
Hourly Rates	Hourly Rate Calculations

**Table 1 - Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements of the MACT Floor
for Existing Major Sources: Polyvinyl Chloride and Copolymer Manufacturing Units - Year 1**

Burden Item	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	Total Labor Costs Per Year	Total Non-Labor Costs Per Year	Total Responses Per Year	Footnotes
	Respondent Hours per Occurrence (Technical hours)	Non-Labor Costs Per Occurrence	Number of Occurrences Per Respondent Per Year	Hours Per Respondent Per Year (C=A x C)	Number of Respondents Per Year	Technical Hours Per Year (D x E)	Management Hours Per Year (F x 0.05)	Clerical Hours Per Year (F x 0.1)				
1. Applications	N/A											
2. Surveys and Studies	N/A											
3. Reporting Requirements												
A. Read and Understand Rule Requirements	25	\$100	1	25	15	375	19	38	\$40,790	\$1,500	0	a,b,c
B. Required Activities												
1) Initial performance test, sampling, and report												
a) Process Vents	32	\$51,198	1	32	14	448	22	45	\$48,731	\$716,768	0	a,d
b) Resins	2	\$1,803	1	2	18	36	2	4	\$3,916	\$32,454	0	a,e
c) wastewater	2	\$491	1	2	57	114	6	11	\$12,400	\$27,987	0	a,f
d) heat exchangers		\$0	0	0	23	0	0	0	\$0	\$0	0	g
e) equipment leaks	2	\$77,798	1	2	13	26	1	3	\$2,828	\$1,011,368	0	h
2) Periodic performance test, sampling, and report												
a) Process Vents	32	\$48,030	1	32	0	0	0	0	\$0	\$0	0	i
b) Resins	1	\$601	11	11	18	198	10	20	\$21,537	\$118,998	0	e
c) wastewater	1	\$491	11	11	15	165	8	17	\$17,948	\$80,933	0	f
d) uncontrolled wastewater	1	\$491	1	1	0	0	0	0	\$0	\$0	0	f
e) heat exchangers	1	\$0	12	12	23	276	14	28	\$30,022	\$0	0	g
f) equipment leaks	1	\$18,205	1	1	13	13	1	1	\$1,414	\$236,666	0	h
3) Establish operating parameters and monitoring plan												
a) Process Vents	3.5	\$0	1	3.5	14	49	2	5	\$5,330	\$0	0	a,b,c
4) Continuous parameter monitoring												
a) Initial capital costs (PRD Electronic Monitor)	0	\$188,913	1	0	15	0	0	0	\$0	\$2,833,695	0	a,b
b) Annualized capital and O&M costs (PRD Electronic Monitor)	11	\$26,897	1	11	15	165	8	17	\$17,948	\$403,455	0	b
C. Create Information	Incl. in 3.B											
D. Gather Information	Incl. in 3.E											
E. Report Preparation												
1) Initial Notification	5	\$0	1	5	15	75	4	8	\$8,158	\$0	15	a,b
2) Batch precompliance report	5	\$0	1	5	15	75	4	8	\$8,158	\$0	15	a,b
3) Notification of performance test with test plan	10	\$0	1	10	15	150	8	15	\$16,316	\$0	15	a,b
4) Notification of compliance status	20	\$0	1	20	15	300	15	30	\$32,632	\$0	15	a,b
5) Compliance report	25	\$0	1	25	0	0	0	0	\$0	\$0	0	b,k
6) Notice of inspection	5	\$0	1	5	15	75	4	8	\$8,158	\$0	15	b,k
7) Affirmative defense	18	\$0	1	18	0	18	12	0	\$0	\$0	0	j
Reporting Subtotal						2,540	127	254	\$276,285	\$2,630,128	75	i
4. Recordkeeping Requirements												
A. Read Instructions	Incl. in 3.A											
B. Implement Activities	N/A											
C. Develop Record System	N/A											
D. Record Information												
1) Records of process vent requirements	10	\$0	1	10	0	0	0	0	\$0	\$0	0	b,k
2) Records of resin stripper requirements	15	\$0	1	15	0	0	0	0	\$0	\$0	0	b,k
3) Records wastewater requirements	15	\$0	1	15	0	0	0	0	\$0	\$0	0	b,k
4) Records of storage vessel requirements	10	\$0	1	10	0	0	0	0	\$0	\$0	0	b,k
5) Records of equipment leak requirements	25	\$0	1	25	0	0	0	0	\$0	\$0	0	b,k
6) Records of heat exchanger requirements	10	\$0	1	10	0	0	0	0	\$0	\$0	0	b,k
7) Records of other emission sources requirements	10	\$0	1	10	0	0	0	0	\$0	\$0	0	b,k
E. Personnel Training	Incl. in 3.B											
F. Time for Audits	N/A											
Recordkeeping Subtotal						0	0	0	\$0	\$0	0	
TOTAL:						2,540	127	254	\$276,285	\$2,630,128	75	
									Total Hours	Labor	Non-Labor	Total
									2,921	\$276,285	\$2,630,128	\$2,906,413
											\$2,835,195	
											\$2,630,128	

FOOTNOTES

- a One-time only costs.
- b Cost incurred by a facility regardless of the number of affected units at the plant.
- c 15 major sources in affected source category
- d 14 major sources are expected to perform testing for process vents. OxyVinyls Pasadena does not operate a process vent control, but rather sends process vent gas streams to PolyOne Pedricktown for control.
- e 18 respondents equivalent to 19 unique combinations of facilities and resin types.
- f An estimated 42 uncontrolled streams and 15 wastewater stripper outlets (across 15 facilities) are expected to require initial wastewater testing. 15 wastewater stripper outlets are expected to require monthly testing. 42 uncontrolled streams will require annual testing
- g All heat exchanger testing and monitoring costs assumed to be incurred annually. 23 cooling towers at 15 facilities.
- h 13 facilities are expected to be required to increase stringency of their LDAR programs to 40 CFR Part 63, Subpart UU. Non-Labor costs technically include labor to perform LDAR testing in addition to monitoring equipment and maintenance materials. Respondent hours are an estimation of the additional reporting required by the final rule.
- i process vent testing is required initially and once every five years, therefore no additional costs are expected in addition to the initial testing requirement.
- j Hours for affirmative defense are shown only for illustration and are not included in the total burden estimate
- k Annual cost. Annual costs are not incurred until the second year of operation.
- l Reporting subtotal does not include capital costs for PRD monitoring system.

**Table 2 - Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements of the MACT Floor
for Existing Major Sources: Polyvinyl Chloride and Copolymer Manufacturing Units - Year 2**

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Non-Labor Costs Per Occurrence	(C) Number of Occurrences Per Respondent Per Year	(D) Hours Per Respondent Per Year (C=A x C)	(E) Number of Respondents Per Year	(F) Technical Hours Per Year (D x E)	(G) Management Hours Per Year (F x 0.05)	(H) Clerical Hours Per Year (F x 0.1)	Total Labor Costs Per Year	Total Non-Labor Costs Per Year	Total Responses Per Year	Footnotes
1. Applications	N/A											
2. Surveys and Studies	N/A											
3. Reporting Requirements												
A. Read and Understand Rule Requirements	25	\$100	1	25	0	0	0	0	\$0	\$0	0	a,b,c
B. Required Activities												
1) Initial performance test, sampling, and report												
a) Process Vents	32	\$51,198	1	32	0	0	0	0	\$0	\$0	0	a,d
b) Resins	2	\$1,803	1	2	0	0	0	0	\$0	\$0	0	a,e
c) wastewater	2	\$491	1	2	0	0	0	0	\$0	\$0	0	a,f
d) heat exchangers		\$0	0	0	0	0	0	0	\$0	\$0	0	g
e) equipment leaks	2	\$77,798	1	2	0	0	0	0	\$0	\$0	0	h
2) Periodic performance test, sampling, and report												
a) Process Vents	32	\$48,030	1	32	3	90	4	9	\$9,746	\$134,484	0	i
b) Resins	1	\$601	12	12	18	216	11	22	\$23,495	\$129,815	0	e
c) wastewater	1	\$491	12	12	15	180	9	18	\$19,579	\$88,290	0	f
d) uncontrolled wastewater	1	\$491	1	1	42	42	2	4	\$4,568	\$20,601	0	f
e) heat exchangers	1	\$0	12	12	23	276	14	28	\$30,022	\$0	0	g
f) equipment leaks	1	\$18,205	1	1	13	13	1	1	\$1,414	\$236,666	0	h
3) Establish operating parameters and monitoring plan												
a) Process Vents	3.5	\$0	1	3.5	0	0	0	0	\$0	\$0	0	a,b,c
4) Continuous parameter monitoring												
a) Initial capital costs (PRD Electronic Monitor)	0	\$188,913	1	0	0	0	0	0	\$0	\$0	0	a,b
b) Annualized capital and O&M costs (PRD Electronic Monitor)	11	\$26,897	1	11	15	165	8	17	\$17,948	\$403,455	0	b
C. Create Information	Incl. in 3.B											
D. Gather Information	Incl. in 3.E											
E. Report Preparation												
1) Initial Notification	5	\$0	1	5	0	0	0	0	\$0	\$0	0	a,b
2) Batch precompliance report	5	\$0	1	5	0	0	0	0	\$0	\$0	0	a,b
3) Notification of performance test with test plan	10	\$0	1	10	0	0	0	0	\$0	\$0	0	a,b
4) Notification of compliance status	20	\$0	1	20	0	0	0	0	\$0	\$0	0	a,b
5) Compliance report	25	\$0	1	25	15	375	19	38	\$40,790	\$0	15	b,k
6) Notice of inspection	5	\$0	1	5	15	75	4	8	\$8,158	\$0	15	b,k
7) Affirmative defense	18	\$0	1	18	0	18	12	0	\$0	\$0	0	j
Reporting Subtotal						1,432	72	143	\$155,720	\$1,013,312	30	i
4. Recordkeeping Requirements												
A. Read Instructions	Incl. in 3.A											
B. Implement Activities	N/A											
C. Develop Record System	N/A											
D. Record Information												
1) Records of process vent requirements	10	\$0	1	10	15	150	8	15	\$16,316	\$0	0	b,k
2) Records of resin stripper requirements	15	\$0	1	15	15	225	11	23	\$24,474	\$0	0	b,k
3) Records wastewater requirements	15	\$0	1	15	15	225	11	23	\$24,474	\$0	0	b,k
4) Records of storage vessel requirements	10	\$0	1	10	15	150	8	15	\$16,316	\$0	0	b,k
5) Records of equipment leak requirements	25	\$0	1	25	15	375	19	38	\$40,790	\$0	0	b,k
6) Records of heat exchanger requirements	10	\$0	1	10	15	150	8	15	\$16,316	\$0	0	b,k
7) Records of other emission sources requirements	10	\$0	1	10	15	150	8	15	\$16,316	\$0	0	b,k
E. Personnel Training	Incl. in 3.B											
F. Time for Audits	N/A											
Recordkeeping Subtotal						1,425	71.25	142.5	\$155,003	\$0	0	
TOTAL:						2,857	143	286	\$310,723	\$1,013,312	30	
							Total Hours	Labor	Non-Labor	Total		
							3,285	\$310,723	\$1,013,312	\$1,324,035		
									\$0			
									\$1,013,312			

FOOTNOTES

- a One-time only costs.
- b Cost incurred by a facility regardless of the number of affected units at the plant.
- c 15 major sources in affected source category
- d 14 major sources are expected to perform testing for process vents. OxyVinyls Pasadena does not operate a process vent control, but rather sends process vent gas streams to PolyOne Pedricktown for control.
- e 18 respondents equivalent to 19 unique combinations of facilities and resin types.
- f An estimated 42 uncontrolled streams and 15 wastewater stripper outlets (across 15 facilities) are expected to require initial wastewater testing. 15 wastewater stripper outlets are expected to require monthly testing. 42 uncontrolled streams will require annual testing
- g All heat exchanger testing and monitoring costs assumed to be incurred annually. 23 cooling towers at 15 facilities.
- h 13 facilities are expected to be required to increase stringency of their LDAR programs to 40 CFR Part 63, Subpart UU. Non-Labor costs technically include labor to perform LDAR testing in addition to monitoring equipment and maintenance materials. Respondent hours are an estimation of the additional reporting required by the final rule.
- i process vent testing is required initially and once every five years, therefore no additional costs are expected in addition to the initial testing requirement.
- j Hours for affirmative defense are shown only for illustration and are not included in the total burden estimate
- k Annual cost. Annual costs are not incurred until the second year of operation.
- l Reporting subtotal does not include capital costs for PRD monitoring system.

**Table 3 - Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements of the MACT Floor
for Existing Major Sources: Polyvinyl Chloride and Copolymer Manufacturing Units - Year 3**

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Non-Labor Costs Per Occurrence	(C) Number of Occurrences Per Respondent Per Year	(D) Hours Per Respondent Per Year (C=A x C)	(E) Number of Respondents Per Year	(F) Technical Hours Per Year (D x E)	(G) Management Hours Per Year (F x 0.05)	(H) Clerical Hours Per Year (F x 0.1)	Total Labor Costs Per Year	Total Non-Labor Costs Per Year	Total Responses Per Year	Footnotes
1. Applications	N/A											
2. Surveys and Studies	N/A											
3. Reporting Requirements												
A. Read and Understand Rule Requirements	25	\$100	1	25	0	0	0	0	\$0	\$0	0	a,b,c
B. Required Activities												
1) Initial performance test, sampling, and report												
a) Process Vents	32	\$51,198	1	32	0	0	0	0	\$0	\$0	0	a,d
b) Resins	2	\$1,803	1	2	0	0	0	0	\$0	\$0	0	a,e
c) wastewater	2	\$491	1	2	0	0	0	0	\$0	\$0	0	a,f
d) heat exchangers		\$0	0	0	0	0	0	0	\$0	\$0	0	g
e) equipment leaks	2	\$77,798	1	2	0	0	0	0	\$0	\$0	0	h
2) Periodic performance test, sampling, and report												
a) Process Vents	32	\$48,030	1	32	3	90	4	9	\$9,746	\$134,484	0	i
b) Resins	1	\$601	12	12	18	216	11	22	\$23,495	\$129,815	0	e
c) wastewater	1	\$491	12	12	15	180	9	18	\$19,579	\$88,290	0	f
d) uncontrolled wastewater	1	\$491	1	1	42	42	2	4	\$4,568	\$20,601	0	f
e) heat exchangers	1	\$0	12	12	23	276	14	28	\$30,022	\$0	0	g
f) equipment leaks	1	\$18,205	1	1	13	13	1	1	\$1,414	\$236,666	0	h
3) Establish operating parameters and monitoring plan												
a) Process Vents	3.5	\$0	1	3.5	0	0	0	0	\$0	\$0	0	a,b,c
4) Continuous parameter monitoring												
a) Initial capital costs (PRD Electronic Monitor)	0	\$188,913	1	0	0	0	0	0	\$0	\$0	0	a,b
b) Annualized capital and O&M costs (PRD Electronic Monitor)	11	\$26,897	1	11	15	165	8	17	\$17,948	\$403,455	0	b
C. Create Information	Incl. in 3.B											
D. Gather Information	Incl. in 3.E											
E. Report Preparation												
1) Initial Notification	5	\$0	1	5	0	0	0	0	\$0	\$0	0	a,b
2) Batch precompliance report	5	\$0	1	5	0	0	0	0	\$0	\$0	0	a,b
3) Notification of performance test with test plan	10	\$0	1	10	0	0	0	0	\$0	\$0	0	a,b
4) Notification of compliance status	20	\$0	1	20	0	0	0	0	\$0	\$0	0	a,b
5) Compliance report	25	\$0	1	25	15	375	19	38	\$40,790	\$0	15	b,k
6) Notice of inspection	5	\$0	1	5	15	75	4	8	\$8,158	\$0	15	b,k
7) Affirmative defense	18	\$0	1	18	0	18	12	0	\$0	\$0	0	j
Reporting Subtotal						1,432	72	143	\$155,720	\$1,013,312	30	i
4. Recordkeeping Requirements												
A. Read Instructions	Incl. in 3.A											
B. Implement Activities	N/A											
C. Develop Record System	N/A											
D. Record Information												
1) Records of process vent requirements	10	\$0	1	10	15	150	8	15	\$16,316	\$0	0	b,k
2) Records of resin stripper requirements	15	\$0	1	15	15	225	11	23	\$24,474	\$0	0	b,k
3) Records wastewater requirements	15	\$0	1	15	15	225	11	23	\$24,474	\$0	0	b,k
4) Records of storage vessel requirements	10	\$0	1	10	15	150	8	15	\$16,316	\$0	0	b,k
5) Records of equipment leak requirements	25	\$0	1	25	15	375	19	38	\$40,790	\$0	0	b,k
6) Records of heat exchanger requirements	10	\$0	1	10	15	150	8	15	\$16,316	\$0	0	b,k
7) Records of other emission sources requirements	10	\$0	1	10	15	150	8	15	\$16,316	\$0	0	b,k
E. Personnel Training	Incl. in 3.B											
F. Time for Audits	N/A											
Recordkeeping Subtotal						1,425	71.25	142.5	\$155,003	\$0	0	
TOTAL:						2,857	143	286	\$310,723	\$1,013,312	30	
							Total Hours	Labor	Non-Labor	Total		
							3,285	\$310,723	\$1,013,312	\$1,324,035		
									\$0			
									\$1,013,312			

FOOTNOTES

- a One-time only costs.
- b Cost incurred by a facility regardless of the number of affected units at the plant.
- c 15 major sources in affected source category
- d 14 major sources are expected to perform testing for process vents. OxyVinyls Pasadena does not operate a process vent control, but rather sends process vent gas streams to PolyOne Pedricktown for control.
- e 18 respondents equivalent to 19 unique combinations of facilities and resin types.
- f An estimated 42 uncontrolled streams and 15 wastewater stripper outlets (across 15 facilities) are expected to require initial wastewater testing. 15 wastewater stripper outlets are expected to require monthly testing. 42 uncontrolled streams will require annual testing
- g All heat exchanger testing and monitoring costs assumed to be incurred annually. 23 cooling towers at 15 facilities.
- h 13 facilities are expected to be required to increase stringency of their LDAR programs to 40 CFR Part 63, Subpart UU. Non-Labor costs technically include labor to perform LDAR testing in addition to monitoring equipment and maintenance materials. Respondent hours are an estimation of the additional reporting required by the final rule.
- i process vent testing is required initially and once every five years, therefore no additional costs are expected in addition to the initial testing requirement.
- j Hours for affirmative defense are shown only for illustration and are not included in the total burden estimate
- k Annual cost. Annual costs are not incurred until the second year of operation.
- l Reporting subtotal does not include capital costs for PRD monitoring system.

Table 4 - Summary of Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements of the MACT Floor for Existing Sources: Polyvinyl Chloride and Copolymer Manufacturing Units

Year	Technical Hours	Management Hours	Clerical Hours	Total Hours	Labor Costs	Non-Labor (Annualized Capital/Startup and O&M) Costs	Total Costs
1	2,540	127	254	2,921	\$276,285	\$2,630,128	\$2,906,413
2	2,857	143	286	3,285	\$310,723	\$1,013,312	\$1,324,035
3	2,857	143	286	3,285	\$310,723	\$1,013,312	\$1,324,035
Total	8,253	413	825	9,491	\$897,731	\$4,656,752	\$5,554,483
Average	2,751	138	275	3,164	\$299,244	\$1,552,251	\$1,851,494

Table 5 - Annual Designated Administrator Burden and Cost of Recordkeeping and Reporting Requirements of the MACT Floor for Existing Sources: Polyvinyl Chloride and Copolymer Manufacturing Units - Year 1

Burden Item	(A)		(B)	(C)	(D)	(E)	(F)
	Number of Occurrences Per Year		EPA Hours Per Occurrence	Tech Hours Per Year (C=AxB)	Management Hours Per Year (D=Cx0.05)	Clerical Hours Per Year (E=Cx0.1)	EPA Cost Per Year (a,b)
1. Applications	not applicable						
2. Read and Understand Rule Requirements	10		16	160	8	16	\$8,292
3. Required Activities							
A. Observe initial performance tests	3	b	48	134	7	13	\$6,965
B. Excess emissions -- Enforcement Activities	2	d	24	38	2	4	\$1,990
C. Create Information	not applicable						
D. Gather Information	not applicable						
E. Report Reviews							
1) Review initial notification	15		3	45	2	5	\$2,332
2) Review batch precompliance report	15		5	75	4	8	\$3,887
3) Review notification of performance test	15		10	150	8	15	\$7,773
4) Review notification of compliance status	15		40	600	30	60	\$31,093
5) Review compliance report	0		20	0	0	0	\$0
6) Review notice of inspection	15		3	45	2	5	\$2,332
7) Review affirmative defense	0		10	0	0	0	\$0
F. Prepare annual summary report	1	c	32	32	2	3	\$1,658
4. Travel expenses: (1 person * 30 hours per year / 8 hours per day * \$75 per diem) + (\$600 per round trip) =					\$881	per trip	\$2,468
TOTAL				1280	64	128	\$68,790

FOOTNOTES

- a Figures may not add exactly due to rounding.
- b Assumes EPA personnel attend 20 percent of the initial process vent stack tests.
- c Using four hours per state to write annual summary report.
- d Assume 10% of major source facilities (16) have emission exceedances.

Table 6 - Annual Designated Administrator Burden and Cost of Recordkeeping and Reporting Requirements of the MACT Floor for Existing Sources: Polyvinyl Chloride and Copolymer Manufacturing Units - Year 2

Burden Item	(A)		(B)	(C)	(D)	(E)	(F)
	Number of Occurrences Per Year		EPA Hours Per Occurrence	Tech Hours Per Year (C=AxB)	Management Hours Per Year (D=Cx0.05)	Clerical Hours Per Year (E=Cx0.1)	EPA Cost Per Year (a,b)
1. Applications	not applicable						
2. Read and Understand Rule Requirements	0		16	0	0	0	\$0
3. Required Activities							
A. Observe initial performance tests	0	b	48	0	0	0	\$0
B. Excess emissions -- Enforcement Activities	2	d	24	38	2	4	\$1,990
C. Create Information	not applicable						
D. Gather Information	not applicable						
E. Report Reviews							
1) Review initial notification	0		3	0	0	0	\$0
2) Review batch precompliance report	0		5	0	0	0	\$0
3) Review notification of performance test	0		10	0	0	0	\$0
4) Review notification of compliance status	0		40	0	0	0	\$0
5) Review compliance report	15		20	300	15	30	\$15,547
6) Review notice of inspection	15		3	45	2	5	\$2,332
7) Review affirmative defense	0		10	0	0	0	\$0
F. Prepare annual summary report	1	c	32	32	2	3	\$1,658
4. Travel expenses: (1 person * 30 hours per year / 8 hours per day * \$75 per diem) + (\$600 per round trip) =					n/a	per trip	\$0
TOTAL				415	21	42	\$21,527

FOOTNOTES

- a Figures may not add exactly due to rounding.
- b Assumes EPA personnel attend 20 percent of the initial process vent stack tests.
- c Using four hours per state to write annual summary report.
- d Assume 10% of major source facilities (16) have emission exceedances.

Table 7 - Annual Designated Administrator Burden and Cost of Recordkeeping and Reporting Requirements of the MACT Floor for Existing Sources: Polyvinyl Chloride and Copolymer Manufacturing Units - Year 3

Burden Item	(A)		(B)	(C)	(D)	(E)	(F)
	Number of Occurrences Per Year		EPA Hours Per Occurrence	Tech Hours Per Year (C=AxB)	Management Hours Per Year (D=Cx0.05)	Clerical Hours Per Year (E=Cx0.1)	EPA Cost Per Year (a,b)
1. Applications	not applicable						
2. Read and Understand Rule Requirements	0		16	0	0	0	\$0
3. Required Activities							
A. Observe initial performance tests	0	b	48	0	0	0	\$0
B. Excess emissions -- Enforcement Activities	2	d	24	38	2	4	\$1,990
C. Create Information	not applicable						
D. Gather Information	not applicable						
E. Report Reviews							
1) Review initial notification	0		3	0	0	0	\$0
2) Review batch precompliance report	0		5	0	0	0	\$0
3) Review notification of performance test	0		10	0	0	0	\$0
4) Review notification of compliance status	0		40	0	0	0	\$0
5) Review compliance report	15		20	300	15	30	\$15,547
6) Review notice of inspection	15		3	45	2	5	\$2,332
7) Review affirmative defense	0		10	0	0	0	\$0
F. Prepare annual summary report	1	c	32	32	2	3	\$1,658
4. Travel expenses: (1 person * 30 hours per year / 8 hours per day * \$75 per diem) + (\$600 per round trip) =					n/a	per trip	\$0
TOTAL				415	21	42	\$21,527

FOOTNOTES

a Figures may not add exactly due to rounding.

b Assumes EPA personnel attend 20 percent of the initial process vent stack tests.

c Using four hours per state to write annual summary report.

d Assume 10% of major source facilities (16) have emission exceedances.

Table 8 - Summary of Annual Designated Administrator Burden and Cost of Recordkeeping and Reporting Requirements of the MACT Floor for Existing Sources: Polyvinyl Chloride and Copolymer Manufacturing Units

Year	Technical Hours	Management Hours	Clerical Hours	Total Hours	Labor Costs	Non-Labor Costs	Total Costs
1	1,280	64	128	1,472	\$68,790	\$0	\$68,790
2	415	21	42	478	\$21,527	\$0	\$21,527
3	415	21	42	478	\$21,527	\$0	\$21,527
Total	2,111	106	211	2,427	\$111,844	\$0	\$111,844
Average	704	35	70	809	\$37,281	\$0	\$37,281

Response Hours Analysis

	Reporting		
	Hours	# of Respondents	# of Responses
Year 1	2,921	15	75
Year 2	1,646	15	30
Year 3	1,646	15	30
Total	6,214	45	135
Average Annual	2,071	15	45

Total hours	9,491
Hours per year	3,164
# of responses per respondent (annual)	3.00
Hours per response (annual)	70.305
Reporting hours per response (annual)	46.0273
Recorkeeping hours per response (annual)	24.27778

Cost per response (non-labor)	###
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Recordkeeping
Hours
-
1,639
1,639
3,278
1,093

ATTACHMENT E: RECORDKEEPING AND REPORTING COST ALGORITHM
February 9, 2012

Record Keeping and Reporting Burden by Emission Point

Note: This table is used to calculate the record keeping and reporting burden by emission point for the PVC NESHAP. The costs presented in the table below represent costs not otherwise included in the PVC NESHAP Impact estimate (i.e., testing and monitoring costs are already included in the PVC NESHAP impacts estimate, therefore, they are not included in the table below). The costs presented in the table below should be added to the previously calculated PVC Impacts to obtain an impacts estimate which includes record keeping and reporting.

Record Keeping and Reporting Burden By Emission Point						
Emission Point	Initial Cost (\$)	Initial Notes	Annual Cost (\$/yr)			Annual Notes
			Yr 1	Yr 2	Yr 3	
Resins	\$20,446	a,b,d	\$21,537	\$54,961.80	\$54,961.80	e,f,g
Process Vents	\$70,591	a,b,c,d	\$0	\$33,054.77	\$33,054.77	e,f,g
Wastewater	\$28,931	a,b,d	\$17,948	\$55,614.44	\$55,614.44	e,f,g
Equipment Leaks	\$19,358	a,b,d	\$19,362	\$67,144.45	\$67,144.45	e,f,g,h
Storage Vessels	\$16,530	a,d	\$0	\$23,308.65	\$23,308.65	e,f,g
Heat Exchange Systems	\$16,530	a,b,d	\$30,022	\$53,330.19	\$53,330.19	e,f,g
Other Sources	\$16,530	a,d	\$0	\$23,308.65	\$23,308.65	e,f,g
Total	\$188,917		\$88,868.11	\$310,722.95	\$310,722.95	

- a Labor/Non Labor Costs to "Read/Understand Rule Requirements" divided by 7 emission points
- b Initial Performance Test/Sampling/Report
- c Establishment of operating parameters and monitoring plan
- d Report preparation for item 3.E.1-6 divided by 7 emission points
- e Periodic sampling/testing/and monitoring (not applicable for process vents in year 1)
- f Years 2 and 3 include items 3.E.5 and 3.E.6 divided by 7 emission points
- g In year 2 and 3, recordkeeping items under 4.D are included
- h includes annual labor cost for PRD monitoring system

Equipment Leaks BTF Costs Calculation on a Facility Basis

Equipment Leaks	\$1,320	\$1,305	\$4,490.80	\$4,490.80	Facilities going from V to UU
Equipment Leaks	\$1,102	\$1,197	\$4,382.03	\$4,382.03	MACT
Equipment Leaks	\$218	\$109	\$109	\$109	Incremental BTF Costs for Facilities going from V to UU

2. Required activities			
a. Perf. spec. tests (certif.) for CMS	11	1	11

Notes:

2. Person-hours per occurrence for CMS performance specification costs are based on the performance specification costs to certify CMS (\$700) divided by the composite hourly labor rate (\$66.41/hr).

Sources:

1. Bureau of Labor Statistics, Occupational Employment Statistics, May 2008 National Industry-Specific Occupational Employment and Wage Estimates.
2. Hospital/Medical/Infectious Waste Incinerators (HMIWI) [EPA-HQ-OAR2006-0534] Testing and Monitoring Options and Costs Memo (IV-B-66).