Cost Factor (in 2008\$)		Reference/Note
Advanced Combustion Controls (Linkageless Boiler Manag	ement Syste	m) cost is per boiler - TCI
\$	19,127	LBMS costs are based on a 2008 quote provided to the U.S. Department of Energy. The installed cost for a LBMS on a 20 mmBtu/hr unit was are \$19,127. The DOE noted that costs are relatively fixed, regardless of the size of the unit.
Activated Carbon Injection		
Hospital/Medical/Infectious Waste Incinerators (HMIWI). [IOAR-2006-0534]	EPA-HQ-	Received spreadsheet of HMIWI model costs from Tom Holloway of RTI International.
Fabric Filter		
Hospital/Medical/Infectious Waste Incinerators (HMIWI). [IOAR-2006-0534]	EPA-HQ-	Received spreadsheet of HMIWI model costs from Tom Holloway of RTI International.
Packed Scrubber		·
Hospital/Medical/Infectious Waste Incinerators (HMIWI). [OAR-2006-0534]	EPA-HQ-	Received spreadsheet of HMIWI model costs from Tom Holloway of RTI International.
Secondary Chamber/Afterburner Retrofit		
Hospital/Medical/Infectious Waste Incinerators (HMIWI). [IOAR-2006-0534]	EPA-HQ-	Received spreadsheet of HMIWI model costs from Tom Holloway of RTI International.
Selective Non-Catalytic Reduction		
Hospital/Medical/Infectious Waste Incinerators (HMIWI). [IOAR-2006-0534]	EPA-HQ-	Received spreadsheet of HMIWI model costs from Tom Holloway of RTI International.
Catalytic Oxidizer		

Used catalytic oxidizer costing for all sizes, though some fell outside the appropriate size-range for the EPA Air Pollution Control Cost Manual, Sixth Edition EPA 452/B-02-001

Used catalytic oxidizer costing for all sizes, though some fell outside the appropriate size-range for the equation.

Year of Costs
Assumed to represent \$2008, since that was the
year the quote was obtained.
Originally \$2004
311g.11d.11)
Originally \$2004
Criginally \$200 i
Originally \$2004
Originally \$2004
Originally \$2004

Monitoring Costs

						All	model sizes	
Parameters/Costs	Equation	FF	ws	SNCR	Bag leak detector	CO CEMS	HCI CEMS	PM CEMS
A. Devembers								
Rarameters Recording lime/carbon flow, min/4-hr period								
2. Annual operating hours, hr/yr (H)								
3. Cost index								
a. 2008		575.4	575.4	575.4	575.4	575.4	575.4	575.4
b. 2006		499.6	499.6	499.6	499.6	499.6	499.6	499.
c. 1997		386.5	386.5	386.5	386.5	386.5	386.5	386.
d. 1993		359.2	359.2	359.2	359.2	359.2	359.2	359.:
e. 1992		358.2	358.2	358.2	358.2	358.2	358.2	358.
4. Operating labor wage rate, \$/hr (LR)		\$57.22	\$57.22	\$57.22	\$57.22	\$57.22		\$57.2
5. Capital recovery factor, 20-yr equipment life, 7% interest (CRF)	= $[i \times (1 + i)^a] / [(1 + i)^a - 1]$, where $i =$ interest rate, $a =$ equipment life	0.09439	0.09439	0.09439	0.09439	0.09439	0.09439	0.0943
B. Total Capital Investment, \$ (TCI)								
1. Planning		\$700	\$700	\$700	\$800	\$4,000		\$90
2. Select type of equipment		\$400	\$400	\$400		\$10,000		\$12,20
3. Provide support facilities		\$1,500	\$1,500	\$1,500	\$500	\$20,600	\$20,600	\$50
4. Purchased equipment cost (PEC)		\$13,000	\$19,300	\$5,300	\$14,100	\$48,400		\$73,50
5. Install and check equipment		\$1,000	\$1,000	\$1,000	\$4,800	\$18,200		\$19,50
6. Perf. spec. tests (certif.)		\$700	\$700	\$700		\$15,700		\$35,50
7. Prepare QA/QC plan		\$700	\$700	\$700	\$800	\$17,500		\$15,40
8. Total capital cost	= Planning + selecting equipment + support facilities + PEC + installation + perf. spec. tests + QA/QC plan	\$18,000	\$24,300	\$10,300	\$25,500	\$134,000	\$142,000	\$158,00
C. Annual Costs, \$/yr								
Operating labor	= (5 min to record lime/carbon flow/4-hr period) x (1 hr/60 min) x H x LR							
2. Maintenance materials	= 0.02 x TCl	\$400	\$500	\$200				
Operation & maintenance	= Day-to-day activities + annual RATA + CGA + annual QA + O&M review and update	Ψ100	Ψ000	4200	\$6,000	\$27,600	\$24,600	\$27,30
4. Recordkeeping and reporting	= \$1,000 x (525.4/386.5)	\$1,500	\$1,500	\$1,500	\$200	\$1,200	\$1,600	\$6,30
5. Overhead	= 0.6 x (labor + maintenance materials)	\$200	\$300	\$100		. ,===		
6. Property taxes, insurance, and administration	= 0.04 x TCI	\$700	\$1,000	\$400				
7. Capital recovery	= CRF x TCI	\$1,700	\$2,300	\$1,000		\$12,600	\$20,200	\$22,500
8. Total annual cost	= Operating labor + maintenance materials + recordkeeping and reporting + overhead + property taxes, insurance, and administration + capital recovery	\$4,500	\$5,600	\$3,200	\$9,700	\$41,400	\$46,400	\$56,100

Monitoring Costs

Par	ameters/Costs	Hg CEMS	Multi-metal CEMS	Dioxin or Hg sorbent trap biweekly monitoring	ACI
^ -					
A. F	arameters 1. Recording lime/carbon flow, min/4-hr period				5
	2. Annual operating hours, hr/yr (H)				6,000
	3. Cost index				
	a. 2008	575.4	575.4	575.4	575.4
	b. 2006	499.6		499.6	499.6
	c. 1997	386.5		386.5	386.5
	d. 1993	359.2		359.2	359.2
	e. 1992	358.2		358.2	358.2
	4. Operating labor wage rate, \$/hr (LR)	\$57.22		\$57.22	\$57.22
	5. Capital recovery factor, 20-yr equipment life, 7% interest (CRF)	0.09439		0.09439	0.09439
D .	Total Capital Investment & (TCI)				
B	otal Capital Investment, \$ (TCI) 1. Planning	#2.200			
	2. Select type of equipment	\$3,300			
		\$16,100			
	3. Provide support facilities	\$20,600			
	4. Purchased equipment cost (PEC)	\$109,900			
	5. Install and check equipment	\$21,500			
	6. Perf. spec. tests (certif.)	\$42,300			
	7. Prepare QA/QC plan 8. Total capital cost	\$17,500 \$231,000		\$115,000	
C. <i>F</i>	nnual Costs, \$/yr				
	Operating labor				\$7,200
	2. Maintenance materials				
	3. Operation & maintenance	\$78,100			
	Recordkeeping and reporting	\$1,600			
	5. Overhead				\$4,300
	6. Property taxes, insurance, and administration				
	7. Capital recovery	\$32,900			
	8. Total annual cost	\$112,600	\$63,300	\$41,500	\$11,500

Recordkeeping and Reporting Costs

Trecording and treporting deets	(A)	(B)	(C)	(D)	(E)	(F)	(G)
Burden item	Person-hours per occurrence	Number of occurrences per year	Technical person-hours per year (C = A x B)	Management person-hours per year (D = C x 0.05)	Clerical person-hours per year (E = C x 0.1)	Total person- hours per year (F = C + D + E)	Cost, \$
A Applications	N1/0						
A. Applications	N/A						
B. Surveys and Studies	N/A						
C. Reporting Requirements							
Read instructions	1.0	1	1.0	0.05	0.1	1.2	\$65
Required activities							
a. Perf. spec. tests (certif.) for CMS	11	1	11	0.6	1.1	. 13	\$719
Write report							
a. Notification of initial performance test							
i. Pollutants, fugitive ash emissions	2.0	1	2.0	0.1	0.2	2.3	\$131
ii. Fugitive ash emissions	1.0	1	1.0	0.05	0.1	1.2	\$65
b. Notification of initial CMS demonstration	2.0	1	2.0	0.1	0.2	2.3	\$131
c. Report of initial performance test							
i. Pollutants, fugitive ash emissions	8.0	1	8.0	0.4	0.8	9.2	\$523
ii. Fugitive ash emissions	2.0	1	2.0	0.1	0.2	2.3	\$131
d. Report of initial CMS demonstration	Incl. in C2						
e. Annual report							
i. Results of performance tests conducted during the year	40	1	40	2.0	4.0	46	\$2,615
D. Recordkeeping Requirements							
Read instructions	Incl. in C1						
2. Plan activities	N/A						
3. Implement activities	N/A						
Develop record system	N/A						
5. Time to enter information							
a. Records of initial performance test	Incl. in C3						
b. Records of annual and any subsequent compliance tests	Incl. in C3						
E. Total Labor Burden and Cost			67	3.4	6.7	77	\$4,380

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).
- 3. Control device inspection cost already accounted for under monitoring costs.
- 4. Assume 8 hours for each facility to review the report of the initial performance test for pollutants and fugitive ash.
- 5. Assume 2 hours for each facility to review the report of the initial performance test for fugitive ash.
- 6. Assume 40 hours to review report of annual PM, CO, and HCl compliance reports.
- 7. The average recurrent burden and cost in the first 3 years after promulgation for the sources with recurrent burden are equal to the person-hours added down each column for technical, management, and clerical and the sum of the cost column.

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).

Table 1.A - Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements of the Emissions Guidelines for Existing Stationary Sources; Sewage Sludge Incineration Units - Subpart MMMM - Year 1. Fluidized Bed

for Existing Station	ary Sources:	Sewage Slu		ation Units -			1, Fluidized I	Bed				
	(A)		(B)	(C)	(D)	(E)	(F)	(G)				
	Respondent	Non-Labor	Number of	Hours	Number of	Technical	Management	Clerical	Total	Total	Total	
	Hours per	Costs	Occurrences	Per	Respondents	Hours	Hours	Hours	Labor Costs	Non-Labor	Responses	S
	Occurrence	Per	Per	Respondent	Per Year	Per Year	Per Year	Per Year	Per Year	Costs	Per Year) te
	(Technical	Occurrence	Respondent	Per Year						Per Year		ΙĔ
Burden Item	hours)		Per Year	(C=A x B)		(CXD)	(E x 0.05)	(E x 0.1)				Footnotes
1. Applications	N/A			, , , , , , , , , , , , , , , , , , ,		· · ·						
Surveys and Studies	N/A											T
Reporting Requirements												
Read and Understand Rule Requirements	40	\$100	1	40	41	1,640	82	164	\$107,220	\$4,100	0	a,b,i,i
B. Required Activities						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				. ,		1
Initial stack test and report	40	\$61,740	1	40	60	2,400	120	240	\$156,907	\$3,704,400	0	а
2) Annual stack test and test report	40	\$21,348	1	40	0	0	0	0	\$0	\$0	0	c,k
3) Operator training and qualification	1	7,	_				-					,
a) Establish and teach operator qualification course	64	\$0	1	64	41	2,624	131	262	\$171,552	\$0	0	a,b,j
b) Obtain operator qualification	72	\$0	1	72	41	2,952	148	295	\$192,996	\$0	0	a,b,j
c) Annual refresher course	12	\$0	1	12	0	0	0	0	\$0	\$0	0	C
d) Initial review of site-specific information	Incl. in a.		 			1 -	1	<u> </u>				Ť
e) Annual review of site-specific information	8	\$0	1	8	0	0	0	0	\$0	\$0	0	С
Establish operating parameters (maximum and minimum)	40	\$0	1	40	60	2,400	120	240	\$156,907	\$0	0	a
5) Continuous parameter monitoring (including CEMS)		**		ı.		2,.00	1 220	 	2200,000			Ť
a) Initial capital costs	0	\$2,773	1	0	60	0	0	0	\$0	\$166,400	0	a,d
b) Annualized capital and O&M costs	11	\$667	1	11	60	660	33	66	\$43,150	\$40,000	0	c,e
C. Create Information	Incl. in 3.B	400.	-		- "	1000	- 55	 "	ψ 10,100	4.0,000		10,0
D. Gather Information	Incl. in 3.E									 	 	_
E. Report Preparation	III O.L								 	 	 	+
Notification of initial performance test	2	\$0	1	2	60	120	6	12	\$7,845	\$0	60	+
2) Notification of initial CMS Demonstration	2	\$0	1	2	60	120	6	12	\$7,845	\$0	60	b,i
3) Final Control Plan	20	\$0	1	20	60	1,200	60	120	\$78,454	\$0	60	10,1
4) Initial Compliance Report	40	\$0	1	40	60	2,400	120	240	\$156,907	\$0	60	+
5) Report for site-specific parameter petition	14	\$0	1	14	0	0	0	0	\$0	\$0	0	a,f
6) Annual Compliance Report	40	\$0	1	40	0	0	0	0	\$0	\$0	0	a,ı
7) Status report for operators that are off-site for more than 2 weeks	8	\$0	1	8	5	40	2	4	\$2.615	\$0	5	g
8) Corrective action summary for operators that are off-site	0	Φ0		0	3	40		+ +	Φ2,013	Ψ0		- 9
for more than 2 weeks	8	\$0	2	16	5	80	4	8	\$5,230	\$0	10	q
9) Semiannual Deviation Report	24	\$0	2	48	5	240	12	24	\$15.691	\$0	10	h
ReportingSubtotal	24	Φ0		40	5	16.876	844	1.688	\$1,103,320	\$3.748.500	265	+"
4. Recordkeeping Requirements	_					10,070	044	1,000	\$1,103,320	\$3,740,500	205	_
	leel is 0.4											+
A. Read Instructions	Incl. in 3.A N/A											+
B. Plan Activities	N/A											+
C. Implement Activities	N/A											+
D. Develop Record System	IVA									 	 	_
E. Record Information		**		101	_							+
1) Records of operating parameters	2	\$0	52	104	0	0	0	0	\$0	\$0	0	+
Records of exceedances of the operating parameters	2	\$0	1	2	5	10	1	1	\$654	\$0	0	g
3) Records of stack tests	2	\$0	1	2	0	0	0	0	\$0	\$0	0	+
4) Records of persons who have reviewed operating procedures	2	\$0	1	2	0	0	0	0	\$0	\$0	0	+
5) Records of persons who have completed operator training	2	\$0	1	2	0	0	0	0	\$0	\$0	0	+
6) Records of persons who meet operator qualification criteria	2	\$0	1	2	0	0	0	0	\$0	\$0	0	+
7) Records of monitoring device calibration	2	\$0	1	2	0		0	0	\$0	\$0	0	+
8) Records of site-specific documentation	24	\$0	1	24	0	0	0	0	\$0	\$0	0	+
F. Personnel Training	Incl. in 3.B	ļ				ļ						_
G. Time for Audits	N/A							.				_
Recordkeeping Subtotal			l .			10	0.5	1	\$654	\$0	0	
TOTAL:						16,886	844	1,689	\$1,103,974	\$3,748,500	265	$oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{ol}}}}}}}}}}}}}}}}}$
1							Total Hours	Labor	Non-Labor	Total		
					spondent Burden		19,419	\$1,103,974		\$4,852,474		
				Initial Capital an					\$170,500			

Annualized Capital/Start-up and O & M

\$3,748,500

- a One-time only costs.
- b Cost incurred by a facility regardless of the number of affected units at the plant.
- c Annual cost. Annual costs are not incurred until the second year of operation.
- d Based on the sum of the total capital costs for each monitoring system required for incinerators.
- e Based on the sum of the annualized capital costs for each monitoring system required for incinerators.
- f Assumed that none of the facilities will petition for site-specific parameters.
- g Assumed that 10 percent of the facilities would not have a qualified operator available for more than two weeks at least once a year. Assumed that this required only two corrective action summaries.
- h Assumed that 10 percent of the facilities would have an exceedance during the year.
- i Assumed \$100 for puchase of filing cabinet to house copy of rule, records and report copies.
- j 32 facilities have FB units; however one of these facilities also has a MH unit. Facility-specific costs are included for only 31 units here and the facility-specific costs for the facility have both unit types are incorporated into the MH tables.

Table 1.B - Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements of the Emissions Guidelines

for Existing Stationary Sources: Sewage Sludge Incineration Units - Subpart MMMM - Year 2, Fluidized Bed

for Existing Stationary		ewage Siuc										
for Exfor Existing Stationary Sources: Sewage Sludge Incineration Units - Subpart	(A)		(B)	(C)	(D)	(E)	(F)	(G)				
Footn Footnotes	Respondent	Non-Labor	Number of	Hours	Number of	Technical	Management	Clerical	Total	Total	Total	
Total Total	Hours per	Costs	Occurrences	Per	Respondents	Hours	Hours	Hours	Labor Costs	Non-Labor	Responses	Ś
RespcResponses	Occurrence	Per	Per	Respondent	Per Year	Per Year	Per Year	Per Year	Per Year	Costs	Per Year	l e
	(Technical	Occurrence	Respondent	Per Year						Per Year		Footnotes
Burden Item	hours)		Per Year	(C=A x B)		(CXD)	(E x 0.05)	(E x 0.1)				l ĕ
1. Applications	N/A			, , ,		<u> </u>	,	<u> </u>				
Surveys and Studies	N/A											\vdash
Reporting Requirements												-
A. Read and Understand Rule Requirements	40	\$0	1	40	0	0	0	0	\$0	\$0	0	a.b.i
B. Regured Activities	1 70	Ψ0	-	70	·	l	0		ΨΟ	Ψ0		и,ы,і
1) Initial stack test and report	40	\$61,740	1	40	0	0	0	0	\$0	\$0	0	а
2) Annual stack test and teport	40	\$21,348	1	40	60	2,400	120	240	\$156,907	\$1,280,880	0	c,k
3) Operator training and qualification	40	Ψ21,340		40	00	2,400	120	240	Ψ130,307	\$1,200,000		C,K
a) Establish and teach operator qualification course	64	\$0	1	64	0	0	0	0	\$0	\$0	0	a,b
	72		1	72	0			0	\$0	\$0	0	
b) Obtain operator qualification	12	\$0				0	0					a,b
c) Annual refresher course		\$0	1	12	41	492	25	49	\$32,166	\$0	0	c,j
d) Initial review of site-specific information	Incl. in a.											₩.
e) Annual review of site-specific information	8	\$0	1	8	41	328	16	33	\$21,444	\$0	0	c,j
Establish operating parameters (maximum and minimum)	40	\$0	1	40	0	0	0	0	\$0	\$0	0	a
5) Continuous parameter monitoring (including CEMS)												ـــــ
a) Initial capital costs	0	\$0	1	0	0	0	0	0	\$0	\$0	0	a,d
b) Annualized capital and O&M costs	11	\$667	1	11	60	660	33	66	\$43,150	\$40,000	0	c,e
C. Create Information	Incl. in 3.B											
D. Gather Information	Incl. in 3.E											
E. Report Preparation												
Notification of initial performance test	2	\$0	1	2	0	0	0	0	\$0	\$0	0	
Notification of initial CMS Demonstration	2	\$0	1	2	0	0	0	0	\$0	\$0	0	b,i
3) Final Control Plan	20	\$0	1	20	0	0	0	0	\$0	\$0	0	
4) Initial Compliance Report	40	\$0	1	40	0	0	0	0	\$0	\$0	0	T
5) Report for site-specific parameter petition	14	\$0	1	14	0	0	0	0	\$0	\$0	0	a,f
6) Annual Compliance Report	40	\$0	1	40	60	2,400	120	240	\$156,907	\$0	60	
7) Status report for operators that are off-site for more than 2 weeks	8	\$0	1	8	5	40	2	4	\$2,615	\$0	5	q
8) Corrective action summary for operators that are off-site	-	+	-					·	42,010	40		<u> </u>
for more than 2 weeks	8	\$0	2	16	5	80	4	8	\$5,230	\$0	10	l a
9) Semiannual Deviation Report	24	\$0	2	48	5	240	12	24	\$15.691	\$0	10	h
Reporting Subtotal	24	Ψ0	-	40	3	6.640	332	664	\$434,110	\$1,320,880	85	
		-				0,040	332	004	Φ434,110	\$1,320,000	65	₩
Recordkeeping Requirements	1											₩
A. Read Instructions	Incl. in 3.A											₩
B. Plan Activities	N/A											₩
C. Implement Activities	N/A											₩
D. Develop Record System	N/A											
E. Record Information												
Records of operating parameters	2	\$0	52	104	0	0	0	0	\$0	\$0	0	ــــــ
Records of exceedances of the operating parameters	2	\$0	1	2	5	10	1	1	\$654	\$0	0	g
Records of stack tests	2	\$0	1	2	41	82	4	8	\$5,361	\$0	0	
Records of persons who have reviewed operating procedures	2	\$0	1	2	41	82	4	8	\$5,361	\$0	0	L i
5) Records of persons who have completed operator training	2	\$0	1	2	41	82	4	8	\$5,361	\$0	0	j
Records of persons who meet operator qualification criteria	2	\$0	1	2	41	82	4	8	\$5,361	\$0	0	Ĺ
7) Records of monitoring device calibration	2	\$0	1	2	41	82	4	8	\$5,361	\$0	0	
Records of site-specific documentation	24	\$0	1	24	41	984	49	98	\$64,332	\$0	0	j
F. Personnel Training	Incl. in 3.B											
G. Time for Audits	N/A											
Recordkeeping Subtotal						1404	70.2	140.4	\$91,791	\$0	0	
TOTAL:				-	-	8,044	402	804	\$525,901	\$1,320,880	85	\vdash
10 m.c.						0,044	Total Hours	Labor	Non-Labor	Total	00	
				Summany of Dog	spondent Burden		9,251	\$525,901	\$1,320,880	\$1,846,781		
				Initial Capital an			3,231	402J,301	\$0	Ψ±,040,701		
) e M						
Annualized Capital/Start-up and O & M \$1,320,880												

- a One-time only costs.
- b Cost incurred by a facility regardless of the number of affected units at the plant.
- c Annual cost. Annual costs are not incurred until the second year of operation.
- d Based on the sum of the total capital costs for each monitoring system required for incinerators.
- e Based on the sum of the annualized capital costs for each monitoring system required for incinerators.
- f Assumed that none of the facilities will petition for site-specific parameters.
- g Assumed that 10 percent of the facilities would not have a qualified operator available for more than two weeks at least once a year. Assumed that this required only two corrective action summaries.
- h Assumed that 10 percent of the facilities would have an exceedance during the year.
- i Assumed \$100 for puchase of filing cabinet to house copy of rule, records and report copies.
- j 32 facilities have FB units; however one of these facilities also has a MH unit. Facility-specific costs are included for only 31 units here and the facility-specific costs for the facility have both unit types are incorporated into the MH tables.

Table 1.C - Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements of the Emissions Guidelines for Existing Stationary Sources: Sewage Sludge Incineration Units - Subpart MMMM - Year 3, Fluidized Bed

ioi Existing Stationa		sewaye Siu					, riuluizeu E					
for Exfor Existing Stationary Sources: Sewage Sludge Incineration Units - Subpart			(B)	(C)	(D)	(E)	(F)	(G)				
FootnFootnotes	Respondent	Non-Labor	Number of	Hours	Number of	Technical	Management	Clerical	Total	Total	Total	1 !
Total Total	Hours per	Costs	Occurrences	Per	Respondents	Hours	Hours	Hours	Labor Costs	Non-Labor	Responses	ν
Resp(Responses	Occurrence	Per	Per	Respondent	Per Year	Per Year	Per Year	Per Year	Per Year	Costs	Per Year	Footnotes
	(Technical	Occurrence	Respondent	Per Year						Per Year		Ě
Burden Item	hours)	1	Per Year	(C=A x B)		(CXD)	(E x 0.05)	(E x 0.1)				ļĕ
1. Applications	N/A			(0 12)		(01.12)	(= 11 0100)	(= :: -; -)				
Surveys and Studies	N/A											\vdash
Reporting Requirements	14// 1	†										\vdash
A. Read and Understand Rule Requirements	40	\$0	1	40	0	0	0	0	\$0	\$0	0	a,b,i
B. Regulred Activities	40	Ψ0		40	- 	<u> </u>	0	_ <u> </u>	ΨΟ	Ψ0		α,υ,ι
Nequired Activities I) Initial stack test and report	40	\$61,740	1	40	0	0	0	0	\$0	\$0	0	а
2) Annual stack test and test report	40	\$21,348	1	40	60	2,400	120	240	\$156,907	\$1,280,880	0	c,k
3) Operator training and qualification	40	\$21,340	1	40	00	2,400	120	240	\$130,907	\$1,200,000	0	C,K
	64	\$0	1	64	0	0	0	0	\$0	\$0	0	a,b
a) Establish and teach operator qualification course											_	
b) Obtain operator qualification	72	\$0	1	72	0	0	0	0	\$0	\$0	0	a,b
c) Annual refresher course	12	\$0	1	12	41	492	25	49	\$32,166	\$0	0	c,j
d) Initial review of site-specific information	Incl. in a.											<u> </u>
e) Annual review of site-specific information	8	\$0	1	8	41	328	16	33	\$21,444	\$0	0	c,j
Establish operating parameters (maximum and minimum)	40	\$0	1	40	0	0	0	0	\$0	\$0	0	а
5) Continuous parameter monitoring (including CEMS)												
a) Initial capital costs	0	\$0	1	0	0	0	0	0	\$0	\$0	0	a,d
b) Annualized capital and O&M costs	11	\$667	1	11	60	660	33	66	\$43,150	\$40,000	0	c,e
C. Create Information	Incl. in 3.B											
D. Gather Information	Incl. in 3.E											
E. Report Preparation												
Notification of initial performance test	2	\$0	1	2	0	0	0	0	\$0	\$0	0	
Notification of initial CMS Demonstration	2	\$0	1	2	0	0	0	0	\$0	\$0	0	b,j
3) Final Control Plan	20	\$0	1	20	0	0	0	0	\$0	\$0	0	,,
4) Initial Compliance Report	40	\$0	1	40	0	0	0	0	\$0	\$0	0	
5) Report for site-specific parameter petition	14	\$0	1	14	0	0	0	0	\$0	\$0	0	a,f
6) Annual Compliance Report	40	\$0	1	40	60	2,400	120	240	\$156.907	\$0	60	и,1
7) Status report for operators that are off-site for more than 2 weeks	8	\$0	1	8	5	40	2	4	\$2,615	\$0	5	q
8) Corrective action summary for operators that are off-site	+ -	ΨΟ	-	-	 	40		7	Ψ2,013	Ψ0		y
for more than 2 weeks	8	\$0	2	16	5	80	4	8	\$5,230	\$0	10	۱ .
9) Semiannual Deviation Report	24	\$0	2	48	5	240	12	24	\$15,691	\$0	10	h
ReportingSubtota	24	⊅ U		40	3	6,640	332	664	\$434,110	\$1,320,880		0
						6,640	332	664	\$434,110	\$1,320,880	85	U
Recordkeeping Requirements	+											
A. Read Instructions	Incl. in 3.A											<u> </u>
B. Plan Activities	N/A											—
C. Implement Activities	N/A											ـــــ
D. Develop Record System	N/A											
E. Record Information												
Records of operating parameters	2	\$0	52	104	0	0	0	0	\$0	\$0	0	
Records of exceedances of the operating parameters	2	\$0	1	2	5	10	1	1	\$654	\$0	0	g
Records of stack tests	2	\$0	1	2	41	82	4	8	\$5,361	\$0	0	
Records of persons who have reviewed operating procedures	2	\$0	1	2	41	82	4	8	\$5,361	\$0	0	j
5) Records of persons who have completed operator training	2	\$0	1	2	41	82	4	8	\$5,361	\$0	0	j
Records of persons who meet operator qualification criteria	2	\$0	1	2	41	82	4	8	\$5,361	\$0	0	ī
7) Records of monitoring device calibration	2	\$0	1	2	41	82	4	8	\$5,361	\$0	0	
8) Records of site-specific documentation	24	\$0	1	24	41	984	49	98	\$64,332	\$0	0	i
F. Personnel Training	Incl. in 3.B		1		1				,			
G. Time for Audits	N/A											\vdash
Recordkeeping Subtotal	1		+			1404	70.2	140.4	\$91,791	\$0	0	\vdash
TOTAL:		!	<u> </u>		!	8,044	402	804	\$525,901	\$1,320,880	85	-
TOTAL.						0,044					65	Щ
							Total Hours	Labor	Non-Labor	Total		
				Summary of Res			9,251	\$525,901	\$1,320,880	\$1,846,781		
				Initial Capital and					\$0			
				Annualized Capit	al/Start-up and O	& M			\$1,320,880			

- a One-time only costs.
- b Cost incurred by a facility regardless of the number of affected units at the plant.
- c Annual cost. Annual costs are not incurred until the second year of operation.
- d Based on the sum of the total capital costs for each monitoring system required for incinerators.
- e Based on the sum of the annualized capital costs for each monitoring system required for incinerators.
- f Assumed that none of the facilities will petition for site-specific parameters.
- g Assumed that 10 percent of the facilities would not have a qualified operator available for more than two weeks at least once a year. Assumed that this required only two corrective action summaries.
- h Assumed that 10 percent of the facilities would have an exceedance during the year.
- i Assumed \$100 for puchase of filing cabinet to house copy of rule, records and report copies.
- j 32 facilities have FB units; however one of these facilities also has a MH unit. Facility-specific costs are included for only 31 units here and the facility-specific costs for the facility have both
- unit types are incorporated into the MH tables.
- k Facilities may test every three years if certain requirements are met, thus annual testing is divided by three to give a per year cost. It is assumed most facilities would meet the requirements.

Table 1.D - Summary of Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements of the Emissions Guidelines for Existing Stationary Sources: Sewage Sludge Incineration Units - Subpart MMMM - Fluidized Bed

		Management				Non-Labor (Annualized Capital/Startup and	
Year	Technical Hours	Hours	Clerical Hours	Total Hours	Labor Costs	O&M) Costs	Total Costs
1	16,886	844	1,689	19,419	\$1,103,974	\$3,748,500	\$4,852,474
2	8,044	402	804	9,251	\$525,901	\$1,320,880	\$1,846,781
3	8,044	402	804	9,251	\$525,901	\$1,320,880	\$1,846,781
Total	32,974	1,649	3,297	37,920	\$2,155,776	\$6,390,260	\$8,546,036
Average	10,991	550	1,099	12,640	\$718,592	\$2,130,087	\$2,848,679

 $Table \ 2.A \ - \ Annual \ Respondent \ Burden \ and \ Cost \ of \ Record keeping \ and \ Reporting \ Requirements \ of \ the \ Emissions \ Guidelines$

for Existing Stationary Sources: Sewage Sludge Incineration Units - Subpart MMMM - Year 1, Multiple Hearth

for Exfor Existing Stationary Sources: Sewage Sludge Incineration Units - Subpart M	(A)		(B)	(C)	(D)	(E)	(F)	(G)				$\overline{}$
FootnFootnotes	Respondent	Non Lobor	Number of	Hours	Number of	Technical		Clerical	Total	Total	Total	1 !
Total Total		Non-Labor Costs	Occurrences				Management Hours		Labor Costs			1 !
	Hours per			Per	Respondents	Hours		Hours		Non-Labor	Responses	es
RespiResponses	Occurrence	Per	Per	Respondent	Per Year	Per Year	Per Year	Per Year	Per Year	Costs	Per Year	ΙĒ
	(Technical	Occurrence	Respondent	Per Year						Per Year		Footnotes
Burden Item	hours)		Per Year	(C=A x B)		(CXD)	(E x 0.05)	(E x 0.1)				L L
1. Applications	N/A											—
2. Surveys and Studies	N/A											
Reporting Requirements												<u> </u>
A. Read and Understand Rule Requirements	40	\$100	1	40	69	2,760	138	276	\$180,443	\$6,900	0	a,b,i
B. Required Activities												
Initial stack test and report	40	\$61,740	1	40	144	5,760	288	576	\$376,578	\$8,890,560	0	а
Annual stack test and test report	40	\$23,302	1	40	0	0	0	0	\$0	\$0	0	c,j
Operator training and qualification												
a) Establish and teach operator qualification course	64	\$0	1	64	69	4,416	221	442	\$288,709	\$0	0	a,b
b) Obtain operator qualification	72	\$0	1	72	69	4,968	248	497	\$324,798	\$0	0	a,b
c) Annual refresher course	12	\$0	1	12	0	0	0	0	\$0	\$0	0	С
d) Initial review of site-specific information	Incl. in a.											
e) Annual review of site-specific information	8	\$0	1	8	0	0	0	0	\$0	\$0	0	С
Establish operating parameters (maximum and minimum)	40	\$0	1	40	144	5,760	288	576	\$376,578	\$0	0	а
5) Continuous parameter monitoring (including CEMS)												
a) Initial capital costs	0	\$1,688	1	0	144	0	0	0	\$0	\$243,000	0	a,d
b) Annualized capital and O&M costs	11	\$389	1	11	144	1,584	79	158	\$103,559	\$56,000	0	c,e
C. Create Information	Incl. in 3.B											
D. Gather Information	Incl. in 3.E											
E. Report Preparation												
Notification of initial performance test	2	\$0	1	2	144	288	14	29	\$18,829	\$0	144	
2) Notification of initial CMS Demonstration	2	\$0	1	2	144	288	14	29	\$18,829	\$0	144	b,j
3) Final Control Plan	20	\$0	1	20	144	2,880	144	288	\$188,289	\$0	144	
4) Initial Compliance Report	40	\$0	1	40	144	5,760	288	576	\$376,578	\$0	144	
5) Report for site-specific parameter petition	14	\$0	1	14	0	0	0	0	\$0	\$0	0	a,f
6) Annual Compliance Report	40	\$0	1	40	0	0	0	0	\$0	\$0	0	
7) Status report for operators that are off-site for more than 2 weeks	8	\$0	1	8	7	56	3	6	\$3,661	\$0	7	q
8) Corrective action summary for operators that are off-site	l	Ψ.	-	Ů	·	- 55	l	_ ĭ	40,001	+	·	9
for more than 2 weeks	8	\$0	2	16	7	112	6	11	\$7,322	\$0	14	n
9) Semiannual Deviation Report	24	\$0	2	48	7	336	17	34	\$21,967	\$0	14	h
Reporting Subtotal	 -	**	_		·	34,968	1,748	3.497	\$2,286,140	\$8,953,460	611	Ë
Recordkeeping Requirements						04,500	1,140	0,437	Ψ2,200,140	ψ0,550,400	011	-
A. Read Instructions	Incl. in 3.A											╁
B. Plan Activities	N/A											\vdash
C. Implement Activities	N/A											\vdash
D. Develop Record System	N/A											\vdash
E. Record Information	14// (\vdash
Record minimation Records of operating parameters	2	\$0	52	104	0	0	0	0	\$0	\$0	0	
2) Records of exceedances of the operating parameters	2	\$0	1	2	7	14	1	1	\$915	\$0	0	а
3) Records of stack tests	2	\$0	1	2	0	0	0	0	\$0	\$0	0	y y
4) Records of stack tests 4) Records of persons who have reviewed operating procedures	2	\$0	1	2	0	0	0	0	\$0	\$0	0	\vdash
	2	\$0	1	2	0		0	0	\$0	\$0	0	\vdash
5) Records of persons who have completed operator training						0	0		\$0 \$0		0	\vdash
6) Records of persons who meet operator qualification criteria	2	\$0	1	2	0	0	0	0		\$0	_	\vdash
7) Records of monitoring device calibration	2	\$0	1	2	0	0		0	\$0	\$0	0	\vdash
8) Records of site-specific documentation	24	\$0	1	24	0	0	0	0	\$0	\$0	0	₩
F. Personnel Training	Incl. in 3.B	1				-						\vdash
G. Time for Audits	N/A	-				.			****			⊢
Recordkeeping Subtotal		L				14	0.7	1.4	\$915	\$0	0	\vdash
TOTAL:						34,982	1,749	3,498	\$2,287,055	\$8,953,460	611	
							Total Hours	Labor	Non-Labor	Total		
				Summary of Res			40,229	\$2,287,055	\$8,953,460	\$11,240,515		
				Initial Capital and					\$249,900			
				Annualizad Cani	tal/Ctart up and C				#0 0E2 460			

Annualized Capital/Start-up and O & M

\$8.953.460

- a One-time only costs.
- b Cost incurred by a facility regardless of the number of affected units at the plant.
- c Annual cost. Annual costs are not incurred until the second year of operation.
- d Based on the sum of the total capital costs for each monitoring system required for incinerators.
- e Based on the sum of the annualized capital costs for each monitoring system required for incinerators.
- f Assumed that none of the facilities will petition for site-specific parameters.
- g Assumed that 10 percent of the facilities would not have a qualified operator available for more than two weeks at least once a year. Assumed that this required only two corrective action summaries.
- h Assumed that 10 percent of the facilities would have an exceedance during the year.
- i Assumed \$100 for puchase of filing cabinet to house copy of rule, records and report copies.
- j Facilities may test every three years if certain requirements are met, thus annual testing is divided by three to give a per year cost. It is assumed most facilities would meet the requirements.

 $Table\ 2.B\ -\ Annual\ Respondent\ Burden\ and\ Cost\ of\ Record keeping\ and\ Reporting\ Requirements\ of\ the\ Emissions\ Guidelines$

for Existing Stationary Sources: Sewage Sludge Incineration Units - Subpart MMMM - Year 2, Multiple Hearth

		orrage crae	ge incineral									
for Exfor Existing Stationary Sources: Sewage Sludge Incineration Units - Subpart			(B)	(C)	(D)	(E)	(F)	(G)				
FootnFootnotes	Respondent	Non-Labor	Number of	Hours	Number of	Technical	Management	Clerical	Total	Total	Total	
Total Total	Hours per	Costs	Occurrences	Per	Respondents	Hours	Hours	Hours	Labor Costs	Non-Labor	Responses	ι ς:
Resp(Responses	Occurrence	Per	Per	Respondent	Per Year	Per Year	Per Year	Per Year	Per Year	Costs	Per Year	1 #
	(Technical	Occurrence	Respondent	Per Year						Per Year		-ootnotes
Burden Item	hours)		Per Year	(C=A x B)		(CXD)	(E x 0.05)	(E x 0.1)				1 8
1. Applications	N/A											
Surveys and Studies	N/A											\vdash
Reporting Requirements												$\overline{}$
A. Read and Understand Rule Requirements	40	\$0	1	40	0	0	0	0	\$0	\$0	0	a.b.
B. Regulred Activities									• -			
Initial stack test and report	40	\$61.740	1	40	0	0	0	0	\$0	\$0	0	а
Annual stack test and test report	40	\$23,302	1	40	144	5,760	288	576	\$376,578	\$3,355,488	0	C,j
Operator training and qualification		4-0,000	_			0,1.00			40.0,0.0	10,000,100	-	1 - "
a) Establish and teach operator qualification course	64	\$0	1	64	0	0	0	0	\$0	\$0	0	a,t
b) Obtain operator qualification	72	\$0	1	72	0	0	0	0	\$0	\$0	0	a,t
c) Annual refresher course	12	\$0	1	12	69	828	41	83	\$54.133	\$0	0	C
d) Initial review of site-specific information	Incl. in a.	40	-		- 00	020		- 00	40 1,100	+	Ť	Ť
e) Annual review of site-specific information	8	\$0	1	8	69	552	28	55	\$36,089	\$0	0	С
Establish operating parameters (maximum and minimum)	40	\$0	1	40	0	0	0	0	\$0	\$0	0	a
5) Continuous parameter monitoring (including CEMS)		ΨΟ		70	 	_ <u> </u>	•		Ψ0	1	_ <u> </u>	۳
a) Initial capital costs	0	\$0	1	0	0	0	0	0	\$0	\$0	0	a,c
b) Annualized capital and O&M costs	11	\$389	1	11	144	1.584	79	158	\$103,559	\$56,000	0	C,E
C. Create Information	Incl. in 3.B	Ψ303			144	1,304	13	130	Ψ105,555	\$30,000	0	+ 0,0
D. Gather Information	Incl. in 3.E											-
E. Report Preparation	IIICI. III 3.E											\vdash
Notification of initial performance test	2	\$0	1	2	0	0	0	0	\$0	\$0	0	-
Notification of initial CMS Demonstration	2	\$0	1	2	0	0	0	0	\$0	\$0	0	b,i
3) Final Control Plan	20	\$0	1	20	0	0	0	0	\$0	\$0	0	[D,]
	40	\$0	1	40	0	0	0	0	\$0	\$0	0	+-
4) Initial Compliance Report	14	\$0	1	14	0	0	0	0	\$0 \$0	\$0	0	+
5) Report for site-specific parameter petition 6) Annual Compliance Report	40	\$0		40	144	5,760	288	576	\$376,578	\$0	144	a,f
	8	\$0	1	8	7					\$0	7	+-
Status report for operators that are off-site for more than 2 weeks Corrective action summary for operators that are off-site	8	\$ U	1	8	/	56	3	6	\$3,661	\$0	/	g
	_	60		10	7	110		11	#7 222		14	١ ـ
for more than 2 weeks 9) Semiannual Deviation Report	8 24	\$0 \$0	2	16 48	7	112 336	6 17	11 34	\$7,322 \$21.967	\$0 \$0	14	g h
	24	\$0		48	/	14.988	749	1.499			179	 "
epo tingSubtotal						14,988	749	1,499	\$979,886	\$3,411,488	179	₩
. Recordkeeping Requirements												₩
A. Read Instructions	Incl. in 3.A											₩
B. Plan Activities	N/A											₩
C. Implement Activities	N/A											₩
D. Develop Record System	N/A											₩
E. Record Information	_										_	┷
Records of operating parameters	2	\$0	52	104	0	0	0	0	\$0	\$0	0	₩
Records of exceedances of the operating parameters	2	\$0	1	2	7	14	1	1	\$915	\$0	0	g
3) Records of stack tests	2	\$0	1	2	69	138	7	14	\$9,022	\$0	0	₩
Records of persons who have reviewed operating procedures	2	\$0	1	2	69	138	7	14	\$9,022	\$0	0	₩
5) Records of persons who have completed operator training	2	\$0	1	2	69	138	7	14	\$9,022	\$0	0	ــــــ
Records of persons who meet operator qualification criteria	2	\$0	1	2	69	138	7	14	\$9,022	\$0	0	Щ
7) Records of monitoring device calibration	2	\$0	1	2	69	138	7	14	\$9,022	\$0	0	1
Records of site-specific documentation	24	\$0	1	24	69	1,656	83	166	\$108,266	\$0	0	_
F. Personnel Training	Incl. in 3.B											Щ
	N/A											1
ecordkeeping Subtotal						2360	118	236	\$154,292		0	
OTAL:						17,348	867	1,735	\$1,134,178	\$3,411,488	179	
·	•		•				Total Hours	Labor	Non-Labor	Total		
				Summary of Res	spondent Burden		19,950	\$1,134,178	\$3,411,488	\$4,545,666		
				Initial Capital an					\$0			
				Annualized Capi	tal/Start-up and C	N & (\$3,411,488			
G. Time for Audits ecordkeeping Subtotal	N/A			Initial Capital an	d Startup	, -	867 Total Hours	Labor	\$1,134,178 Non-Labor \$3,411,488 \$0	Total		

- a One-time only costs.
- b Cost incurred by a facility regardless of the number of affected units at the plant.
- c Annual cost. Annual costs are not incurred until the second year of operation.
- d Based on the sum of the total capital costs for each monitoring system required for incinerators.
- e Based on the sum of the annualized capital costs for each monitoring system required for incinerators.
- f Assumed that none of the facilities will petition for site-specific parameters.
- g Assumed that 10 percent of the facilities would not have a qualified operator available for more than two weeks at least once a year. Assumed that this required only two corrective action summaries.
- h Assumed that 10 percent of the facilities would have an exceedance during the year.
- i Assumed \$100 for puchase of filing cabinet to house copy of rule, records and report copies.
- j Facilities may test every three years if certain requirements are met, thus annual testing is divided by three to give a per year cost. It is assumed most facilities would meet the requirements.

Table 2.C-Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements of the Emissions Guidelines

for Existing Stationary Sources: Sewage Sludge Incineration Units - Subpart MMMM - Year 3, Multiple Hearth

ioi existing stationa		ocwage orac										
for Exfor Existing Stationary Sources: Sewage Sludge Incineration Units - Subpart M			(B)	(C)	(D)	(E)	(F)	(G)				!
FootnFootnotes	Respondent	Non-Labor	Number of	Hours	Number of	Technical	Management	Clerical	Total	Total	Total	
Total Total	Hours per	Costs	Occurrences	Per	Respondents	Hours	Hours	Hours	Labor Costs	Non-Labor	Responses	ς
Resp(Responses	Occurrence	Per	Per	Respondent	Per Year	Per Year	Per Year	Per Year	Per Year	Costs	Per Year	ote
	(Technical	Occurrence	Respondent	Per Year						Per Year		-ootnotes
Burden Item	hours)		Per Year	(C=A x B)		(CXD)	(E x 0.05)	(E x 0.1)				Ĭĕ
1. Applications	N/A			<u> </u>		`	, í	,				
Surveys and Studies	N/A											$\overline{}$
Reporting Requirements												
A. Read and Understand Rule Requirements	40	\$0	1	40	0	0	0	0	\$0	\$0	0	a,b,i
B. Regulred Activities		**	-		Ť	- ĭ		- ŭ	**	**		α,ε,.
Initial stack test and report	40	\$61,740	1	40	0	0	0	0	\$0	\$0	0	а
2) Anhual stack test and test report	40	\$23,302	1	40	144	5,760	288	576	\$376,578	\$3,355,488	0	c,j
3) Operator training and qualification	+	Ψ20,002	-	10	177	5,700	200	310	Ψ010,010	Ψ0,000,400		0,j
a) Establish and teach operator qualification course	64	\$0	1	64	0	0	0	0	\$0	\$0	0	a,b
b) Obtain operator qualification	72	\$0	1	72	0	0	0	0	\$0	\$0	0	a,b
c) Annual refresher course	12	\$0	1	12	69	828	41	83	\$54.133	\$0	0	C
d) Initial review of site-specific information	Incl. in a.	Ψυ	1	12	09	020	41	03	Φ34,133	Ψ0	- 0	۲
e) Annual review of site-specific information	inci. in a.	\$0	1	8	69	552	28	55	\$36,089	\$0	0	С
4) Establish operating parameters (maximum and minimum)	40	\$0 \$0	1	40	0	0	0	0	\$36,089	\$0	0	a
	40	ΦU	1	40	U	U	U	U	ΦU	ΦU	U	a
5) Continuous parameter monitoring (including CEMS)	0	\$0	1	0	0	0	0	0	\$0	\$0		0.4
a) Initial capital costs			1								0	a,d
b) Annualized capital and O&M costs	11	\$389	1	11	144	1,584	79	158	\$103,559	\$56,000	0	c,e
C. Create Information	Incl. in 3.B											₩
D. Gather Information	Incl. in 3.E											
E. Report Preparation							_					—
Notification of initial performance test	2	\$0	1	2	0	0	0	0	\$0	\$0	0	
Notification of initial CMS Demonstration	2	\$0	1	2	0	0	0	0	\$0	\$0	0	b,j
3) Final Control Plan	20	\$0	1	20	0	0	0	0	\$0	\$0	0	
4) Initial Compliance Report	40	\$0	1	40	0	0	0	0	\$0	\$0	0	
5) Report for site-specific parameter petition	14	\$0	1	14	0	0	0	0	\$0	\$0	0	a,f
6) Annual Compliance Report	40	\$0	1	40	144	5,760	288	576	\$376,578	\$0	144	
7) Status report for operators that are off-site for more than 2 weeks	8	\$0	1	8	7	56	3	6	\$3,661	\$0	7	g
Corrective action summary for operators that are off-site												
for more than 2 weeks	8	\$0	2	16	7	112	6	11	\$7,322	\$0	14	g
9) Semiannual Deviation Report	24	\$0	2	48	7	336	17	34	\$21,967	\$0	14	h
ReportingSubtotal						14,988	749	1,499	\$979,886	\$3,411,488	179	
Recordkeeping Requirements												
A. Read Instructions	Incl. in 3.A											
B. Plan Activities	N/A											
C. Implement Activities	N/A											
D. Develop Record System	N/A											
E. Record Information												
Records of operating parameters	2	\$0	52	104	0	0	0	0	\$0	\$0	0	
Records of exceedances of the operating parameters	2	\$0	1	2	7	14	1	1	\$915	\$0	0	g
3) Records of stack tests	2	\$0	1	2	69	138	7	14	\$9,022	\$0	0	Ť
Records of persons who have reviewed operating procedures	2	\$0	1	2	69	138	7	14	\$9,022	\$0	0	
5) Records of persons who have completed operator training	2	\$0	1	2	69	138	7	14	\$9.022	\$0	0	
Records of persons who meet operator qualification criteria	2	\$0	1	2	69	138	7	14	\$9,022	\$0	0	†
7) Records of monitoring device calibration	2	\$0	1	2	69	138	7	14	\$9,022	\$0	0	\vdash
8) Records of site-specific documentation	24	\$0	1	24	69	1.656	83	166	\$108,266	\$0	0	T
F. Personnel Training	Incl. in 3.B		1	 		_,,500			1223,200	1		t
G. Time for Audits	N/A	†				l						\vdash
Recordkeeping Subtotal		 				2360	118	236	\$154,292	\$0	0	\vdash
TOTAL:						17.348	867	1.735	\$1.134.178	\$3.411.488	179	\vdash
TOTAL.						11,340	Total Hours	1,735 Labor	Non-Labor	Total	1/9	Ь—
				Common of D	an an dant Dunder							
					spondent Burden		19,950	\$1,134,178	\$3,411,488 \$0	\$4,545,666		
				Initial Capital an	a Startup ital/Start-up and C) 0 M			\$0 \$3,411,488			
				Armuanzeu Cap	narotan-up and C	OK IVI			Φ 3,411,4 88			

- a One-time only costs.
- b Cost incurred by a facility regardless of the number of affected units at the plant.
- c Annual cost. Annual costs are not incurred until the second year of operation.
- d Based on the sum of the total capital costs for each monitoring system required for incinerators.
- e Based on the sum of the annualized capital costs for each monitoring system required for incinerators.
- f Assumed that none of the facilities will petition for site-specific parameters.
- g Assumed that 10 percent of the facilities would not have a qualified operator available for more than two weeks at least once a year. Assumed that this required only two corrective action summaries.
- g Assumed that 10 percent of the facilities would not have a qualified operator available h Assumed that 10 percent of the facilities would have an exceedance during the year.
- i Assumed \$100 for puchase of filing cabinet to house copy of rule, records and report copies.
- j Facilities may test every three years if certain requirements are met, thus annual testing is divided by three to give a per year cost. It is assumed most facilities would meet the requirements.

Table 2.D - Summary of Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements of the Emissions Guidelines for Existing Stationary Sources: Sewage Sludge Incineration Units - Subpart MMMM - Multiple Hearth

		Management				Non-Labor (Annualized Capital/Startup and	
Year	Technical Hours	Hours	Clerical Hours	Total Hours	Labor Costs	O&M) Costs	Total Costs
1	34,982	1,749	3,498	40,229	\$2,287,055	\$8,953,460	\$11,240,515
2	17,348	867	1,735	19,950	\$1,134,178	\$3,411,488	\$4,545,666
3	17,348	867	1,735	19,950	\$1,134,178	\$3,411,488	\$4,545,666
Total	69,678	3,484	6,968	80,130	\$4,555,412	\$15,776,436	\$20,331,848
Average	23,226	1,161	2,323	26,710	\$1,518,471	\$5,258,812	\$6,777,283

Table 3 - Summary of Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements of the Emissions Guidelines for Existing Stationary Sources: Sewage Sludge Incineration Units - Subpart MMMM - All Subcategories

		Management				Non-Labor (Annualized Capital/Startup and	
Year	Technical Hours	Hours	Clerical Hours	Total Labor Hours	Labor Costs	O&M) Costs	Total Costs
1	51,868	2,593	5,187	59,648	\$3,391,029	\$12,701,960	\$16,092,989
2	25,392	1,270	2,539	29,201	\$1,660,079	\$4,732,368	\$6,392,447
3	25,392	1,270	2,539	29,201	\$1,660,079	\$4,732,368	\$6,392,447
Total	102,652	5,133	10,265	118,050	\$6,711,187	\$22,166,696	\$28,877,883
Average	34,217	1,711	3,422	39,350	\$2,237,062	\$7,388,899	\$9,625,961

Table 4 - Annual Designated Administrator Burden and Cost of Recordkeeping and Reporting Requirements of the Emission Guidelines for Existing Stationary Sources: Sewage Sludge Incineration Units -Subpart MMMM - Year 1

·	(A)		(B)	(C)	(D)	(E)	(F)	
Burden Item	Occurrences Per F		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	
1. Applications		not applicable						
Read and Understand Rule Requirements	60	а	40	2400	120	240	\$124,374	
3. Required Activities								
A. Observe stack tests	41	b	48	1958	98	196	\$101,489	
B. Excess emissions Enforcement Activities	12		24	288	14	29	\$14,925	
C. Create Information	not applicable							
D. Gather Information	not applicable							
E. Report Reviews								
1) Review initial notifications	204		20	4080	204	408	\$211,435	
2) Review initial compliance report	204		40	8160	408	816	\$422,871	
Review annual compliance report	0		8	0	0	0	\$0	
Review semi-annual excess emission and parameter exceedance report	24		16	384	19	38	\$19,900	
5) Review status reports and corrective action summary for operators off-site	24		4	96	5	10	\$4,975	
F. Prepare annual summary report	1	С	200	200	10	20	\$10,364	
5. Travel expenses: (1 person * 30 hours per year / 8 hours per day * \$75 per diem) + (\$600 per round trip) =					\$881	per trip	\$35,955	
TOTAL	·		·	17566	878	1757	\$946,288	

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 Assumes EPA personnel attend 20 percent of the stack tests.

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

Table 5 - Annual Designated Administrator Burden and Cost of Recordkeeping and Reporting Requirements of the Emission Guidelines for Existing Stationary Sources: Sewage Sludge Incineration Units - Subpart MMMM - Year 2

	(A)		(B)	(C)	(D)	(E)	(F)		
Burden Item	Occurrences Per Per		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		
1. Applications		not applicable							
Read and Understand Rule Requirements	0		40	0	0	0	\$0		
3. Required Activities									
A. Observe stack tests	41	b	48	1958	98	196	\$101,489		
B. Excess emissions Enforcement Activities	12		24	288	14	29	\$14,925		
C. Create Information	not applicable								
D. Gather Information	not applicable								
E. Report Reviews									
1) Review initial notifications	0		20	0	0	0	\$0		
2) Review initial compliance report	0		40	0	0	0	\$0		
Review annual compliance report	204		8	1632	82	163	\$84,574		
4) Review semi-annual excess emission and parameter exceedance report	24		16	384	19	38	\$19,900		
5) Review status reports and corrective action summary for operators off-site	24		4	96	5	10	\$4,975		
F. Prepare annual summary report	1	С	200	200	10	20	\$10,364		
5. Travel expenses: (1 person * 30 hours per year / 8 hours per day * \$75 per diem) + (\$600 per round tri	p) =				\$881	per trip	\$35,955		
TOTAL				4558	228	456	\$272,182		

- 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 Assumes EPA personnel attend 20 percent of the stack tests.
- c Using four hours per state to write annual summary report.

Table 6 - Annual Designated Administrator Burden and Cost of Recordkeeping and Reporting Requirements of the Emission Guidelines for Existing Stationary Sources: Sewage Sludge Incineration Units - Subpart MMMM - Year 3

5 0.0 00.0							
	(A)		(B)	(C)	(D)	(E)	(F)
Burden Item	Number of Occurrences 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
1. Applications not applicable						(2 0.0.2)	1 01 1 04.
Read and Understand Rule Requirements	0	а	40	0	0	0	\$0
3. Required Activities							
A. Observe stack tests	41	b	48	1958	98	196	\$101,489
B. Excess emissions Enforcement Activities	12		24	288	14	29	\$14,925
C. Create Information	not applicable						
D. Gather Information	not applicable						
E. Report Reviews							
1) Review initial notifications	0		20	0	0	0	\$0
Review initial compliance report	0		40	0	0	0	\$0
Review annual compliance report	204		8	1632	82	163	\$84,574
4) Review semi-annual excess emission and parameter exceedance report	24		16	384	19	38	\$19,900
5) Review status reports and corrective action summary for operators off-site	24		4	96	5	10	\$4,975
F. Prepare annual summary report	1	С	200	200	10	20	\$10,364
5. Travel expenses: (1 person * 30 hours per year / 8 hours per day * \$75 per diem) + (\$600 per round trip) =					\$881	per trip	\$35,955
TOTAL 4558 22					228	456	\$272,182

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 Assumes EPA personnel attend 20 percent of the stack tests.

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

Table 7 - Summary of Designated Administrator Burden and Cost of Recordkeeping and Reporting Requirements of the Emission Guidelines for Existing Stationary Sources: Sewage Sludge Incineration Units - Subpart MMMM

	Technical				_	Non-Labor	
Year	Hours	Management Hours	Clerical Hours	Total Hours	Labor Costs	Costs	Total Costs
1	17,566	878	1,757	20,201	\$946,288	\$0	\$946,288
2	4,558	228	456	5,242	\$272,182	\$0	\$272,182
3	4,558	228	456	5,242	\$272,182	\$0	\$272,182
Total	26,683	1,334	2,668	30,686	\$1,490,652	\$0	\$1,490,652
Average	8,894	445	889	10,229	\$496,884	\$0	\$496,884