	B	C
1	**Source Description**	
2		
3	Phase I ID No.	809
4	EPA ID No.	TND003376928
5	Facility Name	Eastman Chemical Company
6	Facility Location	
7	City	Kingsport
8	State	Tennessee
9	Unit ID Name/No.	Rotary Kiln No. 1
10	Other Sister Facilities	Rotary Kiln No. 2
11	Number of Sister Facilities	0
12	Combustor Class	Onsite incinerator
13	Combustor Type	Rotary kiln
14	Combustor Characteristics	with afterburner, 8' diameter
15	Capacity (MMBtu/hr)	
16	Soot Blowing	
17	APCS Detailed Acronym	Q/SC/GS/WESP
18	APCS General Class	WQ, LEWS, HE, WESP
19	APCS Characteristics	Quench for gas cooling, rod scrubber for hydrogen chloride absorption, gas subcooling, and two wet electrostatic precipitators. New APCS for new most recent data. Old APCD used with old data.
20		
21	Hazardous Wastes	liq,solid
22	Haz Waste Description	
23	Supplemental Fuel	oil
24		fuel oil
25	Stack Characteristics	
26	Diameter (ft)	10.0
27	Height (ft)	200.0
28	Gas Velocity (ft/sec)	2.6
29	Gas Temperature (°F)	173.0
30		
31	Permitting Status	Spiked and measured Pb and Cr to fully represent all SVM and LVM
32	HWC Burn Status (Date if Terminated)	

	B	C
1	**Condition Description**	
2		
3	**809C10**	
4		
5	Report Name/Date	Mini-Trial Burn Report for Rotary Kiln Incinerator No. 1, March 2002
6	Report Prepare	Franklin Engineering Group, Inc
7	Testing Firm	Eastman Chemical Company
8	Testing Dates	Nov 15-16, 2001
9	Cond Dates	Nov-01
10	Condition Descr	Trial burn, max metals, ash, chlorine, min temp
11	Content	PM, HCl/Cl2, metals, PCDD/F, DRE, CO/HC
12		
13	**809C11**	
14		
15	Report Name/Date	Mini-Trial Burn Report for Rotary Kiln Incinerator No. 1, March 2002
16	Report Prepare	Franklin Engineering Group, Inc
17	Testing Firm	Eastman Chemical Company
18	Testing Dates	November 13, 2001
19	Cond Dates	Nov-01
20	Condition Descr	Trial burn, organics testing, min combustion temp, SCC not operated
21	Content	DRE, PCDD/F, HC/CO
22		
23	**809C1**	
24		
25	Report Name/Date	Metals Trial Burn, Tennessee Eastman's No. 1 Rotary Kiln, Tennessee Eastman Company, August 30, 1991
26	Report Prepare	Tennessee Eastman
27	Testing Firm	Eastman?
28	Cond Descr	Trial burn, LOW METALS FEED
29	Testing Dates	June 13, 1991
30	Cond Dates	Jun-91
31		
32	**809C2**	
33		
34	Report Name/Date	Metals Trial Burn, Tennessee Eastman's No. 1 Rotary Kiln, Tennessee Eastman Company, August 30, 1991
35	Report Prepare	Tennessee Eastman
36	Testing Firm	Eastman?
37	Cond Descr	Trial burn, HIGH METALS FEED
38	Testing Dates	June 13-14, 1991
39	Cond Dates	Jun-91
40		
41	**809C3**	
42		
43	Report Name/Date	Trial Burn Report for Tennessee Eastman Company B-248 Incineration Facility, Tennessee Eastman Company, Eastman Road, P.O. Box 511, Kingsport TN 37662, Submitted to Tennessee Division of Solid Waste Management, April 1989
44	Report Prepar	
45	Testing Firm	
46	Testing Dates	19-Jan-89
47	Cond Dates	Jan-89
48	Cond Description	Trial burn, max feedrates, all permit conditions set during testing
49	Content	PM, DRE, CO, HCl
50		
51	**809C4**	
52		
53	Report Name/Date	Trial Burn Report for Tennessee Eastman Company B-248 Incineration Facility, Tennessee Eastman Company, Eastman Road, P.O. Box 511, Kingsport TN 37662, Submitted to Tennessee Division of Solid Waste Management, April 1989
54	Report Prepar	
55	Testing Firm	
56	Testing Dates	13-Jan-89
57	Cond Dates	Jan-89
58	Cond Description	General trash feed, no permit limits set
59	Content	
60		
61	**809C5**	
62		

	B	C
63	Report Name/Date	Trial Burn Report for Tennessee Eastman Company B-248 Incineration Facility, Tennessee Eastman Company, Eastman Road, P.O. Box 511, Kingsport TN 37662, Submitted to Tennessee Division of Solid Waste Management, April 1989
64	Report Prepar	
65	Testing Firm	
66	Testing Dates	11-Jan-89
67	Cond Dates	Jan-89
68	Cond Description	Hexachlorobenzene POHC DRE trial burn
69	Content	

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Stack Gas Emissions 1**												
2													
3		Comments	Units	7% O2									
4													
5	**809C10**					R1		R2		R3		Cond Avg	
6													
7	PM	E1	gr/dscf	y		0.0023		0.0007		0.0004		0.001	
8	CO (RA)	E1	ppmv	y		10.1		10		10		10.0	
9	CO (MHRA)	E1	ppmv	y		12.4		12.4		12.2		12.3	
10	HC (RA)	E1	ppmv	y		0.004		0.011		0.009		0.008	
11	HC (MHRA)	E1	ppmv	y		0.05		0.313		0.73		0.364	
12	HCl	E1	ppmv	y	nd	0.76	nd	0.775	nd	0.745		0.8	
13	Cl2	E1	ppmv	y		1.03		1.07		1.04		1.0	
14	Total Chlorine	E1	ppmv	y		2.83		2.91		2.82		2.9	
15													
16	POHC	Perchloroethylene											
17	POHC Feedrate		lb/hr			559		575		578			
18	Emission Rate	E3	lb/hr		nd	2.30E-04	nd	1.78E-04	nd	1.79E-04			
19	DRE	E3	%		>	99.99996	>	99.99997	>	99.99997			
20													
21	POHC	Monochlorobenzene											
22	POHC Feedrate		lb/hr			72		74		73			
23	Emission Rate	E3	lb/hr		nd	1.86E-04	nd	1.78E-04	nd	1.79E-04			
24	DRE	E3	%		>	99.99974	>	99.99976	>	99.99976			
25													
26	Chromium	E2	ug/dscm	y		12.5		16.6		13		14.0	
27	Lead	E2	ug/dscm	y		53.2		57.5		65.7		58.8	
28													
29	SVM	E2	ug/dscm	y		53.2		57.5		65.7		58.8	Pb only
30	LVM	E2	ug/dscm	y		12.5		16.6		13		14.0	Cd only
31													
32	Sampling Train	PM, HCl/Cl2	E1										
33	Stack Gas Flowrate		dscfm			28200		27600		28500		28100.0	
34	O2		%			11.8		11.7		11.7		11.7	
35	Moisture		%			13.2		11.6		11.94		12.2	
36	Temperature		°F			136		133		131.6		133.5	
37													
38	Sampling Train	Metals	E2										
39	Stack Gas Flowrate		dscfm			27700		29100		28300		28366.7	
40	O2		%			11.7		11.7		11.6		11.7	
41	Moisture		%			12.14		11.58		11.65		11.8	
42	Temperature		°F			132.9		132.3		131.3		132.2	
43													
44	Sampling Train	PCDD/F	E3										
45	Stack Gas Flowrate		dscfm			30100		30400		30400		30300.0	
46	O2		%			11.8		11.7		11.7		11.7	
47	Moisture		%			14		12.6		10.9		12.5	
48	Temperature		°F			132.1		130.5		129.3		130.6	
49													
50													
51	**809C11**					R1		R2		R3		Cond Avg	
52													
53	CO (RA)	E1	ppmv	y		13.2		13.7		11.4		12.8	
54	CO (MHRA)	E1	ppmv	y		15.4		17.3		14.2		15.6	
55	HC (RA)	E1	ppmv	y		0.022		0.014		0.006		0.0	
56	HC (MHRA)	E1	ppmv	y		0.592		0.129		0.569		0.4	
57													
58	POHC	Perchloroethylene											
59	POHC Feedrate		lb/hr			95.0		96.0		90.4			
60	Emission Rate		lb/hr		nd	1.61E-04	nd	1.55E-04	nd	1.93E-04			
61	DRE		%		>	99.99983	>	99.99984	>	99.99979			
62													
63	POHC	Monochlorobenzene											
64	POHC Feedrate		lb/hr			20.4		20.2		19.9			
65	Emission Rate		lb/hr		nd	1.61E-04	nd	1.55E-04	nd	1.93E-04			
66	DRE		%		>	99.99921	>	99.99923	>	99.99903			

	B	C	D	E	F	G	H	I	J	K	L	M	Y
1	**Stack Gas Emissions 2**												
2													
3													
4	**809C1**					R1		R2		R3		Cond Avg	
5													
6	CO (RA)	E1	ppmv	y		1301.3		1219.0		1226.8		1249.0	
7	HC (RA)	E1	ppmv	y		4.8		4.1		4.2		4.4	
8	Antimony	E2	ug/dscm	y		346.4		211.0		192.7		250.0	
9	Arsenic	E2	ug/dscm	y		5.6		4.4		4.4		4.8	
10	Cadmium	E2	ug/dscm	y		107.8		87.1		70.7		88.5	
11	Chromium	E2	ug/dscm	y		115.5		152.0		154.9		140.8	
12	Chromium (Hex)	E1	ug/dscm	y		6.0		3.0		2.2		3.8	
13	Lead	E2	ug/dscm	y		882.9		750.1		695.2		776.0	
14													
15	SVM	E2	ug/dscm	y		990.7		837.1		765.8		864.6	
16	LVM	E2	ug/dscm	y		121.1		156.4		159.3		145.6	(no Be)
17													
18	Sampling Train	Cr+6	E1										
19	Stack Gas Flowrate		dscfm			26631.0		25042.0		25053.0			
20	O2		%			13.2		12.8		13.0			
21	Moisture		%										
22	Temperature		°F			171.0		176.0		175.0			
23													
24	Sampling Train	Metals	E2										
25	Stack Gas Flowrate		dscfm			26974.0		25280.0		24732.0			
26	O2		%			13.2		12.8		13.0			
27	Moisture		%			21.3		22.6		22.6			
28	Temperature		°F			170.0		174.0		172.0			
29													
30													
31	**809C2**					R1		R2		R3		Cond Avg	
32													
33	CO (RA)	E2	ppmv	y		1407.4		1233.1		1157.8		1266.1	
34	HC (RA)	E2	ppmv	y		4.6		5.4		2.8		4.3	
35	Antimony	E2	ug/dscm	y		7209.3		6762.1		6347.1		6772.8	
36	Arsenic	E2	ug/dscm	y		286.5		289.8		259.3		278.5	
37	Cadmium	E2	ug/dscm	y		1891.3		1703.5		1730.0		1774.9	
38	Chromium	E2	ug/dscm	y		443.8		475.6		501.2		473.5	
39	Chromium (Hex)	E1	ug/dscm	y	nd	2.3	nd	2.2		15.7		6.7	
40	Lead	E2	ug/dscm	y		21159.8		17703.9		17725.4		18863.1	
41													
42	SVM	E2	ug/dscm	y		23051		19407		19455		20638.0	
43	LVM	E2	ug/dscm	y		730.3		765.4		760.5		752.1	No Be
44													
45	Sampling Train	Cr+6	E1										
46	Stack Gas Flowrate		dscfm			25717.0		25758.0		25618.0			
47	O2		%			13.4		13.2		13.6			
48	Moisture		%			21.3		21.8		21.1			
49	Temperature		°F			171.0		172.0		170.0			
50													
51	Sampling Train	Metals	E2										
52	Stack Gas Flowrate		dscfm			26263.0		25794.0		26101.0			
53	O2		%			13.4		13.2		13.6			
54	Moisture		%			21.3		21.8		21.1			
55	Temperature		°F			169.0		169.0		169.0			
56													
57													
58													
59	**809C3**					R1		R2		R3		Cond Avg	
60													
61	PM	E1	gr/dscf	y		0.01		0.009		0.008		0.0090	
62	CO (RA)	E1	ppmv	y		374		364		322		353.3	
63	CO (MHRA)	E1	ppmv	y		436		373		350		386.3	
64	HCl	E1	lb/hr			8.97		8.54		8.39			
65	HCl	E1	ppmv	y		121.5		107.1		118.5		115.7	
66	Total Chlorine	E1	ppmv	y		121.5		107.1		118.5		115.7	
67													
68	POHC DRE	Carbon Tetrachloride											
69	POHC Feedrate		lb/hr										
70	POHC Emissions		lb/hr										
71	POHC DRE		%			99.9983		99.9981		99.9981			

	B	C	D	E	F	G	H	I	J	K	L	M	Y
72													
73	POHC DRE	1,2-Dichoroethane											
74	POHC Feedrate		lb/hr										
75	POHC Emissions		lb/hr										
76	POHC DRE		%			99.999		99.9995		99.9986			
77													
78	POHC DRE	Toluene											
79	POHC Feedrate		lb/hr										
80	POHC Emissions		lb/hr										
81	POHC DRE		%			99.9996		99.9998		99.9998			
82													
83	Sampling Train	PM, HC	E1										
84	Stack Gas Flowrate		dscfm			20,686		21369		20298		20784.3	
85	O2		%			12.2		11.8		12.4		12.1	
86	Moisture		%			23.68		21.31		25.64		23.5	
87	Temperature		°F			184.1		175		181.8		180.3	
88													
89	**809C4**					R1		R2		R3		Cond Avg	
90													
91	PM	E1	gr/dscf	y		0.019		0.015		0.026		0.0200	
92	HCl	E1	lb/hr			5.46		6.7		5.69			
93	HCl	E1	ppmv	y		75.2		91.8		79.4		82.1	
94	Total Chlorine	E1	ppmv	y		75.2		91.8		79.4		82.1	
95													
96	Sampling Train	PM	E1										
97	Stack Gas Flowrate		dscfm			25584		26463		25988		26011.7	
98	O2		%			14		14.2		14.2		14.1	
99	Moisture		%			20.47		20.42		20.32		20.4	
100	Temperature		°F			160.2		157.3		166.7		161.4	
101													
102	POHC DRE	Carbon Tetrachloride											
103	POHC Feedrate		lb/hr										
104	POHC Emissions		lb/hr										
105	POHC DRE		%			99.9989		99.9988		99.9982			
106													
107	POHC DRE	1,2-Dichoroethane											
108	POHC Feedrate		lb/hr										
109	POHC Emissions		lb/hr										
110	POHC DRE		%			99.9987		99.9985		99.9986			
111													
112	POHC DRE	Toluene											
113	POHC Feedrate		lb/hr										
114	POHC Emissions		lb/hr										
115	POHC DRE		%			99.9928		99.9994		99.9994			
116													
117	**809C5**					R1		R2		R3		Cond Avg	
118													
119	POHC DRE	Hexachlorobenzene											
120	POHC Feedrate		lb/hr										
121	POHC Emissions		lb/hr										
122	POHC DRE		%			99.9957		99.9976		99.9905			

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	**Feedrate Calculations**																							
2																								
3																								
4	**809C10**		**Trial burn**		R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2	
5																								
6	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2		F3		F3	
7	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Solid HW		Solid HW		Solid HW		Solid HW		Liq HW		Liq HW	
8	Feed Class 2																							
9	Feedstream Description				Liq waste kiln		Liq waste kiln		Liq waste kiln		Liq waste kiln		Solid waste kiln		Solid waste kiln		Solid waste kiln		Solid waste kiln		SCC waste		SCC waste	
10	Feed Rate		lb/hr		5818		5944		5963		5908.3		2391		2409		2366		2388.7		4126		4178	
11	Thermal Feedrate		MMBtu/hr																					
12	Ash		lb/hr										2045		2072		2033		2050.0					
13	Chlorine		lb/hr																					
14	Chromium		lb/hr																					
15	Lead		lb/hr																					
16																								
17	Stack Gas Flowrate		dscfm		28200.0		27600		28500.0		28100.0		28200.0		27600		28500.0		28100.0		28200.0		27600	
18	Oxygen		%		11.8		11.7		11.7		11.7		11.8		11.7		11.7		11.7		11.8		11.7	
19																								
20	Estimated Firing Rate		MMBtu/hr																					
21																								
22	*Feedrate MTEC Calculations*																							
23	Ash		mg/dscm	y									29505.5		30216.5		28711.5		29469.3					
24	Chlorine		ug/dscm	y																				
25	Chromium		ug/dscm	y																				
26	Lead		ug/dscm	y																				
27																								
28	SVM		ug/dscm	y																				
29	LVM		ug/dscm	y																				

	B	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AN	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
1	**Feedrate Calculations**																								
2																									
3																									
4	**809C10**	R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2	
5																									
6	Feedstream Number	F3		F3										F4		F4		F4		F4		F5		F5	
7	Feed Class	Liq HW		Liq HW										Spike		Spike		Spike		Spike		Total		Total	
8	Feed Class 2					HW		HW		HW		HW		Spike		Spike		Spike		Spike		Total		Total	
9	Feedstream Description	SCC waste		SCC waste										Spike		Spike		Spike		Spike		Total		Total	
10	Feed Rate	4198		4167.3																					
11	Thermal Feedrate																					63.6		66.4	
12	Ash													139		133		144		139		2185		2214	
13	Chlorine													497		512		519		509		497		512	
14	Chromium													6.9		6.8		7		6.9		6.9		6.8	
15	Lead													3.8		3.9		4.0		3.9		3.8		3.9	
16																									
17	Stack Gas Flowrate	28500.0		28100.0										28200.0		27600		28500.0		28100.0		28200.0		27600	
18	Oxygen	11.7		11.7										11.8		11.7		11.7		11.7		11.8		11.7	
19																									
20	Estimated Firing Rate																					82.4		81.5	
21																									
22	*Feedrate MTEC Calculation*																								
23	Ash					29505.5		30216.5		28711.5		29469.3		2005.5		1939.6		2033.7		1993.4		31525.4		32287.3	
24	Chlorine													7170767.7		7466621.4		7329692.4		7321809.8		7170767.7		7466621.4	
25	Chromium													99553.9		99166.1		98859.1		99189.4		99553.9		99166.1	
26	Lead													54826.8		56874.7		56490.9		56063.6		54826.8		56874.7	
27																									
28	SVM													54826.8		56874.7		56490.9		56063.6		54826.8		56874.7	
29	LVM													99553.9		99166.1		98859.1		99189.4		99553.9		99166.1	

	B	AX	AY	AZ
1	**Feedrate Calculations**			
2				
3				
4	**809C10**	R3		Cond Avg
5				
6	Feedstream Number	F5		F5
7	Feed Class	Total		Total
8	Feed Class 2	Total		Total
9	Feedstream Description	Total		Total
10	Feed Rate			
11	Thermal Feedrate	59.8		62.7
12	Ash	2179		2193
13	Chlorine	519		509.33333
14	Chromium	7		6.9
15	Lead	4.0		3.9
16				
17	Stack Gas Flowrate	28500.00		28100.0
18	Oxygen	11.7		11.7
19				
20	Estimated Firing Rate	84.1		82.7
21				
22	*Feedrate MTEC Calculation*			
23	Ash	30773.4		31525.0
24	Chlorine	7329692.4		7321809.8
25	Chromium	98859.1		99189.4
26	Lead	56490.9		56063.6
27				
28	SVM	56490.9		56063.6
29	LVM	98859.1		99189.4

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	**Feedstream 2**																								
2																									
3																									
4	**809C1**				R1		R2		R3		R1		R2		R3		R1		R2		R3		R1		R2
5																									
6	Feedstream Number				F1		F1		F1		F2		F2		F2		F3		F3		F3				
7	Feed Class				Spike		Spike		Spike		Spike		Spike		Spike		Spike		Spike		Spike				
8	Feed Class 2																						Spike		Spike
9	Feedstream Description				Spike A		Spike A		Spike A		Spike B		Spike B		Spike B		Soln C		Soln C		Soln C				
10	Feed Rate		lb/hr		63.88		63.88		63.88		20.19		20.19		20.19		14.38		14.38		14.38				
11	Heating value		Btu/lb																						
12	Ash		wt %																						
13	Antimony		ppmw		21852		22042		21757																
14	Arsenic		ppmw		665		729		717																
15	Cadmium		ppmw								4035		4164		4301										
16	Chromium		ppmw														113747.8393		113747.8393		111426.4549				
17	Lead		ppmw								52907		51788		51874										
18																									
19	Stack Gas Flowrate		dscfm		26631		25042		25053		26631		25042		25053		26631		25042		25053				
20	Oxygen		%		13.2		12.8		13		13.2		12.8		13		13.2		12.8		13				
21																									
22	Estimated Firing Rate		MMBtu/hr																						
23																									
24	*Feedrate MTEC Calculation*																								
25	Antimony		ug/dscm		25155		25667		25957														25155		25667
26	Arsenic		ug/dscm		766		849		856														766		849
27	Cadmium		ug/dscm								1468		1532		1622								1468		1532
28	Chromium		ug/dscm														29476		29817		29926		29476		29817
29	Lead		ug/dscm								19249		19060		19561								19249		19060
30																									
31	SVM		ug/dscm								20717		20593		21183								20717		20593
32	LVM		ug/dscm		766		849		856								29476		29817		29926		30241		30666
33																									
34																									
35																									
36	**809C2**				R1		R2		R3		R1		R2		R3		R1		R2		R3		R1		R2
37																									
38	Feedstream Number				F1		F1		F1		F2		F2		F2		F3		F3		F3				
39	Feed Class				Spike		Spike		Spike		Spike		Spike		Spike		Spike		Spike		Spike				
40	Feed Class 2																						Spike		Spike
41	Feedstream Description				Spike A		Spike A		Spike A		Spike B		Spike B		Spike B		Soln C		Soln C		Soln C		Spike		Spike
42	Feed Rate		lb/hr		2349.43		2349.43		2075.33		225.23		225.23		225.23		202.5		202.5		202.5				
43	Heating value		Btu/lb																						
44	Ash		wt %																						
45	Antimony		ppmw		21376.8		21947		22137																
46	Arsenic		ppmw		732		736		722.06																
47	Cadmium		ppmw								3794		4198		4301										
48	Chromium		ppmw														114522		114522		109879				
49	Lead		ppmw								43616		49638		46283										
50																									
51	Stack Gas Flowrate		dscfm		26263		25794		26101		26263		25794		26101		26263		25794		26101				
52	Oxygen		%		13.4		13.2		13.6		13.4		13.2		13.6		13.4		13.2		13.6				
53																									
54	Estimated Firing Rate		MMBtu/hr																						
55																									
56	*Feedrate MTEC Calculation*																								
57	Antimony		ug/dscm		941876		959329		890350														941876		959329
58	Arsenic		ug/dscm		32233		32185		29041														32233		32185
59	Cadmium		ug/dscm								16025		17592		18775								16025		17592
60	Chromium		ug/dscm														434911		431465		431218		434911		431465

	B	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
1	**Feedstream 2**																							
2																								
3																								
4	**809C1**		R3		R1		R2		R3		R1		R2		R3		R1		R2		R3		Cond Avg	
5																								
6	Feedstream Number				F4		F4		F4		F5		F5		F5		F6		F6		F6		F6	
7	Feed Class				Liq HW		Liq HW		Liq HW		Liq non-HW		Liq non-HW		Liq non-HW		Total		Total		Total		Total	
8	Feed Class 2		Spike		HW		HW		HW		Non-HW		Non-HW		Non-HW		Total		Total		Total		Total	
9	Feedstream Descriptic				Liquid waste		Liquid waste		Liquid waste		River water		River water		River water		Total		Total		Total		Total	
10	Feed Rate				4181.4		4416		4428		2962.2		3294.6		3325.8									
11	Heating value																							
12	Ash																							
13	Antimony			1	0.0047	1	0.0047	1	0.0047	1	0.005	1	0.005	1	0.005									
14	Arsenic			1	0.0047	1	0.0047	1	0.0047	1	0.005	1	0.005	1	0.005									
15	Cadmium			1	0.0233	1	0.0233	1	0.0233	1	0.005	1	0.005	1	0.005									
16	Chromium			1	0.0467	1	0.0467	1	0.0467	1	0.010	1	0.010	1	0.010									
17	Lead			1	0.0467	1	0.0467	1	0.0467	1	0.010	1	0.010	1	0.010									
18																								
19	Stack Gas Flowrate				26631		25042		25053		26631		25042		25053		26631		25042		25053		25575	
20	Oxygen				13.2		12.8		13		13.2		12.8		13		13.2		12.8		13		13.0	
21																								
22	Estimated Firing Rate																						65.0	
23																								
24	*Feedrate MTEC Calcu*																							
25	Antimony		25957	100	0.35	100	0.38	100	0.39	100	0.27	100	0.30	100	0.31		25155		25668		25958		25594	
26	Arsenic		856	100	0.35	100	0.38	100	0.39	100	0.27	100	0.30	100	0.31		766		849		856		824	
27	Cadmium		1622	100	1.76	100	1.88	100	1.93	100	0.27	100	0.30	100	0.31		1470		1535		1624		1543	
28	Chromium		29926	100	3.52	100	3.76	100	3.86	100	0.53	100	0.60	100	0.62		29480		29821		29930		29744	
29	Lead		19561	100	3.52	100	3.76	100	3.86	100	0.53	100	0.60	100	0.62		19253		19065		19565		19294	
30																								
31	SVM		21183	100	5.3	100	5.6	100	5.8	100	0.8	100	0.9	100	0.9		20723		20599		21189		20837	
32	LVM		30781	100	3.9	100	4.1	100	4.2	100	0.8	100	0.9	100	0.9		30246		30671		30787		30568	As, Cr only
33																								
34																								
35																								
36	**809C2**		R3		R1		R2		R3		R1		R2		R3		R1		R2		R3		Cond Avg	
37																								
38	Feedstream Number				F4		F4		F4		F5		F5		F5		F6		F6		F6		F6	
39	Feed Class				Liq HW		Liq HW		Liq HW		Liq non-HW		Liq non-HW		Liq non-HW		Total		Total		Total		Total	
40	Feed Class 2		Spike		HW		HW		HW		Non-HW		Non-HW		Non-HW		Total		Total		Total		Total	
41	Feedstream Descriptic		Spike		Liquid waste		Liquid waste		Liquid waste		River water		River water		River water		Total		Total		Total		Total	
42	Feed Rate				4272		4287		4269															
43	Heating value																							
44	Ash																							
45	Antimony			1	0.0047	1	0.0047	1	0.0047															
46	Arsenic			1	0.0047	1	0.0047	1	0.0047															
47	Cadmium			1	0.0233	1	0.0233	1	0.0233															
48	Chromium			1	0.0467	1	0.0467	1	0.0467															
49	Lead			1	0.0467	1	0.0467	1	0.0467															
50																								
51	Stack Gas Flowrate				26263		25794		26101		26263		25794		26101		26263		25794		26101		26053	
52	Oxygen				13.4		13.2		13.6		13.4		13.2		13.6		13.4		13.2		13.6		13.4	
53																								
54	Estimated Firing Rate																						62.9	
55																								
56	*Feedrate MTEC Calcu*																							
57	Antimony		890350	100	0.374	100	0.372	100	0.386								941876		959330		890350		930519	
58	Arsenic		29041	100	0.374	100	0.372	100	0.386								32233		32186		29042		31154	
59	Cadmium		18775	100	1.869	100	1.861	100	1.930								16026		17594		18777		17466	
60	Chromium		431218	100	3.739	100	3.722	100	3.861								434915		431469		431222		432535	

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
61	Lead		ug/dscm								184229		208003		202023								184229		208003
62																									
63	SVM		ug/dscm		0		0		0		200253		225595		220798		0		0		0		200253		225595
64	LVM		ug/dscm		32233		32185		29041		0		0		0		434911		431465		431218		467145		463650
65																									
66																									
67																									
68	**809C3**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2		R3
69																									
70	Feedstream Description				Solid Waste		Solid Waste		Solid Waste		Solid Waste		Liquid Waste		Liquid Waste		Liquid Waste		Liquid Waste		Total		Total		Total
71	Feed Class 2																				Total		Total		Total
72	Feed Rate		lb/hr		3696		3672		3750		3706.0		11685		11727		11907		11773		15381		15399		15657
73	Heating Value		Btu/lb																						
74	Chlorine		lb/hr																		1779		1804		1786
75	Ash		lb/hr																		1540		1530		1563
76																									
77	Stack Gas Flowrate		dscfm																		20686		21369		20298
78	Oxygen		%																		12.2		11.8		12.4
79																									
80	Thermal Feedrate		MMBtu/hr																						
81	Estimated Firing Rate		MMBtu/hr																						
82																									
83	*Feedrate MTEC Calculations*																								
84	Chlorine		ug/dscm	y																	36581622		34348732		38297988
85	Ash		mg/dscm	y																	31667		29132		33516
86																									
87																									
88	**809C4**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2		R3
89																									
90	Feedstream Description				Solid Waste		Solid Waste		Solid Waste		Solid Waste		Liquid Waste		Liquid Waste		Liquid Waste		Liquid Waste		Total		Total		Total
91	Feed Class 2																				Total		Total		Total
92	Feed Rate		lb/hr		1302		1266		1266				2970		2892		2898		2920.0		4272		4158		4164
93	Heating Value		Btu/lb																						
94	Chlorine		lb/hr																		816		795		796
95	Ash		lb/hr																		543		528		528
96																									
97	Stack Gas Flowrate		dscfm																		25584		26463		25988
98	Oxygen		%																		14		14.2		14.2
99																									
100	Thermal Feedrate		MMBtu/hr																						
101	Estimated Firing Rate		MMBtu/hr																						
102																									
103	*Feedrate MTEC Calculations*																								
104	Chlorine		ug/dscm	y																	17055713		16537328		16860774
105	Ash		mg/dscm	y																	11350		10983		11184

	B	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
61	Lead		202023	100	3.739	100	3.722	100	3.861								184232		208007		202027		198089	
62																								
63	SVM		220798	100	5.6	100	5.6	100	5.8								200259		225600		220804		215554	
64	LVM		460259	100	4.1	100	4.1	100	4.2								467149		463654		460263		463689	As, Cr only
65																								
66																								
67																								
68	**809C3**		Cond Avg																					
69																								
	Feedstream		Total																					
70	Description																							
71	Feed Class 2		Total																					
72	Feed Rate		15479																					
73	Heating Value																							
74	Chlorine																							
75	Ash																							
76																								
77	Stack Gas Flowrate																							
78	Oxygen																							
79																								
80	Thermal Feedrate																							
81	Estimated Firing Rate																							
82																								
83	*Feedrate MTEC Calcu*																							
84	Chlorine		36409447																					
85	Ash		31438																					
86																								
87																								
88	**809C4**		Cond Avg																					
89																								
	Feedstream		Total																					
90	Description																							
91	Feed Class 2		Total																					
92	Feed Rate		2920																					
93	Heating Value																							
94	Chlorine																							
95	Ash																							
96																								
97	Stack Gas Flowrate		26011.7																					
98	Oxygen		14.1																					
99																								
100	Thermal Feedrate																							
101	Estimated Firing Rate																							
102																								
103	*Feedrate MTEC Calcu*																							
104	Chlorine		16817938																					
105	Ash		11172																					

	B	C	D	E	F	G	H
1	**Process Information**						
2							
3	**809C10**						
4				Run 1	Run 2	Run 3	Cond Avg
5	Kiln Exit Temperature	F					1464
6	Afterburner Exit Temperature	F					1768
7	Rod Scrubber Recycle pH	pH					3.8
8	Rod Scrubber Liquid/Gas Ratio	gpm/1000 acfm					72
9	WESP Power-to-Gas Ratio	W/1000 acfm					350
10	WESP Liquid/Gas Ratio	gpm/1000 acfm					12
11	WESP Liquid pH	pH					6.3
12	Liquid Blowdown Solids Content	%					5.7

	C	D	E	F	G
1	**Process Information 2**				
2					
3	**809C1**		R1	R2	R3
4					
5	Combustion Temperature	F	1825	1799	1799
6	WS Pressure Drop	in H2O	49.8	50.5	50.6
7	WS pH		3.17	3.54	3.21
8					
9	**809C2**		R1	R2	R3
10					
11	Combustion Temperature	F	1806	1790	1805
12	WS Pressure Drop	in H2O	50.1	50	50.7
13	WS pH		3.29	3.51	3.38

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	**PCDD/PCDF**																	
2	N																	
3	Facility Name and ID:		Eastman Chemical Company															
4	Condition ID:		809C10															
5	Condition/Test Date:		Trial burn, max feerate, min temp. November 15-16, 2001															
6																		
7			I-TEF				Run 1						Run 2				Run 3	
8			Wght Fact		Total	TEQ	Total	TEQ		Total	TEQ	Total	TEQ		Total	TEQ	Total	TEQ
9					Full ND	Full ND	1/2 ND	1/2 ND		Full ND	Full ND	1/2 ND	1/2 ND		Full ND	Full ND	1/2 ND	1/2 ND
10	Gas Concentration (ng/dscm @ 7% O2)																	
11		2,3,7,8-TCDD	1		2.03E-03	2.03E-03	2.03E-03	2.03E-03		1.59E-03	1.59E-03	1.59E-03	1.59E-03		1.95E-03	1.95E-03	1.95E-03	1.95E-03
12		Other TCDD	0		0.022	0.00E+00	2.20E-02	0.00E+00		0.018	0.00E+00	1.80E-02	0.00E+00		1.20E-02	0.00E+00	1.20E-02	0.00E+00
13		1,2,3,7,8-PCDD	0.5	nd	4.48E-03	2.24E-03	2.24E-03	1.12E-03	nd	2.88E-03	1.44E-03	1.44E-03	7.20E-04	nd	3.04E-03	1.52E-03	1.52E-03	7.60E-04
14		Other PCDD	0		0.038	0.00E+00	3.80E-02	0.00E+00		0.012	0.00E+00	1.20E-02	0.00E+00		1.00E-02	0.00E+00	1.00E-02	0.00E+00
15		1,2,3,4,7,8-HxCDD	0.1	nd	4.48E-03	4.48E-04	2.24E-03	2.24E-04	nd	3.11E-03	3.11E-04	1.56E-03	1.56E-04	nd	2.66E-03	2.66E-04	1.33E-03	1.33E-04
16		1,2,3,6,7,8-HxCDD	0.1		4.90E-03	4.90E-04	4.90E-03	4.90E-04	nd	3.12E-03	3.12E-04	1.56E-03	1.56E-04	nd	2.66E-03	2.66E-04	1.33E-03	1.33E-04
17		1,2,3,7,8,9-HxCDD	0.1		5.42E-03	5.42E-04	5.42E-03	5.42E-04	nd	3.06E-03	3.06E-04	1.53E-03	1.53E-04	nd	2.64E-03	2.64E-04	1.32E-03	1.32E-04
18		Other HxCDD	0		0.051	0.00E+00	5.10E-02	0.00E+00		0.017	0.00E+00	1.70E-02	0.00E+00		2.00E-02	0.00E+00	2.00E-02	0.00E+00
19		1,2,3,4,6,7,8-HpCDD	0.01		0.027	2.70E-04	2.70E-02	2.70E-04		9.72E-03	9.72E-05	9.72E-03	9.72E-05		1.20E-02	1.20E-04	1.20E-02	1.20E-04
20		Other HpCDD	0		0.024	0.00E+00	2.40E-02	0.00E+00		0.011	0.00E+00	1.10E-02	0.00E+00		1.20E-02	0.00E+00	1.20E-02	0.00E+00
21		OCDD	0.001		0.039	3.90E-05	3.90E-02	3.90E-05		0.017	1.70E-05	1.70E-02	1.70E-05		2.20E-02	2.20E-05	2.20E-02	2.20E-05
22		2,3,7,8-TCDF	0.1		6.20E-03	6.20E-04	6.20E-03	6.20E-04		2.42E-03	2.42E-04	2.42E-03	2.42E-04		2.78E-03	2.78E-04	2.78E-03	2.78E-04
23		Other TCDF	0		0.135	0.00E+00	1.35E-01	0.00E+00		0.06	0.00E+00	6.00E-02	0.00E+00		7.10E-02	0.00E+00	7.10E-02	0.00E+00
24		1,2,3,7,8-PCDF	0.05		0.011	5.50E-04	1.10E-02	5.50E-04		3.46E-03	1.73E-04	3.46E-03	1.73E-04		4.66E-03	2.33E-04	4.66E-03	2.33E-04
25		2,3,4,7,8-PCDF	0.5		0.012	6.00E-03	1.20E-02	6.00E-03		5.56E-03	2.78E-03	5.56E-03	2.78E-03		7.35E-03	3.68E-03	7.35E-03	3.68E-03
26		Other PCDF	0		0.13	0.00E+00	1.30E-01	0.00E+00		0.054	0.00E+00	5.40E-02	0.00E+00		5.60E-02	0.00E+00	5.60E-02	0.00E+00
27		1,2,3,4,7,8-HxCDF	0.1		0.018	1.80E-03	1.80E-02	1.80E-03		0.013	1.30E-03	1.30E-02	1.30E-03		1.20E-02	1.20E-03	1.20E-02	1.20E-03
28		1,2,3,6,7,8-HxCDF	0.1		0.015	1.50E-03	1.50E-02	1.50E-03		9.58E-03	9.58E-04	9.58E-03	9.58E-04		9.10E-03	9.10E-04	9.10E-03	9.10E-04
29		2,3,4,6,7,8-HxCDF	0.1		0.016	1.60E-03	1.60E-02	1.60E-03		0.011	1.10E-03	1.10E-02	1.10E-03		1.10E-02	1.10E-03	1.10E-02	1.10E-03
30		1,2,3,7,8,9-HxCDF	0.1		4.86E-03	4.86E-04	4.86E-03	4.86E-04		2.94E-03	2.94E-04	2.94E-03	2.94E-04		2.53E-03	2.53E-04	2.53E-03	2.53E-04
31		Other HxCDF	0		0.088	0.00E+00	8.80E-02	0.00E+00		0.052	0.00E+00	5.20E-02	0.00E+00		4.40E-02	0.00E+00	4.40E-02	0.00E+00
32		1,2,3,4,6,7,8-HpCDF	0.01		0.052	5.20E-04	5.20E-02	5.20E-04		0.041	4.10E-04	4.10E-02	4.10E-04		3.90E-02	3.90E-04	3.90E-02	3.90E-04
33		1,2,3,4,7,8,9-HpCDF	0.01		7.35E-03	7.35E-05	7.35E-03	7.35E-05		7.34E-03	7.34E-05	7.34E-03	7.34E-05		4.58E-03	4.58E-05	4.58E-03	4.58E-05
34		Other HpCDF	0		0.028	0.00E+00	2.80E-02	0.00E+00		0.03	0.00E+00	3.00E-02	0.00E+00		2.40E-02	0.00E+00	2.40E-02	0.00E+00
35		OCDF	0.001		0.026	2.60E-05	2.60E-02	2.60E-05		0.029	2.90E-05	2.90E-02	2.90E-05		3.20E-02	3.20E-05	3.20E-02	3.20E-05
36																		
37		Gas sample volume (dscf)																
38		O2 (%)																
39																		
40		PCDD/PCDF (ng in sample)																
41		PCDD/PCDF (ng/dscm @ 7% O2)	14.0			0.019	0.767	0.018	20.7		0.0114	0.414	0.0102	18.5		0.0125	0.415	0.0114
42																		
43		TEQ Cond Avg	0.013															
44		Total Cond Avg	0.532															

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	**PCDD/PCDF**																	
2	N																	
3	Facility Name and ID:	Eastman Chemical Company																
4	Condition ID:	809C11																
5	Condition/Test Date:	Max feerate, min temp. November 13, 2001																
6																		
7			I-TEF				Run 1						Run 2					Run 3		
8			Wght Fact		Total	TEQ	Total	TEQ		Total	TEQ	Total	TEQ		Total	TEQ	Total	TEQ
9					Full ND	Full ND	1/2 ND	1/2 ND		Full ND	Full ND	1/2 ND	1/2 ND		Full ND	Full ND	1/2 ND	1/2 ND
10	Gas Concentration (ng/dscm @ 7% O2)																	
11		2,3,7,8-TCDD	1		9.31E-04	9.31E-04	9.31E-04	9.31E-04		1.19E-03	1.19E-03	1.19E-03	1.19E-03		1.50E-03	1.50E-03	1.50E-03	1.50E-03
12		Other TCDD	0		0.016	0.00E+00	1.60E-02	0.00E+00		0.011	0.00E+00	1.10E-02	0.00E+00		0.017	0.00E+00	1.70E-02	0.00E+00
13		1,2,3,7,8-PCDD	0.5	nd	1.92E-03	9.60E-04	9.60E-04	4.80E-04	nd	2.51E-03	1.26E-03	1.26E-03	6.28E-04	nd	3.91E-03	1.96E-03	1.96E-03	9.78E-04
14		Other PCDD	0		0.025	0.00E+00	2.50E-02	0.00E+00		0.021	0.00E+00	2.10E-02	0.00E+00		0.027	0.00E+00	2.70E-02	0.00E+00
15		1,2,3,4,7,8-HxCDD	0.1	nd	2.29E-03	2.29E-04	1.15E-03	1.15E-04	nd	2.98E-03	2.98E-04	1.49E-03	1.49E-04	nd	3.91E-03	3.91E-04	1.96E-03	1.96E-04
16		1,2,3,6,7,8-HxCDD	0.1	nd	3.26E-03	3.26E-04	1.63E-03	1.63E-04	nd	4.27E-03	4.27E-04	2.14E-03	2.14E-04	nd	3.91E-03	3.91E-04	1.96E-03	1.96E-04
17		1,2,3,7,8,9-HxCDD	0.1	nd	2.25E-03	2.25E-04	1.13E-03	1.13E-04	nd	2.94E-03	2.94E-04	1.47E-03	1.47E-04	nd	3.91E-03	3.91E-04	1.96E-03	1.96E-04
18		Other HxCDD	0		0.029	0.00E+00	2.90E-02	0.00E+00		0.03	0.00E+00	3.00E-02	0.00E+00		0.048	0.00E+00	4.80E-02	0.00E+00
19		1,2,3,4,6,7,8-HpCDD	0.01		0.012	1.20E-04	1.20E-02	1.20E-04		0.018	1.80E-04	1.80E-02	1.80E-04		0.018	1.80E-04	1.80E-02	1.80E-04
20		Other HpCDD	0		0.012	0.00E+00	1.20E-02	0.00E+00		0.017	0.00E+00	1.70E-02	0.00E+00		0.017	0.00E+00	1.70E-02	0.00E+00
21		OCDD	0.001		0.026	2.60E-05	2.60E-02	2.60E-05		0.038	3.80E-05	3.80E-02	3.80E-05		0.03	3.00E-05	3.00E-02	3.00E-05
22		2,3,7,8-TCDF	0.1		3.52E-03	3.52E-04	3.52E-03	3.52E-04		2.76E-03	2.76E-04	2.76E-03	2.76E-04		3.77E-03	3.77E-04	3.77E-03	3.77E-04
23		Other TCDF	0		0.054	0.00E+00	5.40E-02	0.00E+00		0.054	0.00E+00	5.40E-02	0.00E+00		0.075	0.00E+00	7.50E-02	0.00E+00
24		1,2,3,7,8-PCDF	0.05		3.68E-03	1.84E-04	3.68E-03	1.84E-04		6.24E-03	3.12E-04	6.24E-03	3.12E-04		6.77E-03	3.39E-04	6.77E-03	3.39E-04
25		2,3,4,7,8-PCDF	0.5		6.16E-03	3.08E-03	6.16E-03	3.08E-03		7.00E-03	3.50E-03	7.00E-03	3.50E-03		8.14E-03	4.07E-03	8.14E-03	4.07E-03
26		Other PCDF	0		0.039	0.00E+00	3.90E-02	0.00E+00		0.058	0.00E+00	5.80E-02	0.00E+00		0.077	0.00E+00	7.70E-02	0.00E+00
27		1,2,3,4,7,8-HxCDF	0.1		7.83E-03	7.83E-04	7.83E-03	7.83E-04		0.01	1.00E-03	1.00E-02	1.00E-03		0.01	1.00E-03	1.00E-02	1.00E-03
28		1,2,3,6,7,8-HxCDF	0.1		7.27E-03	7.27E-04	7.27E-03	7.27E-04		8.60E-03	8.60E-04	8.60E-03	8.60E-04		9.86E-03	9.86E-04	9.86E-03	9.86E-04
29		2,3,4,6,7,8-HxCDF	0.1		7.69E-03	7.69E-04	7.69E-03	7.69E-04		0.012	1.20E-03	1.20E-02	1.20E-03		0.011	1.10E-03	1.10E-02	1.10E-03
30		1,2,3,7,8,9-HxCDF	0.1	nd	3.26E-03	3.26E-04	1.63E-03	1.63E-04	nd	4.27E-03	4.27E-04	2.14E-03	2.14E-04	nd	3.91E-03	3.91E-04	1.96E-03	1.96E-04
31		Other HxCDF	0		0.039	0.00E+00	3.90E-02	0.00E+00		0.043	0.00E+00	4.30E-02	0.00E+00		0.055	0.00E+00	5.50E-02	0.00E+00
32		1,2,3,4,6,7,8-HpCDF	0.01		0.025	2.50E-04	2.50E-02	2.50E-04		0.043	4.30E-04	4.30E-02	4.30E-04		0.033	3.30E-04	3.30E-02	3.30E-04
33		1,2,3,4,7,8,9-HpCDF	0.01		4.15E-03	4.15E-05	4.15E-03	4.15E-05		6.86E-03	6.86E-05	6.86E-03	6.86E-05		4.81E-03	4.81E-05	4.81E-03	4.81E-05
34		Other HpCDF	0		0.017	0.00E+00	1.70E-02	0.00E+00		0.029	0.00E+00	2.90E-02	0.00E+00		0.019	0.00E+00	1.90E-02	0.00E+00
35		OCDF	0.001		0.019	1.90E-05	1.90E-02	1.90E-05		0.047	4.70E-05	4.70E-02	4.70E-05		0.02	2.00E-05	2.00E-02	2.00E-05
36																		
37		Gas sample volume (dscf)																
38		O2 (%)																
39																		
40		PCDD/PCDF (ng in sample)																
41		PCDD/PCDF (ng/dscm @ 7% O2)		22.1		0.009	0.361	0.008	22.9		0.0118	0.472	0.0105	26.1		0.0135	0.502	0.0117
42																		
43		TEQ Cond Avg	0.010															
44		Total Cond Avg	0.445															