	B	C
1	**Source Description**	
2		
3	Phase I ID No.	810
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.	B-248D Liquid Chemical Destructor
10	Other Sister Facilities	
11	Number of Sister Facilities	0
12	Combustor Class	Onsite incinerator
13	Combustor Type	Liquid injection
14	Combustor Characteristics	Only pumpable liquids for treatment.
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 most recent data. Older data taken with APCS that has been removed.
20		
21	Hazardous Wastes	Liq
22	Haz Waste Description	Organic wastes
23	Supplemental Fuel	oil
24		fuel oil
25	Stack Characteristics	
26	Diameter (ft)	3.50
27	Height (ft)	38.6
28	Gas Velocity (ft/sec)	42.7
29	Gas Temperature (°F)	140
30		
31	Permitting Status	Cr and Pb spiked
32	HWC Burn Status (Date if Terminated)	

	B	C
1	**Condition Description**	
2		
3	**810C10**	
4		
5	Report Name/Date	Performance Test Report for Liquid Chemical Destructor, August 2000
6	Report Prepare	Franklin Engineering Group, Inc
7	Testing Firm	Eastman Chemical Company
8	Testing Dates	June 13, 2000
9	Cond Dates	Jun-00
10	Condition Descr	Worst-case cond, max feedrate
11	Content	PM, HCl/Cl2, metals, PCDD/F
12		
13	**810C1**	
14		
15	Report Name/Date	Metals Trial Burn, Tennessee Eastman's No. 1 Liquid Chemical Destructor, Tennessee Eastman Company, August 30, 1991
16	Report Prepare	Tennessee Eastman
17	Testing Firm	Tennessee Eastman ?
18	Cond Descr	Trial burn, LOW METALS FEED
19	Testing Dates	June 11-12, 1991
20	Cond Dates	Jun-91
21		
22		
23	**810C2**	
24		
25	Report Name/Date	Metals Trial Burn, Tennessee Eastman's No. 1 Liquid Chemical Destructor, Tennessee Eastman Company, August 30, 1991
26	Report Prepare	Tennessee Eastman
27	Testing Firm	Tennessee Eastman ?
28	Cond Descr	Trial burn, HIGH METALS FEED
29	Testing Dates	June 12, 1991
30	Cond Dates	Jun-91
31		
32	**810C3**	
33		
34	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
35	Report Prepar	
36	Testing Firm	
37	Testing Dates	17-Jan-89
38	Cond Dates	Jan-89
39	Cond Description	Trial burn, max operating conditions, permit limit setting test cond
40	Content	PM, HCl, CO, DRE

	B	C	D	E	F	G	H	I	J	K	L	M
1	**Stack Gas Emissions 1**											
2												
3		Comments	Units	7% O2								
4												
5	**810C10**					R1		R2		R3		Cond Avg
6												
7	PM	E1	gr/dscf	y		0.003		0.0026		0.0024		0.003
8	CO (RA)	E1	ppmv	y		43		2		2		15.7
9	CO (MHRA)	E1	ppmv	y		156		2		3		53.7
10												
11	HCl	E1	ppmv	y		2.1		2.7		2.5		2.4
12	Cl2	E1	ppmv	y		0.9		0.9		2.3		1.4
13	Total Chlorine	E1	ppmv	y		3.81		4.54		7.14		5.2
14												
15	Metals											
16	Antimony	E2	ug/dscm	y	nd	6.3	nd	6.1	nd	6.6		6.3
17	Arsenic	E2	ug/dscm	y	nd	2.2	nd	0.6	nd	0.6		1.1
18	Barium	E2	ug/dscm	y		2.5	nd	1.6		1.7		1.9
19	Beryllium	E2	ug/dscm	y	nd	0.2	nd	0.2	nd	0.2		0.2
20	Cadmium	E2	ug/dscm	y	nd	1.8	nd	1.2	nd	1.3		1.4
21	Chromium	E2	ug/dscm	y		42.1		39.6		42.8		41.5
22	Lead	E2	ug/dscm	y		3.6		3.7		3.9		3.7
23	Nickel	E2	ug/dscm	y	nd	2.0	nd	1.6	nd	3.6		2.4
24	Selenium	E2	ug/dscm	y	nd	1.1	nd	3.7	nd	0.9		1.9
25	Silver	E2	ug/dscm	y	nd	1.3	nd	1.2	nd	1.3		1.3
26	Thallium	E2	ug/dscm	y	nd	6.4	nd	6.5	nd	4.4		5.8
27												
28	SVM	E2	ug/dscm	y	33	5.4	25	4.9	26	5.18		5.1
29	LVM	E2	ug/dscm	y	5.4	44.5	2	40.4	1.9	43.66		42.9
30												
31	Sampling Train	PM, HCl/Cl2	E1									
32	Stack Gas Flowrate		dscfm			17700		17400		17500		17533.3
33	O2		%			13.8		13.5		14		13.8
34	Moisture		%			15.8		17.3		17.3		16.8
35	Temperature		°F			139		139		137		138.3
36												
37	Sampling Train	Metals	E2									
38	Stack Gas Flowrate		dscfm			18000		18400		17700.0		18033.3
39	O2		%			13.8		13.5		14		13.8
40	Moisture		%			17.4		15.1		17.5		16.7
41	Temperature		°F			140		141		138		139.7
42												
43												
44	Sampling Train	PCDD/F	E3									
45	Stack Gas Flowrate		dscfm			18100.0		17200		18300.0		17866.7
46	O2		%			13.1		13.1		13.1		13.1
47	Moisture		%			17.5		17.7		18.1		17.8
48	Temperature		°F			137.1		137.5		136.3		137.0

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	**Stack Gas Emissions 2**													
2														
3														
4	**810C1**					R1		R2		R3		Cond Avg		
5														
6	CO (RA)	E2	ppmv	y		12.1		12.1		24.8		16.4		
7	Antimony	E2	ug/dscm	y		245.5		107.0		356.0		236.2		
8	Arsenic	E2	ug/dscm	y		25.7		10.4		27.2		21.1		
9	Cadmium	E2	ug/dscm	y		102.4		48.3		108.3		86.3		
10	Chromium	E2	ug/dscm	y		87.1		28.0		108.3		74.5		
11	Chromium (Hex)	E1	ug/dscm	y		20.1		38.2		43.1		33.8		
12	Lead	E2	ug/dscm	y		926.5		473.3		1078.1		825.9		
13														
14	SVM	E2	ug/dscm	y		1028.8		521.6		1186.4		912.3		
15	LVM	E2	ug/dscm	y		112.8		38.4		135.5		95.6		As, Cr only
16														
17	Sampling Train	Cr Hex	E1											
18	Stack Gas Flowrate		dscfm			15434.0		15766.0		15631.0				
19	O2		%			10.7		11.2		11.3				
20	Moisture		%			31.4		31.4		27.7				
21	Temperature		°F			207.0		203.0		204.0				
22														
23	Sampling Train	Metals	E2											
24	Stack Gas Flowrate		dscfm			15667.0		15795.0		15154.0				
25	O2		%			10.7		11.2		11.3				
26	Moisture		%			31.4		31.4		27.7				
27	Temperature		°F			213.0		213.0		208.0				
28														
29														
30	**810C2**					R1		R2		R3		Cond Avg		
31														
32	CO (RA)	E2	ppmv	y		18.9		37.3		18.6		24.9		
33	Antimony	E2	ug/dscm	y		737.9		659.8		579.7		659.1		
34	Arsenic	E2	ug/dscm	y		70.8		74.0		68.5		71.1		
35	Cadmium	E2	ug/dscm	y		186.0		176.9		137.2		166.7		
36	Chromium	E2	ug/dscm	y		106.5		89.8		105.5		100.6		
37	Chromium (Hex)	E1	ug/dscm	y		12.4		12.3		18.0		14.2		
38	Lead	E2	ug/dscm	y		1854.6		1713.4		1261.9		1610.0		
39														
40	SVM	E2				2040.5		1890.3		1399.1		1776.7		
41	LVM	E2				177.3		163.8		173.9		171.7		(No Be)
42														
43	Sampling Train	Cr Hex	E1											
44	Stack Gas Flowrate		dscfm			14367.0		14766.0		14662.0				
45	O2		%			10.9		10.9		10.9				
46	Moisture		%			30.8		31.3		31.3				
47	Temperature		°F			205.0		204.0		204.0				
48														
49	Sampling Train	Metals	E2											
50	Stack Gas Flowrate		dscfm			15045.0		14751.0		14809.0				
51	O2		%			10.9		10.9		10.9				
52	Moisture		%			30.8		31.3		31.3				
53	Temperature		°F			214.0		218.0		211.0				
54														
55														
56	**810C3**					R1		R2		R3		Cond Avg		
57														
58	PM	E1	gr/dscf	y		0.0219		0.0241		0.0118		0.0193		
59	CO (RA)	E1	ppmv	y		3		0		0		1.00		
60	CO (MHRA)	E1	ppmv	y		3		0		0		1.00		
61	HCl		lb/hr			3.67		3.58		3.08				
62	HCl	E1	ppmv	y		59.1		58.9		48.9		55.6		
63	Total Chlorine	E1	ppmv	y		59.1		58.9		48.9		55.6		
64														
65	POHC DRE	Carbon Tetrachloride												
66	POHC Feedrate		lb/hr											
67	POHC Emissions		lb/hr											
68	POHC DRE		%			99.9996		99.9994		99.9994				
69														
70	POHC DRE	1,2-Dichoroethane												
71	POHC Feedrate		lb/hr											

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
72	POHC Emissions		lb/hr											
73	POHC DRE		%			99.9987		99.9981		99.9991				
74														
75	POHC DRE	Toluene												
76	POHC Feedrate		lb/hr											
77	POHC Emissions		lb/hr											
78	POHC DRE		%			99.9998		99.9995		99.9997				
79														
80	Sampling Train	PM, HCl	E1											
81	Stack Gas Flowrate		dscfm			16641		16112		16191		16314.7		
82	O2		%			11.8		11.7		11.4		11.6		
83	Moisture		%			34.84		32.17		32.45		33.2		
84	Temperature		°F			194.9		225.8		226		215.6		

	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	AA
1	**Feedstream 1**																									
2																										
3																										
4	**810C10**	**Trial burn**			R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2		R3	
5																										
6	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2							
7	Feed Class				Solid non-HW		Solid non-HW		Solid non-HW		Solid non-HW		Liq non-HW		Liq non-HW		Liq non-HW		Liq non-HW							
8	Feed Class 2																				Non-HW		Non-HW		Non-HW	
9	Feedstream Description				Salt		Salt		Salt		Salt		Salt Water		Salt Water		Salt Water		Salt Water							
10	Feed Rate		lb/hr		328		342.2		338.6		336.3		1518		1584		1566		1556							
11	Feed Rate		gpm																							
12	Heating Value		MM Btu/lb																							
13	Ash		lb/hr																							
14	Chlorine		lb/hr																							
15	Chromium		lb/hr																							
16	Lead		lb/hr																							
17																										
18	Stack Gas Flowrate		dscfm		17700		17400		17500		17533.3		17700		17400		17500		17533.3							
19	Oxygen		%		13.8		13.5		14		13.8		13.8		13.5		14		13.8							
20																										
21	Thermal Feedrate		MMBtu/hr																							
22	Estimated Firing Rate		MMBtu/hr																							
23																										
24	*Feedrate MTEC Calculations*																									
25	Ash		mg/dscm	y																						
26	Chlorine		ug/dscm																							
27	Chromium		ug/dscm																							
28	Lead		ug/dscm																							
29																										
30	SVM		ug/dscm																							
31	LVM		ug/dscm																							

	B	AB	AD	AF	AH	AJ	AL	AN	AP	AR	AT
1	**Feedstream 1**										
2											
3											
4	**810C10**	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1
5											
6	Feedstream Number		F3	F3	F3	F3	F3	F4	F4	F4	F5
7	Feed Class		Spike	Spike	Spike	Spike	Liq HW	Liq HW	Liq HW	Liq HW	Oil
8	Feed Class 2	Non-HW	Spike	Spike	Spike	Spike	HW	HW	HW	HW	
9	Feedstream Description		Metals Spike No.1	Metals Spike	Metals Spike	Metals Spike	Perchloroethylen	Perchloroethylene	Perchloroethylene	Perchloroethylene	C Nozzle Fuel Oil
10	Feed Rate		200	200	200	200	570	570	582	574	816
11	Feed Rate										
12	Heating Value						1.2	1.2	1.2		15.7
13	Ash		328	342	339	336.3					
14	Chlorine						501	498.8	524.4	508.1	
15	Chromium		5.01	4.86	5	5.0					
16	Lead		0.28	0.24	0.24	0.3					
17											
18	Stack Gas Flowrate		17700	17400	17500	17533.3	17700	17400	17500	17533.3	
19	Oxygen		13.8	13.5	14	13.8	13.8	13.5	14	13.8	
20											
21	Thermal Feedrate										
22	Estimated Firing Rate										
23											
24	*Feedrate MTEC Calculation*										
25	Ash		9634.2	9809.8	10358.8	9926.9					
26	Chlorine						14715606.5	14307446.7	16024068.7	14995603.1	
27	Chromium		147156.1	139402.9	152784.8	146296.2					
28	Lead		8224.3	6884.1	7333.7	7477.1					
29											
30	SVM		8224.3	6884.1	7333.7	7477.1					
31	LVM		147156.1	139402.9	152784.8	146296.2					

	B	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM
1	**Feedstream 1**																		
2																			
3																			
4	**810C10**	R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2	
5																			
6	Feedstream Number	F5		F5		F5		F6		F6		F6		F6		F7		F7	
7	Feed Class	Oil		Oil		Oil		Oil		Oil		Oil		Oil		Oil		Oil	
8	Feed Class 2																		
9	Feedstream Description	C Nozzle Fuel Oil		C Nozzle Fuel Oil		C Nozzle Fuel Oil		D Nozzle Fuel Oil		D Nozzle Fuel Oil		D Nozzle Fuel Oil		D Nozzle Fuel Oil		F Burner Fuel Oil		F Burner Fuel Oil	
10	Feed Rate	804		810		810		804		810		816		810					
11	Feed Rate															0.8		0.8	
12	Heating Value	15.5		15.6				15.4		15.6		15.7				6.8		6.8	
13	Ash																		
14	Chlorine																		
15	Chromium																		
16	Lead																		
17																			
18	Stack Gas Flowrate																		
19	Oxygen																		
20																			
21	Thermal Feedrate																		
22	Estimated Firing Rate																		
23																			
24	*Feedrate MTEC Calculation*																		
25	Ash																		
26	Chlorine																		
27	Chromium																		
28	Lead																		
29																			
30	SVM																		
31	LVM																		

	B	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF
1	**Feedstream 1**																			
2																				
3																				
4	**810C10**	R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg
5																				
6	Feedstream Number	F7		F7										F8		F8		F8		F8
7	Feed Class	Oil		Oil										Total		Total		Total		Total
8	Feed Class 2					MF		MF		MF		MF		Total		Total		Total		Total
9	Feedstream Description	F Burner Fuel Oil		F Burner Fuel Oil										Total		Total		Total		Total
10	Feed Rate													4236.0		4310.2		4312.6		4286.3
11	Feed Rate	0.8																		
12	Heating Value	6.5																		
13	Ash													328.0		342.0		339.0		336.3
14	Chlorine													501.0		498.8		524.4		508.1
15	Chromium													5.0		4.9		5.0		5.0
16	Lead													0.3		0.2		0.2		0.3
17																				
18	Stack Gas Flowrate													17700		17400		17500		17533.3
19	Oxygen													13.8		13.5		14		13.8
20																				
21	Thermal Feedrate																			
22	Estimated Firing Rate																			40.3
23																				
24	*Feedrate MTEC Calculation*																			
25	Ash													9634.2		9809.8		10358.8		9926.9
26	Chlorine													14715606.5		14307446.7		16024068.7		14995603.1
27	Chromium													147156.1		139402.9		152784.8		146296.2
28	Lead													8224.3		6884.1		7333.7		7477.1
29																				
30	SVM													8224.3		6884.1		7333.7		7477.1
31	LVM													147156.1		139402.9		152784.8		146296.2

	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	**Feedstreams 2**																							
2																								
3																								
4	**810C1**				R1		R2		R3		R1		R2		R3		R1		R2		R3		R1	
5																								
6	Feedstream Number				F1		F1		F1		F2		F2		F2								F3	
7	Feed Class				Spike		Spike		Spike		Spike		Spike		Spike								Liq HW	
8	Feed Class 2																Spike		Spike		Spike			
9	Feedstream Description				Metal spike		Metal spike		Metal spike		Metal spike		Metal spike		Metal spike								Soln C	
10	Feedrate		lb/hr		63.9		63.9		63.9		20.19		20.19		20.19								8.1	
11	Heating value																							
12	Ash																							
13	Antimony		ppmw		21376.8		21376.8		19856.7															
14	Arsenic		ppmw		718.3		722.1		693.6															
15	Cadmium		ppmw								8946.8		8774.8		14194.4									
16	Chromium		ppmw																				119938.2	
17	Lead		ppmw								106673.4		106673.4		108394.0									
18																								
19	Stack Gas Flowrate		dscfm		15434		15766		15631		15434		15766		15631								15434	
20	Oxygen		%		10.7		11.2		11.3		10.7		11.2		11.3								10.7	
21																								
22	Estimated Firing Rate		MMBtu/hr																					
23																								
24	Antimony		ug/dscm		32154		33083		31315								32154		33083		31315			
25	Arsenic		ug/dscm		1080		1117		1094								1080		1117		1094			
26	Cadmium		ug/dscm								4253		4292		7075		4253		4292		7075			
27	Chromium		ug/dscm														0		0		0		22876	
28	Lead		ug/dscm								50713		52178		54029		50713		52178		54029			
29																								
30	SVM		ug/dscm								54967		56471		61105		54967		56471		61105		0	
31	LVM		ug/dscm		1080.4		1117.5		1093.8								1080		1117		1094		22875.6	
32																								
33	**810C2**				R1		R2		R3		R1		R2		R3		R1		R2		R3		R1	
34																								
35	Feedstream Number				F1		F1		F1		F2		F2		F2								F3	
36	Feed Class				Spike		Spike		Spike		Spike		Spike		Spike								Liq HW	
37	Feed Class 2																Spike		Spike		Spike			
38	Feestream Description				Metal spike		Metal spike		Metal spike		Metal spike		Metal spike		Metal spike								Soln C	
39	Feedrate		lb/hr		2349.43		2349.43		2349.43		225.23		225.23		225.23								335.66	
40	Heating value																							
41	Ash																							
42	Antimony		ppmw		20807		21377		20807															
43	Arsenic		ppmw		770		722		770															
44	Cadmium		ppmw								8947		8947		9118.858									
45	Chromium		ppmw																				115295	
46	Lead		ppmw								107534		106673		107534									
47																								
48	Gas flowrate		dscfm		14367		14766		14662		14367		14766		14662								14367	
49	Oxygen		%		10.9		10.9		10.9		10.9		10.9		10.9								10.9	
50																								
51	Estimated Firing Rate		MMBtu/hr																					
52																								
53	Antimony		ug/dscm		1261031		1260571		1235659								1261031		1260571		1235659			
54	Arsenic		ug/dscm		46641		42579		45702								46641		42579		45702			
55	Cadmium		ug/dscm								51982		50577		51916		51982		50577		51916			
56	Chromium		ug/dscm														0		0		0		998321	
57	Lead		ug/dscm								624784		603038		612213		624784		603038		612213			
58																								
59	SVM		ug/dscm								676766		653615		664129		676766		653615		664129			
60	LVM		ug/dscm		46641		42579		45702								46641		42579		45702		998321	

	B	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU
1	**Feedstreams 2**																						
2																							
3																							
4	**810C1**	R2		R3		R1		R2		R3		R1		R2		R3		R1		R2		R3	
5																							
6	Feedstream Number	F3		F3		F4		F4		F4								F5		F5		F5	
7	Feed Class	Liq HW		Liq HW		Liq HW		Liq HW		Liq HW								Liq non-HW		Liq non-HW		Liq non-HW	
8	Feed Class 2											HW		HW		HW		Non-HW		Non-HW		Non-HW	
9	Feedstream Description	Soln C		Soln C		Liquid waste		Liquid waste		Liquid waste								River water		River water		River water	
10	Feedrate	8.1		8.1		6502.2		6490.8		5315.4								3840		3840		3836.4	
11	Heating value																						
12	Ash																						
13	Antimony				1	0.0047	1	0.005	1	0.005							1	0.005	1	0.005	1	0.0050	
14	Arsenic				1	0.0047	1	0.005	1	0.047							1	0.005	1	0.005	1	0.0050	
15	Cadmium				1	0.0233	1	0.023	1	0.023							1	0.005	1	0.005	1	0.0050	
16	Chromium	116069.2		114521.6	1	0.0467	1	0.047	1	0.047								0.014		0.010		0.2831	
17	Lead				1	0.0467	1	0.047	1	0.047							1	0.010	1	0.010	1	0.0100	
18																							
19	Stack Gas Flowrate	15766		15631		15434		15766		15631								15434		15766		15631	
20	Oxygen	11.2		11.3		10.7		11.2		11.3								10.7		11.2		11.3	
21																							
22	Estimated Firing Rate																						
23																							
24	Antimony				100	0.71	100	0.73	100	0.61	100	0.71	100	0.73	100	0.61	100	0.45	100	0.47	100	0.47	0
25	Arsenic				100	0.71	100	0.73	100	6.12	100	0.71	100	0.73	100	6.12	100	0.45	100	0.47	100	0.47	0
26	Cadmium				100	3.57	100	3.67	100	3.06	100	3.57	100	3.67	100	3.06	100	0.45	100	0.47	100	0.47	0
27	Chromium	22777		22901	100	7.14	100	7.34	100	6.12	0	22883	0	22785	0	22907		1.27		0.93		26.82	0
28	Lead				100	7.14	100	7.34	100	6.12	100	7.14	100	7.34	100	6.12	100	0.90	100	0.93	100	0.95	0
29																							
30	SVM	0		0		11		11		9	100	11	100	11	100	9	100	1.4	100	1.4	100	1.4	0
31	LVM	22777.2		22901.3		7.9		8.1		12.2	0	22883	0	22785	0	22914	26	1.7	33	1.4	2	27.3	0
32																							
33	**810C2**	R2		R3		R1		R2		R3								R1		R2		R3	
34																							
35	Feedstream Number	F3		F3		F4		F4		F4								F5		F5		F5	
36	Feed Class	Liq HW		Liq HW		Liq HW		Liq HW		Liq HW								Liq non-HW		Liq non-HW		Liq non-HW	
37	Feed Class 2											HW		HW		HW		Non-HW		Non-HW		Non-HW	
38	Feestream Description	Soln C		Soln C		Liquid waste		Liquid waste		Liquid waste								River water		River water		River water	
39	Feedrate	335.66		335.66		3750		3879		3730								3835.8		3726.6		3735.6	
40	Heating value																						
41	Ash																						
42	Antimony				1	0.0047	1	0.0047	1	0.047							1	0.0050	1	0.0050	1	0.0050	
43	Arsenic				1	0.0047	1	0.0047	1	0.005							1	0.0050	1	0.0050	1	0.0050	
44	Cadmium				1	0.0233	1	0.0233	1	0.023							1	0.0050	1	0.0050	1	0.0050	
45	Chromium	116843		116843	1	0.0467	1	0.0467	1	0.047								0.2171	1	0.0100	1	0.0100	
46	Lead				1	0.0467	1	0.0467	1	0.047							1	0.0100	1	0.0100	1	0.0100	
47																							
48	Gas flowrate	14766		14662		14367		14766		14662								14367		14766		14662	
49	Oxygen	10.9		10.9		10.9		10.9		10.9								10.9		10.9		10.9	
50																							
51	Estimated Firing Rate																						
52																							
53	Antimony				100	0.45	100	0.45	100	4.40	100	0.45	100	0.45	100	4.40	100	0.49	100	0.47	100	0.47	0
54	Arsenic				100	0.45	100	0.45	100	0.44	100	0.45	100	0.45	100	0.44	100	0.49	100	0.47	100	0.47	0
55	Cadmium				100	2.26	100	2.27	100	2.20	100	2.26	100	2.27	100	2.20	100	0.49	100	0.47	100	0.47	0
56	Chromium	984383		991366	100	4.51	100	4.54	100	4.40	0	998326	0	984388	0	991370		21.48	100	0.94	100	0.94	0
57	Lead				100	4.51	100	4.54	100	4.40	100	4.51	100	4.54	100	4.40	100	0.99	100	0.94	100	0.94	0
58																							
59	SVM					6.8		6.8		6.6	100	6.8	100	6.8	100	6.6	100	1.5	100	1.4	100	1.4	0
60	LVM	984383		991366		5.0		5.0		4.8	0	998326	0	984388	0	991371	2	22.0	100	1.4	100	1.4	0

	B	AV	AW	AX	AY	AZ	BA	BB	BC	BD
1	**Feedstreams 2**									
2										
3										
4	**810C1**	R1		R2		R3		Cond Avg		
5										
6	Feedstream Number	F6		F6		F6		F6		
7	Feed Class	Total		Total		Total		Total		
8	Feed Class 2	Total		Total		Total		Total		
9	Feedstream Description	Total		Total		Total		Total		
10	Feedrate									
11	Heating value									
12	Ash									
13	Antimony									
14	Arsenic									
15	Cadmium									
16	Chromium									
17	Lead									
18										
19	Stack Gas Flowrate	15434		15766		15631		15610		
20	Oxygen	10.7		11.2		11.3		11.1		
21										
22	Estimated Firing Rate							49.2		
23										
24	Antimony	32155	0	33084	0	31317	0	32185		
25	Arsenic	1082	0	1119	1	1100	0	1100		
26	Cadmium	4257	0	4296	0	7079	0	5211		
27	Chromium	22884	0	22785	0	22934	0	22868		
28	Lead	50721	0	52187	0	54036	0	52315		
29										
30	SVM	54979	0	56483	0	61115	0	57526		
31	LVM	23966	0	23904	0	24035	0	23968	As, Cr only	
32										
33	**810C2**	R1		R2		R3		Cond Avg		
34										
35	Feedstream Number	F6		F6		F6		F6		
36	Feed Class	Total		Total		Total		Total		
37	Feed Class 2	Total		Total		Total		Total		
38	Feestream Description	Total		Total		Total		Total		
39	Feedrate									
40	Heating value									
41	Ash									
42	Antimony									
43	Arsenic									
44	Cadmium									
45	Chromium									
46	Lead									
47										
48	Gas flowrate	14367		14766		14662		14598		
49	Oxygen	10.9		10.9		10.9		10.9		
50										
51	Estimated Firing Rate							46.8		
52										
53	Antimony	1261031	0	1260572	0	1235663	0	1252422		
54	Arsenic	46642	0	42580	0	45703	0	44975		
55	Cadmium	51985	0	50580	0	51918	0	51494		
56	Chromium	998347	0	984389	0	991371	0	991369		
57	Lead	624789	0	603043	0	612218	0	613350		
58										
59	SVM	676774	0	653623	0	664137	0	664845		
60	LVM	1044989	0	1026969	0	1037075	0	1036344	As, Cr only	

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
61																								
62	**810C3**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2	
63																								
64	Feedstream Description												Liquid Waste		Liquid Waste		Liquid Waste		Liquid Waste		Total		Total	
65	Feed Class 2																				Total		Total	
66	Feed Rate		lb/hr										14565		14163		13083		13937.0		14565		14163	
67	Heating Value		Btu/lb																					
68	Chlorine		lb/hr																		1858		1800	
69	Ash		lb/hr																		761		853	
70																								
71	Stack Gas Flowrate		dscfm																		16641		16112	
72	Oxygen		%																		11.8		11.7	
73																								
74	Thermal Feedrate		MMBtu/hr																					
75	Estimated Firing Rate		MMBtu/hr																					
76																								
77	*Feedrate MTEC Calculations*																							
78	Chlorine		ug/dscm	y																	45428110		44966212	
79	Ash		mg/dscm	y																	18606		21309	

	B	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU
61																							
62	**810C3**	R3		Cond Avg																			
63																							
64	Feedstream Description	Total		Total																			
65	Feed Class 2	Total		Total																			
66	Feed Rate	13083		13937																			
67	Heating Value																						
68	Chlorine	1659																					
69	Ash	782																					
70																							
71	Stack Gas Flowrate	16191																					
72	Oxygen	11.4																					
73																							
74	Thermal Feedrate																						
75	Estimated Firing Rate																						
76																							
77	*Feedrate MTEC Calculations*																						
78	Chlorine	39952842		43449055																			
79	Ash	18833		19583																			

	B	AV	AW	AX	AY	AZ	BA	BB	BC	BD
61										
62	**810C3**									
63										
64	Feedstream Description									
65	Feed Class 2									
66	Feed Rate									
67	Heating Value									
68	Chlorine									
69	Ash									
70										
71	Stack Gas Flowrate									
72	Oxygen									
73										
74	Thermal Feedrate									
75	Estimated Firing Rate									
76										
77	*Feedrate MTEC Calculations*									
78	Chlorine									
79	Ash									

	B	C	D	E	F	G
1	**Process Information**					
2						
3	**810C10**			Run 1	Run 2	Run 3
4						
5	Comb Temperature	F		1707	1701	1698
6	Quench Outlet Temperature	F		169	169	169
7	Quench Recycle Temperature	F		168	168	168
8	Rod Scrubber Outlet Temperature	F		129	129	129
9	Rod Scrubber Recycle Temperature (pre-Hex)	F		157	157	157
10	Rod Scrubber Recycle Temperature (post-Hex)	F		131	131	131
11	WESP 1 Oulet Temperature	F		135	135	135
12	WESP 1 Recycle Temperature	F		134	134	133
13	WESP 2 Outlet Temperature	F		131	131	131
14	WESP 2 Recycle Temperature	F		130	130	130
15	Comb Pressure	in. W.C		-1	-1.1	-1.1
16	Quench Discharge Pressure	in. W.C		-3	-3.3	-3.4
17	Rod Scrubber Pressure	in. W.C		-5.8	-6.2	-6.2
18	Rod Scrubber Discharge Pressure	in. W.C		-5.8	-6.1	-6.4
19	WESP 1 Pressure	in. W.C		-9.9	-10.6	-10.8
20	WESP 1 Discharge Pressure	in. W.C		-10.6	-11.5	-11.6
21	WESP 2 Pressure	in. W.C		-14.6	-15.6	-16
22	WESP 2 Discharge Pressure	in. W.C		-15	-16.1	-16.2
23	Quench Recycle pH	pH		2.6	2.7	2.2
24	Rod Scrubber Recycle pH	pH		3.3	5.4	6.2
25	WESP 1 Recycle pH	pH		6.5	6.4	6.5
26	WESP 2 Recycle pH	pH		6.3	6.3	6.3
27	Quench Recycle Flow	gpm		486	489	461
28	Quench Blowdown Flow	gpm		80	84	81
29	Rod Scrubber Recycle Flow	gpm		2005	2024	2049
30	Rod Scrubber Blowdown Flow	gpm		93	96	98
31	WESP 1 Recycle Flow	gpm		277	279	279
32	WESP 1 Blowdown Flow	gpm		12	15	15
33	WESP 2 Recycle Flow	gpm		296	304	308
34	WESP 1 Power	Watts		1672	1655	1690
35	WESP 2 Power	Watts		7732	7645	7618
36	WESP 1 Power -to-Gas Ratio	Watts/1000acfm		618	67	68
37	WESP 2 Power -to- Gas Ratio	Watts/1000acfm		316	311	308

	C	D	E	F	G
1	**Process Information 2**				
2					
3	**810C1**		R1	R2	R3
4					
5	Combustion Temperature	F	2110	2107	2115
6	WS Pressure Drop	in H2O	53.7	53.4	53.5
7	WS pH		1.03	0.89	0.88
8	WS pH		7.01	6.97	6.77
9					
10	**810C2**				
11					
12	Combustion Temperature	F		2106	2103
13	WS Pressure Drop	in H2O	53.2	52.9	53.7
14	WS pH		0.5	0.96	0.62
15	WS pH		6.15	6.23	6.16

	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:		810C10															
5	Condition/Test Date:		Worst-case cond, max feedrate															
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	Detected in sample volume (ng)																	
11		2,3,7,8-TCDD	1	nd	0.0015	0.0015	0.0007	0.0007	nd	0.00138	0.001	0.001	0.001	nd	0.002	0.002	0.001	0.001
12		1,2,3,7,8-PCDD	0.5		0.0064	0.0032	0.0064	0.0032	nd	0.00363	0.002	0.002	0.001	nd	0.001	0.000	0.000	0.000
13		1,2,3,4,7,8-HxCDD	0.1	nd	0.0053	0.0005	0.0027	0.0003	nd	0.0053	0.001	0.003	0.000	nd	0.003	0.000	0.002	0.000
14		1,2,3,6,7,8-HxCDD	0.1	nd	0.0058	0.0006	0.0029	0.0003	nd	0.00583	0.001	0.003	0.000	nd	0.004	0.000	0.002	0.000
15		1,2,3,7,8,9-HxCDD	0.1	nd	0.0053	0.0005	0.0026	0.0003	nd	0.00529	0.001	0.003	0.000	nd	0.003	0.000	0.002	0.000
16		1,2,3,4,6,7,8-HpCDD	0.01		0.0354	0.0004	0.0354	0.0004		0.0301	0.000	0.030	0.000		0.024	0.000	0.024	0.000
17		OCDD	0.001		0.1110	0.0001	0.1110	0.0001		0.11	0.000	0.110	0.000		0.076	0.000	0.076	0.000
18		2,3,7,8-TCDF	0.1		0.0095	0.0009	0.0095	0.0009		0.00606	0.001	0.006	0.001		0.008	0.001	0.008	0.001
19		1,2,3,7,8-PCDF	0.05		0.0181	0.0009	0.0181	0.0009		0.0103	0.001	0.010	0.001		0.012	0.001	0.012	0.001
20		2,3,4,7,8-PCDF	0.5		0.0209	0.0105	0.0209	0.0105		0.0155	0.008	0.016	0.008		0.015	0.008	0.015	0.008
21		1,2,3,4,7,8-HxCDF	0.1		0.0199	0.0020	0.0199	0.0020		0.0142	0.001	0.014	0.001		0.015	0.002	0.015	0.002
22		1,2,3,6,7,8-HxCDF	0.1		0.0200	0.0020	0.0200	0.0020		0.012	0.001	0.012	0.001		0.013	0.001	0.013	0.001
23		2,3,4,6,7,8-HxCDF	0.1		0.0118	0.0012	0.0118	0.0012		0.00935	0.001	0.009	0.001		0.009	0.001	0.009	0.001
24		1,2,3,7,8,9-HxCDF	0.1		0.0073	0.0007	0.0073	0.0007		0.00524	0.001	0.005	0.001		0.005	0.000	0.005	0.000
25		1,2,3,4,6,7,8-HpCDF	0.01		0.0491	0.0005	0.0491	0.0005		0.0317	0.000	0.032	0.000		0.032	0.000	0.032	0.000
26		1,2,3,4,7,8,9-HpCDF	0.01		0.0080	0.0001	0.0080	0.0001		0.00643	0.000	0.006	0.000		0.006	0.000	0.006	0.000
27		OCDF	0.001		0.0233	0.0000	0.0233	0.0000		0.0222	0.000	0.022	0.000		0.018	0.000	0.018	0.000
28		Total TCDD	0		0.0302	0.0000	0.0302	0.0000		0	0.000	0.034	0.000		0.024	0.000	0.024	0.000
29		Total PCDD	0		0.0549	0.0000	0.0549	0.0000		0.0202	0.000	0.020	0.000		0.027	0.000	0.027	0.000
30		Total HxCDD	0		0.0680	0.0000	0.0680	0.0000		0.056	0.000	0.056	0.000		0.049	0.000	0.049	0.000
31		Total HpCDD	0		0.0714	0.0000	0.0714	0.0000		0.0606	0.000	0.061	0.000		0.050	0.000	0.050	0.000
32		Total TCDF	0		0.2760	0.0000	0.2760	0.0000		0.188	0.000	0.188	0.000		0.201	0.000	0.201	0.000
33		Total PCDF	0		0.2300	0.0000	0.2300	0.0000		0.158	0.000	0.158	0.000		0.161	0.000	0.161	0.000
34		Total HxCDF	0		0.1190	0.0000	0.1190	0.0000		0.0852	0.000	0.085	0.000		0.085	0.000	0.085	0.000
35		Total HpCDF	0		0.0759	0.0000	0.0759	0.0000		0.0556	0.000	0.056	0.000		0.054	0.000	0.054	0.000
36																		
37		Gas sample volume (dscf)				122.53	122.53	122.53			116.367	116.367	116.367			123.350	123.350	123.350
38		O2 (%)				13.10	13.10	13.10			13.100	13.100	13.100			13.100	13.100	13.100
39																		
40		PCDD/PCDF (ng in sample)				0.03	1.1	0.02			0.019	0.790	0.016			0.017	0.744	0.016
41		PCDD/PCDF (ng/dscm @ 7% O2)		12.1		0.013	0.54	0.012	26.0		0.010	0.425	0.009	20.6		0.009	0.378	0.008
42																		
43		TEQ Cond Avg	0.01															
44		Total Cond Avg	0.45															