

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase II ID No.	1012
4	EPA ID No.	TND003376928
5	Facility Name	Eastman Chemicals Co. - Tennessee Eastman Div
6	Facility Location	
7	City	Kingsport
8	State	TN
9	Unit ID Name/No.	Boiler No. 22
10	Other Sister Facilities	Boiler No. 21
11	Number of Sister Facilities	1
12	Combustor Class	Coal-fired boiler
13	Combustor Type	Stoker
14	Combustor Characteristics	Babcock & Wilcox, coal-fired spreader stoker watertube boiler, 216 MM Btu/hr, comb chamber dimensions (ft): 24 w, 16 l, 40 h
15	Capacity (MMBtu/hr)	216
16	Soot Blowing	Yes
17	APCS Detailed Acronym	ESP
18	APCS General Class	ESP
19	APCS Characteristics	Research Cottrell, 2 fields; 11,232 ft2 plate area for 118 kacfm @ 350 F, SCA=95 ft2/kacfm
20	Hazardous Wastes	Biosludge
21	Haz Waste Description	Biosludge
22	Supplemental Fuel	Coal
23		
24	Stack Characteristics	14 Blrs (# 11 - 24) exhaust to one common breeching interconnected to 3 stacks
25	Diameter (ft)	
26	Height (ft)	225
27	Gas Velocity (ft/sec)	
28	Gas Temperature (°F)	
29		
30	Permitting Status	BIF Interim Status Tier III for metals, HCl/Cl2
31	HWC Burn Status (Date if Terminated)	

	B	C
1	Cond Description	
2		
3	1012C1	
4		
5	Report Name/Date	Recertification of Compliance for Tennessee Eastman Division Boilers 21 and 22; dated August 11, 1997
6	Report Preparer	Eastman Chemical Co
7	Testing Firm	Eastman Chemical Co
8	Testing Dates	June 10-12, 1997
9	Cond Dates	Jun-97
10	Cond Description	CoC; max feedrates
11	Content	PM, metals, CO, HCl/Cl ₂ ; feed analysis for metals, ash, chlorides
12		
13	1012C2	
14		
15	Report Name/Date	Recertification of Compliance for Tennessee Eastman Division Boilers 21 and 22; dated August 11, 1997
16	Report Preparer	Eastman Chemical Co
17	Testing Firm	Eastman Chemical Co
18	Testing Dates	June 10-12, 1997
19	Cond Dates	Jun-97
20	Cond Description	CoC; min combustion temperature
21	Content	CO

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Stack Gas Emissions															
2																
3		Comments	Units	7% O2												
4																
5										sootblow						
6	1012C1					R1	R2	R3		Cond Avg						
7																
8	Sampling Train	(PM, HCl/Cl2)	E1													
9	Stack Gas Flowrate		dscfm			49954	51793	53008		51585						
10	O2		%			6.2	5.8	5.3		5.8						
11	Moisture		%			22.41	15.64	17.42		18.5						
12	Temperature		°F			325	322	317		321.3						
13																
14	HCl		ppmv	n		56.1	56.7	36.3		49.7						
15	Cl2		ppmv	n		1.47	1.5	1.75		1.57						
16																
17	PM	E1	gr/dscf	y		0.0248	0.1324	0.0098		0.0173						PM level is high outlier!
18	CO (RA)	E1	ppmv	y		65.73	43.26	60.33		56.4						
19	CO (MHRA)	E1	ppmv	y		66.98	43.99	60.14		57.0						
20	HCl	E1	ppmv	y		53.07	52.22	32.37		45.9						
21	Cl2	E1	ppmv	y		1.39	1.38	1.56		1.4						
22	Total Chlorine	E1	ppmv	y		55.85	54.99	35.49		48.8						
23																
24	Sampling Train	(Metals)	E2													
25	Stack Gas Flowrate		dscfm			50873	51363	52155		51464						
26	O2		%			6.2	5.8	5.3		5.8						
27	Moisture		%			15.47	16.32	17.19		16.33						
28	Temperature		°F			331	328	326		328						
29	Sampling Volume		dscf			37.15	35.74	37.32								
30																
31	Mercury		µg/dscm	n		9.80	9.40	14.47								
32	Lead		µg/dscm	n		63.48	60.44	85.16								
33	Cadmium		µg/dscm	n		4.84	3.6	8.70								
34	Arsenic		µg/dscm	n	nd	26.6	26.2	20.96								
35	Beryllium		µg/dscm	n		0.72	1.40	1.18								
36	Chromium		µg/dscm	n		28.6	54.6	38.37								
37	Antimony		µg/dscm	n		120.96	88.0	113.03								
38																
39	Mercury	E2	µg/dscm	y		9.27	8.66	12.90		10.3						
40	Lead	E2	µg/dscm	y		60.05	55.67	75.94		63.9						
41	Cadmium	E2	µg/dscm	y		4.58	3.3	7.75		5.2						
42	Arsenic	E2	µg/dscm	y	nd	25.2	24.1	18.69	73	22.7						
43	Beryllium	E2	µg/dscm	y		0.68	1.29	1.05		1.0						
44	Chromium	E2	µg/dscm	y		27.1	50.3	34.22		37.2						
45	Antimony	E2	µg/dscm	y		114.42	81.1	100.79		98.8						
46																
47	SVM	E2	µg/dscm	y		64.6	59.0	83.7		69.1						
48	LVM	E2	µg/dscm	y	48	52.9	32	75.7		60.9	27					
49																
50	1012C2					R1	R2	R3		Cond Avg						
51																
52	CO (MHRA)		ppmv	y		72.5	86.1	79.5		79.4						
53	CO (RA)		ppmv	y		73.1	84.5	79.6		79.1						

	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																								
3																								
4																								
5	1012C1																							
6																								
7	Feedstream Number																							
8	Feed Class																							
9	Feed Class 2																							
10	Feedstream Description																							
11	Feed Rate																							
12	Heating Value																							
13	Ash																							
14	Chlorine																							
15	Antimony																							
16	Arsenic																							
17	Barium																							
18	Beryllium																							
19	Cadmium																							
20	Chromium																							
21	Lead																							
22	Mercury																							
23	Silver																							
24	Thallium																							
25																								
26	Stack Gas Flowrate																							
27	O2																							
28																								
29	Thermal Feedrate																							
30	Estimated Firing Rate																							
31																								
32	Feedrate MTEC Calculations																							
33	Ash																							
34	Chlorine																							
35	Antimony																							
36	Arsenic																							
37	Barium																							
38	Beryllium																							
39	Cadmium																							
40	Chromium																							
41	Lead																							
42	Mercury																							
43	Silver																							
44	Thallium																							
45																								
46	SVM																							
47	LVM																							

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
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	A	B	C
1	Process Information		
2			
3		Units	Cond Avg
4			
5	1012C1		
6			
7	Steam Production	klb/hr	163.8
8	Comb Chamber Outlet Temperature	F	1351
9	ESP Inlet Temperature	F	375
10	ESP Power	kW	9.2
11	ESP Air Flow (velocity)	ft/min	2102
12			
13	1012C2		
14			Cond Avg
15	Steam Production	klb/hr	103
16	Comb Chamber Temperature	F	1025
17	ESP Air Flow (velocity)	ft/min	1728