

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase II ID No.	778
4	EPA ID No.	NCD042091975
5	Facility Name	Mallinckrodt Inc.
6	Facility Location	
7	City	Raleigh
8	State	NC
9	Unit ID Name/No.	Boiler No.1
10	Other Sister Facilities	None
11	Number of Sister Facilities	0
12	Combustor Class	Liquid-fired boiler
13	Combustor Type	Liquid-fired
14	Combustor Characteristics	Watertube boiler. Cleaver-Brooks Model D34 water-tube boiler, John Zink LoNOx burner LN-HIV-25, 18.6 million Btu/hr heat input, 15,000 lb/hr steam production @ 125 psi, rotary soot blower
15	Capacity (MMBtu/hr)	18.6
16	Soot Blowing	Yes; once per day for 5 minutes
17	APCS Detailed Acronym	None
18	APCS General Class	
19	APCS Characteristics	
20	Hazardous Wastes	Liq
21	Haz Waste Description	Liquid, aniline, K083
22	Supplemental Fuel	Natural gas (start up only)
23		
24	Stack Characteristics	
25	Diameter (ft)	2.25
26	Height (ft)	50
27	Gas Velocity (ft/sec)	32.6
28	Gas Temperature (°F)	636
29		
30	Permitting Status	Tier I metals, chlorine (IA for Cr)
31	HWC Burn Status (Date if Terminated)	

	B	C
1	Cond Description	
2		
3	778C10	
4		
5	Report Name/Date	Recertification of Compliance Test Report for Boiler No. 1, 8/27/98; Compliance Emission Test Report - Boiler No. 1, 8/21/98.
6	Report Preparer	Compliance Strategies & Solutions
7	Testing Firm	DEECO Inc.
8	Testing Dates	July 9, 1998
9	Cond Dates	Jul-98
10	Cond. Description	CoC; max waste feedrate
11	Content	PM, CO, Cr/Cr+6 emissions; ash, Cl, and metals feeds
12		
13	778C11	
14		
15	Report Name/Date	Recertification of Compliance Test Report for Boiler No. 1, 8/27/98; Compliance Emission Test Report - Boiler No. 1, 8/21/98.
16	Report Preparer	Compliance Strategies & Solutions
17	Testing Firm	DEECO Inc.
18	Testing Dates	July 10, 1998 and August 19-20, 1998
19	Cond Dates	Jul-98
20	Cond. Description	CoC; min comb temperature
21	Content	CO

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions											
2												
3		Comment	Units		7% O2							
4												
5										Soot blow		
6	778C10					R1	R2			R3		Cond Avg
7												
8	PM	E2	gr/dscf	y		0.055	0.056			0.138		0.068
9	CO (MHRA)	E2	ppmv	y		2.9	2.5			2.2		2.5
10	Chromium (Hex)		g/hr			0.008	0.037			0.034		0.024
11	Chromium		g/hr			0.245	0.271			4.38		0.877
12												
13	Sampling Train	Cr+6	E1									
14	Stack Gas Flowrate		dscfm			3300	3200			3200		3233.3
15	O2		%			8.3	8.1			8.1		8.2
16	Moisture		%			13.5	14			13.7		13.7
17	Temperature		°F			624	639			645		636.0
18												
19	Sampling Train	PM	E2									
20	Stack Gas Flowrate		dscfm			3100	3000			3200		3100.0
21	O2		%			8.2	8			8.7		8.3
22	Moisture		%			13.3	16.6			12.8		14.2
23	Temperature		°F			624	633			652		636.3
24												
25	Chromium (Hex)	E1	µg/dscm	y		1.7	7.8			7.1		5.5
26	Chromium	E1	µg/dscm	y		50.9	57.3			917.5		341.9
27	LVM	E1	µg/dscm	y		0.0	0.0			0.0		0.0
28												
29	778C11					R1	R2			R3		Cond Avg
30												
31	CO (MHRA)		ppmv	y		12.4	10.6			13.5		12.2

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1	Feedstreams																										
2																											
3																											
4	778C10																										
5	Feedstream Number																										
6	Feed Class																										
7	Feed Class 2																										
8	Feedstream Description																										
9	Feed Rate	lb/hr																									
10	Heat Content	Btu/lb																									
11	Ash	lb/hr																									
12	Chlorine	g/hr																									
13	Mercury	g/hr																									
14	Lead	g/hr																									
15	Cadmium	g/hr																									
16	Arsenic	g/hr																									
17	Beryllium	g/hr																									
18	Chromium	g/hr																									
19	Antimony	g/hr																									
20																											
21	Stack Gas Flowrate	dscfm																									
22	O2	%																									
23																											
24																											
25	Thermal Feedrate	MMBtu/hr																									
26	Estimated Firing Rate	MMBtu/hr																									
27																											
28	Feedrate MTEC Calculations																										
29	Ash	mg/dscm																									
30	Chlorine	ug/dscm																									
31	Mercury	ug/dscm																									
32	Lead	ug/dscm																									
33	Cadmium	ug/dscm																									
34	Arsenic	ug/dscm																									
35	Beryllium	ug/dscm																									
36	Chromium	ug/dscm																									
37	Antimony	ug/dscm																									
38																											
39	SVM	ug/dscm																									
40	LVM	ug/dscm																									
41																											
42	BIF Feedrate Limits																										
43	Antimony	g/hr																									
44	Arsenic	g/hr																									
45	Barium	g/hr																									
46	Beryllium	g/hr																									
47	Cadmium	g/hr																									
48	Chromium	g/hr																									
49	Lead	g/hr																									
50	Mercury	g/hr																									
51	Silver	g/hr																									
52	Thallium	g/hr																									
53	Chlorine	g/hr																									
54																											

	A	B	C	D	E	F
1	Process Information					
2						
3						
4	Cond ID No.	Units	Run	Run	Run	Avg
5			1	2	3	
6						
7	778C11					
8						
9	Comb Temperature	°F	1750.4	1755.4	1764.6	1756.8