

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase II ID No.	777
4	EPA ID No.	GAD981237118
5	Facility Name	Monsanto (Nutrasweet Kelco Co.)
6	Facility Location	
7	City	Augusta
8	State	GA
9	Unit ID Name/No.	Boiler 2 - WHRU 2
10	Other Sister Facilities	None
11	Number of Sister Facilities	0
12	Combustor Class	Liquid-fired boiler
13	Combustor Type	Liquid-fired
	Combustor Characteristics	Firetube boiler. John Zink 2-stage combustion firetube boiler, forced draft, with 2 burner guns; 26 MM Btu/hr, 19,500 lb/hr steam with fire-tube heat recovery boiler; part of cooled boiler exhaust is returned to 2nd stage combustor inlet
14		
15	Capacity (MMBtu/hr)	26
16	Soot Blowing	None
17	APCS Detailed Acronym	QC/WS
18	APCS General Class	WQ,LEWS
19	APCS Characteristics	(Cooler/caustic scrubber)
20	Hazardous Wastes	Liq
	Haz Waste Description	Liquid, primarily ester #1 and methanol, classed as D001 and D002; 42-51% ester #1, 10-17% methanol, 11-18% water, 9-22% acetic acid, and <1% hydrochloric acid; 8.1 lb/gal and 7,100 Btu/lb
21		
22	Supplemental Fuel	Natural gas
23		
24	Stack Characteristics	
25	Diameter (ft)	
26	Height (ft)	100
27	Gas Velocity (ft/sec)	
28	Gas Temperature (°F)	155
29		
30	Permitting Status	Tier IA for all metals, except Cr; Tier III for Cr/HCL/Cl2
	HWC Burn Status (Date if Terminated)	
31		

	B	C
1	Cond Description	
2		
3	777C10	
4		
5	Report Name/Date	BIF Recertification of Compliance Test Report - Boilers 1 and 2; dated August 20, 1997
6	Report Prepar	B3 Systems, Inc
7	Testing Firm	METCO
8	Testing Dates	June 17-25, 1997
9	Cond Dates	Jun-97
10	Cond Description	CoC; max feedrate
11	Content	PM, CO, HCl/Cl2, Cr emissions; metals/ash/Cl feed analysis
12		
13	777C11	
14		
15	Report Name/Date	BIF Recertification of Compliance Test Report - Boilers 1 and 2; dated August 20, 1997
16	Report Prepar	B3 Systems, Inc
17	Testing Firm	METCO
18	Testing Dates	June 17-25, 1997
19	Cond Dates	Jun-97
20	Cond Description	CoC; min combustion temp
21	Content	CO

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions											
2												
3		Comments	Units	7% O2								
4												
5	777C10					R1	R2	R3		Cond Avg		
6												
7	Sampling Train	PM, HCl/Cl2	E1									
8	Stack Gas Flowrate		dscfm			5,850	5,695	5,639		5728		
9	O2		%			3	2.3	2.6		2.6		
10	Moisture		%			27.29	26.68	27.97		27.3		
11	Temperature		°F			155	154	156		155.0		
12												
13	PM		gr/dscf	n		0.0556	0.0567	0.0557				
14	HCl		ppmv	n		5.63	5.4	5.56				
15	Cl2		ppmv	n		0.01	0.01	0.01				
16												
17	PM	E1	gr/dscf	y		0.0432	0.0424	0.0424		0.0427		
18	CO (RA)	E1	ppmv	y		12	7.2	7.1		8.8		
19	CO (MHRA)	E1	ppmv	y		12	7	7		8.7		
20	HCl	E1	ppmv	y		4.38	4.04	4.23		4.22		
21	Cl2	E1	ppmv	y		0.008	0.007	0.008		0.01		
22	Total Chlorine	E1	ppmv	y		4.39	4.06	4.25		4.23		
23												
24	Sampling Train	Cr	E2									
25	Stack Gas Flowrate		dscfm			6,011	5,735	5,691		5812		
26	O2		%			3	2.3	2.6		2.6		
27	Moisture		%			27.78	26.86	27.88		27.5		
28	Temperature		°F			153	154	155		154		
29												
30	Chromium		µg/dscm	n		9.4	16.7	15.5		13.9		
31	Chromium	E2	µg/dscm	y		7.3	12.5	11.8		10.5		
32	LVM	E2	µg/dscm	y		7.3	12.5	11.8		10.5		
33												
34	777C11					R1	R2	R3		Cond Avg		
35												
36	CO (RA)	E1	ppmv	y		16.8	17.7	19		17.8		
37	CO (MHRA)	E1	ppmv	y		17	17	19		17.7		
38												
39	Sampling Train	CO	E1									
40	Stack Gas Flowrate		dscfm									
41	O2		%			11	11	11.2		11.1		
42	Moisture		%									
43	Temperature		°F									

B	C	D	E	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG		
Feedstreams																												
1																												
2																												
3																												
4	777C10																											
5																												
6	Feedstream Number																											
7	Feed Class																											
8	Feed Class 2																											
9	Feedstream Description																											
10	Feed Rate	g/hr																										
11	Density	g/ml																										
12	Ash	g/hr																										
13	Chlorine	g/hr																										
14	Mercury	g/hr																										
15	Lead	g/hr																										
16	Cadmium	g/hr																										
17	Arsenic	g/hr																										
18	Beryllium	g/hr																										
19	Chromium	g/hr																										
20	Antimony	g/hr																										
21																												
22	Stack Gas Flowrate	dscfm																										
23	O2	%																										
24																												
25	Thermal Feedrate	MMBtu/hr																										
26	Estimated Firing Rate	MMBtu/hr																										
27																												
28	Feedrate MTEC Calculations																											
29	Ash	mg/dscm																										
30	Chlorine	µg/dscm																										
31	Mercury	µg/dscm																										
32	Lead	µg/dscm																										
33	Cadmium	µg/dscm																										
34	Arsenic	µg/dscm																										
35	Beryllium	µg/dscm																										
36	Chromium	µg/dscm																										
37	Antimony	µg/dscm																										
38	SVM	µg/dscm																										
39	LVM	µg/dscm																										
40																												
41																												
42																												
43	777C11																											
44																												
45	Feedstream Number																											
46	Feed Class																											
47	Feed Class 2																											
48	Feedstream Description																											
49	Feed Rate	g/hr																										
50	Thermal Feedrate	MMBtu/hr																										
51	Ash	g/hr																										
52	Chlorine	g/hr																										
53	Mercury	g/hr																										
54	Lead	g/hr																										
55	Cadmium	g/hr																										
56	Arsenic	g/hr																										
57	Beryllium	g/hr																										
58	Chromium	g/hr																										

	B	C	D	E	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	
59	Antimony		g/hr				0.05																					
60																												
61	Stack Gas Flowrate		dscfm																									
62	O2		%			3		2.3		2.6																		
63																												
64	need stack gas flowrate to make MTEC calculations																											
65																												
66	Estimated Firing Rate		MMBtu/hr																									
67	Ash		mg/dscm																									
68	Chlorine		µg/dscm																									
69	Mercury		µg/dscm																									
70	Lead		µg/dscm																									
71	Cadmium		µg/dscm																									
72	Arsenic		µg/dscm																									
73	Beryllium		µg/dscm																									
74	Chromium		µg/dscm																									
75	Antimony		µg/dscm																									
76	SVM		µg/dscm																									
77	LVM		µg/dscm																									

	A	B	C
1	Process Information		
2			
3		Units	Cond Avg
4			
5	777C10		
6			
7	Steam Production Rate	klb/hr	51.16
8	Comb Chamber Temperature	F	1993
9	Scrubber Operation		
10	Scrubber L/G Ratio	gpm	9.79
11	Scrubber Liquid Blowdown	gpm/kacfm	5.3
12	Scrubber pH		6.3
13			
14	777C11		
15			
16	Comb Chamber Temperature	F	1105