

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase II ID No.	776
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 1 - WHRU 1
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 boiler, forced draft, with 3 burner guns; 66 MM Btu/hr, 49,000 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)	66
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)	162
29		
30	Permitting Status	Tier IA for all metals, except Cr; Tier III for Cr and chlorine
	HWC Burn Status (Date if Terminated)	
31		

	B	C
1	Cond Description	
2		
3	776C10	
4		
5	Report Name/Date	BIF Recerification 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	776C11	
14		
15	Report Name/Date	BIF Recerification 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 temperature
21	Content	CO emissions

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions											
2												
3		Comments	Units	7% O2								
4												
5	776C10					R1	R2	R3		Cond Avg		
6												
7	Sampling Train	(PM, HCl/Cl2)	E1									
8	Stack Gas Flowrate		dscfm			13240	12903	13598		13247		
9	O2		%			1.8	2	1.8		1.9		
10	Moisture		%			35.12	34.27	32.41		33.9		
11	Temperature		°F			164	162	161		162.3		
12												
13	PM		gr/dscf	n		0.0496	0.0574	0.0483				
14	HCl		ppmv	n		2.85	3.96	2.69				
15	Cl2		ppmv	n		0.04	0.01	0.02				
16												
17	PM	E1	gr/dscf	y		0.0362	0.0423	0.0352		0.0379		
18	CO (RA)	E1	ppmv	y		3	5	3		3.67		
19	CO (MHRA)	E1	ppmv	y		3	5	3		3.67		
20	HCl	E1	ppmv	y		2.08	2.92	1.96		2.32		
21	Cl2	E1	ppmv	y		0.03	0.01	0.01		0.02		
22	Total Chlorine	E1	ppmv	y		2.14	2.93	1.99		2.35		
23												
24	Sampling Train	Cr	E2									
25	Stack Gas Flowrate		dscfm			13352	13004	12906		13087		
26	O2		%			2.3	2.2	3.2		2.567		
27	Moisture		%			32.41	33.55	32.79		32.917		
28	Temperature		°F			163	161	160		161.3		
29												
30	Chromium		µg/dscm	n		3.13	5.37	6.61		5.04		
31	Chromium	E2	µg/dscm	y		2.34	4.00	5.20		3.85		
32	LVM	E2	µg/dscm	y		2.34	4.00	5.20		3.85		
33												
34	776C11					R1	R2	R3		Cond Avg		
35												
36	CO (RA)	E1	ppmv	y		3.9	3.7	3.9		3.8		
37	CO (MHRA)	E1	ppmv	y		4	3	4		3.7		
38												
39	Sampling Train	CO	E1									
40	Stack Gas Flowrate		dscfm									
41	O2		%			11	10.7	10.7		10.8		
42	Moisture		%									
43	Temperature		°F									

	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	776C10																										
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	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	SVM	ug/dscm																									
39	LVM	ug/dscm																									
40																											
41																											
42																											
43	776C11																										
44																											
45	Feedstream Number																										
46	Feed Class																										
47	Feed Class 2																										
48	Feedstream Description																										
49	Feed Rate	g/hr																									
50	Ash	g/hr																									
51	Chlorine	g/hr																									
52	Mercury	g/hr																									
53	Lead	g/hr																									
54	Cadmium	g/hr																									
55	Arsenic	g/hr																									
56	Beryllium	g/hr																									
57	Chromium	g/hr																									
58	Antimony	g/hr																									

	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		
59																													
60	Stack Gas Flowrate		dscfm																										
61	O2		%		2.3		2.2		3.2			NA																	
62																													
63	Thermal Feedrate		MMBtu/hr																										
64	Estimated Firing Rate		MMBtu/hr		22.5		23.4		23.5			23.1																	
65																													
66	Feedrate MTEC Calculations																												
67	Ash																												
68	Chlorine																												
69	Mercury																												
70	Lead																												
71	Cadmium																												
72	Arsenic																												
73	Beryllium																												
74	Chromium																												
75	Antimony																												
76	SVM																												
77	LVM																												

	A	B	C
1	Process Information		
2			
3		Units	
4			
5	776C10		Cond Avg
6			
7	Steam Production Rate	klb/hr	51.16
8	Comb Chamber Temperature	F	2000
9	Scrubber Operation		
10	Scrubber L/G Ratio	gpm/kacfm	6.5
11	Scrubber Liquid Blowdown	gpm	9.2
12	Scrubber pH		6
13			
14	776C11		
15			
16	Comb Chamber Temperature	F	1041