

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase II ID No.	3035
4	EPA ID No.	MAD001039767
5	Facility Name	Bostik, Inc.
6	Facility Location	
7	City	Middleton
8	State	MA
9	Unit ID Name/No.	Struthers-Wells Byrner Unit
10	Other Sister Facilities	None
11	Number of Sister Facilities	None
12	Combustor Class	Liquid -fired boiler
13	Combustor Type	Liquid-fired
	Combustor Characteristics	The heater was manufactured by Struthers-Wells (SW) of Warren, PA in 1969 and is designed as Model No. 5C15-4. Vertical fired cold chamber heater. The original economizer was added in 1980 and was also built by SW. A second economizer (also made by SW) was added in July 1996. . Thermal rating output is 7.5x10^6 Btu/hr. The combustion chamber and primary energy recovery section are of integral design. Thermal recovery is at least 60 percent and at least 75 percent of the recoverd energy is utilized at the facility
14		
15	Capacity (MMBtu/hr)	7.5
16	Soot Blowing	
17	APCS Detailed Acronym	
18	APCS General Class	
19	APCS Characteristics	
20	Hazardous Wastes	Liq
21	Haz Waste Description	Polyester or direct solvation distillate (byproduct)
22	Supplemental Fuel	No. 2 fuel oil
23		
24	Stack Characteristics	
25	Diameter (ft)	5
26	Height (ft)	65
27	Gas Velocity (ft/sec)	
28	Gas Temperature (°F)	640.3
29		
30	Permitting Status	Adjusted Tier I feed rate for metals and chlorine
	HWC Burn Status (Date if	
31	Terminated)	

	B	C
1	Cond Description	
2		
3	3035C1	
4		
5	Report Name/Date	Comliance Recertification for Bostik's Struthers-Wells Burner Unit Pursuant to the BIF Regulations. February 16, 2000
6	Report Prepare	ENSR
7	Testing Firm	ENSR
8	Testing Dates	November 23, 1999
9	Cond Dates	Nov-99
10	Condition Descr	CoC, normal operation
11	Content	PM, 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	3035C1					R1	R2	R3		Cond Avg		
6												
7	PM	E1	gr/dscf	y		0.006	0.0037	0.0035		0.0044		
8	CO (RA)	E1	ppmv	y		0.6	0.9	0.9		0.8		
9	CO (MHRA)	E1	ppmv	y		2.8	5	6.9		4.9		
10												
11												
12	Sampling Train	PM	E1									
13	Stack Gas Flowrate		dscfm			1813	1855	1736		1801		
14	O2		%			5.31	3.11	3.89		4.1		
15	Moisture		%			23.1	22.7	23.4		23.1		
16	Temperature		°F			629	665	627		640.3		

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	Feedstreams																			
2																				
3	3035C1				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg	
4																				
5	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2	
6	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		NG		NG		NG		NG	
7	Feed Class 2				HW		HW		HW		HW		MF		MF		MF		MF	
8	Feedstream Description				Waste Distillate		Waste Distillate		Waste Distillate		Waste Distillate		No. 2 Fuel Oil		No. 2 Fuel Oil		No. 2 Fuel Oil		No. 2 Fuel Oil	
9	Feed Rate			lb/hr	978		862.3		845.6		895.3		61.2		54.6		52.1		56.0	
10	Heating Value			Btu/lb	6560		6770		6740		6690		19220		19040		19250		19170.0	
11	Thermal Feedrate			MMBtu/hr																
12	Density			lb/gal	7.956		7.973		7.967		7.965		7.158		7.158		7.158		7.158	
13	Ash			wt. %	0.04		0.02		0.01		0.023		0.02		0.03		0.02		0.023	
14	Chlorine			wt. %	0.02		0.01		0.01		0.013		0.03		0.03		0.03		0.030	
15	Antimony			ppmw	3.62		5.74		4.2		4.52 nd		0.5 nd		0.5 nd		0.5		0.5	
16	Arsenic		nd	ppmw	0.2	nd	0.2	nd	0.2		0.2		0.207 nd		0.2		0.225		0.21	
17	Barium			ppmw	2	nd	0.5		0.78		1.1 nd		0.5		1.63 nd		0.5		0.88	
18	Beryllium		nd	ppmw	0.05	nd	0.05	nd	0.05		0.05 nd		0.05 nd		0.05 nd		0.05		0.05	
19	Cadmium		nd	ppmw	0.1	nd	0.1	nd	0.1		0.1 nd		0.1 nd		0.1 nd		0.1		0.1	
20	Chromium			ppmw	0.1	nd	0.1	nd	0.1		0.1 nd		0.1 nd		0.1 nd		0.1		0.1	
21	Lead		nd	ppmw	0.5	nd	0.5	nd	0.5		0.5 nd		0.5 nd		0.5 nd		0.5		0.5	
22	Mercury			ppmw	0.04		0.05	nd	0.03		0.04 nd		0.04 nd		0.05 nd		0.04		0.04	
23	Silver		nd	ppmw	0.5	nd	0.5	nd	0.5		0.5 nd		0.5 nd		0.5 nd		0.5		0.5	
24	Thallium		nd	ppmw	0.5	nd	0.5	nd	0.5		0.5 nd		0.5 nd		0.5 nd		0.5		0.5	
25																				
26	Stack Gas Flowrate			dscfm	1813.0		1855.0		1736.0		1801.3		1813.0		1855.0		1736.0		1801.3	
27	Oxygen			%	5.31		3.11		3.89		4.10		5.31		3.11		3.89		4.10	
28																				
29																				
30	<i>Feedrate MTEC Calculations</i>																			
31	Ash			mg/dscm	51.5		19.5		10.7		27.2		1.6		1.8		1.3		1.6	
32	Chlorine			ug/dscm	25739.2		9726.4		10656.4		15374.0		2416.0		1847.6		1969.7		2077.8	
33	Antimony			ug/dscm	465.9		558.3		447.6		490.6 100		4.0 100		3.1 100		3.3		3.5	0
34	Arsenic		100	ug/dscm	25.7 100		19.5 100		21.3 100		22.2		1.7 100		1.2		1.5		1.5	94
35	Barium			ug/dscm	257.4 100		48.6		83.1		129.7 100		4.0		10.0 100		3.3		5.8	2
36	Beryllium		100	ug/dscm	6.4 100		4.9 100		5.3 100		5.5 100		0.4 100		0.3 100		0.3		0.3	100
37	Cadmium		100	ug/dscm	12.9 100		9.7 100		10.7 100		11.1 100		0.8 100		0.6 100		0.7		0.7	100
38	Chromium			ug/dscm	12.9 100		9.7 100		10.7		11.1 100		0.8 100		0.6 100		0.7		0.7	6
39	Lead		100	ug/dscm	64.3		48.6 100		53.3 100		55.4 100		4.0 100		3.1 100		3.3		3.5	100
40	Mercury			ug/dscm	5.1 100		4.9 100		3.2 100		4.4 100		0.3 100		0.3 100		0.3		0.3	6
41	Silver		100	ug/dscm	64.3 100		48.6 100		53.3 100		55.4 100		4.0 100		3.1 100		3.3		3.5	100
42	Thallium		100	ug/dscm	64.3 100		48.6 100		53.3 100		55.4 100		4.0 100		3.1 100		3.3		3.5	100
43																				
44	SVM		100	ug/dscm	77.2 17		58.4 100		63.9 72		66.5 100		4.8 100		3.7 100		3.9 100		4.2	100
45	LVM		71	ug/dscm	45.0 100		34.0 100		37.3 90		38.8 42		2.9 100		2.2 40		2.5 61		2.5	70
46																				
47	BIF Feedrate Limits			Both units																
48																				
49	Antimony			g/hr							6246									
50	Arsenic			g/hr							2.9									
51	Barium			g/hr							1041064									
52	Beryllium			g/hr							1.7									
53	Cadmium			g/hr							2.3									
54	Chromium			g/hr							15.6									
55	Lead			g/hr							1874									
56	Mercury			g/hr							6246									
57	Silver			g/hr							62464									
58	Thallium			g/hr							10411									
59	Chlorine			g/hr							8330									
60	Ash			g/hr							7750									

	B	V	W	X	Y	Z	AA	AB
1	Feedstreams							
2								
3	3035C1	R1		R2		R3		Cond Avg
4								
5	Feedstream Number	F3		F3		F3		F3
6	Feed Class	Total		Total		Total		Total
7	Feed Class 2	Total		Total		Total		Total
8	Feedstream Description	Total		Total		Total		Total
9	Feed Rate							
10	Heating Value							
11	Thermal Feedrate	8.3		7.3		7.2		7.60
12	Density							
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	Oxygen							
28								
29								
30	<i>Feedrate MTEC Calculations</i>							
31	Ash	53.1		21.3		12.0		28.8
32	Chlorine	28155.2		11574.0		12626.1		17451.8
33	Antimony	469.9	0	561.4	0	450.9	0	494.0
34	Arsenic	27.4	100	20.7	94	22.8	96	23.6
35	Barium	261.4	83	58.7	4	86.4	29	135.5
36	Beryllium	6.8	100	5.2	100	5.7	100	5.9
37	Cadmium	13.7	100	10.3	100	11.3	100	11.8
38	Chromium	13.7	100	10.3	100	11.3	69	11.8
39	Lead	68.4	6	51.7	100	56.6	69	58.9
40	Mercury	5.5	100	5.2	100	3.5	69	4.7
41	Silver	68.4	100	51.7	100	56.6	100	58.9
42	Thallium	68.4	100	51.7	100	56.6	100	58.9
43								
44	SVM	82.0	22	62.1	100	67.9	74	70.7
45	LVM	47.9	100	36.2	96	39.8	89	41.3
46								
47	BIF Feedrate Limits							
48								
49	Antimony							
50	Arsenic							
51	Barium							
52	Beryllium							
53	Cadmium							
54	Chromium							
55	Lead							
56	Mercury							
57	Silver							
58	Thallium							
59	Chlorine							
60	Ash							

	A	B	C
1	Process Information		
2			
3	3035C1		Cond Avg
4			
5	Comb Temp	°F	1027