

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase II ID No.	2008
4	EPA ID No.	PAD002312791
5	Facility Name	Sunoco Inc. (R & M) Frankford Plant
6	Facility Location	
7	City	Philadelphia
8	State	PA
9	Unit ID Name/No.	Boiler No. 2
10	Other Sister Facilities	Boiler No. 1 (Phase II ID No. 900)
11	Number of Sister Facilities	1
12	Combustor Class	Liquid-fired boiler
13	Combustor Type	Liquid-fired
	Combustor Characteristics	Watertube boiler. Babcock and Wilcox BL-702, front wall fired (6 burners in 2 rows), drum Sterling tube design, steam prod at 156,000 lb/hr @ 260 psig and 527°F
14		
15	Capacity (MMBtu/hr)	260
	Soot Blowing	Yes; 4 times per day, 10 min in duration (C1R2 has sootblowing)
16		
17	APCS Detailed Acronym	None
18	APCS General Class	
19	APCS Characteristics	NA
20	Hazardous Wastes	Liq
21	Haz Waste Description	Liquid wastes
22	Supplemental Fuel	Natural gas
23		
24	Stack Characteristics	
25	Diameter (ft)	4
26	Height (ft)	133
27	Gas Velocity (ft/sec)	119.5
28	Gas Temperature (°F)	483
29		
30	Permitting Status	Tier I metals, chlorine (testing for Cr+6/Cr, Cl2/HCl split)
	HWC Burn Status (Date if	
31	Terminated)	

	B	C
1	Cond Description	
2		
3	2008C1	
4		
5	Report Name/Date	1999 Revised BIF Compliance Certification, September 1999
6	Report Prepare	ENSR Corp.
7	Testing Firm	ENSR Corp.
8	Testing Dates	June 23, 1999
9	Cond Dates	Jun-99
10	Condition Descr	CoC, normal waste, metals, chlorine, ash feed
11	Content	PM, CO, HCl/Cl ₂ , and Cr/Cr+6

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions											
2												
3												
4												
5		Comments	Units	7% O2				Sootblowing				
6	2008C1					R1		R2		R3		Cond Avg
7												
8	PM	E1	gr/dscf	y		0.0165		0.0417		0.0102		0.0204
9	CO (RA)	E1	ppmv	y		1.8		1.6		2.1		1.8
10	CO (MHRA)	E1	ppmv	y		6.5		2.1		2.1		3.6
11	HCl		g/hr			101.9		110.9		129.2		114.5
12	Cl2		g/hr			57.6		70.6		46.4		56.4
13	Chromium		g/hr			0.89		3.69		0.91		1.52
14	Chromium (Hex)		g/hr			0.62		2.47		0.44		0.96
15												
16	Sampling Train	PM, HCl/Cl2	E1									
17	Stack Gas Flowrate		dscfm			48507		47619		49025		48384
18	O2		%			7.4		6		6.6		6.7
19	Moisture		%			8.2		8.5		8.1		8.3
20	Temperature		°F			488		476		485		483.0
21												
22	Sampling Train	Cr, Cr+6	E2									
23	Stack Gas Flowrate		dscfm			48939		46885		48532		48119
24	O2		%			7.4		6		6.6		6.7
25	Moisture		%			7.7		8.9		8.1		8.2
26	Temperature		°F			488		475		483		482.0
27												
28	HCl	E1	ppmv	y		0.84		0.84		1.00		0.90
29	Cl2	E1	ppmv	y		0.25		0.28		0.19		0.23
30	Total Chlorine	E1	ppmv	y		1.33		1.40		1.37		1.36
31	Chromium	E2	µg/dscm	y		11.0		43.3		10.7		18.2
32	Chromium (Hex)	E2	µg/dscm	y		7.7		29.0		5.2		11.5
33	LVM	E2	µg/dscm	y		11.0		43.3		10.7		18.2

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Feedstreams																		
2																			
3	2008C1																		
4																			
5	Feedstream Number																		
6	Feed Class																		
7	Feed Class 2																		
8	Feedstream Description																		
9	Feed Rate	lb/hr																	
10	Density	lb/gal																	
11	Heating Value	Btu/lb																	
12	Ash	g/hr																	
13	Chlorine	g/hr																	
14	Antimony	g/hr																	
15	Arsenic	g/hr																	
16	Barium	g/hr																	
17	Beryllium	g/hr																	
18	Cadmium	g/hr																	
19	Chromium	g/hr																	
20	Lead	g/hr																	
21	Mercury	g/hr																	
22	Silver	g/hr																	
23	Thallium	g/hr																	
24																			
25	Stack Gas Flowrate	dscfm																	
26	Oxygen	%																	
27																			
28	Thermal Feedrate	MMBtu/hr																	
29	Estimated Firing Rate	MMBtu/hr																	
30																			
31	Feedrate MTEC Calculations																		
32	Ash	mg/dscm																	
33	Chlorine	ug/dscm																	
34	Antimony	ug/dscm																	
35	Arsenic	ug/dscm																	
36	Barium	ug/dscm																	
37	Beryllium	ug/dscm																	
38	Cadmium	ug/dscm																	
39	Chromium	ug/dscm																	
40	Lead	ug/dscm																	
41	Mercury	ug/dscm																	
42	Silver	ug/dscm																	
43	Thallium	ug/dscm																	
44	SVM	ug/dscm																	
45	LVM	ug/dscm																	
46																			
47	BIF Feedrate Limits																		
48																			
49	Antimony	g/hr																	
50	Arsenic	g/hr																	
51	Barium	g/hr																	
52	Beryllium	g/hr																	
53	Cadmium	g/hr																	
54	Chromium	g/hr																	
55	Lead	g/hr																	
56	Mercury	g/hr																	
57	Silver	g/hr																	
58	Thallium	g/hr																	

	A	B	C
1	Process Information		
2			
3	2008C1		
4			
5	Boiler Steam Prod	lb/hr	147600