

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase II ID No.	836
4	EPA ID No.	LAD040776809
5	Facility Name	BASF
6	Facility Location	
7	City	Geismar
8	State	LA
9	Unit ID Name/No.	No. 6 Boiler
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. Babcock and Wilcox, D shaped, gas fired watertube field erected boiler with superheater and economizer, 250000 lb/hr steam @ 650 psig and 750°F
15	Capacity (MMBtu/hr)	300
16	Soot Blowing	
17	APCS Detailed Acronym	None
18	APCS General Class	
19	APCS Characteristics	NA
20	Hazardous Wastes	Liq
21	Haz Waste Description	Ignitable (D001), methanol, mixed alcohols, from production of THF and PTHF, butanediol light ends, TDA
22	Supplemental Fuel	Natural gas
23		
24	Stack Characteristics	
25	Diameter (ft)	7.95
26	Height (ft)	60
27	Gas Velocity (ft/sec)	39.4
28	Gas Temperature (°F)	400
29		
30	Permitting Status	
31	HWC Burn Status (Date if Terminated)	

	B	C
1	Cond Description	
2		
3	836C10	
4		
5	Report Name/Date	BASF Corp. DRE Trial Burn Report, March 1998, Rev. 2
6	Report Prepar	??**??
7	Testing Firm	METCO
8	Testing Dates	February 12-13, 1997
9	Cond Dates	Feb-97
10	Cond Description	Trial Burn
11	Content	DRE, PM, HCl/Cl ₂ , CO; metals, chlorine, ash feeds
12		
13	836C11	
14		
15	Report Name/Date	BASF Corp. DRE Trial Burn Report, March 1998, Rev. 2
16	Report Prepar	??**??
17	Testing Firm	METCO
18	Testing Dates	February 13-14, 1997
19	Cond Dates	Feb-97
20	Cond Description	Trial Burn
21	Content	DRE, PM, HCl/Cl ₂ , CO; metals, chlorine, ash feeds
22		
23	836C12	
24		
25	Report Name/Date	BASF Corp. DRE Trial Burn Report, March 1998, Rev. 2
26	Report Prepar	??**??
27	Testing Firm	METCO
28	Testing Dates	November 10-11, 1997
29	Cond Dates	Nov-97
30	Cond Description	Trial Burn
31	Content	DRE, PM, HCl/Cl ₂ , CO; metals, chlorine, ash feeds
32		
33	836C13	
34		
35	Report Name/Date	Risk Burn Report Amines Boiler, Number 6 Utility Boiler, March 1998
36	Report Prepar	ICF Kaiser/BASF
37	Testing Firm	METCO
38	Testing Dates	February 18-20, 1997
39	Cond Dates	Feb-97
40	Cond Description	Risk burn; worst case (max temp., feedrates, production rates)
41	Content	PM, chlorine, D/F, organics (metals in feedstream only)

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions											
2												
3		Comments	Units	7% O2								
4												
5												
6	836C10					R1		R2		R3		Cond Avg
7												
8	PM	E1	gr/dscf	y		0.0004		0.0004		0.0004		0.0004
9	CO (RA)	E1	ppmv	y		2.7		2.4		2.4		2.5
10	HCl		ppmv	n		0.01		0.01		0.01		
11	Cl2		ppmv	n		nd		nd		nd		
12												
13	Sampling Train	PM, HCl/Cl2	E1									
14	Stack Gas Flowrate		dscfm			64133		60632		63046		62603.7
15	O2		%			8.6		8.6		8.6		8.6
16	Moisture		%			12.5		12.8		12.7		12.7
17	Temperature		°F			408.2		408.2		408.2		408.2
18												
19	HCl	E1	ppmv	y		0.011		0.011		0.011		0.011
20	Cl2	E1	ppmv	y		0.000		0.000		0.000		0.000
21	Total Chlorine	E1	ppmv	y		0.011		0.011		0.011		0.011
22												
23	POHC DRE	Toluene										
24	Feedrate		lb/hr			659		645		678		
25	Emissions Rate					0.002636		0.003225		0.004068		
26	DRE	E1	%			99.9996		99.9995		99.9994		
27												
28												
29	836C11					R1		R2		R3		Cond Avg
30												
31	PM	E1	gr/dscf	y		0.0008		0.0007		0.001		0.00083
32	CO (RA)	E1	ppmv	y		9.7		9.1		8.6		9.1
33	HCl		ppmv	n		0.01		0.02		0.01		
34	Cl2		ppmv	n		nd		nd		nd		
35												
36	Sampling Train	PM, HCl/Cl2	E1									
37	Stack Gas Flowrate		dscfm			62491		64242		64152		63628.3
38	O2		%			6.8		6.9		6.7		6.8
39	Moisture		%			13.75		13.96		14.02		13.9
40	Temperature		°F			415.4		413.6		411.8		413.6
41												
42	HCl	E1	ppmv	y		0.010		0.020		0.010		0.013
43	Cl2	E1	ppmv	y		0.000		0.000		0.000		0.000
44	Total Chlorine	E1	ppmv	y		0.010		0.020		0.010		0.013
45												
46	POHC DRE	Toluene										
47	Feedrate		lb/hr			665		659		676		
48	Emissions Rate		lb/hr			0.001064		0.000659		0.000744		
49	DRE	E1	%			99.99984		99.9999		99.99989		
50												
51												
52	836C12					R1		R2		R3		Cond Avg
53												
54	PM	E1	gr/dscf	y		0.0003		0.0003		0.0004		0.00033
55	CO (RA)	E1	ppmv	y		0.1		0		0		0.03
56	HCl		ppmv	n	nd	0.01		0.02		0.01		
57	Cl2		ppmv	n		nd		nd		nd		
58												
59												
60	Sampling Train	PM, HCl/Cl2	E1									
61	Stack Gas Flowrate		dscfm			32398		31990		32130		32172.7
62	O2		%			7.9		7.9		7.9		7.9
63	Moisture		%			14.03		13.88		13.06		13.7
64	Temperature		°F			327.2		327.2		323.6		326.0
65												
66	HCl	E1	ppmv	y		0.011		0.021		0.011		0.014
67	Total Chlorine	E1	ppmv	y		0.011		0.021		0.011		0.014

	B	C	D	E	F	G	H	I	J	K	L	M
68												
69	POHC DRE	Toluene										
70	Feedrate		lb/hr			665.7		678.5		667.8		
71	Emissions Rate											
72	DRE	E1	%			99.9993		99.99916		99.99929		
73												
74	836C13	risk burn worst case				R1		R2		R3		Cond Avg
75												
76	PM	E1	gr/dscf	y		0.0007		0.0002		0.0002		0.00037
77	CO (RA)	E1	ppmv	y		0		0		0		0
78	HCl		ppmv	n		0.01		0.02		0.02		
79	Cl2		ppmv	n		nd		nd		nd		
80												
81	Sampling Train	PM, HCl/Cl2	E1									
82	Stack Gas Flowrate		dscfm			64444		62203		63371		63339.3
83	O2		%			8.4		8.6		8.7		8.6
84	Moisture		%			12.7		13.3		13.4		13.1
85	Temperature		°F			408.2		408.2		408.2		408.2
86												
87	HCl	E1	ppmv	y		0.011		0.023		0.023		0.019
88	Cl2	E1	ppmv	y		0.000		0.000		0.000		0.000
89	Total Chlorine	E1	ppmv	y		0.011		0.023		0.023		0.019

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Feedstreams																		
2																			
3	836C10																		
4																			
5	Feedstream Number																		
6	Feed Class																		
7	Feed Class 2																		
8	Feedstream Description																		
9	Feed Rate																		
10	Density																		
11	Heating Value																		
12	Ash																		
13	Chlorine																		
14	Antimony																		
15	Arsenic																		
16	Barium																		
17	Beryllium																		
18	Cadmium																		
19	Chromium																		
20	Lead																		
21	Mercury																		
22	Nickel																		
23	Selenium																		
24	Silver																		
25	Thallium																		
26																			
27																			
28	Stack Gas Flowrate																		
29	O2																		
30																			
31	Thermal Feedrate																		
32	Estimated Firing Rate																		
33																			
34	Feedrate MTEC Calculations																		
35	Ash																		
36	Chlorine																		
37	Antimony																		
38	Arsenic																		
39	Barium																		
40	Beryllium																		
41	Cadmium																		
42	Chromium																		
43	Lead																		
44	Mercury																		
45	Nickel																		
46	Selenium																		
47	Silver																		
48	Thallium																		
49																			
50	SVM																		
51	LVM																		
52																			
53																			
54																			
55																			
56	836C11																		
57																			
58	Feedstream Number																		

B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
59	Feed Class			Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Total	Total	Total	Total	Total	Total	Total	Total
60	Feed Class 2			HW	HW	HW	HW	HW	HW	HW	Total	Total	Total	Total	Total	Total	Total	Total
61	Feedstream Description			Haz waste	Haz waste	Haz waste	Haz waste	Haz waste	Haz waste	Haz waste	Total	Total	Total	Total	Total	Total	Total	Total
62	Feed Rate	g/hr		2530324	2518038	2134749	2394370											
63	Density	g/ml		0.87	0.87	0.87	0.87											
64	Heating Value	Btu/lb		8314	8314	8314	8314											
65	Ash			65.788	32.734 nd	2.135												
66	Chlorine	g/hr	nd	1.265 nd	1.259 nd	1.067												
67	Antimony	g/hr	nd	0.104 nd	0.103 nd	0.088												
68	Arsenic	g/hr	nd	0.076 nd	0.076 nd	0.064												
69	Barium	g/hr	nd	0.382 nd	0.38 nd	0.322												
70	Beryllium	g/hr	nd	0.005 nd	0.005 nd	0.004												
71	Cadmium	g/hr	nd	0.005 nd	0.005 nd	0.004												
72	Chromium	g/hr	nd	0.154 nd	0.154 nd	0.13												
73	Lead	g/hr	nd	0.051 nd	0.05 nd	0.043												
74	Mercury	g/hr	nd	0.086 nd	0.086 nd	0.073												
75	Nickel	g/hr	nd	0.076 nd	0.076 nd	0.064												
76	Selenium	g/hr	nd	0.129 nd	0.128 nd	0.129												
77	Silver	g/hr	nd	0.025 nd	0.025 nd	0.021												
78	Thallium	g/hr	nd	0.076 nd	0.076 nd	0.064												
79																		
80																		
81	Stack Gas Flowrate	dscfm		62491	64242	64152	63628											
82	O2	%		6.8	6.9	6.7	6.8											
83				46.3	46.1	39.1	43.8					46.3			46.1		39.1	43.8
84	Thermal Feedrate	MMBtu/hr																287
85	Estimated Firing Rate	MMBtu/hr																
86																		
87	Feedrate MTEC Calculations																	
88	Ash	mg/dscm		0.6	0.3	2	0.3	0	0	0	0	0.6	0	0.3	100	0.6	2	0.3
89	Chlorine	µg/dscm	100	11.8	11.5	9.6	10.9	100	100	100	100	11.8	100	11.5	100	9.6	100	10.9
90	Antimony	µg/dscm	100	1.0	1.0	0.9	0.9	100	100	100	100	1.0	100	0.9	100	0.8	100	0.9
91	Arsenic	µg/dscm	100	0.7	0.7	0.6	0.7	100	100	100	100	0.7	100	0.7	100	0.6	100	0.7
92	Barium	µg/dscm	100	3.5	3.5	2.9	3.3	100	100	100	100	3.5	100	3.5	100	2.9	100	3.3
93	Beryllium	µg/dscm	100	0.0	0.0	0.0	0.0	100	100	100	100	0.0	100	0.0	100	0.0	100	0.0
94	Cadmium	µg/dscm	100	0.0	0.0	0.0	0.0	100	100	100	100	0.0	100	0.0	100	0.0	100	0.0
95	Chromium	µg/dscm	100	1.4	1.4	1.2	1.3	100	100	100	100	1.4	100	1.4	100	1.2	100	1.3
96	Lead	µg/dscm	100	0.5	0.5	0.4	0.4	100	100	100	100	0.5	100	0.5	100	0.4	100	0.4
97	Mercury	µg/dscm	100	0.8	0.8	0.7	0.7	100	100	100	100	0.8	100	0.8	100	0.7	100	0.7
98	Nickel	µg/dscm	100	0.7	0.7	0.6	0.7	100	100	100	100	0.7	100	0.7	100	0.6	100	0.7
99	Selenium	µg/dscm	100	1.2	1.2	1.2	1.2	100	100	100	100	1.2	100	1.2	100	1.2	100	1.2
100	Silver	µg/dscm	100	0.2	0.2	0.2	0.2	100	100	100	100	0.2	100	0.2	100	0.2	100	0.2
101	Thallium	µg/dscm	100	0.7	0.7	0.6	0.7	100	100	100	100	0.7	100	0.7	100	0.6	100	0.7
102																		
103	SVM	µg/dscm	100	0.5	0.5	0.4	0.5	100	100	100	100	0.5	100	0.5	100	0.4	100	0.5
104	LVM	µg/dscm	100	2.2	2.1	1.8	2.0	100	100	100	100	2.2	100	2.1	100	1.8	100	2.0
105																		
106																		
107																		
108	836C12	Units	R1	R2	R3	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3
109																		
110	Feedstream Number																	
111	Feed Class		F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1
112	Feed Class 2		Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW
113	Feedstream Description		Haz waste	Haz waste	Haz waste	Haz waste	Haz waste	Haz waste	Haz waste	Haz waste	Haz waste	Haz waste	Haz waste	Haz waste	Haz waste	Haz waste	Haz waste	Haz waste
114	Feed Rate	g/hr	2142571	2086375	2043568	2090838	2090838	2043568	2043568	2043568	2090838	2090838	2043568	2043568	2043568	2090838	2043568	2043568
115	Density	g/ml	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
116	Heating Value	Btu/lb	8314	8314	8314	8314	8314	8314	8314	8314	8314	8314	8314	8314	8314	8314	8314	8314

B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
117	Ash			0.002		35.468	nd	2.044											
118	Chlorine	g/hr	nd	1.071	nd	1.043	nd	1.022											
119	Antimony	g/hr	nd	0.086	nd	0.086	nd	0.084											
120	Arsenic	g/hr	nd	0.064	nd	0.063	nd	0.061											
121	Barium	g/hr	nd	0.324	nd	0.315	nd	0.309											
122	Beryllium	g/hr	nd	0.004	nd	0.004	nd	0.004											
123	Cadmium	g/hr	nd	0.004	nd	0.004	nd	0.004											
124	Chromium	g/hr	nd	0.131	nd	0.127	nd	0.125											
125	Lead	g/hr	nd	0.043	nd	0.042	nd	0.041											
126	Mercury	g/hr	nd	0.073	nd	0.071	nd	0.069											
127	Nickel	g/hr	nd	0.064	nd	0.063	nd	0.061											
128	Selenium	g/hr	nd	0.109	nd	0.106	nd	0.104											
129	Silver	g/hr	nd	0.021	nd	0.021	nd	0.02											
130	Thallium	g/hr	nd	0.064	nd	0.063	nd	0.061											
131																			
132																			
133	Stack Gas Flowrate	dscfm		32398		31990		32130		32173		39.2		38.2		37.4		38.3	
134	O2	%		7.9		7.9		7.9		7.9								134	
135																			
136	Thermal Feedrate	MMBtu/hr		39.2		38.2		37.4		38.3									
137	Estimated Firing Rate	MMBtu/hr																	
138																			
139	<i>Feedrate MTEC Calculations</i>																		
140	Ash			3.9E-05		0.7	100	0.04	6	0.2	0	3.9E-05	0	0.7	100	0.04	6	0.2	
141	Chlorine	µg/dscm	100	20.8	100	20.5	100	20.0	100	10.2	100	20.8	100	20.5	100	20.02	100	10.2	
142	Antimony	µg/dscm	100	1.7	100	1.7	100	1.6	100	0.8	100	1.7	100	1.7	100	1.65	100	0.83	
143	Arsenic	µg/dscm	100	1.2	100	1.2	100	1.2	100	0.6	100	1.2	100	1.2	100	1.19	100	0.61	
144	Barium	µg/dscm	100	6.3	100	6.2	100	6.1	100	3.1	100	6.3	100	6.2	100	6.05	100	3.09	
145	Beryllium	µg/dscm	100	0.1	100	0.1	100	0.1	100	0.0	100	0.1	100	0.1	100	0.08	100	0.04	
146	Cadmium	µg/dscm	100	0.1	100	0.1	100	0.1	100	0.0	100	0.1	100	0.1	100	0.08	100	0.04	
147	Chromium	µg/dscm	100	2.5	100	2.5	100	2.4	100	1.2	100	2.5	100	2.5	100	2.45	100	1.25	
148	Lead	µg/dscm	100	0.8	100	0.8	100	0.8	100	0.4	100	0.8	100	0.8	100	0.80	100	0.41	
149	Mercury	µg/dscm	100	1.4	100	1.4	100	1.4	100	0.7	100	1.4	100	1.4	100	1.35	100	0.69	
150	Nickel	µg/dscm	100	1.2	100	1.2	100	1.2	100	0.6	100	1.2	100	1.2	100	1.19	100	0.61	
151	Selenium	µg/dscm	100	2.1	100	2.1	100	2.0	100	1.0	100	2.1	100	2.1	100	2.04	100	1.04	
152	Silver	µg/dscm	100	0.4	100	0.4	100	0.4	100	0.2	100	0.4	100	0.4	100	0.39	100	0.20	
153	Thallium	µg/dscm	100	1.2	100	1.2	100	1.2	100	0.6	100	1.2	100	1.2	100	1.19	100	0.61	
154																			
155	SVM	µg/dscm	100	0.5	100	0.5	100	0.4	100	0.4	100	0.5	100	0.5	100	0.4	100	0.4	
156	LVM	µg/dscm	100	1.9	100	1.9	100	1.9	100	1.9	100	1.9	100	1.9	100	1.9	100	1.9	
157																			
158																			
159																			
160	836C13																		
161																			
162	Feedstream Number	Units								Cond Avg								Cond Avg	
163	Feed Class		F1	F1	F1	F1	F1	F1	F1	F1	F2	F2	F2	F2	F2	F2	F2	F2	
164	Feed Class 2		Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Total	Total	Total	Total	Total	Total	Total	Total	
165	Feedstream Description		HW	HW	HW	HW	HW	HW	HW	HW	Total	Total	Total	Total	Total	Total	Total	Total	
166	Feed Rate	g/hr	1968147	1968147	1948118	1948118	2099235	2099235	2099235	2005167	2005167	2005167	2005167	2005167	2005167	2005167	2005167	2005167	
167	Density	g/ml	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	
168	Heat Content	Btu/lb	8314	8314	8314	8314	8314	8314	8314	8314	8314	8314	8314	8314	8314	8314	8314	8314	
169	Ash	g/hr	141.71	nd	1.95	1.95	62.01	62.01	62.01	62.01	62.01	62.01	62.01	62.01	62.01	62.01	62.01	62.01	
170	Chlorine	g/hr	nd	5.55	2.28	2.28	5.16	5.16	5.16	5.16	5.16	5.16	5.16	5.16	5.16	5.16	5.16	5.16	
171	Antimony	g/hr	nd	0.004	nd	0.004	nd	0.004	nd	0.004	nd	0.004	nd	0.004	nd	0.004	nd	0.004	
172	Arsenic	g/hr	nd	0.002	nd	0.002	nd	0.002	nd	0.002	nd	0.002	nd	0.002	nd	0.002	nd	0.002	
173	Barium	g/hr	nd	0.187	nd	0.187	nd	0.187	nd	0.187	nd	0.187	nd	0.187	nd	0.187	nd	0.187	
174	Beryllium	g/hr	nd	0.0002	nd	0.0002	nd	0.0002	nd	0.0002	nd	0.0002	nd	0.0002	nd	0.0002	nd	0.0002	

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
175	Cadmium			nd	0.0002	nd	0.0002	nd	0.0002										
176	Chromium		g/hr		1.175		0.286		0.21										
177	Lead		g/hr	nd	0.002	nd	0.002	nd	0.002										
178	Mercury		g/hr	nd	0.083	nd	0.08	nd	0.088										
179	Nickel		g/hr	nd	0.323		0.064		0.042										
180	Selenium		g/hr	nd	0.004	nd	0.004	nd	0.004										
181	Silver		g/hr	nd	0.001	nd	0.001	nd	0.001										
182	Thallium		g/hr	nd	0.002	nd	0.002	nd	0.002										
183																			
184																			
185	Stack Gas Flowrate		dscfm		64444		62203		63371		63339								
186	O2		%		8.4		8.6		8.7		8.57								
187																			
188	Thermal Feedrate		MMBtu/hr		36.0		35.7		38.4		36.7								
189	Estimated Firing Rate		MMBtu/hr		36.0		35.7		38.4		36.7								
190																			
191	Feedrate MTEC Calculations																		
192	Ash		mg/dscm		1.4	###	0.0		0.7	1	0.7								
193	Chlorine		µg/dscm	100	56.4	0.0	44.9	0.0	101.1	28	67.4	100	56.4	0.0	0.0	100	101.1	28	0.7
194	Antimony		µg/dscm	100	0.0	100	0.0	100	0.0	100	0.0	100	0.0	100	0.0	100	0.0	100	1
195	Arsenic		µg/dscm	100	0.0	100	0.0	100	0.0	100	0.0	100	0.0	100	0.0	100	0.0	100	0.042
196	Barium		µg/dscm	100	1.9	100	2.0	100	2.0	100	2.0	100	1.9	100	2.0	100	2.0	100	0.021
197	Beryllium		µg/dscm	100	0.0	100	0.0	100	0.0	100	0.0	100	0.0	100	0.0	100	0.0	100	1.96
198	Cadmium		µg/dscm	100	0.0	100	0.0	100	0.0	100	0.0	100	0.0	100	0.0	100	0.0	100	0.002
199	Chromium		µg/dscm	100	11.9	0.0	3.1		2.2		5.7		11.9	0.0	0.0	100	2.2		0.002
200	Lead		µg/dscm	100	0.0	100	0.0	100	0.0	100	0.0	100	0.0	100	0.0	100	0.0	100	5.736
201	Mercury		µg/dscm	100	0.8	100	0.9	100	0.9	100	0.9	100	0.8	100	0.9	100	0.9	100	0.021
202	Nickel		µg/dscm	100	3.3	0.7	0.7		0.4		1.5		3.3	0.7	0.4		0.4		0.88
203	Selenium		µg/dscm	100	0.04	100	0.04	100	0.04	100	0.0	100	0.0	100	0.0	100	0.0	100	1.47
204	Silver		µg/dscm	100	0.01	100	0.01	100	0.01	100	0.0	100	0.0	100	0.0	100	0.0	100	0.042
205	Thallium		µg/dscm	100	0.02	100	0.02	100	0.02	100	0.0	100	0.0	100	0.0	100	0.0	100	0.010
206																			0.021
207	SVM		µg/dscm	100	0.022	100	0.024	100	0.023	100	0.0230	100	0.0223	100	0.0235	100	0.0233	100	0.0
208	LVM		µg/dscm		12.0		3.1		2.2		5.8		12.0	3.1		2.2			5.8
209																			
210																			
211																			
212	TIER I BIF LIMITS																		
213	Antimony		g/hr		160														
214	Arsenic		g/hr		0.81														
215	Barium		g/hr		29380														
216	Beryllium		g/hr		0.24														
217	Cadmium		g/hr		0.36														
218	Chlorine		g/hr		400														
219	Chromium		g/hr		1.25														
220	Lead		g/hr		199														
221	Mercury		g/hr		150														
222	Silver		g/hr		2000														
223	Thallium		g/hr		300														

	A	B	C	D	E	F
1	Process Information					
2						
3		Units	Run	Run	Run	Avg
4			1	2	3	
5	836C10					
6						
7	Steam Production	lb/hr	171790	170000	170000	170597
8						
9	836C11					
10						
11	Steam Production	lb/hr	207120	206730	205770	206540

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	PCDD/PCDF																
2	N																
3	Facility Name and ID:	BASF, Geismar, LA, No. 6 Utilities boiler															
4	Condition ID:	836C13															
5	Condition/Test Date:	Risk burn, worst case February 18-20, 1997															
6																	
7		I-TEF															
8		Wght Fact															
9																	
10																	
11	Detected in sample volume (ng)																
12	2,3,7,8-TCDD	1	nd	0.0300	0.0300	0.0150	0.0150	nd	0.05	0.0500	0.0250	0.0250	nd	0.04	0.0400	0.0200	0.0200
13	TCDD Total	0		0.0500	0.0000	0.0500	0.0000	nd	0.05	0.0000	0.0250	0.0000	nd	0.04	0.0000	0.0200	0.0000
14	1,2,3,7,8-PCDD	0.5	nd	0.0500	0.0250	0.0250	0.0125	nd	0.07	0.0350	0.0350	0.0175	nd	0.05	0.0250	0.0250	0.0125
15	PCDD Total	0		0.0900	0.0000	0.0900	0.0000	nd	0.07	0.0000	0.0350	0.0000	nd	0.05	0.0000	0.0250	0.0000
16	1,2,3,4,7,8-HxCDD	0.1	nd	0.0500	0.0050	0.0250	0.0025	nd	0.08	0.0080	0.0400	0.0040	nd	0.06	0.0060	0.0600	0.0060
17	1,2,3,6,7,8-HxCDD	0.1	nd	0.0400	0.0040	0.0200	0.0020	nd	0.08	0.0080	0.0400	0.0040	nd	0.06	0.0060	0.0600	0.0060
18	1,2,3,7,8,9-HxCDD	0.1	nd	0.0500	0.0050	0.0250	0.0025	nd	0.07	0.0070	0.0350	0.0035	nd	0.06	0.0060	0.0600	0.0060
19	HxCDD Total	0		0.0600	0.0000	0.0600	0.0000	nd	0.08	0.0000	0.0400	0.0000	nd	0.16	0.0000	0.1600	0.0000
20	1,2,3,4,6,7,8-HpCDD	0.01		0.0800	0.0008	0.0800	0.0008	nd	0.06	0.0006	0.0300	0.0003	nd	0.09	0.0009	0.0450	0.0005
21	HpCDD Total	0		0.1500	0.0000	0.1500	0.0000	nd	0.11	0.0000	0.0500	0.0000	nd	0.09	0.0000	0.0450	0.0000
22	OCDD	0.001		0.1900	0.0002	0.1900	0.0002		0.2	0.0002	0.2000	0.0002		0.25	0.0003	0.2500	0.0003
23	2,3,7,8-TCDF	0.1		0.0600	0.0060	0.0600	0.0060		0.03	0.0030	0.0300	0.0030	nd	0.03	0.0030	0.0150	0.0015
24	TCDF Total	0		0.4800	0.0000	0.4800	0.0000		0.13	0.0000	0.1300	0.0000	nd	0.03	0.0000	0.0150	0.0000
25	1,2,3,7,8-PCDF	0.05		0.0300	0.0015	0.0300	0.0015	nd	0.05	0.0025	0.0250	0.0125	nd	0.05	0.0025	0.0250	0.0125
26	PCDF Total	0.5		0.0400	0.0200	0.0400	0.0200	nd	0.05	0.0250	0.0250	0.0125	nd	0.06	0.0300	0.0300	0.0150
27	1,2,3,4,7,8-HxCDF	0		0.3800	0.0000	0.3800	0.0000	nd	0.05	0.0000	0.0250	0.0000	nd	0.1	0.0000	0.0500	0.0000
28	1,2,3,6,7,8-HxCDF	0.1	nd	0.0700	0.0070	0.0700	0.0070	nd	0.05	0.0050	0.0250	0.0025	nd	0.05	0.0050	0.0500	0.0050
29	2,3,4,6,7,8-HxCDF	0.1		0.0300	0.0030	0.0150	0.0015	nd	0.05	0.0050	0.0250	0.0025	nd	0.06	0.0060	0.0600	0.0060
30	1,2,3,7,8,9-HxCDF	0.1	nd	0.0400	0.0040	0.0400	0.0040	nd	0.04	0.0040	0.0200	0.0020	nd	0.06	0.0060	0.0600	0.0060
31	HxCDF Total	0		0.0400	0.0040	0.0200	0.0020	nd	0.06	0.0060	0.0300	0.0030	nd	0.05	0.0050	0.0500	0.0050
32	1,2,3,4,6,7,8-HpCDF	0.01		0.1700	0.0000	0.1700	0.0000	nd	0.1	0.0000	0.0500	0.0000	nd	0.15	0.0000	0.1500	0.0000
33	1,2,3,4,7,8,9-HpCDF	0.01		0.0900	0.0009	0.0900	0.0009	nd	0.04	0.0004	0.0200	0.0002	nd	0.06	0.0006	0.0600	0.0006
34	HpCDF Total	0		0.0300	0.0003	0.0300	0.0003	nd	0.09	0.0009	0.0450	0.0005	nd	0.05	0.0005	0.0500	0.0005
35	OCDF	0.001		0.1200	0.0000	0.1200	0.0000	nd	0.04	0.0000	0.0200	0.0000	nd	0.11	0.0000	0.1100	0.0000
36				0.1100	0.0001	0.1100	0.0001	nd	0.12	0.0001	0.0600	0.0001	nd	0.14	0.0001	0.1400	0.0001
37	Gas sample volume (dscf)			150.90	150.90	150.90	150.90		154.90	154.90	154.90	154.90		160.40	160.40	160.40	160.40
38	O2 (%)			8.60	8.60	8.60	8.60		8.60	8.60	8.60	8.60		8.80	8.80	8.80	8.80
39																	
40	PCDD/PCDF (ng in sample)			1.8000	0.1168	1.8000	0.0788		0.9500	0.1607	0.6400	0.0820		1.1200	0.1429	0.9650	0.0922
41	PCDD/PCDF (ng/dscm @ 7% O2)		65.1	0.4759	0.0309	0.4759	0.0208	98.0	0.2447	0.0414	0.1648	0.0211	71.0	0.2831	0.0361	0.2440	0.0233
42																	
43	TEQ Cond Avg			0.022													
44	Total Cond Avg			0.295													