	B	C
1	**Source Description**	
2		
3	Phase II ID No.	835
4	EPA ID No.	LAD040776809
5	Facility Name	BASF
6	Facility Location	
7	City	Geismar
8	State	LA
9	Unit ID Name/No.	No. 3 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, 285 MMBtu/hr, 205000 lb/hr steam @ 650 psig and 750°F
15	Capacity (MMBtu/hr)	285
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)	48" x 94"
26	Height (ft)	70
27	Gas Velocity (ft/sec)	32.8
28	Gas Temperature (°F)	400
29		
30	Permitting Status	
31	HWC Burn Status (Date if Terminated)	

	B	C
1	**Cond Description**	
2		
3	**835C10**	
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/Cl2, CO; metals, chlorine, ash feeds
12		
13	**835C11**	
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/Cl2, CO; metals, chlorine, ash feeds
22		
23	**835C12**	
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/Cl2, CO; metals, chlorine, ash feeds

	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	**835C10**					R1		R2		R3		Cond Avg
7												
8	PM	E1	gr/dscf	y		0.0006		0.0008		0.0007		0.0007
9	CO (RA)	E1	ppmv	y		0		0		0		0
10	HCl		ppmv	n		0.01		0.01		0.02		
11	Cl2		ppmv	n		0.01		0.01		0.01		
12												
13	Sampling Train	PM HCl/Cl2	E1									
14	Stack Gas Flowrate		dscfm			32153		32620		32932		32568.3
15	O2		%			6.1		5.8		5.6		5.8
16	Moisture		%			16.2		16.1		15.9		16.1
17	Temperature		°F			399.2		390.2		404.6		398.0
18												
19	HCl	E1	ppmv	y		0.01		0.01		0.02		0.01
20	Cl2	E1	ppmv	y		0.01		0.01		0.01		0.01
21	Total Chlorine	E1	ppmv	y		0.03		0.03		0.04		0.03
22												
23	POHC DRE	Toluene										
24	Feedrate		lb/hr			206		206		216		
25	Emissions Rate		lb/hr			0.00206		0.00103		0.00108		
26	DRE	E1	%			99.999		99.9995		99.9995		
27												
28												
29												
30	**835C11**					R1		R2		R3		Cond Avg
31												
32	PM	E1	gr/dscf	y		0.0004		0.0004		0.0004		0.0004
33	CO (RA)	E1	ppmv	y		0		0		0		0
34	HCl		ppmv	n		0.02		0.02		0.01		
35	Cl2		ppmv	n		0.01		0.01		0.01		
36												
37	Sampling Train	PM, HCl/Cl2	E1									
38	Stack Gas Flowrate		dscfm			28710		27602		26813		27708.3
39	O2		%			7		7		6.8		6.9
40	Moisture		%			13.34		14.4		14.5		14.1
41	Temperature		°F			361.4		350.6		348.8		353.6
42												
43	HCl	E1	ppmv	y		0.02		0.02		0.01		0.02
44	Cl2	E1	ppmv	y		0.01		0.01		0.01		0.01
45	Total Chlorine	E1	ppmv	y		0.04		0.04		0.03		0.04
46												
47	POHC DRE	Toluene										
48	Feedrate		lb/hr			210		205		209		
49	Emissions Rate		lb/hr			0.00042		0.0002665		0.000418		
50	DRE	E1	%			99.9998		99.99987		99.9998		
51												
52												
53	**835C12**					R1		R2		R3		Cond Avg
54												
55	PM	E1	gr/dscf	y		0.0013		0.0014		0.001		0.0012
56	CO (RA)	E1	ppmv	y		0		0		0		0
57	HCl		ppmv	n		0.12		0.03		0.02		
58	Cl2		ppmv	n		0.07		0.13		0.02		
59												
60	Sampling Train	PM, HCl/Cl2	E1									
61	Stack Gas Flowrate		dscfm			44216		45104		44825		44715.0
62	O2		%			6.2		6		6.3		6.2
63	Moisture		%			18.5		17.9		18		18.1
64	Temperature		°F			575.6		566.6		570.2		570.8
65												
66	HCl	E1	ppmv	y		0.11		0.03		0.02		0.05
67	Cl2	E1	ppmv	y		0.07		0.12		0.02		0.07

	B	C	D	E	F	G	H	I	J	K	L	M
68	Total Chlorine	E1	ppmv	y		0.25		0.27		0.06		0.19
69												
70	POHC DRE	Toluene										
71	Feedrate		lb/hr			180		171		169		
72	Emissions Rate		lb/hr			0.00018		0.000171		0.000169		
73	DRE	E1	%			99.9999		99.9999		99.9999		

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	**Feedstreams**																		
2																			
3																			
4	**835C10**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg
5																			
6	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2
7	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Total		Total		Total		Total
8	Feed Class 2				HW		HW		HW		HW		Total		Total		Total		Total
9	Feedstream Description				Liquid waste		Liquid waste		Liquid waste		Liquid waste		Total		Total		Total		Total
10	Feed Rate		g/hr		3600765		3731798		3744097		3692220								
11	Density		g/ml		0.88		0.88		0.88		0.88								
12	Heating Value		Btu/lb		9000		9000		9000		9000								
13	Ash		g/hr	nd	3.601		123.15		48.673		20								
14	Chlorine		g/hr	nd	1.8	nd	1.866	nd	1.872										
15	Antimony		g/hr	nd	0.148	nd	0.153	nd	0.154										
16	Arsenic		g/hr	nd	0.108	nd	0.112	nd	0.112										
17	Barium		g/hr	nd	0.544	nd	0.564	nd	0.565										
18	Beryllium		g/hr	nd	0.007	nd	0.007	nd	0.007										
19	Cadmium		g/hr	nd	0.007	nd	0.007	nd	0.007										
20	Chromium		g/hr	nd	0.22	nd	0.228	nd	0.228										
21	Lead		g/hr	nd	0.072	nd	0.075	nd	0.075										
22	Mercury		g/hr	nd	0.122	nd	0.127	nd	0.127										
23	Nickel		g/hr	nd	0.108	nd	0.112	nd	0.112										
24	Selenium		g/hr	nd	0.184	nd	0.19	nd	0.191										
25	Silver		g/hr	nd	0.036	nd	0.037	nd	0.037										
26	Thallium		g/hr	nd	0.108	nd	0.112	nd	0.112										
27																			
28																			
29	Stack Gas Flowrate		dscfm		32153		32620		32932		32568.3								
30	O2		%		6.1		5.8		5.6		5.8								
31																			
32	Thermal Feedrate		MMBtu/hr		71.4		74.0		74.2		73.2		71.4		74.0		74.2		73.2
33	Estimated Firing Rate		MMBtu/hr		152.1		157.4		161.0		156.8								156.8
34																			
35	*Feedrate MTEC Calculations*																		
36	Ash		mg/dscm	100	0.1		2.0		0.8	6	1.0	100	0.03	0	2.05	0	0.79	6	1.0
37	Chlorine		µg/dscm	100	31.0	100	31.0	100	30.4	100	15.41	100	15.5	100	15.5	100	15.2	100	15.41
38	Antimony		µg/dscm	100	2.5	100	2.5	100	2.5	100	1.27	100	1.3	100	1.3	100	1.3	100	1.27
39	Arsenic		µg/dscm	100	1.9	100	1.9	100	1.8	100	0.92	100	0.9	100	0.9	100	0.9	100	0.92
40	Barium		µg/dscm	100	9.4	100	9.4	100	9.2	100	4.65	100	4.7	100	4.7	100	4.6	100	4.65
41	Beryllium		µg/dscm	100	0.1	100	0.1	100	0.1	100	0.06	100	0.1	100	0.1	100	0.1	100	0.06
42	Cadmium		µg/dscm	100	0.1	100	0.1	100	0.1	100	0.06	100	0.1	100	0.1	100	0.1	100	0.06
43	Chromium		µg/dscm	100	3.8	100	3.8	100	3.7	100	1.88	100	1.9	100	1.9	100	1.9	100	1.88
44	Lead		µg/dscm	100	1.2	100	1.2	100	1.2	100	0.62	100	0.6	100	0.6	100	0.6	100	0.62
45	Mercury		µg/dscm	100	2.1	100	2.1	100	2.1	100	1.05	100	1.0	100	1.1	100	1.0	100	1.05
46	Nickel		µg/dscm	100	1.9	100	1.9	100	1.8	100	0.92	100	0.9	100	0.9	100	0.9	100	0.92
47	Selenium		µg/dscm	100	3.2	100	3.2	100	3.1	100	1.57	100	1.6	100	1.6	100	1.6	100	1.57
48	Silver		µg/dscm	100	0.6	100	0.6	100	0.6	100	0.31	100	0.3	100	0.3	100	0.3	100	0.31
49	Thallium		µg/dscm	100	1.9	100	1.9	100	1.8	100	0.92	100	0.9	100	0.9	100	0.9	100	0.92
50																			
51	SVM		µg/dscm	100	1.4	100	1.4	100	1.3	100	1.4	100	1.4	100	1.4	100	1.3	100	1.4
52	LVM		µg/dscm	100	5.8	100	5.8	100	5.6	100	5.7	100	5.8	100	5.8	100	5.6	100	5.7
53																			
54																			
55																			
56	**835C11**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg
57																			
58	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2

	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		Total		Total		Total		Total
60	Feed Class 2				HW		HW		HW		HW		Total		Total		Total		Total
61	Feedstream Description				Liquid waste		Liquid waste		Liquid waste		Liquid waste		Total		Total		Total		Total
62	Feed Rate		g/hr		2189138		2163782		2211634		2,188,185								
63	Density		g/ml		0.87		0.87		0.87		0.87								
64	Heating Value		Btu/lb		9000		9000		9000		9000								
65	Ash		g/hr	nd	2.1891	nd	2.1638	nd	2.2116										
66	Chlorine		g/hr	nd	1.095	nd	1.082	nd	1.106										
67	Antimony		g/hr	nd	0.09	nd	0.089	nd	0.091										
68	Arsenic		g/hr	nd	0.066	nd	0.065	nd	0.066										
69	Barium		g/hr	nd	0.3331	nd	0.327	nd	0.334										
70	Beryllium		g/hr	nd	0.004	nd	0.004	nd	0.004										
71	Cadmium		g/hr	nd	0.004	nd	0.004	nd	0.004										
72	Chromium		g/hr	nd	0.134	nd	0.132	nd	0.135										
73	Lead		g/hr	nd	0.044	nd	0.043	nd	0.044										
74	Mercury		g/hr	nd	0.074	nd	0.0074	nd	0.075										
75	Nickel		g/hr	nd	0.066	nd	0.065	nd	0.066										
76	Selenium		g/hr	nd	0.112	nd	0.11	nd	0.113										
77	Silver		g/hr	nd	0.022	nd	0.022	nd	0.022										
78	Thallium		g/hr	nd	0.066	nd	0.065	nd	0.066										
79																			
80																			
81	Stack Gas Flowrate		dscfm		28710		27602		26813		27708.3								
82	O2		%		7.0		7.0		6.8		6.9								
83																			
84	Thermal Feedrate		MMBtu/hr		43.4		42.9		43.8		43.4		43.4		42.9		43.8		43.4
85	Estimated Firing Rate		MMBtu/hr		127.6		122.7		120.9		123.7								123.7
86																			
87	*Feedrate MTEC Calculations*																		
88	Ash		mg/dscm	100	0.04	100	0.05	100	0.05	100	0.02	100	0.04	100	0.05	100	0.05	100	0.023
89	Chlorine		µg/dscm	100	22.5	100	23.1	100	24.0	100	11.6	100	22.46	100	23.09	100	23.95	100	11.58
90	Antimony		µg/dscm	100	1.8	100	1.9	100	2.0	100	0.95	100	1.85	100	1.90	100	1.97	100	0.95
91	Arsenic		µg/dscm	100	1.4	100	1.4	100	1.4	100	0.69	100	1.35	100	1.39	100	1.43	100	0.69
92	Barium		µg/dscm	100	6.8	100	7.0	100	7.2	100	3.51	100	6.83	100	6.98	100	7.23	100	3.51
93	Beryllium		µg/dscm	100	0.1	100	0.1	100	0.1	100	0.04	100	0.08	100	0.09	100	0.09	100	0.04
94	Cadmium		µg/dscm	100	0.1	100	0.1	100	0.1	100	0.04	100	0.08	100	0.09	100	0.09	100	0.04
95	Chromium		µg/dscm	100	2.7	100	2.8	100	2.9	100	1.41	100	2.75	100	2.82	100	2.92	100	1.41
96	Lead		µg/dscm	100	0.9	100	0.9	100	1.0	100	0.46	100	0.90	100	0.92	100	0.95	100	0.46
97	Mercury		µg/dscm	100	1.5	100	0.2	100	1.6	100	0.55	100	1.52	100	0.16	100	1.62	100	0.55
98	Nickel		µg/dscm	100	1.4	100	1.4	100	1.4	100	0.69	100	1.35	100	1.39	100	1.43	100	0.69
99	Selenium		µg/dscm	100	2.3	100	2.3	100	2.4	100	1.18	100	2.30	100	2.35	100	2.45	100	1.18
100	Silver		µg/dscm	100	0.5	100	0.5	100	0.5	100	0.23	100	0.45	100	0.47	100	0.48	100	0.23
101	Thallium		µg/dscm	100	1.4	100	1.4	100	1.4	100	0.69	100	1.35	100	1.39	100	1.43	100	0.69
102																			
103	SVM		µg/dscm	100	1.0	100	1.0	100	1.0	100	1.0	100	1.0	100	1.0	100	1.0	100	1.0
104	LVM		µg/dscm	100	4.2	100	4.3	100	4.4	100	4.3	100	4.2	100	4.3	100	4.4	100	4.3
105																			
106																			
107																			
108	**835C12**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg
109																			
110	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2
111	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Total		Total		Total		Total
112	Feed Class 2				HW		HW		HW		HW		Total		Total		Total		Total
113	Feedstream Description				Liquid waste		Liquid waste		Liquid waste		Liquid waste		Total		Total		Total		Total
114	Feed Rate		g/hr		4082876		3964664		3951026		3,999,522								
115	Density		g/ml		0.89		0.89		0.89		0.89								
116	Heating Value		Btu/lb		9000		9000		9000		9000								

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
117	Ash		g/hr		8.1658		39.647		35.559										
118	Chlorine		g/hr		1.674		22.083		16.357										
119	Antimony		g/hr	nd	0.167	nd	0.163	nd	0.162										
120	Arsenic		g/hr	nd	0.122	nd	0.119	nd	0.119										
121	Barium		g/hr	nd	0.617	nd	0.599	nd	0.597										
122	Beryllium		g/hr	nd	0.008	nd	0.008	nd	0.008										
123	Cadmium		g/hr	nd	0.008	nd	0.008	nd	0.008										
124	Chromium		g/hr	nd	0.249	nd	0.242	nd	0.241										
125	Lead		g/hr	nd	0.082	nd	0.079	nd	0.079										
126	Mercury		g/hr	nd	0.139	nd	0.135	nd	0.134										
127	Nickel		g/hr	nd	0.122	nd	0.119	nd	0.119										
128	Selenium		g/hr	nd	0.208	nd	0.202	nd	0.202										
129	Silver		g/hr	nd	0.041	nd	0.04	nd	0.04										
130	Thallium		g/hr	nd	0.122	nd	0.119	nd	0.119										
131																			
132																			
133	Stack Gas Flowrate		dscfm		44216		45104		44825		44715								
134	O2		%		6.2		6		6.3		6.17								
135																			
136	Thermal Feedrate		MMBtu/hr		80.9		78.6		78.3		79.3		80.9		78.6		78.3		79.3
137	Estimated Firing Rate		MMBtu/hr								298.1								298.1
138																			
139	*Feedrate MTEC Calculations*																		
140	Ash		mg/dscm		0.1		0.5		0.4		0.3	0	0.10	0	0.48	0	0.44	0	0.344
141	Chlorine		µg/dscm		21.1		269.1		204.7		165.0	0	21.1	0	269.1	0	204.7	0	164.96
142	Antimony		µg/dscm	100	2.1	100	2.0	100	2.0	100	1.0	100	1.1	100	1.0	100	1.0	100	1.02
143	Arsenic		µg/dscm	100	1.5	100	1.5	100	1.5	100	0.7	100	0.8	100	0.7	100	0.7	100	0.75
144	Barium		µg/dscm	100	7.8	100	7.3	100	7.5	100	3.8	100	3.9	100	3.6	100	3.7	100	3.76
145	Beryllium		µg/dscm	100	0.1	100	0.1	100	0.1	100	0.0	100	0.1	100	0.0	100	0.1	100	0.05
146	Cadmium		µg/dscm	100	0.1	100	0.1	100	0.1	100	0.0	100	0.1	100	0.0	100	0.1	100	0.05
147	Chromium		µg/dscm	100	3.1	100	2.9	100	3.0	100	1.5	100	1.6	100	1.5	100	1.5	100	1.52
148	Lead		µg/dscm	100	1.0	100	1.0	100	1.0	100	0.5	100	0.5	100	0.5	100	0.5	100	0.50
149	Mercury		µg/dscm	100	1.8	100	1.6	100	1.7	100	0.8	100	0.9	100	0.8	100	0.8	100	0.85
150	Nickel		µg/dscm	100	1.5	100	1.5	100	1.5	100	0.7	100	0.8	100	0.7	100	0.7	100	0.75
151	Selenium		µg/dscm	100	2.6	100	2.5	100	2.5	100	1.3	100	1.3	100	1.2	100	1.3	100	1.27
152	Silver		µg/dscm	100	0.5	100	0.5	100	0.5	100	0.3	100	0.3	100	0.2	100	0.3	100	0.25
153	Thallium		µg/dscm	100	1.5	100	1.5	100	1.5	100	0.7	100	0.8	100	0.7	100	0.7	100	0.75
154																			
155	SVM		µg/dscm	100	1.1	100	1.1	100	1.1	100	1.1	100	1.1	100	1.1	100	1.1	100	1.1
156	LVM		µg/dscm	100	4.8	100	4.5	100	4.6	100	4.6	100	4.8	100	4.5	100	4.6	100	4.6
157																			
158																			
159	**Tier I BIF Limits**																		
160																			
161	Antimony		g/hr		196														
162	Arsenic		g/hr		1.3														
163	Barium		g/hr		29381														
164	Beryllium		g/hr		0.34														
165	Cadmium		g/hr		0.64														
166	Chlorine		g/hr		483														
167	Chromium		g/hr		1.95														
168	Lead		g/hr		218														
169	Mercury		g/hr		218														
170	Silver		g/hr		3017														
171	Thallium		g/hr		409														

	A	B	C	D	E	F
1	**Process Information**					
2						
3		Units	Run	Run	Run	Avg
4			1	2	3	
5	**835C10**					
6						
7	Steam Production	lb/hr	116230	119270	118830	118110
8						
9	**835C11**					
10						
11	Steam Production	lb/hr	89700	88320	88110	88710
12						
13	**835C12**					
14						
15	Steam Production	lb/hr	170200	177200	170200	172533