

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase II ID No.	843
4	EPA ID No.	TXD008092793
5	Facility Name	Dow Chemical Company
6	Facility Location	
7	City	Freeport
8	State	TX
9	Unit ID Name/No.	B-902
10	Other Sister Facilities	B-901, B-903
11	Number of Sister Facilities	2
12	Combustor Class	Liquid-fired boiler
13	Combustor Type	Liquid-fired
	Combustor Characteristics	Watertube boiler. Direct fired combustion chamber, Combustion Engineering, capacity of 229 MMBtu/hr, operated @ 1700-2200F, soot blowing capabilities
14		
15	Capacity (MMBtu/hr)	229
16	Soot Blowing	None
17	APCS Detailed Acronym	None
18	APCS General Class	
19	APCS Characteristics	N/A
20	Hazardous Wastes	Liq
21	Haz Waste Description	Liquid wastes (Heavy Oils)
22	Supplemental Fuel	Natural gas
23		
24	Stack Characteristics	
25	Diameter (ft)	5.5
26	Height (ft)	52
27	Gas Velocity (ft/sec)	21.2
28	Gas Temperature (°F)	
29		
30	Permitting Status	Tier I for metals and HCl/Cl2
	HWC Burn Status (Date if Terminated)	
31		

	B	C
1	Cond Description	
2		
3	843C1	
4		
5	Report Name/Date	B-902 Trial Burn and Risk Burn Report, October 9 and 12, 1998
6	Report Prepare	Focus Environmental, Inc.
7	Testing Firm	METCO Environmental
8	Testing Dates	July 15-16, 1998
9	Cond Dates	Jul-98
10	Condition Descr	Trial burn, max waste feed rate, max comb gas velocity
11	Content	PM, DRE for POHC (acetophenone)
12		
13	843C2	
14		
15	Report Name/Date	B-902 Trial Burn and Risk Burn Report, October 9 and 12, 1998
16	Report Prepare	Focus Environmental, Inc.
17	Testing Firm	METCO Environmental
18	Testing Dates	July 14, 1998
19	Cond Dates	Jul-98
20	Condition Descr	Trial burn, min comb temp
21	Content	DRE for POHC (acetophenone)
22		
23	843C3	
24		
25	Report Name/Date	B-902 Trial Burn and Risk Burn Report, October 9 and 12, 1998
26	Report Prepare	Focus Environmental, Inc.
27	Testing Firm	METCO Environmental
28	Testing Dates	February 10-11, 1998
29	Cond Dates	Feb-98
30	Condition Descr	Risk burn, slightly above normal operating conditions
31	Content	PCDD/F, metals

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions											
2												
3		Comm	Units		7%	O2						
4												
5												
6	843C1	Trial Burn				R1		R2		R3		Cond Avg
7												
8	PM	E1	gr/dscf	y		0.013		0.012		0.026		0.017
9	CO (MHRA)	E1	ppmv	y		45.55		13.53		60.21		39.8
10	CO (RA)	E1	ppmv	y		20.25		6.8		29.45		18.8
11												
12	POHC DRE	Acetophenone										
13	Feedrate		ug/hr			410000		420000		500000		
14	Emission Rate	E2	ug/hr			0.0082		0.0084		0.01		
15	DRE	E2	%			99.999998		99.999998		99.999998		
16												
17	Sampling Train	PM	E1									
18	Stack Gas Flowrate		dscfm			32300		32900		32500		32600
19	O2		%			5.2		5.1		5		5.1
20	Moisture		%									
21	Temperature		°F									
22												
23	Sampling Train	DRE	E2									
24	Stack Gas Flowrate		dscfm			33000		32200		32800		32700
25	O2		%									
26	Moisture		%									
27	Temperature		°F									
28												
29												
30	843C2	Trial Burn				R1		R2		R3		Cond Avg
31												
32	CO (MHRA)	E1	ppmv	y		26.87		15.75		26.83		23.2
33	CO (RA)	E1	ppmv	y		17.99		14.58		19.91		17.5
34												
35	POHC DRE	Acetophenone										
36	Feedrate		units?			200000		200000		197500		
37	Emission Rate	E1	units?			0.0080		0.0060		0.0079		
38	DRE	E1	%			99.999996		99.999997		99.999996		
39												
40	Sampling Train	DRE	E1									
41	Stack Gas Flowrate		dscfm			32400		32200		33200		32600.0
42	O2		%									
43	Moisture		%									
44	Temperature		°F									
45												
46												
47	843C3	Risk Burn				R1		R2		R3		Cond Avg
48												
49	CO (MHRA)	E1	ppmv	y		6.8		6.7		6.78		6.76
50	CO (RA)	E1	ppmv	y		6.64		6.5		6.68		6.61
51	Antimony		µg/dscf		nd	0.0052	nd	0.0056	nd	0.0057		
52	Arsenic		µg/dscf		nd	0.011	nd	0.0092	nd	0.013		
53	Barium		µg/dscf			0		0		0.158		
54	Beryllium		µg/dscf		nd	0.00063	nd	0.00069	nd	0.0007		
55	Cadmium		µg/dscf		nd	0.0034	nd	0.0037	nd	0.0076		
56	Chromium		µg/dscf			0.177		0.211		0.223		
57	Cobalt		µg/dscf		nd	0.014	nd	0.021	nd	0.016		
58	Copper		µg/dscf			0		0		0		
59	Lead		µg/dscf		nd	0.0085	nd	0.019	nd	0.031		
60	Manganese		µg/dscf			0.168		0.106		0.0189		
61	Mercury		µg/dscf		nd	0.0019	nd	0.0021	nd	0.6		
62	Molybdenum		µg/dscf		nd	0.140	nd	0.14	nd	0.14		
63	Nickel		µg/dscf		nd	0.021	nd	0.023	nd	0.023		
64	Selenium		µg/dscf		nd	0.0091	nd	0.015	nd	0.01		
65	Silver		µg/dscf		nd	0.0012	nd	0.0028	nd	0.0014		
66	Thallium		µg/dscf		nd	0.0079	nd	0.0086	nd	0.0088		
67	Vanadium		µg/dscf		nd	0.0074	nd	0.008	nd	0.0082		
68												
69	Antimony	E1	µg/dscm	y	nd	0.2	nd	0.2	nd	0.2	100	0.2
70	Arsenic	E1	µg/dscm	y	nd	0.4	nd	0.3	nd	0.4	100	0.4
71	Barium	E1	µg/dscm	y		0		0		5.4		1.8

	B	C	D	E	F	G	H	I	J	K	L	M
72	Beryllium	E1	µg/dscm	y	nd	0.0	nd	0.0	nd	0.0	100	0.0
73	Cadmium	E1	µg/dscm	y	nd	0.1	nd	0.1	nd	0.3	100	0.2
74	Chromium	E1	µg/dscm	y		6.3		7.4		7.6		7.1
75	Cobalt	E1	µg/dscm	y	nd	0.5	nd	0.7	nd	0.5	100	0.6
76	Copper	E1	µg/dscm	y		0		0		0		0.0
77	Lead	E1	µg/dscm	y	nd	0.3	nd	0.7	nd	1.1	100	0.7
78	Manganese	E1	µg/dscm	y		5.9		3.7		0.6		3.4
79	Mercury	E1	µg/dscm	y	nd	0.1	nd	0.1	nd	20.3	100	6.8
80	Molybdenum	E1	µg/dscm	y	nd	4.9	nd	4.9	nd	4.7	100	4.9
81	Nickel	E1	µg/dscm	y	nd	0.7	nd	0.8	nd	0.8	100	0.8
82	Selenium	E1	µg/dscm	y	nd	0.3	nd	0.5	nd	0.3	100	0.4
83	Silver	E1	µg/dscm	y	nd	0.0	nd	0.1	nd	0.0	100	0.1
84	Thallium	E1	µg/dscm	y	nd	0.3	nd	0.3	nd	0.3	100	0.3
85	Vanadium	E1	µg/dscm	y	nd	0.3	nd	0.3	nd	0.3	100	0.3
86	SVM	E1	µg/dscm	y	100	0.4	100	0.8	100	1.3	100	0.8
87	LVM	E1	µg/dscm	y	6.2	6.7	4.48	7.7	5.8	8.0	5.4	7.5
88												
89	Sampling Train	Metals	E1									
90	Stack Gas Flowrate		dscfm			17212		16546		16149		16635.7
91	O2		%									
92	Moisture		%									
93	Temperature		°F									
94												
95	Sampling Train	PCDD/I	E2									
96	Stack Gas Flowrate		dscfm			16900		17000		16900		16933.3
97	O2		%			7		6.8		6.4		6.7
98	Moisture		%									
99	Temperature		°F									
100												
101	Particle Size Distribution		in microns									
102	0.2-0.5		% wt			19.9						
103	0.5-0.9					15.2						
104	0.9-1.3					8.5						
105	1.3-2.7					29.9						
106	2.7-4.5					18.9						
107	4.5-6.5					0.3						
108	6.5-9.7					0.5						
109	9.7-15					1						
110	>15					5.8						

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
1	Feedstreams																						
2																							
3																							
4	843C1	Trial Burn			R1	R2	R3		Cond Avg	R1	R2	R3		Cond Avg	R1	R2							
5																							
6	Feedstream Number				F1	F1	F1		F1	F2	F2	F2		F2	F3	F3							
7	Feed Class				Liq HW	Liq HW	Liq HW		Liq HW	NG	NG	NG		NG	Spike	Spike							
8	Feed Class 2				HW	HW	HW		HW	MF	MF	MF		MF	Spike	Spike							
9	Feedstream Description				Heavy Oils	Heavy Oils	Heavy Oils		Heavy Oils	Natural Gas	Natural Gas	Natural Gas		Natural Gas									
10	Feed Rate	lb/hr			4554	4483	4621		4553	4072	4072	4067		4070	22.3	22.3							
11	Thermal Feedrate	MMBtu/hr			72.2	71.4	73.4		72.3	81.4	81.4	81.3		81.4									
12	Viscosity	cps			32	34	32		32.7														
13	Heating Value	Btu/lb			16000	16000	16000		16000														
14	Density	lb/gal			8.9	8.9	8.9		8.9														
15	Ash	lb/hr			1.4	1.9	1.2		1.5						4.39	4.39							
16	Chlorine	lb/hr			0.0792	0.109	0.0846		0.09														
17	Antimony	g/hr			0.51	0.4	nd		0.2														
18	Arsenic	g/hr			0.039	0.035	0.029		0.03														
19	Barium	g/hr			0.15	0.12	0.1		0.12														
20	Beryllium	g/hr		nd	0.03	0.03	nd		0.03														
21	Cadmium	g/hr		nd	0.2	nd	0.2		0.2														
22	Chromium	g/hr			0.27	0.26	0.33		0.29														
23	Lead	g/hr		nd	0.4	nd	0.4		0.4														
24	Mercury	g/hr		nd	0.04	nd	0.04		0.04														
25	Nickel	g/hr		nd	1	nd	1		1.00														
26	Selenium	g/hr			0.78	0.5	1.1		0.79														
27	Silver	g/hr		nd	0.06	0.2	0.17		0.14														
28	Thallium	g/hr		nd	0.4	nd	0.4		0.4														
29	Zinc	g/hr			3.8	3.4	4.2		3.80														
30																							
31	Stack Gas Flowrate	dscfm			32300	32900	32500		32600												32300	32900	
32	Oxygen	%			5.2	5.1	5		5.1												5.2	5.1	
33																							
34	Estimated Firing Rate	MMBtu/hr																					
35																							
36	<i>Feedrate MTEC Calculations</i>																						
37	Ash	mg/dscm			10.3	13.6	8.6		10.8												32.2	31.4	
38	Chlorine	ug/dscm			580.9	780.0	609.0		656.6														
39	Antimony	ug/dscm			8.2	6.3	100		3.2	18													
40	Arsenic	ug/dscm			0.6	0.6	0.5		0.5														
41	Barium	ug/dscm			2.4	1.9	1.6		2.0														
42	Beryllium	ug/dscm	100		0.5	100	0.5	100	0.5	100													
43	Cadmium	ug/dscm	100		3.2	100	3.2	100	3.2	100													
44	Chromium	ug/dscm			4.4	4.1	5.2		4.6														
45	Lead	ug/dscm	100		6.5	100	6.3	100	6.4														
46	Mercury	ug/dscm	100		0.6	100	0.6	100	0.6	100													
47	Nickel	ug/dscm	100		16.2	100	15.8	100	15.9	100													
48	Selenium	ug/dscm			12.6	7.9	17.4		12.6														
49	Silver	ug/dscm	100		1.0	3.2	2.7	14	2.3														
50	Thallium	ug/dscm	100		6.5	100	6.3	100	6.4														
51	Zinc	ug/dscm			61.4	53.6	66.6		60.5														
52																							
53	SVM	ug/dscm	100		9.7	100	9.5	100	9.6														
54	LVM	ug/dscm	9		5.5	9	5.1	8	6.2	9													
55																							
56																							
57																							
58	843C2	Trial burn			R1	R2	R3		Cond Avg	R1	R2	R3		Cond Avg	R1	R2							
59																							
60	Feedstream Number				F1	F1	F1		F1	F2	F2	F2		F2	F3	F3							

	B	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	Feedstreams												
2													
3													
4	843C1		R3		Cond Avg		R1		R2		R3		Cond Avg
5													
6	Feedstream Number		F3		F3		F4		F4		F4		F4
7	Feed Class		Spike		Spike		Total		Total		Total		Total
8	Feed Class 2		Spike		Spike		Total		Total		Total		Total
9	Feedstream Description		Spike		Spike		Total		Total		Total		Total
10	Feed Rate		22.3		22.3								
11	Thermal Feedrate						153.6		152.8		154.7		153.7
12	Viscosity												
13	Heating Value												
14	Density												
15	Ash		4.39		4.39								
16	Chlorine												
17	Antimony												
18	Arsenic												
19	Barium												
20	Beryllium												
21	Cadmium												
22	Chromium												
23	Lead												
24	Mercury												
25	Nickel												
26	Selenium												
27	Silver												
28	Thallium												
29	Zinc												
30													
31	Stack Gas Flowrate		32500		32600								
32	Oxygen		5		5.1								
33													
34	Estimated Firing Rate						162.0		166.1		165.1		164.6
35													
36	<i>Feedrate MTEC Calculations</i>												
37	Ash		31.6		31.7	0	42.5	0	45.0	0	40.2	0	42.6
38	Chlorine					0	580.9	0	780.0	0	609.0	0	656.6
39	Antimony					0	8.2	0	6.3	100	3.2	18	5.9
40	Arsenic					0	0.6	0	0.6	0	0.5	0	0.5
41	Barium					0	2.4	0	1.9	0	1.6	0	2.0
42	Beryllium					100	0.2	100	0.2	100	0.2	100	0.5
43	Cadmium					100	1.6	100	1.6	100	1.6	100	3.2
44	Chromium					0	4.4	0	4.1	0	5.2	0	4.6
45	Lead					100	3.2	100	3.2	100	3.2	100	6.4
46	Mercury					100	0.3	100	0.3	100	0.3	100	0.6
47	Nickel					100	8.1	100	7.9	100	7.9	100	15.9
48	Selenium					0	12.6	0	7.9	0	17.4	0	12.6
49	Silver					100	1.0	0	3.2	0	2.7	14	2.3
50	Thallium					100	6.5	100	6.3	100	6.3	100	6.4
51	Zinc					0	61.4	0	53.6	0	66.6	0	60.5
52													
53	SVM					100	9.7	100	9.5	100	9.5	100	9.6
54	LVM					9	5.5	9	5.1	8	6.2	9	5.6
55													
56													
57													
58	843C2		R3		Cond Avg								
59													
60	Feedstream Number		F3		F3								

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	
61	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		NG		NG		NG		NG		Total		Total	
62	Feed Class 2				HW		HW		HW		HW		MF		MF		MF		MF		Total		Total	
63	Feedstream Description				Heavy Oils		Heavy Oils		Heavy Oils		Heavy Oils		Natural Gas		Natural Gas		Natural Gas		Natural Gas		Total		Total	
64	Feed Rate		lb/hr		2410		2369		2369		2382.7		3538.0		3538.0		3537.0		3537.0		108.8		108.8	
65	Thermal Feedrate		MMBtu/hr		38		38		38		38.0		70.8		70.8		70.7		70.7		108.8		108.8	
66	Viscosity		cps		33		32		33		32.7													
67	Heating Value		Btu/lb		16000		16000		16000		16000.0													
68	Density		lb/gal		8.9		8.9		8.9		8.9													
69	Ash		lb/hr		0.54		0.51		0.59		0.547													
70	Chlorine		lb/hr		0.032		0.046		0.035		0.038													
71	Acetophenone		g/hr								190000													
72																								
73	Stack Gas Flowrate		dscfm		32400		32200		33200		32600													
74	Oxygen		%		5.2		5.1		5		5.1													
75																								
76	Estimated Firing Rate		MMBtu/hr																		162.5		162.5	
77																								
78	Ash		mg/dscm		3.9		3.7		4.2		4.0										3.9		3.7	
79	Chlorine		ug/dscm		234		336		247		274										234.0		336.3	
80																								
81																								
82																								
83																								
84	843C3		Risk burn		R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2	
85																								
86	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2		F3		F3	
87	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		NG		NG		NG		NG		Total		Total	
88	Feed Class 2				HW		HW		HW		HW		MF		MF		MF		MF		Total		Total	
89	Feedstream Description				Heavy Oils		Heavy Oils		Heavy Oils		Heavy Oils		Natural Gas		Natural Gas		Natural Gas		Natural Gas		Total		Total	
90	Feed Rate		lb/hr		3186		3034		3040		3086.7		1092.0		1035.0		983.0		1036.7		72.2		68.5	
91	Thermal Feedrate		MMBtu/hr		50.4		47.8		47.9		48.7		21.8		20.7		19.7		20.7		72.2		68.5	
92	Viscosity		cps		19.8		21		18.6		19.8													
93	Heating Value		Btu/lb		15800		15800		15800		15800.0													
94	Density		lb/gal		8.92		8.91		8.93		8.9													
95	Ash		lb/hr		0.685		0.661		0.629		0.66													
96	Chlorine		lb/hr		0.00956		0.0121		0.0122		0.01													
97	Antimony		g/hr	nd	0.17		0.766		0.807		0.58													
98	Arsenic		g/hr	nd	0.0072	nd	0.0069	nd	0.0069		0.01													
99	Barium		g/hr		0.0382		0.026		0.0338		0.03													
100	Beryllium		g/hr	nd	0.021	nd	0.02	nd	0.02		0.02													
101	Cadmium		g/hr	nd	0.11	nd	0.11	nd	0.11		0.11													
102	Chromium		g/hr		0.259		0.292		0.333		0.29													
103	Lead		g/hr		0.33		0.869		1.1		0.77													
104	Mercury		g/hr	nd	0.029	nd	0.028	nd	0.028		0.03													
105	Nickel		g/hr	nd	0.69	nd	0.66	nd	0.66		0.67													
106	Selenium		g/hr		0.538	nd	0.29	nd	0.576		0.47													
107	Silver		g/hr	nd	0.041	nd	0.039	nd	0.039		0.04													
108	Thallium		g/hr	nd	0.26	nd	0.25	nd	0.25		0.25													
109	Zinc		g/hr		0.267		0.328		0.258		0.28													
110																								
111	Stack Gas Flowrate		dscfm		17212		16546		16149		16635.7													
112	Oxygen		%		7		6.8		6.4		6.7													
113																								
114	Estimated Firing Rate		MMBtu/hr																		76.5		74.6	
115																								
116	<i>Feedrate MTEC Calculations</i>																							
117	Ash		mg/dscm		10.6		10.5		10.0		10.4										0	10.6	0	10.5
118	Chlorine		ug/dscm		148.5		192.8		193.7		178.3										0	148.5	0	192.8
119	Antimony		ug/dscm	100	5.8		26.9		28.2	10	20.3										100	5.8	0	26.9
120	Arsenic		ug/dscm	100	0.2	100	0.2	100	0.2	100	0.2										100	0.2	100	0.2

	B	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
61	Feed Class		Total		Total								
62	Feed Class 2		Total		Total								
63	Feedstream Description		Total		Total								
64	Feed Rate												
65	Thermal Feedrate		108.7		108.7								
66	Viscosity												
67	Heating Value												
68	Density												
69	Ash												
70	Chlorine												
71	Acetophenone												
72													
73	Stack Gas Flowrate												
74	Oxygen												
75													
76	Estimated Firing Rate		168.6		164.6								
77													
78	Ash		4.2		4.0								
79	Chlorine		246.6		274.4								
80													
81													
82													
83													
84	843C3		R3		Cond Avg								
85													
86	Feedstream Number		F3		F3								
87	Feed Class		Total		Total								
88	Feed Class 2		Total		Total								
89	Feedstream Description		Total		Total								
90	Feed Rate												
91	Thermal Feedrate		67.6		69.4								
92	Viscosity												
93	Heating Value												
94	Density												
95	Ash												
96	Chlorine												
97	Antimony												
98	Arsenic												
99	Barium												
100	Beryllium												
101	Cadmium												
102	Chromium												
103	Lead												
104	Mercury												
105	Nickel												
106	Selenium												
107	Silver												
108	Thallium												
109	Zinc												
110													
111	Stack Gas Flowrate												
112	Oxygen												
113													
114	Estimated Firing Rate		74.8		75.3								
115													
116	<i>Feedrate MTEC Calculations</i>												
117	Ash	0	10.0	0	10.4								
118	Chlorine	0	193.7	0	178.3								
119	Antimony	0	28.2	9.5	20.3								
120	Arsenic	100	0.2	100	0.2								

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
21	Barium		ug/dscm		1.3		0.9		1.2		1.1								0	1.3	0	0.9	
22	Beryllium		ug/dscm	100	0.7	100	0.7	100	0.7	100	0.7								100	0.7	100	0.7	
23	Cadmium		ug/dscm	100	3.8	100	3.9	100	3.8	100	3.8								100	3.8	100	3.9	
24	Chromium		ug/dscm		8.9		10.2		11.6		10.3								0	8.9	0	10.2	
25	Lead		ug/dscm		11.3		30.5		38.5		26.8								0	11.3	0	30.5	
26	Mercury		ug/dscm	100	1.0	100	1.0	100	1.0	100	1.0								100	1.0	100	1.0	
27	Nickel		ug/dscm	100	23.6	100	23.2	100	23.1	100	23.3								100	23.6	100	23.2	
28	Selenium		ug/dscm		18.4		10.2	100	20.1		16.2								0	18.4	0	10.2	
29	Silver		ug/dscm	100	1.4	100	1.4	100	1.4	100	1.4								100	1.4	100	1.4	
30	Thallium		ug/dscm	100	8.9	100	8.8	100	8.7	100	8.8								100	8.9	100	8.8	
31	Zinc		ug/dscm		9.1		11.5		9.0		9.9								0	9.1	0	11.5	
32																							
33	SVM		ug/dscm	25	15.1	11	34.4	9	42.3	13	30.6								25	15.1	11	34.4	
34	LVM		ug/dscm	10	9.8	8	11.2	7	12.6	8	11.2								10	9.8	8	11.2	

	B	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
121	Barium	0	1.2	0	1.1								
122	Beryllium	100	0.7	100	0.7								
123	Cadmium	100	3.8	100	3.8								
124	Chromium	0	11.6	0	10.3								
125	Lead	0	38.5	0	26.8								
126	Mercury	100	1.0	100	1.0								
127	Nickel	100	23.1	100	23.3								
128	Selenium	100	20.1	0	16.2								
129	Silver	100	1.4	100	1.4								
130	Thallium	100	8.7	100	8.8								
131	Zinc	0	9.0	0	9.9								
132													
133	SVM	9.1	42.3	13	30.6								
134	LVM	7	12.6	8	11.2								

	A	B	C
1	Process Information		
2			Cond Avg
3	843C1	Trial burn	
4			
5	Comb Temp	°F	2182
6	Prod Rate	lb/hr	129377
7	Max Comb Air Flow	lb/hr	213645
8			
9	843C2	Trial burn	
10			
11	Comb Temp	°F	1729.0
12	Prod Rate	lb/hr	90118.0
13	Max Comb Air Flow	lb/hr	210084.0
14			
15	843C3	Risk burn	
16			
17	Comb Temp	°F	1769.3
18	Prod Rate	lb/hr	58647.7
19	Max Comb Air Flow	lb/hr	101584

	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:		Dow Chemical Company, Freeport, TX															
4	Condition ID:		843C3															
5	Condition/Test Date:		Risk burn, slightly above normal operating of liq waste feed rate, normal comb temp, February 10-11, 1998.															
6																		
7	I-TEF		Run 1				Run 2				Run 3							
8	Wght Fact		Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ
9			Full ND	Full ND	1/2 ND	1/2 ND	Full ND	Full ND	1/2 ND	1/2 ND	Full ND	Full ND	1/2 ND	1/2 ND	Full ND	Full ND	1/2 ND	1/2 ND
10	Detected in sample volume (pg)																	
11	2,3,7,8-TCDD	1	nd	4	4	2.0	2	nd	6.5	7	3.3	3	nd	5.8	5.80	2.9	2.90	
12	Total TCDD	0	nd	23	0	23.0	0	nd	7	0	3.5	0	nd	5.8	0.00	0.0	0.00	
13	1,2,3,7,8-PCDD	0.5	nd	4.6	2.3	2.3	1.2	nd	5	2.50	2.5	1.25	nd	4.3	2.15	2.2	1.08	
14	Total PCDD	0	nd	4.6	0	2.3	0	nd	5	0	2.5	0	nd	4.3	0.00	0.0	0.00	
15	1,2,3,4,7,8-HxCDD	0.1	nd	7.9	0.8	4.0	0.4	nd	11	1.10	5.5	0.55	nd	9.7	0.97	4.9	0.49	
16	1,2,3,6,7,8-HxCDD	0.1	nd	6.5	0.7	3.3	0.3	nd	8.7	0.87	4.4	0.44	nd	8.0	0.80	4.0	0.40	
17	1,2,3,7,8,9-HxCDD	0.1	nd	6.2	0.6	3.1	0.3	nd	8.3	0.830	4.2	0.415	nd	7.6	0.76	3.8	0.38	
18	Total HxCDD	0	nd	7.9	0	4.0	0	nd	11	0	5.5	0	nd	9.7	0.00	4.9	0.00	
19	1,2,3,4,6,7,8-HpCDD	0.01		14	0.14	14.0	0.14	nd	13	0.130	6.5	0.065	nd	14.0	0.14	7.0	0.07	
20	Total HpCDD	0		14	0	14.0	0	nd	13	0	6.5	0	nd	14.0	0.00	7.0	0.00	
21	OCDD	0.001		110	0.11	110.0	0.11		99	0.099	99.0	0.099		100.0	0.10	100.0	0.10	
22	2,3,7,8-TCDF	0.1	nd	7.4	0.7	3.7	0.4	nd	6.7	0.670	3.4	0.335	nd	7.6	0.76	3.8	0.38	
23	Total TCDF	0	nd	7.4	0.0	3.7	0.0	nd	6.7	0	3.4	0	nd	7.6	0.00	3.8	0.00	
24	1,2,3,7,8-PCDF	0.05	nd	7.2	0.4	3.6	0.2	nd	9.1	0.455	4.6	0.228	nd	6.0	0.30	3.0	0.15	
25	2,3,4,7,8-PCDF	0.5	nd	6.5	3.3	3.3	1.6	nd	8.2	4.1	4.1	2.1	nd	5.5	2.75	2.8	1.38	
26	Total PCDF	0	nd	7.2	0.0	3.6	0.0	nd	9.1	0	4.6	0	nd	6.0	0.00	3.0	0.00	
27	1,2,3,4,7,8-HxCDF	0.1		8.4	0.84	8.4	0.84		6.6	0.66	6.6	0.66	nd	3.5	0.35	1.8	0.18	
28	1,2,3,6,7,8-HxCDF	0.1	nd	3.2	0.32	1.6	0.16	nd	4.6	0.46	2.3	0.23	nd	3.3	0.33	1.7	0.17	
29	1,2,3,7,8,9-HxCDF	0.1	nd	3.2	0.32	1.6	0.16	nd	4.6	0.46	2.3	0.23	nd	3.3	0.33	1.7	0.17	
30	2,3,4,6,7,8-HxCDF	0.1	nd	3.7	0.37	1.9	0.19	nd	5.3	0.53	2.7	0.27	nd	3.9	0.39	2.0	0.20	
31	Total HxCDF	0		17	0	17.0	0		12	0	12.0	0	nd	3.9	0.00	2.0	0.00	
32	1,2,3,4,6,7,8-HpCDF	0.01		52	0.52	52.0	0.52		29	0.29	29.0	0.29		19.0	0.19	19.0	0.19	
33	1,2,3,4,7,8,9-HpCDF	0.01	nd	6.9	0.069	3.5	0.035	nd	3.6	0.036	1.8	0.018	nd	4.4	0.04	2.2	0.02	
34	Total HCDF	0		52	0	52.0	0		29	0	29.0	0		19.0	0.00	19.0	0.00	
35	OCDF	0.001		230	0.23	230.0	0.23		110	0.11	110.0	0.11		56.0	0.06	56.0	0.06	
36																		
37	Gas sample volume (dscf)				133.88	133.88	133.88			136.59	136.59	136.59			131.79	131.79	131.79	
38	O2 (%)				7.00	7.00	7.00			6.8	6.8	6.8			6.40	6.40	6.40	
39																		
40	PCDD/PCDF (pg in sample)				15.63	459.6	8.73			19.800	275.9	10.480			16.22	195.6	8.28	
41	PCDD/PCDF (ng/dscm @ 7% O2)		88.2		0.0041	0.1213	0.0023	94.1		0.005	0.0704	0.003	97.9		0.004	0.0503	0.002	
42																		
43	TEQ Cond Avg		0.0024															
44	Total Cond Avg		0.08															