	B	C
1	**Source Description**	
2		
3	Phase II ID No.	788
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-824
10	Other Sister Facilities	None
11	Number of Sister Facilities	0
12	Combustor Class	HCl Production Furnace
13	Combustor Type	
14	Combustor Characteristics	Vertical fired, open chamber, manufactured by Dow Chemical Proprietary Design, capacity 88 MMBtu/hr, operated @ 1100-1350C, designed to recover MgCl2
15	Capacity (MMBtu/hr)	88
16	Soot Blowing	None
17	APCS Detailed Acronym	MGCLREC/VS/SEP/DM
18	APCS General Class	LEWS, HEWS,Cyclone
19	APCS Characteristics	(Venturi scrubber, separator, demister) J-3 Venturi Scrubber, S-3 Separator, and inorganic reducing agent to capture HCl/Cl2. The gas passes through S-30 demister to remove entrained droplets.
20	Hazardous Wastes	Liq
21	Haz Waste Description	Liquid wastes (Allyl Crude PDC, Trichlor-B-Recycle)
22	Supplemental Fuel	Natural gas
23		
24	Stack Characteristics	
25	Diameter (ft)	3.5
26	Height (ft)	150
27	Gas Velocity (ft/sec)	25.2
28	Gas Temperature (°F)	99.7
29		
30	Permitting Status	Tier I for metals, Tier lll (Cr+6)
31	HWC Burn Status (Date if Terminated)	

	B	C
1	**Cond Description**	
2		
3	**788C1**	
4		
5	Report Name/Date	B-824 Trial Burn Report and Risk Burn Report, March 13, 1998
6	Report Prepare	Focus Environmental, Inc.
7	Testing Firm	METCO Environmental
8	Testing Dates	November 7, 1997
9	Cond Dates	Nov-97
10	Condition Descr	Trial burn, max feed rate and comb temp
11	Content	PM, HCl/Cl2, Cr+6
12		
13	**788C2**	
14		
15	Report Name/Date	B-824 Trial Burn Report and Risk Burn Report, March 13, 1998
16	Report Prepare	Focus Environmental, Inc.
17	Testing Firm	METCO Environmental
18	Testing Dates	November 6, 1997
19	Cond Dates	Nov-97
20	Condition Descr	Trial burn, DRE, min comb temp and max stack gas flow
21	Content	CO, DRE (chlorobenzene)
22		
23	**788C3**	
24		
25	Report Name/Date	B-824 Trial Burn Report and Risk Burn Report, March 13, 1998
26	Report Prepare	Focus Environmental, Inc.
27	Testing Firm	METCO Environmental
28	Testing Dates	November 4-5, 1997
29	Cond Dates	Nov-97
30	Condition Descr	Risk burn, max liq waste feed rate, normal comb temp
31	Content	Stack gas metals, PCDD/F, other organics, PSD

	B	C	D	E	F	G	H	I	J	K	L	M
1	**Stack Gas Emissions**											
2												
3		Comments	Units	7% O2		1		2		3		Cond Avg
4												
5	**788C1**	**Capacity Burn**				R1		R2		R3		Cond Avg
6												
7	PM	E1	gr/dscf	y		0.0034		0.0041		0.0038		0.0038
8	CO (MHRA)	E1	ppmv	y		45		6		6		19
9	CO (RA)	E1	ppmv	y		13.4		5.7		6		8.4
10	Chromium (Hex)		g/hr			0.038		0.23		0.051		0.11
11	HCl		g/hr			79		92		75		82
12	Cl2		g/hr			4.7		280		8.7		99
13												
14	Chromium (Hex)	E2	µg/dscm	y		1.5		10.0		2.1		4.4
15	HCl	E1	ppmv	y		2.1		2.7		2.1		2.3
16	Cl2	E1	ppmv	y		0.1		4.2		0.1		1.4
17	Total Chlorine	E1	ppmv	y		2.23		11.03		2.31		5.1
18												
19	Sampling Train	PM, HCl/Cl2	E1									
20	Stack Gas Flowrate		dscfm			15128		13747		14681		14519
21	O2		%			7.3		7.2		7.4		7.3
22	Moisture		%									
23	Temperature		°F									
24												
25	Sampling Train	Cr+6	E2									
26	Stack Gas Flowrate		dscfm			15329		14800		14820		14983
27	O2		%									
28	Moisture		%									
29	Temperature		°F									
30												
31	**788C2**	**DRE Burn**				R1		R2		R3		Cond Avg
32												
33	CO (MHRA)	E1	ppmv	y		2		2		2		2
34	CO (RA)	E1	ppmv	y		1.8		1.8		1.7		1.8
35												
36	POHC DRE	Chlorobenzene										
37	POHC Feedrate		lb/hr			500		500		500		
38	Emission Rate	E1	lb/hr			1.05E-04		1.34E-04		1.93E-04		
39	DRE	E1	%			99.99998		99.99997		99.99996		
40												
41	Sampling Train	DRE	E1									
42	Stack Gas Flowrate		dscfm			16030		15972		15789		15930
43	O2		%									
44	Moisture		%									
45	Temperature		°F									
46												
47												
48												
49	**788C3**	**Risk Burn**				R1		R2		R3		Cond Avg
50												
51	CO (MHRA)	E1	ppmv	y		39		25		36.9		33.6
52	CO (RA)	E1	ppmv	y		12.8		7.2		6.1		8.7
53	Antimony		µg/dscf	n	nd	0.006	nd	0.006	nd	0.006		
54	Arsenic		µg/dscf	n	nd	0.008	nd	0.008	nd	0.008		
55	Barium		µg/dscf	n		0		0		0.0039		
56	Beryllium		µg/dscf	n	nd	0.002	nd	0.002	nd	0.002		
57	Cadmium		µg/dscf	n	nd	0.003	nd	0.003	nd	0.003		
58	Chromium		µg/dscf	n		0.13		0.034		0.079		
59	Cobalt		µg/dscf	n		0		0.033		0.011		
60	Copper		µg/dscf	n		0.22		1.8		1.7		
61	Lead		µg/dscf	n	nd	0.01	nd	0.01	nd	0.01		
62	Manganese		µg/dscf	n		0		0.053		0.041		
63	Mercury		µg/dscf	n		0.0054		0.0063		0.003		
64	Molybdenum		µg/dscf	n		0.0038		0		0		
65	Nickel		µg/dscf	n		0		0.42		0.36		
66	Selenium		µg/dscf	n	nd	0.006	nd	0.006	nd	0.006		
67	Silver		µg/dscf	n	nd	0.004	nd	0.004	nd	0.004		
68	Thallium		µg/dscf	n	nd	0.01	nd	0.01	nd	0.01		
69	Vanadium		µg/dscf	n	nd	0.01	nd	0.01	nd	0.01		
70												
71	Antimony	E1	µg/dscm	y	nd	0.22	nd	0.22	nd	0.22	100	0.22

	B	C	D	E	F	G	H	I	J	K	L	M
72	Arsenic	E1	µg/dscm	y	nd	0.29	nd	0.29	nd	0.29	100	0.29
73	Barium	E1	µg/dscm	y		0.14		0.00		0.14		0.09
74	Beryllium	E1	µg/dscm	y	nd	0.07	nd	0.07	nd	0.07	100	0.07
75	Cadmium	E1	µg/dscm	y	nd	0.11	nd	0.11	nd	0.11	100	0.11
76	Chromium	E1	µg/dscm	y		4.69		1.22		2.87		2.93
77	Cobalt	E1	µg/dscm	y		0		1.18		0.40		0.53
78	Copper	E1	µg/dscm	y		7.94		64.53		61.84		44.77
79	Lead	E1	µg/dscm	y	nd	0.36	nd	0.36	nd	0.36	100	0.36
80	Manganese	E1	µg/dscm	y		0		1.90		1.49		1.13
81	Mercury	E1	µg/dscm	y		0.19		0.23		0.11		0.18
82	Molybdenum	E1	µg/dscm	y		0.14		0.00		0.00		0.05
83	Nickel	E1	µg/dscm	y		0.00		15.06		13.09		9.38
84	Selenium	E1	µg/dscm	y	nd	0.22	nd	0.22	nd	0.22	100	0.22
85	Silver	E1	µg/dscm	y	nd	0.14	nd	0.14	nd	0.15	100	0.14
86	Thallium	E1	µg/dscm	y	nd	0.36	nd	0.36	nd	0.36	100	0.36
87	Vanadium	E1	µg/dscm	y	nd	0.36	nd	0.36	nd	0.36	100	0.36
88	SVM	E1	µg/dscm	y	100	0.47	100	0.47	100	0.47	100	0.47
89	LVM	E1	µg/dscm	y	7.1	5.06	23	1.58	11	3.24	11	3.29
90												
91	Sampling Train	Metals	E1									
92	Stack Gas Flowrate		dscfm			15289		15460		14847		15198.7
93	O2		%									
94	Moisture		%									
95	Temperature		°F									
96												
97	Sampling Train	PCDD/PCDF	E2									
98	Stack Gas Flowrate		dscfm			15976		15013		14811		15266.7
99	O2		%									
100	Moisture		%									
101	Temperature		°F			100		98		101		99.7
102												
103	**Particle Size Distributio**	**in microns**										
104	0.2-0.5		% wt			0.2						
105	0.5-0.9		% wt			0.5						
106	0.9-1.3		% wt			0.9						
107	1.3-2.7		% wt			7.3						
108	2.7-4.5		% wt			7.4						
109	4.5-6.5		% wt			3.8						
110	6.5-9.7		% wt			8.1						
111	9.7-15		% wt			10.9						
112	>15		% wt			60.8						

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	**Feedstreams**																	
2																		
3																		
4	**788C1**	**Capacity burn**			R1		R2		R3		Cond Avg		R1		R2		R3	
5																		
6	Feedstream Number				F1		F1		F1		F1		F2		F2		F2	
7	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW	
8	Feed Class 2																	
9	Feedstream Description				Allyl Crude PDC		Allyl Crude PDC		Allyl Crude PDC		Allyl Crude PDC		Triclor-B Recycle		Triclor-B Recycle		Triclor-B Recycle	
10	Feed Rate		lb/hr		5462		5168		5186		5272		13420		13253.4		13299	
11	Viscosity		cps		1		1		1		1.00		2		2		2	
12	Heating Value		Btu/lb		7440		7360		7250		7350.0		3296.7		3296.7		3296.7	
13	Density		g/ml		1.14		1.12		1.4		1.2		1.59		1.59		1.59	
14	Ash		lb/hr	nd	0.02		0.02		0.02		0.02		1.9		1.9		1.9	
15	Chlorine		lb/hr		3332.0		3101.0		3163.0		3199.0		10257.3		10257.3		10257.3	
16	Antimony		lb/hr	nd	0.0007	nd	0.0006	nd	0.0006		0.0007	nd	0.002	nd	0.002	nd	0.002	
17	Arsenic		lb/hr	nd	0.0005	nd	0.0005	nd	0.0005		0.0005	nd	0.001	nd	0.001	nd	0.001	
18	Barium		lb/hr		0.00045		0.00041		0.00042		0.00043		0.0011		0.0011		0.0011	
19	Beryllium		lb/hr	nd	0.0002	nd	0.0002	nd	0.0002		0.0002	nd	0.0004	nd	0.0004	nd	0.0004	
20	Cadmium		lb/hr	nd	0.0007	nd	0.0006	nd	0.0006		0.0007	nd	0.002	nd	0.002	nd	0.002	
21	Chromium		lb/hr		0.0001		0.00011		0.00012		0.00011		0.0021		0.0034		0.0018	
22	Lead		lb/hr		0.001		0.0019		0.001		0.0015	nd	0.003	nd	0.0072	nd	0.003	
23	Mercury		lb/hr	nd	0.0005	nd	0.0005	nd	0.0005		0.0005	nd	0.001	nd	0.001	nd	0.001	
24	Nickel		lb/hr	nd	0.003	nd	0.003	nd	0.003		0.003		0.014		0.033		0.014	
25	Selenium		lb/hr	nd	0.001	nd	0.001	nd	0.001		0.001	nd	0.003	nd	0.003	nd	0.003	
26	Silver		lb/hr	nd	0.0007	nd	0.0006	nd	0.0006		0.0007	nd	0.002	nd	0.002	nd	0.002	
27	Thallium		lb/hr	nd	0.001	nd	0.001	nd	0.001		0.001	nd	0.003	nd	0.003	nd	0.003	
28	Zinc		lb/hr	nd	0.0007	nd	0.0006	nd	0.0006		0.0007		0.0091		0.0089		0.0089	
29																		
30	Stack Gas Flowrate		dscfm		15128		13747		14681		14519		15128		13747		14681	
31	Oxygen		%		7.3		7.2		7.4		7.3		7.3		7.2		7.4	
32																		
33	Thermal Feedrate		MMBtu/hr		40.6		38.0		37.6		38.7		44.2		43.7		43.8	
34	Estimated Firing Rate		MMBtu/hr															
35																		
36	*Feedrate MTEC Calculations*																	
37	Ash		mg/dscm	100	0.36	100	0.39	100	0.37		0.4		34.32		37.49		35.62	
38	Chlorine		ug/dscm		60179574		61187252		59299475		60222100		185258088		202391487		192302404	
39	Antimony		ug/dscm	100	12.6	100	11.8	100	11.2		11.9	100	36.1	100	39.5	100	37.5	
40	Arsenic		ug/dscm	100	9.0	100	9.9	100	9.4		9.4	100	18.1	100	19.7	100	18.7	
41	Barium		ug/dscm		8.1		8.1		7.9		8.0		19.9		21.7		20.6	
42	Beryllium		ug/dscm	100	3.6	100	3.9	100	3.7		3.8	100	7.2	100	7.9	100	7.5	
43	Cadmium		ug/dscm	100	12.6	100	11.8	100	11.2		11.9	100	36.1	100	39.5	100	37.5	
44	Chromium		ug/dscm		1.8		2.2		2.2		2.1		37.9		67.1		33.7	
45	Lead		ug/dscm		18.1		37.5		18.7		24.8	100	54.2	100	142.1	100	56.2	
46	Mercury		ug/dscm	100	9.0	100	9.9	100	9.4		9.4	100	18.1	100	19.7	100	18.7	
47	Nickel		ug/dscm	100	54.2	100	59.2	100	56.2		56.5		252.9		651.1		262.5	
48	Selenium		ug/dscm	100	18.1	100	19.7	100	18.7		18.8	100	54.2	100	59.2	100	56.2	
49	Silver		ug/dscm	100	12.6	100	11.8	100	11.2		11.9	100	36.1	100	39.5	100	37.5	
50	Thallium		ug/dscm	100	18.1	100	19.7	100	18.7		18.8	100	54.2	100	59.2	100	56.2	
51	Zinc		ug/dscm	100	12.6	100	11.8	100	11.2		11.9		164.4		175.6		166.9	
52																		
53	SVM		ug/dscm		30.7		49.3		30.0		36.7		90.3		181.5		93.7	
54	LVM		ug/dscm		14.4		16.0		15.4		15.3		63.2		94.7		60.0	
55																		
56																		
57																		
58	**788C2**	**DRE burn**			R1		R2		R3		Cond Avg		R1		R2		R3	
59																		
60	Feedstream Number				F1		F1		F1		F1		F2		F2		F2	

	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1																						
2																						
3																						
4	Cond Avg		R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2	
5																						
6	F2										F3		F3		F3		F3		F4		F4	
7	Liq HW										NG		NG		NG		NG		Spike		Spike	
8			HW		HW		HW		HW		MF		MF		MF		MF		Spike		Spike	
9	Triclor-B Recycle										Nat Gas		Nat Gas		Nat Gas		Nat Gas		Spike		Spike	
10	13324										2.1		2.1		2.1		2.1		1511		1511	
11	2																					
12	3296.7																					
13	1.59																					
14	1.9																		372		372	
15	10257.3																		225		225	
16	0.002																					
17	0.001																					
18	0.0011																					
19	0.0004																					
20	0.002																					
21	0.002																		0.7		0.7	
22	0.004																					
23	0.001																					
24	0.02																					
25	0.003																					
26	0.002																					
27	0.003																					
28	0.008																					
29																						
30	14519																					
31	7.3																					
32																						
33	43.9		84.9		81.7		81.4		82.7		0.042		0.042		0.042		0.042					
34																						
35																						
36																						
37	35.8	1	34.7	1	37.9	1	36.0	1	36.2										6718.7		7340.1	
38	193317326	0	245437662	0	263578739	0	251601879	0	253539427										4063747		4439578	
39	37.7	100	48.8	100	51.3	100	48.7	100	49.6													
40	18.8	100	27.1	100	29.6	100	28.1	100	28.3													
41	20.7	0	28.0	0	29.8	0	28.5	0	28.8													
42	7.5	100	10.8	100	11.8	100	11.2	100	11.3													
43	37.7	100	48.8	100	51.3	100	48.7	100	49.6													
44	46.3	0	39.7	0	69.3	0	36.0	0	48.3										12642.8		13812.0	
45	84.2	75	72.2	79	179.6	75	75.0	77	108.9													
46	18.8	100	27.1	100	29.6	100	28.1	100	28.3													
47	388.8	18	307.0	8	710.3	18	318.7	13	445.4													
48	56.5	100	72.2	100	78.9	100	75.0	100	75.4													
49	37.7	100	48.8	100	51.3	100	48.7	100	49.6													
50	56.5	100	72.2	100	78.9	100	75.0	100	75.4													
51	168.9	7	177.0	6	187.4	6	178.1	6.6	180.9													
52																						
53	121.9	85	121.0	84	230.9	85	123.7	84	158.5													
54	72.6	49	77.7	37	110.7	52	75.4	45	87.9										12642.8		13812.0	
55																						
56																						
57																						
58	Cond Avg		R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg					
59																						
60	F2		F3		F3		F3		F3		F4		F4		F4		F4					

	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ
1											
2											
3											
4	R3		Cond Avg		R1		R2		R3		Cond Avg
5											
6	F4		F4		F5		F5		F5		F5
7	Spike		Spike		Total		Total		Total		Total
8	Spike		Spike		Total		Total		Total		Total
9	Spike		Spike		Total		Total		Total		Total
10	1511		1511								
11											
12											
13											
14	372		372								
15	225		225								
16											
17											
18											
19											
20											
21	0.7		0.7								
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
32											
33					84.9		81.8		81.5		82.7
34											63.1
35											
36											
37	6974.2		7000.5	0	6753.4	0	7378.0	0	7010.2	0	7047
38	4218268		4234201	0	249501409	0	268018317	0	255820147	0	257779958
39				100	48.8	100	51.3	100	48.7	100	50
40				100	27.1	100	29.6	100	28.1	100	28
41				0	28.0	0	29.8	0	28.5	0	29
42				100	10.8	100	11.8	100	11.2	100	11
43				100	48.8	100	51.3	100	48.7	100	50
44	13123.5		13173.1	0	12682.5	0	13881.3	0	13159.5	0	13241
45				75	72.2	79	179.6	75	75.0	77	109
46				100	27.1	100	29.6	100	28.1	100	28
47				18	307.0	8	710.3	18	318.7	13	445
48				100	72.2	100	78.9	100	75.0	100	75
49				100	48.8	100	51.3	100	48.7	100	50
50				100	72.2	100	78.9	100	75.0	100	75
51				7	177.0	6	187.4	6	178.1	7	181
52											
53				85	121.0	84	230.9	85	123.7	84	159
54	13123.5		13173.1	0	12720.4	0	13922.7	0	13198.9	0	13281
55											
56											
57											
58											
59											
60											

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
61	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		NG		NG		NG	
62	Feed Class 2				HW		HW		HW		HW		MF		MF		MF	
63	Feedstream Description				Allyl Crude PDC		Allyl Crude PDC		Allyl Crude PDC		Allyl Crude PDC		Natural Gas		Natural Gas		Natural Gas	
64	Feed Rate		lb/hr		5650		5205		5348		5401.0		0.3		0.3		0.3	
65	Viscosity		cps		1		1		1		1							
66	Heating Value		Btu/lb		7413.3		7413.3		7413.3		7413.3							
67	Density		g/ml		1.14		1.14		1.14		1.14							
68	Ash		lb/hr	nd	0.02		0.02		0.02		0.02							
69	Chlorine		lb/hr		3446.0		3123.0		3155.0		3241.3							
70	Antimony		lb/hr	nd	0.0007		0.0006		0.0006		0.0007							
71	Arsenic		lb/hr	nd	0.0005		0.005		0.0005		0.0006							
72	Barium		lb/hr		0.00043		0.00042		0.00044		0.00043							
73	Beryllium		lb/hr	nd	0.0002	nd	0.0002	nd	0.0002		0.0002							
74	Cadmium		lb/hr	nd	0.0007	nd	0.0006	nd	0.0006		0.0007							
75	Chromium		lb/hr		0.0001		0.000088		0.000098		0.0001							
76	Lead		lb/hr	nd	0.001	nd	0.0019	nd	0.001		0.001							
77	Mercury		lb/hr	nd	0.0005	nd	0.0005	nd	0.0005		0.0005							
78	Nickel		lb/hr	nd	0.003	nd	0.003	nd	0.003		0.003							
79	Selenium		lb/hr	nd	0.001	nd	0.001	nd	0.001		0.001							
80	Silver		lb/hr	nd	0.0007	nd	0.0006	nd	0.0006		0.0007							
81	Thallium		lb/hr	nd	0.001	nd	0.001	nd	0.001		0.001							
82	Zinc		lb/hr	nd	0.0007	nd	0.0006	nd	0.0006		0.0007							
83																		
84	Stack Gas Flowrate		dscfm		16030		15972		15789		15930							
85	Oxygen		%		7.3		7.2		7.4		7.3							
86																		
87	Thermal Feedrate		MMBtu/hr		41.9		38.6		39.6		40.0		0.006		0.006		0.006	
88	Estimated Firing Rate		MMBtu/hr															
89																		
90	*Feedrate MTEC Calculations*																	
91	Ash		mg/dscm	100	0.34	100	0.34	100	0.35	100	0.34							
92	Chlorine		ug/dscm		58736408		53037104		54998650		55594149							
93	Antimony		ug/dscm	100	11.9	100	10.2	100	10.5	100	12.0							
94	Arsenic		ug/dscm	100	8.5	100	84.9	100	8.7	100	10.3							
95	Barium		ug/dscm		7.3		7.1		7.7		7.4							
96	Beryllium		ug/dscm	100	3.4	100	3.4	100	3.5	100	3.4							
97	Cadmium		ug/dscm	100	11.9	100	10.2	100	10.5	100	12.0							
98	Chromium		ug/dscm		1.7		1.5		1.7		1.7							
99	Lead		ug/dscm	100	17.0	100	32.3	100	17.4	100	17.2							
100	Mercury		ug/dscm	100	8.5	100	8.5	100	8.7	100	8.6							
101	Nickel		ug/dscm	100	51.1	100	50.9	100	52.3	100	51.5							
102	Selenium		ug/dscm	100	17.0	100	17.0	100	17.4	100	17.2							
103	Silver		ug/dscm	100	11.9	100	10.2	100	10.5	100	12.0							
104	Thallium		ug/dscm	100	17.0	100	17.0	100	17.4	100	17.2							
105	Zinc		ug/dscm	100	11.9	100	10.2	100	10.5	100	12.0							
106																		
107	SVM		ug/dscm	100	29.0	100	42.5	100	27.9	100	29.2							
108	LVM		ug/dscm	88	13.6	98	89.8	88	13.9	89	15.4							
109																		
110	**788C3**	**Risk burn**			R1		R2		R3		Cond Avg		R1		R2		R3	
111																		
112	Feedstream Number				F1		F1		F1		F1		F2		F2		F2	
113	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW	
114	Feed Class 2																	
115	Feedstream Description				Allyl Crude PDC		Allyl Crude PDC		Allyl Crude PDC		Allyl Crude PDC		Triclor-B Recycle		Triclor-B Recycle		Triclor-B Recycle	
116	Feed Rate		lb/hr		6174.6		4133.4		5283.6		5197.3		14536.8		14922		15766.8	
117	Heating Value		Btu/lb		7350		7470		7330		7383		2900		3380		3240	
118	Density		g/ml		1.16		1.16		1.11		1.14		1.56		1.61		1.52	
119	Viscosity		cp		228		244		161									
120	Moisture		% wt								21							

	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
61	NG		Spike		Spike		Spike		Spike		Total		Total		Total		Total					
62	MF		Spike		Spike		Spike		Spike		Total		Total		Total		Total					
63	Natural Gas		Spike		Spike		Spike		Spike		Total		Total		Total		Total					
64	0.3		500		500		500		500													
65																						
66																						
67																						
68																						
69			158		158		158		158													
70																						
71																						
72																						
73																						
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75																						
76																						
77																						
78																						
79																						
80																						
81																						
82																						
83																						
84																	15930					
85																	7.3					
86																						
87	0.006										41.9		38.6		39.7		40.0					
88																	69.3					
89																						
90																						
91										100	0.3	100	0.3	100	0.3	100	0.3					
92			2693080		2683273		2754291		2709985		61429488		55720377		57752941		58300935					
93										100	12	100	10	100	10	100	10.9					
94										100	9	100	85	100	9	100	34.1					
95										0	7	0	7	0	8	0	7.4					
96										100	3	100	3	100	3	100	3.4					
97										100	12	100	10	100	10	100	10.9					
98										0	2	0	1	0	2	0	1.6					
99										100	17	100	32	100	17	100	22.2					
100										100	9	100	8	100	9	100	8.6					
101										100	51	100	51	100	52	100	51.5					
102										100	17	100	17	100	17	100	17.2					
103										100	12	100	10	100	10	100	10.9					
104										100	17	100	17	100	17	100	17.2					
105										100	12	100	10	100	10	100	10.9					
106																						
107			0.0		0.0		0.0		0.0	100	29.0	100	42.5	100	27.9	100	33.1					
108			0.0		0.0		0.0		0.0	88	13.6	98	89.8	88	13.9	96	39.1					
109																						
110	Cond Avg		R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2	
111																						
112	F2										F3		F3		F3		F3		F4		F4	
113	Liq HW										NG		NG		NG		NG		Total		Total	
114			HW		HW		HW		HW		MF		MF		MF		MF		Total		Total	
115	Triclor-B Recycle										Natural Gas		Natural Gas		Natural Gas		Natural Gas		Total		Total	
116	15075.3																					
117	3173																					
118	1.56																					
119																						
120	16																					

	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ
61											
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101											
102											
103											
104											
105											
106											
107											
108											
109											
110	R3		Cond Avg								
111											
112	F4		F4								
113	Total		Total								
114	Total		Total								
115	Total		Total								
116											
117											
118											
119											
120											

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
121	Ash		lb/hr	nd	0.02	nd	0.01	nd	0.02		0.02		2.2		1.6		1.0	
122	Chlorine		lb/hr		3154.0		3154.0		3154.0		3154.0		11233.5		11674.0		12775.3	
123	Antimony		g/hr	nd	0.3	nd	0.2	nd	0.3		0.3	nd	0.8	nd	0.8	nd	0.9	
124	Arsenic		g/hr	nd	0.3	nd	0.2	nd	0.2		0.3	nd	0.7	nd	0.7	nd	0.7	
125	Barium		g/hr		0.24		0.15		0.2		0.2		0.54		0.56		0.58	
126	Beryllium		g/hr	nd	0.08	nd	0.06	nd	0.07		0.07	nd	0.2	nd	0.2	nd	0.2	
127	Cadmium		g/hr	nd	0.3	nd	0.2	nd	0.3		0.3	nd	0.8	nd	0.8	nd	0.8	
128	Chromium		g/hr		0.043		0.029		0.037		0.04		0.76		1		0.79	
129	Lead		g/hr	nd	0.6	nd	0.4	nd	0.5		0.5	nd	1	nd	1	nd	1.5	
130	Mercury		g/hr	nd	0.3	nd	0.2	nd	0.2		0.2	nd	0.7	nd	0.7	nd	0.7	
131	Nickel		g/hr	nd	2	nd	1	nd	1		1		8.3		5.9		5.2	
132	Selenium		g/hr	nd	0.6	nd	0.4	nd	0.5		0.5	nd	1	nd	1	nd	1	
133	Silver		g/hr	nd	0.3	nd	0.2	nd	0.3		0.3	nd	0.8	nd	0.8	nd	0.9	
134	Thallium		g/hr	nd	0.7	nd	0.5	nd	0.6		0.6	nd	2	nd	2	nd	2	
135	Zinc		g/hr	nd	0.3	nd	0.2	nd	0.3		0.3		2.8		3.6		3.1	
136																		
137	Stack Gas Flowrate		dscfm		15289		15460		14847		15198.7							
138	Oxygen		%		7.3		7.2		7.4		7.3							
139																		
140	Thermal Feedrate		MMBtu/hr		45.4		30.9		38.7		38.4		42.2		50.4		51.1	
141	Estimated Firing Rate		MMBtu/hr															
142																		
143	*Feedrate MTEC Calculations*																	
144	Ash		mg/dscm	100	0.36	100	0.18	100	0.37		0.15		38.58		27.44		17.97	
145	Chlorine		µg/dscm		56364835		55337472		58469620		56723976		200752461		204822491		236832188	
146	Antimony		ug/dscm	100	11.8	100	7.7	100	12.2		10.60	100	31.5	100	30.9	100	36.7	
147	Arsenic		ug/dscm	100	11.8	100	7.7	100	8.2		9.23	100	27.6	100	27.1	100	28.6	
148	Barium		ug/dscm		9.4		5.8		8.2		7.80		21.3		21.6		23.7	
149	Beryllium		ug/dscm	100	3.1	100	2.3	100	2.9		2.78	100	7.9	100	7.7	100	8.2	
150	Cadmium		ug/dscm	100	11.8	100	7.7	100	12.2		10.60	100	31.5	100	30.9	100	32.7	
151	Chromium		ug/dscm		1.7		1.1		1.5		1.44		29.9		38.6		32.3	
152	Lead		ug/dscm	100	23.6	100	15.5	100	20.4		19.83	100	39.4	100	38.6	100	61.2	
153	Mercury		ug/dscm	100	11.8	100	7.7	100	8.2		9.23	100	27.6	100	27.1	100	28.6	
154	Nickel		ug/dscm	100	78.7	100	38.6	100	40.8		52.74		326.7		228.0		212.3	
155	Selenium		ug/dscm	100	23.6	100	15.5	100	20.4		19.83	100	39.4	100	38.6	100	40.8	
156	Silver		ug/dscm	100	11.8	100	7.7	100	12.2		10.60	100	31.5	100	30.9	100	36.7	
157	Thallium		ug/dscm	100	27.6	100	19.3	100	24.5		23.79	100	78.7	100	77.3	100	81.7	
158	Zinc		ug/dscm	100	11.8	100	7.7	100	12.2		10.60	100	110.2	100	139.1	100	126.6	
159																		
160	SVM		ug/dscm		35.4		23.2		32.7		30.43		70.9		69.6		93.9	
161	LVM		ug/dscm		16.7		11.2		12.5		13.45		65.3		73.4		69.0	

	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
121	1.6																					
122	11867.7																					
123	0.8																					
124	0.7																					
125	0.56																					
126	0.2																					
127	0.8																					
128	0.85																					
129	1.17																					
130	0.7																					
131	6.5																					
132	1																					
133	0.8																					
134	2																					
135	3.2																					
136																						
137																			15976		15013	
138																			7.3		7.2	
139																						
140	47.8		87.5		81.3		89.8		86.2		4.2		4.2		4.2		4.2		91.7		85.5	
141																			69.5		65.8	
142																						
143																						
144	27.99	1	38.93		27.61		18.34	0.4	28.1									1	38.9	0	27.6	0
145	214135713	0	257117297	0	260159963	0	295301808	0	270859689									0	257117297	0	260159963	0
146	33.05	100	43.3	100	38.6	100	49.0	100	43.6									100	43.3	100	38.6	100
147	27.73	100	39.4	100	34.8	100	36.7	100	37.0									100	39.4	100	34.8	100
148	22.19	0	30.7	0	27.4	0	31.8	0	30.0									0	30.7	0	27.4	0
149	7.92	100	11.0	100	10.0	100	11.0	100	10.7									100	11.0	100	10.0	100
150	31.69	100	43.3	100	38.6	100	44.9	100	42.3									100	43.3	100	38.6	100
151	33.61	0	31.6	0	39.8	0	33.8	0	35.0									0	31.6	0	39.8	0
152	46.42	100	63.0	100	54.1	100	81.7	100	66.3									100	63.0	100	54.1	100
153	27.73	100	39.4	100	34.8	100	36.7	100	37.0									100	39.4	100	34.8	100
154	255.69	19	405.4	14	266.7	16	253.2	17	308.4									19	405.4	14	266.7	16
155	39.61	100	63.0	100	54.1	100	61.2	100	59.4									100	63.0	100	54.1	100
156	33.05	100	43.3	100	38.6	100	49.0	100	43.6									100	43.3	100	38.6	100
157	79.23	100	106.3	100	96.6	100	106.2	100	103.0									100	106.3	100	96.6	100
158	125.31	100	122.0	100	146.9	100	138.8	100	135.9									100	122.0	100	146.9	100
159																						
160	78.11	100	106.3	100	92.7	100	126.6	100	108.5									100	106.3	100	92.7	100
161	69.26	61	82.0	53	84.6	59	81.5	58	82.7									61	82.0	53	84.6	59

	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ
121											
122											
123											
124											
125											
126											
127											
128											
129											
130											
131											
132											
133											
134											
135											
136											
137	14811		15267								
138	7.4		7.3								
139											
140	94.0		90.4								
141	63.9		66.4								
142											
143											
144	18.3	0	28.3								
145	295301808	0	270859689								
146	49.0	100	43.6								
147	36.7	100	37.0								
148	31.8	0	30.0								
149	11.0	100	10.7								
150	44.9	100	42.3								
151	33.8	0	35.0								
152	81.7	100	66.3								
153	36.7	100	37.0								
154	253.2	17	308.4								
155	61.2	100	59.4								
156	49.0	100	43.6								
157	106.2	100	103.0								
158	138.8	100	135.9								
159											
160	126.6	100	108.5								
161	81.5	58	82.7								

	A	B	C
1	**Process Information**		
2			
3	**788C1**	Capacity burn	Cond Avg
4			
5	Comb Temp	^{o}F	2452.4
6	HCl Prod	lb/hr	11826
7	J-3 Vent Liq Flow Pressure	psi	13.1
8	S-30 Scrubber		
9	Effluent pH	pH	7.2
10	Effluent Flow	gpm	29.3
11	Recycle	gpm	94.9
12	L/G	gal/Macf	6.4
13			
14	**788C2**	DRE burn	Cond Avg
15			
16	Comb Temp	^{o}F	2012.0
17	HCl Prod	lb/hr	2290.2
18	J-3 Vent Liq Flow Pressure	psi	13.6
19	S-30 Scrubber		
20	Effluent pH	pH	8.0
21	Effluent Flow	gpm	30.7
22	Recycle	gpm	95.0
23	L/G	gal/Macf	5.9
24			
25	**788C3**	Risk burn	Cond Avg
26			
27	Comb Temp	^{o}F	2321.6
28	HCl Prod	lb/hr	13140
29	J-3 Vent Liq Flow Pressure	psi	16.1
30	S-30 Scrubber		
31	Effluent pH	pH	7.9
32	Effluent Flow	gpm	31.2
33	Recycle	gpm	94.8
34	L/G	gal/Macf	6.1

	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:		788C3															
5	Condition/Test Date:		Risk burn, max liq waste feed rate, normal comb temp, November 4-5, 1997															
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
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
10	Detected in sample volume (pg)																	
11		2,3,7,8-TCDD	1	nd	3.2	3.2	2	1.6	nd	2.9	2.9	1.5	1.5	nd	2	2.1	1	1.1
12		Total TCDD	0		62	0.0	62	0.0		73	0	73.0	0		74	0.0	74	0.0
13		1,2,3,7,8-PCDD	0.5		3.1	1.55	3	1.55		3.30	1.65	3.3	1.65		2	1.2	2	1.2
14		Total PCDD	0		53	0	53	0		56	0	56.0	0		64	0.0	64	0.0
15		1,2,3,4,7,8-HxCDD	0.1		4.2	0.42	4	0.42	nd	2.6	0.26	1.3	0.13	nd	1.9	0.19	1	0.10
16		1,2,3,6,7,8-HxCDD	0.1		8.6	0.86	9	0.86		3.6	0.36	3.6	0.36		2.8	0.3	3	0.3
17		1,2,3,7,8,9-HxCDD	0.1		5.1	0.51	5	0.51		2.7	0.27	2.7	0.27		2.2	0.2	2	0.2
18		Total HxCDD	0		46	0	46	0		46	0	46	0		30	0	30	0
19		1,2,3,4,6,7,8-HpCDD	0.01		38	0.38	38	0.38		14	0.14	14	0.14		11	0.11	11	0.11
20		Total HpCDD	0		54	0	54	0		26	0	26	0		19	0	19	0
21		OCDD	0.001		76	0.076	76	0.076		31	0.03	31	0.03		35	0.035	35	0.035
22		2,3,7,8-TCDF	0.1		140	14.00	140	14.00		140	14	140	14		110	11	110	11
23		Total TCDF	0		4700	0	4700	0		5200	0	5200	0		4300	0	4300	0
24		1,2,3,7,8-PCDF	0.05		260	13.00	260	13.00		230	11.5	230	11.5		200	10	200	10
25		2,3,4,7,8-PCDF	0.5		89	44.50	89	44.50		80	40	80	40		71	35.5	71	35.5
26		Total PCDF	0		2200	0.0	2200	0.0		2300	0	2300	0		2000	0	2000	0
27		1,2,3,4,7,8-HxCDF	0.1		170	17.00	170	17.00		140	14	140	14		110	11	110	11
28		1,2,3,6,7,8-HxCDF	0.1		56	5.60	56	5.60		51	5.1	51	5.1		40	4	40	4
29		2,3,4,6,7,8-HxCDF	0.1		19	1.90	19	1.90		16	1.6	16	1.6		12	1.2	12	1.2
30		1,2,3,7,8,9-HxCDF	0.1		23	2.30	23	2.30		20	2	20	2		16	1.6	16	1.6
31		Total HxCDF	0		710	0	710.0	0		620	0	620	0		540	0	540	0
32		1,2,3,4,6,7,8-HpCDF	0.01		110	1.1	110	1.1		74	0.74	74	0.74		61	0.61	61	0.61
33		1,2,3,4,7,8,9-HpCDF	0.01		28	0.28	28	0.28		13	0.13	13	0.13		9	0.09	9	0.09
34		Total HpCDF	0		200	0	200	0		120	0	120	0		95	0	95	0
35		OCDF	0.001		400	0.40	400	0.40		66	0.066	66	0.066		65	0.065	65	0.065
36																		
37		Gas sample volume (dscf)				165.31	165.31	165.31			167.02	167.02	167.02			154.89	154.89	154.89
38		O2 (%)*				7.3	7.3	7.3			7.3	7.3	7.3			7.3	7.3	7.3
39																		
40		PCDD/PCDF (pg in sample)				107.08	8501.0	105.48			94.747	8538.0	93.167			79.20	7222.0	78.05
41		PCDD/PCDF (ng/dscm @ 7% O2		3.0		0.023	1.857	0.023	3.3		0.02	1.846	0.02	2.9		0.018	1.684	0.018
42																		
43		* The percentage of O2 level is obtained from Trial burn (average of condition 1)																
44																		
45		TEQ Cond Avg	0.020															
46		Total Cond Avg	1.80															