	B	C
1	**Source Description**	
2		
3	Phase II ID No.	785
4	EPA ID No.	LAD003913449
5	Facility Name	Borden Chemicals and Plastics (BCP)
6	Facility Location	
7	City	Geismar
8	State	LA
9	Unit ID Name/No.	VCR Process Unit
10	Other Sister Facilities	None
11	Number of Sister Facilities	0
12	Combustor Class	HCl Production Furnace
13	Combustor Type	
14	Combustor Characteristics	Reactor
15	Capacity (MMBtu/hr)	30
16	Soot Blowing	
17	APCS Detailed Acronym	GC/HE/QC/AT/WS
18	APCS General Class	HE, WQ, LEWS
19	APCS Characteristics	Gas cooler, shell and tube heat exchanger, quench column, 3 absorber towers, HCl stripper, 2-stage caustic scrubber
20	Hazardous Wastes	Liq
21	Haz Waste Description	Vinyl chloride monomer (VCM) and ethylene dichloride process wastes
22	Supplemental Fuel	?
23		
24	Stack Characteristics	
25	Diameter (ft)	2
26	Height (ft)	164
27	Gas Velocity (ft/sec)	45
28	Gas Temperature (°F)	77
29		
30	Permitting Status	Tier I metals
31	HWC Burn Status (Date if Terminated)	

	B	C
1	**Cond Description**	
2		
3	**785C1**	
4		
5	Report Name/Date	Certification of Compliance, July 1998
6	Report Prepare	Borden Chem
7	Testing Firm	METCO Environmental (Source Emissions Survey of Borden Chem., April 1998, File No. 98-118)
8	Testing Dates	April 21, 1998
9	Cond Dates	Apr-98
10	Condition Descr	CoC; Low scrubber pH
11	Content	PM, HCl/Cl2, CO from stack
12		
13	**785C2**	
14		
15	Report Name/Date	Certification of Compliance, July 1998
16	Report Prepare	Borden Chem
17	Testing Firm	METCO Environmental (Source Emissions Survey of Borden Chem., April 1998, File No. 98-118)
18	Testing Dates	April 22, 1998
19	Cond Dates	Apr-98
20	Condition Descr	CoC; High scrubber pH
21	Content	PM, HCl/Cl2, CO from stack
22		
23	**785C3**	
24		
25	Report Name/Date	Certification of Compliance, July 1998
26	Report Prepare	Borden Chem
27	Testing Firm	METCO Environmental (Source Emissions Survey of Borden Chem., April 1998, File No. 98-118)
28		
29	Testing Dates	April 23, 1998
30	Cond Dates	Apr-98
31	Condition Descr	CoC; Lower scrubber recirculation rate, low scrubber pH
32	Content	PM, HCl/Cl2, CO from stack

	B	C	D	E	F	G	H	I	J	K	L	M
1	**Stack Gas Emissions**											
2												
3		Comments	Units	7% O2								
4												
5	**785C1**					R1		R2		R3		Cond Avg
6												
7	PM	E1	gr/dscf	y		0.005		0.0044		0.0043		0.00457
8	HCl		ppmv	n		39.6		13.5		13.9		
9	Cl2		ppmv	n		9.5		11.9		13.6		
10	CO (RA)	E1	ppmv	y	nd	0.1	nd	0.1	nd	0.1		0.1
11	CO (MHRA)	E1	ppmv	y	nd	0.1	nd	0.1	nd	0.1		0.1
12												
13	Sampling Train	PM, HCl/Cl2	E1									
14	Stack Gas Flowrate		dscfm			7823		8139		8021		7994.3
15	O2		%			10.7		11		10.2		10.5
16	Moisture		%			3.08		3.17		3		3.1
17	Temperature		°F			79		82		80		80.3
18												
19	HCl	E1	ppmv	y		53.8		18.3		18.0		30.1
20	Cl2	E1	ppmv	y		12.9		16.2		17.6		15.6
21	Total Chlorine	E1	ppmv	y		79.7		50.7		53.3		61.2
22												
23	**785C2**					R1		R2		R3		Cond Avg
24												
25	PM	E1	gr/dscf	y		0.0041		0.0041		0.0037		0.00397
26	HCl		ppmv	n		100.4		97.1		92.2		
27	Cl2		ppmv	n		4.1		4.9		4.6		
28	CO (RA)	E1	ppmv	y	nd	0.1	nd	0.1	nd	0.1		0.1
29	CO (MHRA)	E1	ppmv	y	nd	0.1	nd	0.1	nd	0.1		0.1
30												
31	Sampling Train	PM, HCl/Cl2	E1									
32	Stack Gas Flowrate		dscfm			8025		8447		8032		8168.0
33	O2		%			10.5		10.3		10.7		10.5
34	Moisture		%			3.32		3.44		3.56		3.4
35	Temperature		°F			74		76		78		76.0
36												
37	HCl	E1	ppmv	y		133.9		127.0		125.3		128.7
38	Cl2	E1	ppmv	y		5.5		6.4		6.3		6.0
39	Total Chlorine	E1	ppmv	y		144.8		139.9		137.8		140.8
40												
41	**785C3**					R1		R2		R3		Cond Avg
42												
43	PM	E1	gr/dscf	y		0.0035		0.0038		0.0045		0.00393
44	HCl		ppmv	n		10.4		34		51.1		
45	Cl2		ppmv	n		9.4		9.8		9.2		
46	CO (RA)	E1	ppmv	y	nd	0.1	nd	0.1	nd	0.1		0.1
47	CO (MHRA)	E1	ppmv	y	nd	0.1	nd	0.1	nd	0.1		0.1
48												
49	Sampling Train	PM, HCl,Cl2	E1									
50	Stack Gas Flowrate		dscfm			8254		8129		8307		8230.0
51	O2		%			10.7		10.4		10.4		10.5
52	Moisture		%			1.62		2.7		3.28		2.5
53	Temperature		°F			73		73		74		73.3
54												
55	HCl	E1	ppmv	y		14.1		44.9		67.5		42.2
56	Cl2	E1	ppmv	y		12.8		12.9		12.2		12.6
57	Total Chlorine	E1	ppmv	y		39.7		70.8		91.8		67.4

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	**Feedstreams**																		
2																			
3	**785C1**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg
4																			
5	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2
6	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Total		Total		Total		Total
7	Feed Class 2				HW		HW		HW		HW		Total		Total		Total		Total
8	Feedstream Description				Liq waste		Liq waste		Liq waste		Liq waste		Total		Total		Total		Total
9	Feed Rate		g/hr		1493000		1496880		1490076										
10	Thermal Feedrate		Btu/hr		18034680		22605000		20761200										
11	(Heating Value)		Btu/lb		5484		6856		6326										
12	Ash		g/hr		299		449.06		596.03										
13	Chlorine		g/hr		729978		811309		765899										
14	Antimony		g/hr		0.104		0.104		1.58										
15	Arsenic		g/hr		0.0597		0.0599		0.0923										
16	Barium		g/hr		3.911		4.655		2.414										
17	Beryllium		g/hr		0.003		0.003		0.003										
18	Cadmium		g/hr		0.004		0.003		0.007										
19	Chromium		g/hr		1.099		1.118		1.402										
20	Lead		g/hr		0.075		0.075		0.074										
21	Mercury		g/hr		0.084		0.075		0.086										
22	Silver		g/hr		0.149		0.149		0.149										
23	Thallium		g/hr		0.045		0.045		0.045										
24																			
25	Gas Flowrate		dscfm		7823		8139		8021										
26	Oxygen		%		10.7		11		10.2										
27																			
28	Thermal Feedrate		MMBtu/hr		18.0		22.6		20.8		20.5		18.0		22.6		20.8		20.5
29	Estimated Firing Rate		MMBtu/hr		25.6		26.6		27.5		26.6		25.6		26.6		27.5		26.6
30																			
31	*Feedrate MTEC Calculations*																		
32	Ash		mg/dscm		30.6		44.2		56.7		43.8		30.6		44.2		56.7		43.8
33	Chlorine		ug/dscm		74694662		79793657		72896987		75795102		74694662		79793657		72896987		75795102
34	Antimony		ug/dscm		10.6		10.2		150.4		57.1		10.6		10.2		150.4		57.1
35	Arsenic		ug/dscm		6.1		5.9		8.8		6.9		6.1		5.9		8.8		6.9
36	Barium		ug/dscm		400.2		457.8		229.8		362.6		400.2		457.8		229.8		362.6
37	Beryllium		ug/dscm		0.3		0.3		0.3		0.3		0.3		0.3		0.3		0.3
38	Cadmium		ug/dscm		0.4		0.3		0.7		0.5		0.4		0.3		0.7		0.5
39	Chromium		ug/dscm		112.5		110.0		133.4		118.6		112.5		110.0		133.4		118.6
40	Lead		ug/dscm		7.7		7.4		7.0		7.4		7.7		7.4		7.0		7.4
41	Mercury		ug/dscm		8.6		7.4		8.2		8.1		8.6		7.4		8.2		8.1
42	Silver		ug/dscm		15.2		14.7		14.2		14.7		15.2		14.7		14.2		14.7
43	Thallium		ug/dscm		4.6		4.4		4.3		4.4		4.6		4.4		4.3		4.4
44	SVM		ug/dscm		8.1		7.7		7.7		7.8		8.1		7.7		7.7		7.8
45	LVM		ug/dscm		118.9		116.1		142.5		125.8		118.9		116.1		142.5		125.8
46																			
47																			
48	**785C2**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg
49																			
50	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2
51	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Total		Total		Total		Total
52	Feed Class 2				HW		HW		HW		HW		Total		Total		Total		Total
53	Feedstream Description				Liq waste		Liq waste		Liq waste		Liq waste		Total		Total		Total		Total
54	Feed Rate		g/hr		1498241		1500055		1502777										
55	Thermal Feedrate		Btu/hr		22262220		19610510		19149140										
56	(Heating Value)		Btu/lb		6746		5935		5785										
57	Ash		g/hr		450		300		451										
58	Chlorine		g/hr		849502		702026		788958										
59	Antimony		g/hr		0.105		0.105		0.105										
60	Arsenic		g/hr		0.06		0.06		0.06										

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
61	Barium		g/hr		4.9		5.22		4.553										
62	Beryllium		g/hr		0.003		0.003		0.003										
63	Cadmium		g/hr		0.003		0.003		0.01										
64	Chromium		g/hr		1.221		1.264		1.495										
65	Lead		g/hr		0.075		0.075		0.075										
66	Mercury		g/hr		0.09		0.069		0.09										
67	Silver		g/hr		0.15		0.15		0.15										
68	Thallium		g/hr		0.045		0.045		0.045										
69																			
70	Gas Flowrate		dscfm		8025		8447		8032				8025		8447		8032		
71	Oxygen		%		10.5		10.3		10.7				10.5		10.3		10.7		
72																			
73	Thermal Feedrate		MMBtu/hr		22.3		19.6		19.1		20.3		22.3		19.6		19.1		20.3
74	Estimated Firing Rate		MMBtu/hr		26.8		28.7		26.3		27.2		26.8		28.7		26.3		27.2
75																			
76	*Feedrate MTEC Calculations*																		
77	Ash		mg/dscm		44		27		45		38.8		44		27		45		39
78	Chlorine		ug/dscm		83122848		64040878		78629101		75264276		83122848		64040878		78629101		75264276
79	Antimony		ug/dscm		10.3		9.6		10.5		10.1		10.3		9.6		10.5		10.1
80	Arsenic		ug/dscm		5.9		5.5		6.0		5.8		5.9		5.5		6.0		5.8
81	Barium		ug/dscm		479.5		476.2		453.8		469.8		479		476		454		470
82	Beryllium		ug/dscm		0.3		0.3		0.3		0.3		0.29		0.27		0.30		0.29
83	Cadmium		ug/dscm		0.3		0.3		1.0		0.5		0.29		0.27		1.00		0.52
84	Chromium		ug/dscm		119.5		115.3		149.0		127.9		119		115		149		128
85	Lead		ug/dscm		7.3		6.8		7.5		7.2		7.3		6.8		7.5		7.2
86	Mercury		ug/dscm		8.8		6.3		9.0		8.0		8.8		6.3		9.0		8.0
87	Silver		ug/dscm		14.7		13.7		14.9		14.4		14.7		13.7		14.9		14.4
88	Thallium		ug/dscm		4.4		4.1		4.5		4.3		4.4		4.1		4.5		4.3
89	SVM		ug/dscm		7.6		7.1		8.5		7.7		7.6		7.1		8.5		7.7
90	LVM		ug/dscm		125.6		121.1		155.3		134.0		126		121		155		134
91																			
92																			
93																			
94	**785C3**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg
95																			
96	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2
97	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Total		Total		Total		Total
98	Feed Class 2				HW		HW		HW		HW		Total		Total		Total		Total
99	Feedstream Description				Liq waste		Liq waste		Liq waste		Liq waste		Total		Total		Total		Total
100	Feed Rate		g/hr		1531807		1533168		1531354										
101	Thermal Feedrate		Btu/hr		22592130		20043400		22079040										
102	(Heating Value)		Btu/lb		6696		5935		6546										
103	Ash		g/hr		153		153		459										
104	Chlorine		g/hr		856280		863174		898905										
105	Antimony		g/hr		0.107		0.107		0.107										
106	Arsenic		g/hr		0.0613		0.0613		0.0612										
107	Barium		g/hr		3.661		4.845		3.966										
108	Beryllium		g/hr		0.003		0.003		0.003										
109	Cadmium		g/hr		0.003		0.003		0.003										
110	Chromium		g/hr		1.222		0.993		1.273										
111	Lead		g/hr		0.076		0.077		0.076										
112	Mercury		g/hr		0.115		0.09		0.087										
113	Silver		g/hr		0.153		0.153		0.153										
114	Thallium		g/hr		0.046		0.046		0.046										
115																			
116	Gas Flowrate		dscfm		7823		8139		8021				7823		8139		8021		
117	Oxygen		%		10.7		11		10.2				10.7		11		10.2		
118																			
119	Thermal Feedrate		MMBtu/hr		22.6		20.0		22.1		21.6		22.6		20.0		22.1		21.6
120	Estimated Firing Rate		MMBtu/hr		25.6		26.6		27.5		26.6		25.6		26.6		27.5		26.6

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
121																			
122	*Feedrate MTEC Calculations*																		
123	Ash		mg/dscm		15.7		15.1		43.7		24.8		15.7		15.1		43.7		24.8
124	Chlorine		ug/dscm		87618456		84894670		85556276		86023134		8.76E+07		87618456		87618456		87618456
125	Antimony		ug/dscm		10.9		10.5		10.2		11		10.9		10.5		10.2		10.6
126	Arsenic		ug/dscm		6.3		6.0		5.8		6		6.3		6.0		5.8		6.0
127	Barium		ug/dscm		374.6		476.5		377.5		410		374.6		476.5		377.5		409.5
128	Beryllium		ug/dscm		0.3		0.3		0.3		0.3		0.3		0.3		0.3		0.3
129	Cadmium		ug/dscm		0.3		0.3		0.3		0.3		0.3		0.3		0.3		0.3
130	Chromium		ug/dscm		125.0		97.7		121.2		115		125.0		97.7		121.2		114.6
131	Lead		ug/dscm		7.8		7.6		7.2		8		7.8		7.6		7.2		7.5
132	Mercury		ug/dscm		11.8		8.9		8.3		10		11.8		8.9		8.3		9.6
133	Silver		ug/dscm		15.7		15.0		14.6		15		15.7		15.0		14.6		15.1
134	Thallium		ug/dscm		4.7		4.5		4.4		5		4.7		4.5		4.4		4.5
135	SVM		ug/dscm		8.1		7.9		7.5		7.8		8.1		7.9		7.5		7.8
136	LVM		ug/dscm		131.6		104.0		127.3		121.0		131.6		104.0		127.3		121.0
137																			
138																			
139	**BIF Feedrate Limits**																		
140	Antimony		g/hr		2000														
141	Arsenic		g/hr		15														
142	Barium		g/hr		330000														
143	Beryllium		g/hr		28														
144	Cadmium		g/hr		37														
145	Chromium		g/hr		5.4														
146	Lead		g/hr		600														
147	Mercury		g/hr		2000														
148	Silver		g/hr		20000														
149	Thallium		g/hr		2000														

	A	B	C
1	**Process Information**		
2			
3	**785C1**		Cond Avg
4			
5	Scrubber Liquor pH	pH	8.5
6	Scrubber Liquid-to-Gas Ratio	gal/kacf?	0.067
7	Scrubber Blowdown	gpm	14.4
8			
9	**785C2**		Cond Avg
10			
11	Scrubber Liquor pH	pH	8.6
12	Scrubber Liquid-to-Gas Ratio	gal/kacf?	0.067
13	Scrubber Blowdown	gpm	13.5
14			
15	**785C2**		Cond Avg
16			
17	Scrubber Liquor pH	pH	8.3
18	Scrubber Liquid-to-Gas Ratio	gal/kacf?	0.04
19	Scrubber Blowdown	gpm	14