

	B	C
1	Source Description	
2		
3	Phase II ID No.	1004
4	EPA ID No.	TXD083472266
5	Facility Name	Lyondell Chemical Co.
6	Facility Location	
7	City	Channelview
8	State	TX
9	Unit ID Name/No.	F-65630 Hot Oil Heater
10	Other Sister Facilities	None
11	Number of Sister Facilities	0
12	Combustor Class	Liquid-fired boiler
13	Combustor Type	Liquid injection, process heater
14	Combustor Characteristics	Hot oil heater, 138 MM Btu/hr with Ljunstrom combustion air preheater
15	Capacity (MMBtu/hr)	138
16	Soot Blowing	Yes (during run #3 of test condition 1)
17	APCS Detailed Acronym	None
18	APCS General Class	
19	APCS Characteristics	
20	Hazardous Wastes	Liq
21	Haz Waste Description	Glycolic fuel liquids
22	Supplemental Fuel	Natural gas
23		Process vapors
24		
25	Stack Characteristics	
26	Diameter (ft)	7
27	Height (ft)	150
28	Gas Velocity (ft/sec)	24.4
29	Gas Temperature (°F)	286
30		
31	Permit Status	Tier I for metals and chlorine
32	HWC Burn Status (Date if Terminated)	

	B	C
1	Cond Description	
2		
3	1004C1	
4		
5	Report Name/Date	Re-Certification of Compliance for F-65630 Hot Oil Heater and Utility Boilers;8/6/97
6	Report Preparer	Waste Min Inc.
7	Testing Firm	Waste Min Inc.
8	Testing Dates	August 9, 1997
9	Cond Dates	Aug-97
10	Cond. Description	CoC; min combustion temperature
11	Content	CO emissions only; no feed analysis
12		
13	1004C2	
14		
15	Report Name/Date	Re-Certification of Compliance for F-65630 Hot Oil Heater and Utility Boilers; 8/31/98
16	Report Preparer	Waste Min Inc.
17	Testing Firm	Waste Min Inc.
18	Testing Dates	July 23, 1998
19	Cond Dates	Jul-98
20	Cond. Description	CoC; max waste and ash feedrates
21	Content	PM, CO; feed for ash, metals, chloride
22		
23	1004C3	
24		
25	Report Name/Date	Re-Certification of Compliance for F-65630 Hot Oil Heater and Utility Boilers; 8/31/98
26	Report Preparer	Waste Min Inc.
27	Testing Firm	Waste Min Inc.
28	Testing Dates	July 17, 1998
29	Cond Dates	Jul-98
30	Cond. Description	CoC; min combustion temperature
31	Content	CO emissions only; no feed analysis

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions											
2												
3	Cond ID	Comments	Units	7% O2								
4												
5												
6	1004C1					R1	R2	R3				Cond Avg
7												
8	CO (RA)	E1	ppmv	y								1.9
9	CO (MHRA)	E1	ppmv	y								2.1
10												
11	1004C2					R1	R2	R3				Cond Avg
12												
13	CO (MHRA)	E1	ppmv	y		1.98	2.07	1.9				1.98
14	CO (RA)	E1	ppmv	y		1.5	1.49	1.55				1.5
15	PM	E1	gr/dscf	y		0.0101	0.0117	0.0354				0.0194
16												
17	Sampling Train 1	PM	E1									
18	Stack Gas Flowrate		dscfm			35696	32301	32747				33581
19	O2		%			7.5	7.6	6.6				7.2
20	Moisture		%			15.1	16	16.3				15.8
21	Temperature		F			289	289	290				289.3
22												
23	1004C3					R1	R2	R3				Cond Avg
24												
25	CO (MHRA)	E1	ppmv	y								16.4
26	CO (RA)	E1	ppmv	y								6.1

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1																						
2																						
3	Feedstreams																					
4																						
5																						
6	1004C1				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1	
7	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2		F3	
8	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Liq non-HW		Liq non-HW		Liq non-HW		Liq non-HW		Misc. Fuel	
9	Feedstream Description				Glycolic		Glycolic		Glycolic		Glycolic		Tk-635		Tk-635		Tk-635		Tk-635		D-951	
10	Feed Rate				1557		1557		1557		1557		4486		4486		4486		4486		1.27	
11																						
12																						
13																						
14	1004C2				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1	
15	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2		F3	
16	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Liq non-HW		Liq non-HW		Liq non-HW		Liq non-HW		Misc. Fuel	
17	Feed Class 2				HW		HW		HW		HW		Non-HW		Non-HW		Non-HW		Non-HW		MF	
18	Feedstream Description				Liq HW		Liq HW		Liq HW		Liq HW		Non-HW liq		Non-HW liq		Non-HW liq		Non-HW liq		Vapor fuel	
19	Feedrate				2610959		2622629		2600046		2600000		747959		843307		1062402		750000		560018	
20	Heating Value				15314		15514		15313		15366		16813		17314		17615		16344		16097	
21	Thermal Feedrate				88.07		89.62		87.7		88		27.7		32.16		41.22		27		19.856	
22	Ash				783		525		39781		567.6		598		843		18698		543.3			
23	Chlorine				26.11		23.6		780.01		26		59.84		64.09		1168.64		60			
24	Antimony				15.67		15.74		15.6		0.65		4.49		5.06		6.37		0.2			
25	Arsenic				1.31		1.31		1.3		2.6		0.37		0.42		0.53		0.8			
26	Barium				1.31		1.31		1.3		1.3		0.37		0.42		0.53		0.4			
27	Beryllium				1.31		1.31		1.3		1.3		0.37		0.42		0.53		0.4			
28	Cadmium				1.31		1.31		1.3		1.3		0.37		0.42		0.53		0.4			
29	Chromium				1.31		1.31		1.3		1.3		0.52		0.59		0.74		0.5			
30	Lead				2.61		2.62		2.6		15.7		0.75		0.84		1.06		4.5			
31	Mercury				0.65		0.66		0.65		1.3		0.19		0.21		0.27		0.4			
32	Silver				1.31		1.31		1.3		1.3		0.37		0.42		0.53		0.4			
33	Thallium				2.61		2.62		2.6		2.6		0.75		0.84		1.06		0.8			
34																						
35	Stack Gas Flowrate				35696		32301		32747		33581.3		35696		32301		32747		33581.3		35696	
36	O2				7.5		7.6		6.6		7.2		7.5		7.6		6.6		7.2		7.5	
37																						
38																						
39	Feedrate MTEC Calculations																					
40	Ash				13.4		10.0		0.0		7.8		10.2		16.1		0.0		8.8			
41	Chlorine				446.7		449.6		0.0		298.8		1023.8		1220.8		0.0		748.2			
42	Antimony				268.1		299.8		272.8		280.2		76.8		96.4		111.4		94.9			
43	Arsenic				22.4		25.0		22.7		23.4		6.3		8.0		9.3		7.9			
44	Barium				22.4		22.7		22.7		23.4		6.3		8.0		9.3		7.9			
45	Beryllium				22.4		25.0		22.7		23.4		6.3		8.0		9.3		7.9			
46	Cadmium				22.4		25.0		22.7		23.4		6.3		8.0		9.3		7.9			
47	Chromium				22.4		25.0		22.7		23.4		6.3		8.0		9.3		7.9			
48	Lead				44.7		49.9		45.5		46.7		12.8		16.0		18.5		15.8			
49	Mercury				11.1		12.6		11.4		11.7		3.3		4.0		4.7		4.0			
50	Silver				22.4		25.0		22.7		23.4		6.3		8.0		9.3		7.9			
51	Thallium				44.7		49.9		45.5		46.7		12.8		16.0		18.5		15.8			
52	SVM				67.1		74.9		68.2		70.0		19.2		24.0		27.8		23.7			
53	LVM				67.2		74.9		68.2		70.1		21.6		27.2		31.5		26.8			
54																						
55																						
56	BIF Feedrate Limits																					
57	Antimony																					
58																						

	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AC	
1																					
2																					
3																					
4																					
5																					
6																					
7																					
8	R2		R3		Cond Avg																
9	F3		F3		F3																
10	Misc. Fuel		Misc. Fuel		Misc. Fuel																
11	D-951		D-951		D-951																
12	1.27		1.27		1.27																
13																					
14	R2		R3		Cond Avg																
15																					
16	F3		F3		F3																
17	Misc. Fuel		Misc. Fuel		Misc. Fuel																
18	MF		MF		MF																
19	Vapor fuel		Vapor fuel		Vapor fuel																
20	558502		508174		542231.333																
21	16095		16099		16746																
22	19.8		18.02		20																
23																					
24																					
25																					
26																					
27																					
28																					
29																					
30																					
31																					
32																					
33																					
34																					
35																					
36	32301		32747		33581.3																
37	7.6		6.6		7.2																
38																					
39																					
40																					
41																					
42																					
43																					
44																					
45																					
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57																					
58																					

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
59	Arsenic		g/hr									3.7										
60	Barium		g/hr								380,000											
61	Beryllium		g/hr								3.7											
62	Cadmium		g/hr								3.7											
63	Chromium		g/hr								3.7											
64	Lead		g/hr								690											
65	Mercury		g/hr								2300											
66	Silver		g/hr								23,000											
67	Thallium		g/hr								4000											
68																						
69	Chlorine		g/hr								3100											

	A	B	C
1	Process Information		
2			
3	Cond ID No.	Units	Cond Avg
4			
5	1004C1		
6			
7	Combustion Temperature	°F	957