

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase II ID No.	1001
4	EPA ID No.	TXD084970169
5	Facility Name	Lonza, Inc.
6	Facility Location	
7	City	Pasadena
8	State	TX
9	Unit ID Name/No.	Boiler B-4001C
10	Other Sister Facilities	None
11	Number of Sister Facilities	0
12	Combustor Class	Liquid-fired boiler
13	Combustor Type	Liquid injection
14	Combustor Characteristics	38.5 MM Btu/hr capacity with 32,000 lb/hr steam @ 125 psig
15	Capacity (MMBtu/hr)	39
16	Soot Blowing	Yes
17	APCS Detailed Acronym	None
18	APCS General Class	
19	APCS Characteristics	
20	Hazardous Wastes	Liq
21	Haz Waste Description	Liquid organic wastes
22	Supplemental Fuel	Natural gas
23		
24	Stack Characteristics	
25	Diameter (ft)	2.96
26	Height (ft)	52
27	Gas Velocity (ft/sec)	16.9
28	Gas Temperature (°F)	426
29		
30	Permitting Status	
31	HWC Burn Status (Date if Terminated)	

	B	C
1	Cond Description	
2		
3	1001C1	
4		
5	Report Name/Date	Certification of Compliance for Boilers A/B & C; 5/23/97
6	Report Preparer	IT Corp
7	Testing Firm	IT Corp
8	Testing Dates	February 19, 1997
9	Cond Dates	Feb-97
10	Cond Description	CoC; max waste (T-4014) feedrate
11	Content	PM, CO emissions; ash, chlorides, metals in feeds
12		
13	1001C2	
14		
15	Report Name/Date	Certification of Compliance for Boilers A/B & C; 5/23/97
16	Report Preparer	IT Corp
17	Testing Firm	IT Corp
18	Testing Dates	February 21, 1997
19	Cond Dates	Feb-97
20	Cond Description	CoC; max waste (G-3102) feedrate
21	Content	PM, CO emissions; ash, chlorides, metals in feeds
22		
23	1001C3	
24		
25	Report Name/Date	Certification of Compliance for Boilers A/B & C; 5/23/97
26	Report Preparer	IT Corp
27	Testing Firm	IT Corp
28	Testing Dates	February 24, 1997
29	Cond Dates	Feb-97
30	Cond Description	CoC; max waste (T-4053) feedrate
31	Content	PM, CO emissions; ash/chlorides/metals in feeds
32		
33	1001C4	
34		
35	Report Name/Date	Certification of Compliance for Boilers A/B & C; 5/23/97
36	Report Preparer	IT Corp
37	Testing Firm	IT Corp
38	Testing Dates	April 20, 1997
39	Cond Dates	Apr-97
40	Cond Description	CoC; minimum combustion temperature
41	Content	CO emissions

	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	1001C1					R1	R2	R3				Cond Avg
5												
6	PM	E1	gr/dscf	y		0.0026	0.0031	0.0038				0.0029
7	CO (MHRA)	E1	ppmv	y		8.7	9	33.9				17.2
8												
9	Sampling Train	PM	E1									
10	Stack Gas Flowrate		dscfm			7306	6146	4119				5857
11	O2		%			5.2	5	5.2				5.1
12	Moisture		%			15.1	15.2	14.9				15.1
13	Temperature		°F			437.5	453.8	398.8				430.0
14												
15								Sootblow				
16	1001C2					R1	R2	R3				Cond Avg
17												
18	PM	E1	gr/dscf	y		0.0032	0.0023	0.0018				0.0027
19	CO (MHRA)	E1	ppmv	y		31	38.6	41.2				36.9
20												
21	Sampling Train	PM	E1									
22	Stack Gas Flowrate		dscfm			6616	6517	5530				6221
23	O2		%			5.16	4.96	5.03				5.05
24	Moisture		%			13.3	13.3	19.6				15.4
25	Temperature		°F			426.1	425.5	426.8				426.1
26												
27								Sootblow				
28	1001C3					R1	R2	R3				Cond Avg
29												
30	PM	E1	gr/dscf	y		0.0029	0.0019	0.0013				0.0024
31	CO (MHRA)	E1	ppmv	y		33.2	23.8	26.1				27.7
32												
33	Sampling Train	PM	E1									
34	Stack Gas Flowrate		dscfm			7147	7477	7672				7432
35	O2		%			5.18	4.97	5.03				5.06
36	Moisture		%			12.3	12.3	12.3				12.3
37	Temperature		°F			448	449	449				448.7
38												
39	1001C4					R1	R2	R3				Cond Avg
40												
41	CO (MHRA)	E1	ppmv	y		10	0.9	1				4

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Feedstreams																
2																	
3																	
4	1001C1																
5																	
6	Feedstream Number																
7	Feed Class																
8	Feed Class 2																
9	Feedstream Description																
10	Feed Rate																
11	Feed Rate																
12	Viscosity																
13	Heating Value																
14	Ash																
15	Chlorine																
16	Mercury																
17	Lead																
18	Cadmium																
19	Arsenic																
20	Beryllium																
21	Chromium																
22	Antimony																
23																	
24	Stack Gas Flowrate																
25	O2																
26																	
27	Thermal Feedrate																
28	Estimated Firing Rate																
29																	
30	Feedrate MTEC Calculations																
31	Ash																
32	Chlorine																
33	Mercury																
34	Lead																
35	Cadmium																
36	Arsenic																
37	Beryllium																
38	Chromium																
39	Antimony																
40	SVM																
41	LVM																
42																	
43	1001C2																
44																	
45	Feedstream Number																
46	Feed Class																
47	Feed Class 2																
48	Feedstream Description																
49	Feed Rate																
50	Feed Rate																
51	Viscosity																
52	Heat Content																
53	Ash																
54	Chlorine																
55	Mercury																
56	Lead																
57	Cadmium																
58	Arsenic																

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
59	Beryllium		g/hr	nd	0.0170					nd	0.018 nd	0.017 nd	0.017 nd	0.017 nd	0.017		
60	Chromium		g/hr	nd	0.0170					nd	0.018 nd	0.018 nd	0.017 nd	0.017 nd	0.017		
61	Antimony		g/hr	nd	0.340					nd	0.35 nd	0.33 nd	0.33 nd	0.34			
62	Stack Gas Flowrate		dscfm		6221		6221				6616	6517	6517	5530			
64	O2		%		5.05		5.05				5.16	4.96	4.96	5.03			
65									15.4								21.5
66	Thermal Feedrate		MMBtu/hr		6.15												31.5
67	Estimated Firing Rate		MMBtu/hr														
68																	
69	Feedrate MTEC Calculations																
70	Ash		mg/dscm		0.2		13.6				12.0	14.0	14.0	16.0			14.0
71	Chlorine		µg/dscm		8220.3					100	8520.6	6988.3	6988.3	9392.0			8300.3
72	Mercury		µg/dscm	100	1.4					100	1.4 100	1.3 100	1.3 100	1.6 100			1.4
73	Lead		µg/dscm	100	28.2					100	27.5 100	26.0 100	26.0 100	31.7 100			28.4
74	Cadmium		µg/dscm	100	1.4					100	1.4 100	1.3 100	1.3 100	1.6 100			1.4
75	Arsenic		µg/dscm	100	1.4					100	1.4 100	1.3 100	1.3 100	1.6 100			1.4
76	Beryllium		µg/dscm	100	1.4					100	1.4 100	1.3 100	1.3 100	1.6 100			1.4
77	Chromium		µg/dscm	100	1.4					100	1.4 100	1.3 100	1.3 100	1.6 100			1.4
78	Antimony		µg/dscm	100	28.2					100	27.5 100	26.0 100	26.0 100	31.7 100			28.4
79	SVM		µg/dscm	100	14.8					100	14.5 100	13.7 100	13.7 100	16.7 100			14.9
80	LVM		µg/dscm	100	2.1					100	2.1 100	2.0 100	2.0 100	2.4 100			2.2
81																	
82	1001C3				Cond Avg		Cond Avg		Cond Avg		R1		R2		R3		Cond Avg
83																	
84	Feedstream Number				F1		F2		F3		F4		F4		F4		F4
85	Feed Class				Liq HW		Spike		Natural Gas		Total		Total		Total		Total
86	Feed Class 2				HW		Spike		MF		Total		Total		Total		Total
87	Feedstream Description				Liq waste		Spike		Nat gas		Total		Total		Total		Total
88	Feed Rate		g/hr		270000												
89	Feed Rate		scfh						15600								
90	Viscosity		cSt		2.9												
91	Heat Content		Btu/lb		16800												
92	Ash		g/hr		3		180				186	179	179	183			
93	Chlorine		g/hr		61.0						66.2	54.5	54.5	61.8			
94	Mercury		g/hr	nd	0.014					nd	0.014 nd	0.013 nd	0.013 nd	0.014			
95	Lead		g/hr	nd	0.270					nd	0.28 nd	0.26 nd	0.26 nd	0.27			
96	Cadmium		g/hr	nd	0.014					nd	0.014 nd	0.013 nd	0.013 nd	0.014			
97	Arsenic		g/hr	nd	0.014					nd	0.014 nd	0.013 nd	0.013 nd	0.014			
98	Beryllium		g/hr	nd	0.014					nd	0.014 nd	0.013 nd	0.013 nd	0.014			
99	Chromium		g/hr	nd	0.014					nd	0.014 nd	0.013 nd	0.013 nd	0.014			
100	Antimony		g/hr	nd	0.270					nd	0.28 nd	0.26 nd	0.26 nd	0.27			
101																	
102	Stack Gas Flowrate		dscfm		7432		7432				7147	7477	7477	7672			
103	O2		%		5.06		5.06				5.18	4.97	4.97	5.03			
104																	
105	Thermal Feedrate		MMBtu/hr		10.0				15.6								25.6
106	Estimated Firing Rate		MMBtu/hr														37.6
107																	
108	Feedrate MTEC Calculations																
109	Ash		mg/dscm		0.2		12.5				13.6	12.3	12.3	12.3			12.7
110	Chlorine		µg/dscm		4242.4					100	4827.5	3749.1	3749.1	4158.8			4245.1
111	Mercury		µg/dscm	100	1.0					100	1.0 100	0.9 100	0.9 100	0.9 100			1.0
112	Lead		µg/dscm	100	18.8					100	20.4 100	17.9 100	17.9 100	18.2 100			18.8
113	Cadmium		µg/dscm	100	1.0					100	1.0 100	0.9 100	0.9 100	0.9 100			1.0
114	Arsenic		µg/dscm	100	1.0					100	1.0 100	0.9 100	0.9 100	0.9 100			1.0
115	Beryllium		µg/dscm	100	1.0					100	1.0 100	0.9 100	0.9 100	0.9 100			1.0
116	Chromium		µg/dscm	100	1.0					100	1.0 100	0.9 100	0.9 100	0.9 100			1.0

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
117	Antimony		µg/dscm	100	18.8					100	20.4	100	17.9	100	18.2	100	18.8
118	SVM		µg/dscm	100	9.9					100	10.7	100	9.4	100	9.6	100	9.9
119	LVM		µg/dscm	100	1.5					100	1.5	100	1.3	100	1.4	100	1.4
120																	
121																	
122	BIF Feedrate Limits																
123																	
124	Antimony		g/hr		93.3												
125	Arsenic		g/hr		0.037												
126	Barium		g/hr		15333												
127	Beryllium		g/hr		0.037												
128	Cadmium		g/hr		0.037												
129	Chromium		g/hr		0.2												
130	Lead		g/hr		27.3												
131	Mercury		g/hr		93.3												
132	Silver		g/hr		933												
133	Thallium		g/hr		93.3												
134	Chlorine		g/hr		123												

	A	B	C	D	E	F
1	Process Information					
2						
3	Cond ID No.	Units	Run 1	Run 2	Run 3	Cond Avg
4						
5	1001C1					
6						
7	Firebox Exit Temp	F	370	377	333	360
8	Steam Production Rate	Mlb/hr	22.6	22.4	17.5	20.8
9						
10	1001C2					
11						
12	Firebox Exit Temp	F	362	357	357	359
13	Steam Production Rate	Mlb/hr	17.3	16.7	16.7	16.9
14						
15	1001C3					
16						
17	Firebox Exit Temp	F	357	357	357	357
18	Steam Production Rate	Mlb/hr	21.5	21.4	21.1	21.3
19						
20	1001C4					
21						
22	Firebox Exit Temp	F	299	299	299	299