

US EPA ARCHIVE DOCUMENT

Liquid Boilers, LVM

	1	2	3	4	5	6	8	17	18	19	20	21
2	Source ID	Cond ID	Facility Information		Combustor Information		APCS Detailed Acronym	Mixed Radioactive Waste	Comm vs On-site	Gov't	Condition Information	
3	Number	Number	Facility Name	City	Combustor Category	Combustor Class					Conc Dates	Cond Description
4												
5												
6	1000	1000C1	Mallinckrodt Inc.	Raleigh	Liquid boiler	Liquid-fired boiler	None	No	OS	No	10/1/1997	CoC; max waste feedrate
7	1018	1018C13	Celanese Ltd	Bishop	Liquid boiler	Liquid-fired boiler	None	No	OS	No	5/2/2002	Baseline test, normal condition
8	2008	2008C1	Sunoco Inc. (R & M) Frankford Plar	Philadelphia	Liquid boiler	Liquid-fired boiler	None	No	OS	No	6/1/1999	
9	2008A	2008C1	Sun Company, Inc. (R & M) Frankfc	Philadelphia	Liquid boiler	Liquid-fired boiler	None	No	OS	No	6/1/1999	
10	2013	2013C1	E.I. Du Pont De Nemours & Compa	Victoria	Liquid boiler	Liquid-fired boiler	None	No	OS	No	6/1/1995	CoC
11	2013	2013C2	E.I. Du Pont De Nemours & Compa	Victoria	Liquid boiler	Liquid-fired boiler	None	No	OS	No	6/1/1995	CoC
12	2021	2021C1	Union Carbide Coporation	Texas City	Liquid boiler	Liquid-fired boiler	None	No	OS	No	3/1/2000	Trial burn, max comb Temp, max steam prod rate, max feedrate, s
13	232	232C11	Solutia (Chocolate Bayou Plant)	Alvin	Liquid boiler	Liquid-fired boiler	None	No	OS	No	9/1/1997	Trial burn; max waste feed, max prod rate
14	232A	232C11	Solutia (Chocolate Bayou Plant)	Alvin	Liquid boiler	Liquid-fired boiler	None	No	OS	No	9/1/1997	Trial burn; max waste feed, max prod rate
15	724	724C2	Merichem Company	Houston	Liquid boiler	Liquid-fired boiler	Q/ME	No	OS	No	7/1/1996	CoC; max waste feed (spiked ash, chlorine, metals), Wet Scrubbe
16	759	759C1	E.I. duPont de Nemours & Co., Inc.	Orange	Liquid boiler	Liquid-fired boiler		No	OS	No	6/1/1995	CoC; max comb temp, haz waste feed and steam prod rate
17	759A	759C1	E.I. duPont de Nemours & Co., Inc.	Orange	Liquid boiler	Liquid-fired boiler		No	OS	No	6/1/1995	CoC; max comb temp, haz waste feed and steam prod rate
18	759	759C3	E.I. duPont de Nemours & Co., Inc.	Orange	Liquid boiler	Liquid-fired boiler		No	OS	No	7/1/1998	Risk burn
19	759A	759C3	E.I. duPont de Nemours & Co., Inc.	Orange	Liquid boiler	Liquid-fired boiler		No	OS	No	7/1/1998	Risk burn
20	760	760C1	E.I. duPont de Nemours & Co., Inc.	Orange	Liquid boiler	Liquid-fired boiler	None	No	OS	No	5/31/1991	CoC; max temp, haz waste feed and prod rate
21	760	760C4	E.I. duPont de Nemours & Co., Inc.	Orange	Liquid boiler	Liquid-fired boiler	None	No	OS	No	6/30/1994	Risk burn
22	761	761C5	E.I. duPont de Nemours & Co., Inc.	Orange	Liquid boiler	Liquid-fired boiler	None	No	OS	No	12/1/1998	Risk burn
23	761A	761C5	E.I. duPont de Nemours & Co., Inc.	Orange	Liquid boiler	Liquid-fired boiler	None	No	OS	No	12/1/1998	Risk burn
24	767	767C8	Goodyear Tire and Rubber Compar	Beaumont	Liquid boiler	Liquid-fired boiler	None	No	OS	No	1/1/1998	Risk burn, worst case cond, max waste feed and max prod
25	767A	767C8	Goodyear Tire and Rubber Compar	Beaumont	Liquid boiler	Liquid-fired boiler	None	No	OS	No	1/1/1998	Risk burn, worst case cond, max waste feed and max prod
26	767B	767C8	Goodyear Tire and Rubber Compar	Beaumont	Liquid boiler	Liquid-fired boiler	None	No	OS	No	1/1/1998	Risk burn, worst case cond, max waste feed and max prod
27	767C	767C8	Goodyear Tire and Rubber Compar	Beaumont	Liquid boiler	Liquid-fired boiler	None	No	OS	No	1/1/1998	Risk burn, worst case cond, max waste feed and max prod
28	767D	767C8	Goodyear Tire and Rubber Compar	Beaumont	Liquid boiler	Liquid-fired boiler	None	No	OS	No	1/1/1998	Risk burn, worst case cond, max waste feed and max prod
29	776	776C10	Monsanto (Nutrasweet Kelco Co.)	Augusta	Liquid boiler	Liquid-fired boiler	QC/WS	No	OS	No	6/1/1997	CoC; max feedrate
30	777	777C10	Monsanto (Nutrasweet Kelco Co.)	Augusta	Liquid boiler	Liquid-fired boiler	QC/WS	No	OS	No	6/1/1997	CoC; max feedrate
31	778	778C10	Mallinckrodt Inc.	Raleigh	Liquid boiler	Liquid-fired boiler	None	No	OS	No	7/1/1998	CoC; max waste feedrate
32	812	812C2	Rubicon, Inc	Geismar	Liquid boiler	Liquid-fired boiler	Q/WS	No	OS	No	7/1/1997	Trial burn, risk burn; max feed rate
33	813	813C3	Rubicon, Inc.	Geismar	Liquid boiler	Liquid-fired boiler	FF	No	OS	No	8/1/1997	
34	814	814C2	Rubicon, Inc	Geismar	Liquid boiler	Liquid-fired boiler	None	No	OS	No	6/1/1997	Trial burn, risk burn; max feed rate
35	815	815C2	Rubicon, Inc	Geismar	Liquid boiler	Liquid-fired boiler	None	No	OS	No	6/1/1997	
36	819	819C1	Rhone-Poulenc AG Company	Charleston	Liquid boiler	Liquid-fired boiler	ESP	No	OS	No	3/1/1998	CoC; high haz waste feed rate
37	819A	819C1	Rhone-Poulenc AG Company	Charleston	Liquid boiler	Liquid-fired boiler	ESP	No	OS	No	3/1/1998	CoC; high haz waste feed rate
38	819	819C2	Rhone-Poulenc AG Company	Charleston	Liquid boiler	Liquid-fired boiler	ESP	No	OS	No	6/1/1998	CoC; highest Cr feed
39	819A	819C2	Rhone-Poulenc AG Company	Charleston	Liquid boiler	Liquid-fired boiler	ESP	No	OS	No	6/1/1998	CoC; highest Cr feed
40	843	843C3	Dow Chemical Company	Freeport	Liquid boiler	Liquid-fired boiler	None	No	OS	No	2/1/1998	Risk burn, slightly above normal operating conditions
41	843A	843C3	Dow Chemical Company	Freeport	Liquid boiler	Liquid-fired boiler	None	No	OS	No	2/1/1998	Risk burn, slightly above normal operating conditions
42	843B	843C3	Dow Chemical Company	Freeport	Liquid boiler	Liquid-fired boiler	None	No	OS	No	2/1/1998	Risk burn, slightly above normal operating conditions
43	849	849C1	Dow Chemical Company	Freeport	Liquid boiler	Liquid-fired boiler	VS/WS	No	OS	No	6/1/1998	Trial burn, max feed rate, max comb temp and max comb gas flow
44	849	849C3	Dow Chemical Company	Freeport	Liquid boiler	Liquid-fired boiler	VS/WS	No	OS	No	9/1/1998	Trial burn, high capacity, max prod, max feed
45	849	849C5	Dow Chemical Company	Freeport	Liquid boiler	Liquid-fired boiler	VS/WS	No	OS	No	6/1/1998	Risk burn, slightly above normal conditions
46	901	901C1	Diversified Scientific Services, Inc.	Kingston	Liquid boiler	Liquid-fired boiler, SD/FF/PBS/RH/HEPA		Yes	Comm	No	2/1/1996	CoC, max feed, flow, and prod rate, max temp
47	901	901C2	Diversified Scientific Services, Inc.	Kingston	Liquid boiler	Liquid-fired boiler, SD/FF/PBS/RH/HEPA		Yes	Comm	No	2/1/1996	CoC, max feed and flowrate, min pressure drop
48	910	910C1	Union Carbide Corporation	Texas City	Liquid boiler	Liquid-fired boiler	None	No	OS	No	5/1/1999	CoC/trial burn, max liquid waste feed, max prod rate
49	911	911C1	Sunoco Inc. (R&M) Haverhill Plant	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	5/1/1995	CoC; HHC waste fuel
50	911A	911C1	Aristech Chemical Corporation	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	5/1/1995	CoC; HHC waste fuel
51	911B	911C1	Aristech Chemical Corporation	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	5/1/1995	CoC; HHC waste fuel
52	911	911C10	Sunoco Inc. (R&M) Haverhill Plant	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	11/1/2001	CoC; LHC waste fuel high range
53	911A	911C10	Aristech Chemical Corporation	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	11/1/2001	CoC; LHC waste fuel high range
54	911B	911C10	Aristech Chemical Corporation	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	11/1/2001	CoC; LHC waste fuel high range
55	911	911C11	Sunoco Inc. (R&M) Haverhill Plant	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	11/1/2001	CoC; HHC waste fuel high range
56	911A	911C11	Aristech Chemical Corporation	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	11/1/2001	CoC; HHC waste fuel high range
57	911B	911C11	Aristech Chemical Corporation	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	11/1/2001	CoC; HHC waste fuel high range
58	911	911C2	Sunoco Inc. (R&M) Haverhill Plant	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	5/1/1995	CoC; HHC waste fuel
59	911A	911C2	Aristech Chemical Corporation	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	5/1/1995	CoC; HHC waste fuel
60	911B	911C2	Aristech Chemical Corporation	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	5/1/1995	CoC; HHC waste fuel
61	911	911C3	Sunoco Inc. (R&M) Haverhill Plant	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	5/1/1995	CoC; HHC waste fuel

Liquid Boilers, LVM

	2	155	156	157	159	161	163	165	167	171	173	175	177	179	181	183	187	189
2	Cond ID	Cr Thermal Emiss Rating			Cr HW Thermal Emiss (lb/10 ¹² Btu)							Cr in HW (lb/10 ⁹ Btu)						
3	Number	Camp	Rating	Comments	R1	R2	R3	R4	R5	R SB	Cond Avg	R1	R2	R3	R4	R5	R SB	Cond Avg
4	No																	
5																		
6	1000C1	1	N	Normal				412.40	107.54	84.06	242.95				0.29	0.34	0.25	0.29
7	1018C13																	0.08
8	2008C1	1	N	Normal	10.12		10.42			42.24	17.36	0.03		0.03			0.03	0.03
9	2008C1	1	NA	Data in lieu	10.12		10.42			42.24	17.36	0.03		0.03			0.03	0.03
10	2013C1											0.11	0.09	0.09				0.10
11	2013C2											0.11	0.09	0.09				0.10
12	2021C1											0.14	0.13	0.14				0.14
13	232C11	1	N	Normal	24.62	23.30	23.81				23.96	0.13	0.13	0.14				0.13
14	232C11	1	NA	Data in lieu	24.62	23.30	23.81				23.96	0.13	0.13	0.14				0.13
15	724C2	1	CT		133.85	99.05	85.87				106.90	16.65	15.69	17.10				16.49
16	759C1	1	CT		688.82	591.70				1,015.90	760.78	9.47	9.09				10.04	9.53
17	759C1	1	NA	Data in lieu	688.82	591.70				1,015.90	760.78	9.47	9.09				10.04	9.53
18	759C3																	
19	759C3																	
20	760C1	1	CT		956.68	800.05				1,620.21	1,131.88	3.50	3.00				5.98	4.18
21	760C4											0.00	0.00	0.00				0.00
22	761C5											0.00	0.00	0.00				0.00
23	761C5											0.04	0.04	0.04				0.04
24	767C8											0.07	0.08	0.08				0.08
25	767C8											0.08	0.08	0.08				0.08
26	767C8											0.01	0.01	0.01				0.01
27	767C8											0.05	0.06	0.05				0.06
28	767C8											0.03	0.03				0.04	0.03
29	776C10	1	CT		2.33	4.07					3.87	0.19	0.20					0.19
30	777C10	1	CT		8.05	16.11	13.23				12.28	0.23	0.27	0.24				0.24
31	778C10	1	N	Normal	48.72	49.96				818.45	166.65	0.20	0.27				0.29	0.25
32	812C2	1	CT		144.75	66.12	129.42				110.72	0.73	0.67	0.71				0.69
33	813C3																	
34	814C2	1	N	Normal	11.15	14.33	51.71				25.75	0.01	0.01	0.01				0.01
35	815C2	1	N	Normal	10.66	9.16	10.46				10.10	0.01	0.01	0.01				0.01
36	819C1											0.06	0.06				0.07	0.06
37	819C1																	0.06
38	819C2	1	CT		19.17		37.76			24.69	26.97	7.69		7.69			7.50	7.64
39	819C2	1	NA	Data in lieu	19.17		37.76			24.69	26.97	7.69		7.69			7.50	7.64
40	843C3	1	N	Normal	7.99	9.65	9.94				9.18	0.01	0.01	0.02				0.01
41	843C3	1	NA	Data in lieu	7.99	9.65	9.94				9.18	0.01	0.01	0.02				0.01
42	843C3	1	NA	Data in lieu	7.99	9.65	9.94				9.18	0.01	0.01	0.02				0.01
43	849C1	1	IB		3.99	13.37	12.37				9.59	0.21	0.21	0.21				0.21
44	849C3	1	CT		30.17	15.83	13.93				19.98	0.63	0.61	0.63				0.63
45	849C5	1	N	Normal	3.67	5.11	35.77				14.76	0.04	0.04	0.04				0.04
46	901C1	1	IB								2.19							0.53
47	901C2	1	CT								8.48							2.68
48	910C1	1	CT		223.89	243.14				2,673.19	330.69	1.15	1.23				1.23	1.20
49	911C1	1	CT		227.98		221.16			458.92	263.36	0.55		0.49			0.80	0.62
50	911C1	1	NA	Data in lieu	227.98		221.16			458.92	263.36	0.55		0.49			0.80	0.62
51	911C1	1	NA	Data in lieu	227.98		221.16			458.92	263.36	0.55		0.49			0.80	0.62
52	911C10																	
53	911C10																	
54	911C10																	
55	911C11																	
56	911C11																	
57	911C11																	
58	911C2	1	IB		209.14		156.81			395.53	236.48	0.52		0.28			0.43	0.41
59	911C2	1	NA	Data in lieu	209.14		156.81			395.53	236.48	0.52		0.28			0.43	0.41
60	911C2	1	NA	Data in lieu	209.14		156.81			395.53	236.48	0.52		0.28			0.43	0.41
61	911C3	1	IB		136.93		168.21			135.03	139.27	0.28		0.29			0.31	0.29

Liquid Boilers, LVM

	1	2	3	4	5	6	8	17	18	19	20	21
2	Source ID	Cond ID	Facility Information		Combustor Information		APCS	Mixed	Comm	Gov't	Condition Information	
3	Number	Number	Facility Name	City	Combustor	Combustor	Detailed	Radioactive	vs On-site		Cond	Cond Description
4					Category	Class	Acronym	Waste			Dates	
5												
62	911A	911C3	Aristech Chemical Corporation	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	5/1/1995	CoC; HHC waste fuel
63	911B	911C3	Aristech Chemical Corporation	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	5/1/1995	CoC; HHC waste fuel
64	911	911C4	Sunoco Inc. (R&M) Haverhill Plant	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	5/1/1995	CoC; light HC waste
65	911A	911C4	Aristech Chemical Corporation	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	5/1/1995	CoC; light HC waste
66	911B	911C4	Aristech Chemical Corporation	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	5/1/1995	CoC; light HC waste
67	912	912C1	Sunoco Inc. (R&M) Haverhill Plant	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	5/1/1995	CoC; LHC waste fuel
68	912	912C4	Sunoco Inc. (R&M) Haverhill Plant	Haverhill	Liquid boiler	Liquid-fired boiler	None	No	OS	No	10/1/2001	CoC; LHC waste fuel high range

Liquid Boilers, LVM

2	22	23	24	25	26	27	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	55	56	57	58	59	60							
2	Cond ID	Spiking			Tier			SB	LVM Emissions			Cr Stack Gas Emissions Only (ug/dscm)																											
3	Number	Cr	As	Be	Cr	As	Be	Run	Camp	Rating	Rating	Comments	R1	R2	R3	R4	R5	R6	R7	R8	R SB	Cond Avg	No SB																
4								No	No				ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss							
5																																							
62	911C3	N			1	1	1	R2	1	NA	Data in lieu		76.4			101.3																				75.7	79.8	0	88.84
63	911C3	N			1	1	1	R2	1	NA	Data in lieu		76.4			101.3																				75.7	79.8	0	88.84
64	911C4	N			1	1	1	R2	2	NA			55.3			52.4																				69.2	56.4	0	53.87
65	911C4	N			1	1	1	R2	1	NA	Data in lieu		55.3			52.4																				69.2	56.4	0	53.87
66	911C4	N			1	1	1	R2	1	NA	Data in lieu		55.3			52.4																				69.2	56.4	0	53.87
67	912C1	N			1	1	1	R3	2	N			6.0			3.5																			6.7	4.3	0	4.73	
68	912C4							No	1	N			2.2			3.0																				2.6	0	2.61	

Liquid Boilers, LVM

	2	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	86	87	88	89	90	91	101	103	104	105	
2	Cond ID	Cr SRE			Cr SRE (%)												Cr SRE Used for Ranking Purposes (%)																		
3	Number	Camp	Rating	Comment	R1	R2	R3	R4	R5	R6	R7	R8	R SB	Cond Avg	R1	R2	R3	R SB	Cond Avg																
4		No																																	
5																																			
62	911C3	1	NA	Normal, Cr not controlled; SRE	50.237		42.482						55.757	52.186	0			0																	
63	911C3	1	NA	Normal, Cr not controlled; SRE	50.237		42.482						55.757	52.186	0			0																	
64	911C4	1	NA	Normal, Cr not controlled; SRE	-725.772		-706.420						-948.996	-755.054	0			0																	
65	911C4	1	NA	Normal, Cr not controlled; SRE	-725.772		-706.420						-948.996	-755.054	0			0																	
66	911C4	1	NA	Normal, Cr not controlled; SRE	-725.772		-706.420						-948.996	-755.054	0			0																	
67	912C1	2	NA	Cr not controlled; SRE set to 0	-14.664	35.084							-25.943	18.286	0		0																		
68	912C4																																		

Liquid Boilers, LVM

	2	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	138	139	140	141	142	143	144	145	148	149		
2	Cond ID	Cr Feedrate MTEC (ug/dscm)																		Cr Feedrate Hazardous Wastes and Spike (ug/dscm)									
3	Number	R1	R2	R3	R4	R5	R6	R7	R8	Cond Avg	R1	R2	R3	Cond Avg															
4		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
5																													
62	911C3	153.5	171.0	176.1						166.9	153.5	171.0	176.1	166.9															
63	911C3	153.5	171.0	176.1						166.9	153.5	171.0	176.1	166.9															
64	911C4	6.7	6.6	6.5						6.6	6.7	6.6	6.5	6.6															
65	911C4	6.7	6.6	6.5						6.6	6.7	6.6	6.5	6.6															
66	911C4	6.7	6.6	6.5						6.6	6.7	6.6	6.5	6.6															
67	912C1	0	5.2	0	5.4	0	5.3			0	5.3	0	5.2	0	5.4	0	5.3	0	5.3	0	5.3	0	5.3	0	5.3	0	5.3	0	5.3
68	912C4																												

Liquid Boilers, LVM

	2	155	156	157	159	161	163	165	167	171	173	175	177	179	181	183	187	189	
2	Cond ID	Cr Thermal Emiss Rating			Cr HW Thermal Emiss (lb/10 ¹² Btu)							Cr in HW (lb/10 ⁹ Btu)							
3	Number	Camp	Rating	Comments	R1	R2	R3	R4	R5	R SB	Cond Avg	R1	R2	R3	R4	R5	R SB	Cond Avg	
4		No																	
5																			
62	911C3	1	NA	Data in lieu	136.93		168.21			135.03	139.27	0.28		0.29				0.31	0.29
63	911C3	1	NA	Data in lieu	136.93		168.21			135.03	139.27	0.28		0.29				0.31	0.29
64	911C4	1	IB		50.04		48.08			62.04	51.27	0.01		0.01				0.01	0.01
65	911C4	1	NA	Data in lieu	50.04		48.08			62.04	51.27	0.01		0.01				0.01	0.01
66	911C4	1	NA	Data in lieu	50.04		48.08			62.04	51.27	0.01		0.01				0.01	0.01
67	912C1	1	N	Normal	6.83	3.95				7.53	4.91	0.01	0.01					0.01	0.01
68	912C4																		