

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase II ID No.	721
4	EPA ID No.	TXD026040709
5	Facility Name	Celanese Ltd
6	Facility Location	
7	City	Bay City
8	State	TX
9	Unit ID Name/No.	Boiler No. 4
10	Other Sister Facilities	Boiler No. 5
11	Number of Sister Facilities	1
12	Combustor Class	Liquid-fired boiler
13	Combustor Type	Liquid-fired
	Combustor Characteristics	Watertube boiler. C-E Type VU-60 rated at 350,000 lb/hr steam @ 650 psig and 750F; Ljungstrum regeneration air preheater; 4 natural gas burners and 4 liquid waste nozzles; one boiler performs as a BIF at any time, other either idled or burning natural gas and process vent gases for steam production as a regular boiler
14		
15	Capacity (MMBtu/hr)	
16	Soot Blowing	None
17	APCS Detailed Acronym	None
18	APCS General Class	
19	APCS Characteristics	NA
20	Hazardous Wastes	Liq
	Haz Waste Description	V-1041 (Vinyl Acetate Unit's waste organics) and V-683 (combined OXO Units' liquid waste); at times may also carry D018 (benzene) and D035 (methyl ethyl ketone)
21		
22	Supplemental Fuel	Natural gas
23		
24	Stack Characteristics	
25	Diameter (ft)	8.0
26	Height (ft)	50.5
27	Gas Velocity (ft/sec)	50
28	Gas Temperature (°F)	346
29		
30	Permitting Status	Adjusted Tier I for metals and chlorine
	HWC Burn Status (Date if	
31	Terminated)	

	B	C
1	Cond Description	
2		
3	721C10	
4		
5	Report Name/Date	Certification of Compliance, Boiler 4 Celanese Ltd/October 1998
6	Report Prepare	TRC Environmental Corporation, Houston, TX
7	Testing Firm	TRC Environmental Corporation
8	Testing Dates	July 24, 1998
9	Cond Dates	Jul-98
10	Condition Descr	Trial burn; max waste feed
11	Content	Stack PM; Feed analysis of organics and ash.
12		
13	721C11	
14		
15	Report Name/Date	Compliance Test Report, Boiler 4, Celanese Ltd/October 1998
16	Report Prepare	TRC Environmental Corporation, Houston, TX
17	Testing Firm	TRC Environmental Corporation
18	Testing Dates	July 23, 1998
19	Cond Dates	Jul-98
20	Condition Descr	Trial burn; min combustion temp, DRE
21	Content	Stack CO; Feed analysis
22		
23	721C12	
24		
25	Report Name/Date	Trial Burn/Risk Bum Report, Boiler 4, Celanese Ltd/November 1998
26	Report Prepare	TRC Environmental Corporation, Houston, TX
27	Testing Firm	TRC Environmental Corporation
28	Testing Dates	July 21-22, 1998
29	Cond Dates	Jul-98
30	Condition Descr	Risk burn; typical feedrate
31	Content	VOC, Total Organics, SVOCs, PCDDs/PCDFs, Particle Size Distribution, aldehydes, and ketones.

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions											
2												
3		Comments	Units	7% O2								
4												
5												
6	721C10					R1		R2		R3		Cond Avg
7												
8	PM	E1	gr/dscf	y		0.0414		0.0457		0.0481		0.0451
9	CO (MHRA)	E1	ppmv	y		3		1		2		2.0
10												
11	Sampling Train	PM	E1									
12	Stack Gas Flowrate		dscfm			85204		82056		84158		83806.0
13	O2		%			5.7		5.6		5.6		5.6
14	Moisture		%			16.1		15.7		15.5		15.8
15	Temperature		°F			346		347.3		345.7		346.3
16												
17												
18												
19	721C11					R1		R2		R3		Cond Avg
20												
21	CO (MHRA)	E1	ppmv	y		0		0		0		0.0
22												
23	Sampling Train	DRE	E1									
24	Stack Gas Flowrate		dscfm			44701		48655		54714		49356.7
25	O2		%			6.4		6.5		6.6		6.5
26	Moisture		%			14.8		14.9		14.9		14.9
27	Temperature		°F			299.4		295.5		307		300.6
28												
29	POHC DRE	Chlorobenzene										
30	Feedrate		lb/hr			36.9		36.9		36.9		
31	Emissions Rate											
32	DRE		%			> 99.9998	>	99.9998	>	99.9998		
33												
34	POHC DRE	Toluene										
35	Feedrate		lb/hr			72.5		72.5		72.5		
36	Emissions Rate											
37	DRE		%			99.9998	>	99.99983	>	99.999833		
38												
39												
40												
41	721C12					R1		R2		R3		Cond Avg
42												
43	PM	E1	gr/dscf	y		0.0242		0.0300		0.0232		0.026
44	CO (MHRA)	E1	ppmv	y		0		0		0		0.0
45												
46	Sampling Train	PM	E1									
47	Stack Gas Flowrate		dscfm			81629		84820		80204		82217.7
48	O2		%			6.1		6.8		6.5		6.5
49	Moisture		%			15.7		16.2		16.1		16.0
50	Temperature		°F			345		338.6		333.2		338.9
51												
52	Particle Size Distribution	in microns										
53						Cumulative % <			Wt % in Size Range			
54	>10					100.0			4.4			
55	10-9.5					95.6			0.5			
56	9.5-6.4					95.1			0.4			
57	6.4-4.4					94.6			0.2			
58	4.4-2.8					94.4			0.4			
59	2.8-1.4					94.0			1.2			
60	1.4-0.88					92.8			3			
61	0.88-0.6					89.7			2.9			
62	<0.6					86.8			86.8			

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
1	Feedstreams																						
2																							
3																							
4	721C10				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1	R2	
5	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2				
6	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW				
7	Feed Class 2																				HW	HW	
8	Feedstream Description				Haz wastes		Haz wastes		Haz wastes		Haz wastes		Haz wastes		Haz wastes		Haz wastes		Haz wastes				
9					V-683		V-683		V-683		V-683		V-1041		V-1041		V-1041		V-1041				
10	Feed Rate	g/hr			2374898		2132923		2186246		2231356		2034816		1980312		1998480		2004536				
11	Heating Value	Btu/lb			12933		12933		12933		12933		6260		6260		6260		6260				
12	Viscosity	cp			2.81		2.81		2.81		2.81		2.56		2.56		2.56		2.56				
13	Density	g/ml			0.840		0.840		0.840		0.840		1.100		1.100		1.100		1.100				
14	Ash	g/hr	nd		237	nd	213	nd	219		223		17499		5941		7594		10345				
15	Chlorine	g/hr			325		348		363		345	nd	20	nd	20	nd	20		20				
16	Antimony	g/hr	nd		0.66	nd	0.6	nd	0.61		0.620	nd	0.57	nd	0.55	nd	0.56		0.56				
17	Arsenic	g/hr	nd		0.9	nd	0.9	nd	0.9		0.900	nd	0.8	nd	0.8	nd	0.8		0.800				
18	Barium	g/hr	nd		2	nd	2	nd	2		2.000	nd	2	nd	2	nd	2		2.000				
19	Beryllium	g/hr	nd		0.5	nd	0.4	nd	0.4		0.400	nd	0.4	nd	0.4	nd	0.4		0.400				
20	Cadmium	g/hr	nd		0.5	nd	0.4	nd	0.4		0.400	nd	0.4	nd	0.4	nd	0.4		0.400				
21	Chromium	g/hr	nd		0.5	nd	0.4	nd	0.4		0.400		11.9		11.3		10.3		11.200				
22	Lead	g/hr	nd		5	nd	4	nd	4		4.000	nd	4	nd	4	nd	4		4.000				
23	Mercury	g/hr			0.11	nd	0.09	nd	0.09		0.100	nd	0.08	nd	0.08	nd	0.08		0.080				
24	Silver	g/hr	nd		0.22	nd	0.2	nd	0.2		0.200		0.224		0.248		0.218		0.230				
25	Thallium	g/hr	nd		0.28	nd	0.26	nd	0.26		0.270	nd	0.24	nd	0.24	nd	0.24		0.240				
26																							
27	Stack Gas Flowrate	dscfm			85204		82056		84158		83806.0		85204		82056		84158		83806.0				
28	Oxygen	%			5.7		5.6		5.6		5.6		5.7		5.6		5.6		5.6				
29																							
30	Thermal Feedrate	MMBtu/hr			67.7		60.8		62.3		63.6		28.1		27.3		27.6		27.6		95.7	88.1	
31	Estimated Firing Rate	MMBtu/hr																					
32																							
33	<i>Feedrate MTEC Calculations</i>																						
34	Ash	mg/dscm	100		1.5	100	1.4	100	1.4		1.4		110.7		38.8		48.3		65.9	1	112.2	3	40.2
35	Chlorine	ug/dscm			2055.5		2270.6		2309.3		2211.8	100	126.5	100	130.5	100	127.2		128.1	6	2182.0	5	2401.1
36	Antimony	ug/dscm	100		4.2	100	3.9	100	3.9		4.0	100	3.6	100	3.6	100	3.6		3.6	100	7.8	100	7.5
37	Arsenic	ug/dscm	100		5.7	100	5.9	100	5.7		5.8	100	5.1	100	5.2	100	5.1		5.1	100	10.8	100	11.1
38	Barium	ug/dscm	100		12.6	100	13.0	100	12.7		12.8	100	12.6	100	13.0	100	12.7		12.8	100	25.3	100	26.1
39	Beryllium	ug/dscm	100		3.2	100	2.6	100	2.5		2.8	100	2.5	100	2.6	100	2.5		2.6	100	5.7	100	5.2
40	Cadmium	ug/dscm	100		3.2	100	2.6	100	2.5		2.8	100	2.5	100	2.6	100	2.5		2.6	100	5.7	100	5.2
41	Chromium	ug/dscm	100		3.2	100	2.6	100	2.5		2.8		75.3		73.7		65.5		71.5	4	78.4	3	76.3
42	Lead	ug/dscm	100		31.6	100	26.1	100	25.4		27.7	100	25.3	100	26.1	100	25.4		25.6	100	56.9	100	52.2
43	Mercury	ug/dscm			0.7	100	0.6	100	0.6		0.6	100	0.5	100	0.5	100	0.5		0.5	42	1.2	100	1.1
44	Silver	ug/dscm	100		1.3	100	1.3	100	1.3		1.3		1.4		1.6		1.4		1.5	47	2.7	45	2.9
45	Thallium	ug/dscm	100		1.8	100	1.7	100	1.7		1.7	100	1.5	100	1.6	100	1.5		1.5	100	3.3	100	3.3
46																							
47	SVM	ug/dscm			34.8		28.7		28.0		30.5		27.8		28.7		28.0		28.2	100	62.6	100	57.4
48	LVM	ug/dscm			12.0		11.1		10.8		11.3		82.9		81.6		73.2		79.2	21	94.9	20	92.7
49																							
50																							
51	721C11				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1	R2	
52																							
53	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2				
54	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW				
55	Feed Class 2																				HW	HW	
56	Feedstream Description				V-683		V-683		V-683		V-683		V-1041		V-1041		V-1041		V-1041				
57	Feed Rate	g/hr			478136		479213		504253		493201		466009		464987		481475		470824				
58																							
59																							
60	721C12				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1	R2	

	B	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	Feedstreams												
2													
3													
4	721C10		R3		Cond Avg		R1		R2		R3		Cond Avg
5	Feedstream Number						F3		F3		F3		F3
6	Feed Class						Total		Total		Total		Total
7	Feed Class 2		HW		HW		Total		Total		Total		Total
8	Feedstream Description												
9							Total		Total		Total		Total
10	Feed Rate												
11	Heating Value												
12	Viscosity												
13	Density												
14	Ash												
15	Chlorine												
16	Antimony												
17	Arsenic												
18	Barium												
19	Beryllium												
20	Cadmium												
21	Chromium												
22	Lead												
23	Mercury												
24	Silver												
25	Thallium												
26													
27	Stack Gas Flowrate						85204		82056		84158		83806.0
28	Oxygen						5.7		5.6		5.6		5.6
29													
30	Thermal Feedrate		89.8		91.2		95.7		88.1		89.8		91.2
31	Estimated Firing Rate						413.8		401.2		411.4		408.8
32													
33	<i>Feedrate MTEC Calculat</i>												
34	Ash	3	49.7	2	67.3	1	112.2	3	40.2	3	49.7	2	67.3
35	Chlorine	5	2436.5	5	2339.9	6	2182.0	5	2401.1	5	2436.5	5	2339.9
36	Antimony	100	7.4	100	7.6	100	7.8	100	7.5	100	7.4	100	7.6
37	Arsenic	100	10.8	100	10.9	100	10.8	100	11.1	100	10.8	100	10.9
38	Barium	100	25.4	100	25.6	100	25.3	100	26.1	100	25.4	100	25.6
39	Beryllium	100	5.1	100	5.3	100	5.7	100	5.2	100	5.1	100	5.3
40	Cadmium	100	5.1	100	5.3	100	5.7	100	5.2	100	5.1	100	5.3
41	Chromium	4	68.1	4	74.3	4	78.4	3	76.3	4	68.1	4	74.3
42	Lead	100	50.9	100	53.3	100	56.9	100	52.2	100	50.9	100	53.3
43	Mercury	100	1.1	79	1.1	42	1.2	100	1.1	100	1.1	79	1.1
44	Silver	48	2.7	46	2.8	47	2.7	45	2.9	48	2.7	46	2.8
45	Thallium	100	3.2	100	3.2	100	3.3	100	3.3	100	3.2	100	3.2
46							0.0		0.0		0.0		0.0
47	SVM	100	56.0	100	58.7	100	62.6	100	57.4	100	56.0	100	58.7
48	LVM	22	84.0	21	90.5	21	94.9	20	92.7	22	84.0	21	90.5
49													
50													
51	721C11		R3		Cond Avg		R1		R2		R3		Cond Avg
52													
53	Feedstream Number						F3		F3		F3		F3
54	Feed Class						Total		Total		Total		Total
55	Feed Class 2		HW		HW		Total		Total		Total		Total
56	Feedstream Description						Total		Total		Total		Total
57	Feed Rate						944145.0		944200.0		985728.0		964025.0
58													
59													
60	721C12		R3		Cond Avg		R1		R2		R3		Cond Avg

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	
61																								
62	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2					
63	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW					
64	Feed Class 2																				HW	HW		
65	Feedstream Description				V-683		V-683		V-683		V-683		V-1041		V-1041		V-1041		V-1041					
66	Feed Rate				g/hr		g/hr		g/hr		g/hr		g/hr		g/hr		g/hr		g/hr					
67	Heating Value				Btu/lb		Btu/lb		Btu/lb		Btu/lb		Btu/lb		Btu/lb		Btu/lb		Btu/lb					
68	Chlorine				g/hr		g/hr		g/hr		g/hr	nd	g/hr	nd	g/hr	nd	g/hr	nd	g/hr					
69	Antimony			nd	g/hr	0.48	nd	0.48	nd	0.49	nd	0.480	nd	0.28	nd	0.27	nd	0.29	nd			0.280		
70	Arsenic			nd	g/hr	0.7	nd	0.7	nd	0.7	nd	0.700	nd	0.4	nd	0.4	nd	0.4	nd			0.400		
71	Barium			nd	g/hr	1	nd	1	nd	1	nd	1.000	nd	0.8	nd	0.8	nd	0.8	nd			0.800		
72	Beryllium			nd	g/hr	0.3	nd	0.3	nd	0.3	nd	0.300	nd	0.2	nd	0.2	nd	0.2	nd			0.200		
73	Cadmium			nd	g/hr	0.3	nd	0.3	nd	0.3	nd	0.300	nd	0.2	nd	0.2	nd	0.2	nd			0.200		
74	Chromium			nd	g/hr	0.3	nd	0.3	nd	0.3	nd	0.300		5		4.88		5				4.960		
75	Lead			nd	g/hr	3	nd	3	nd	3	nd	3.000	nd	2	nd	2	nd	2	nd			2.000		
76	Mercury			nd	g/hr	0.07	nd	0.07	nd	0.07	nd	0.070	nd	0.04	nd	0.04	nd	0.04	nd			0.040		
77	Silver			nd	g/hr	0.1	nd	0.1	nd	0.1	nd	0.100	nd	0.08	nd	0.08	nd	0.08	nd			0.080		
78	Thallium			nd	g/hr	0.21	nd	0.21	nd	0.21	nd	0.210	nd	0.12	nd	0.12	nd	0.12	nd			0.120		
79																								
80	Stack Gas Flowrate				dscfm		dscfm		dscfm		dscfm		dscfm		dscfm		dscfm		dscfm					
81	Oxygen				%		%		%		%		%		%		%		%					
82																								
83	Thermal Feedrate				MMBtu/hr		MMBtu/hr		MMBtu/hr		MMBtu/hr		MMBtu/hr		MMBtu/hr		MMBtu/hr		MMBtu/hr			62.6	62.4	
84	Estimated Firing Rate				MMBtu/hr		MMBtu/hr		MMBtu/hr		MMBtu/hr		MMBtu/hr		MMBtu/hr		MMBtu/hr		MMBtu/hr					
85																								
86	<i>Feedrate MTEC Calculations</i>																							
87	Chlorine				ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm	
88	Antimony			100	ug/dscm	3.3	100	3.3	100	3.5	100	3.3	100	1.9	100	1.8	100	2.1	100	1.9	100	5.2	100	5.1
89	Arsenic			100	ug/dscm	4.7	100	4.8	100	5.0	100	4.8	100	2.7	100	2.7	100	2.8	100	2.8	100	7.5	100	7.5
90	Barium			100	ug/dscm	6.8	100	6.8	100	7.1	100	6.9	100	5.4	100	5.5	100	5.7	100	5.5	100	12.2	100	12.3
91	Beryllium			100	ug/dscm	2.0	100	2.1	100	2.1	100	2.1	100	1.4	100	1.4	100	1.4	100	1.4	100	3.4	100	3.4
92	Cadmium			100	ug/dscm	2.0	100	2.1	100	2.1	100	2.1	100	1.4	100	1.4	100	1.4	100	1.4	100	3.4	100	3.4
93	Chromium			100	ug/dscm	2.0	100	2.1	100	2.1	100	2.1	100	33.9	100	33.4	100	35.4	100	34.2	6	35.9	6	35.5
94	Lead			100	ug/dscm	20.3	100	20.5	100	21.3	100	20.7	100	13.6	100	13.7	100	14.2	100	13.8	100	33.9	100	34.2
95	Mercury			100	ug/dscm	0.5	100	0.5	100	0.5	100	0.5	100	0.3	100	0.3	100	0.3	100	0.3	100	0.7	100	0.8
96	Silver			100	ug/dscm	0.7	100	0.7	100	0.7	100	0.7	100	0.5	100	0.5	100	0.6	100	0.6	100	1.2	100	1.2
97	Thallium			100	ug/dscm	1.4	100	1.4	100	1.5	100	1.4	100	0.8	100	0.8	100	0.9	100	0.8	100	2.2	100	2.3
98																								
99	SVM				ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm	
00	LVM				ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm		ug/dscm	

	B	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
61													
62	Feedstream Number						F3		F3		F3		F3
63	Feed Class						Total		Total		Total		Total
64	Feed Class 2		HW		HW		Total		Total		Total		Total
65	Feedstream Description						Total		Total		Total		Total
66	Feed Rate												2728530.0
67	Heating Value												
68	Chlorine												
69	Antimony												
70	Arsenic												
71	Barium												
72	Beryllium												
73	Cadmium												
74	Chromium												
75	Lead												
76	Mercury												
77	Silver												
78	Thallium												
79													
80	Stack Gas Flowrate						81629		84820		80204		82217.7
81	Oxygen						6.1		6.8		6.5		6.5
82													
83	Thermal Feedrate		63.9		63.0		62.6		62.4		63.9		63.0
84	Estimated Firing Rate						386.1		382.4		369.2		379.3
85													
86	<i>Feedrate MTEC Calculat</i>												
87	Chlorine	5	1503.0	4	1787.1	4	1660.8	3	2197.4	5	1503.0	4	1787.1
88	Antimony	100	5.5	100	5.3	100	5.2	100	5.1	100	5.5	100	5.3
89	Arsenic	100	7.8	100	7.6	100	7.5	100	7.5	100	7.8	100	7.6
90	Barium	100	12.8	100	12.4	100	12.2	100	12.3	100	12.8	100	12.4
91	Beryllium	100	3.5	100	3.5	100	3.4	100	3.4	100	3.5	100	3.5
92	Cadmium	100	3.5	100	3.5	100	3.4	100	3.4	100	3.5	100	3.5
93	Chromium	6	37.6	6	36.3	6	35.9	6	35.5	6	37.6	6	36.3
94	Lead	100	35.4	100	34.5	100	33.9	100	34.2	100	35.4	100	34.5
95	Mercury	100	0.8	100	0.8	100	0.7	100	0.8	100	0.8	100	0.8
96	Silver	100	1.3	100	1.2	100	1.2	100	1.2	100	1.3	100	1.2
97	Thallium	100	2.3	100	2.3	100	2.2	100	2.3	100	2.3	100	2.3
98													
99	SVM	100	39.0	100	38.0	100	37.3	100	37.7	100	39.0	100	38.0
100	LVM	28	48.9	28	47.4	28	46.8	28	46.4	28	48.9	28	47.4

	A	B	C
1	Process Information		
2			Cond Avg
3	721C10		
4			
5	Steam Production Rate	Mlb/hr	292.03
6	Firebox Temp Indicator	°F	
7			
8	721C11		
9			
10	Steam Production Rate	Mlb/hr	167
11	Firebox Temp Indicator	°F	556
12			
13	721C12		
14			
15	Steam Production Rate	Mlb/hr	253.25
16	Firebox Temp Indicator	°F	628

	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:																
4		Condition ID:																
5		Condition/Test Date:																
6																		
7		721C12																
8			I-TEF															
9			Wght Fact															
10		Detected in sample volume (ng)																
11		2,3,7,8-TCDD	1		0.0130	0.0130	0.0130	0.0130		0.013	0.0130	0.0130	0.0130		0.015	0.0150	0.0150	0.0150
12		TCDD Total	0		0.0130	0.0000	0.0130	0.0000		0.013	0.0000	0.0130	0.0000		0.015	0.0000	0.0150	0.0000
13		1,2,3,7,8-PCDD	0.5	nd	0.0030	0.0015	0.0015	0.0008	nd	0.0025	0.0013	0.0013	0.0006	nd	0.0027	0.0014	0.0014	0.0007
14		PCDD Total	0	nd	0.0030	0.0000	0.0015	0.0000	nd	0.0025	0.0000	0.0013	0.0000	nd	0.0027	0.0000	0.0014	0.0000
15		1,2,3,4,7,8-HxCDD	0.1	nd	0.0031	0.0003	0.0016	0.0002	nd	0.0049	0.0005	0.0025	0.0002	nd	0.0039	0.0004	0.0020	0.0002
16		1,2,3,6,7,8-HxCDD	0.1	nd	0.0026	0.0003	0.0013	0.0001	nd	0.0042	0.0004	0.0021	0.0002	nd	0.0033	0.0003	0.0017	0.0002
17		1,2,3,7,8,9-HxCDD	0.1	nd	0.0028	0.0003	0.0014	0.0001	nd	0.0045	0.0005	0.0023	0.0002	nd	0.0036	0.0004	0.0018	0.0002
18		HxCDD Total	0	nd	0.0085	0.0000	0.0043	0.0000	nd	0.0136	0.0000	0.0068	0.0000	nd	0.0108	0.0000	0.0054	0.0000
19		1,2,3,4,6,7,8-HpCDD	0.01		0.0110	0.0001	0.0110	0.0001		0.01	0.0001	0.0100	0.0001		0.0092	0.0001	0.0092	0.0001
20		HpCDD Total	0		0.0110	0.0000	0.0110	0.0000		0.01	0.0000	0.0100	0.0000		0.0092	0.0000	0.0092	0.0000
21		OCDD	0.001		0.0320	0.0000	0.0320	0.0000		0.027	0.0000	0.0270	0.0000		0.029	0.0000	0.0290	0.0000
22		2,3,7,8-TCDF	0.1		0.0045	0.0005	0.0045	0.0005		0.0055	0.0006	0.0055	0.0006		0.0057	0.0006	0.0057	0.0006
23		TCDF Total	0		0.0045	0.0000	0.0045	0.0000		0.0055	0.0000	0.0055	0.0000		0.0057	0.0000	0.0057	0.0000
24		1,2,3,7,8-PCDF	0.05	nd	0.0026	0.0001	0.0013	0.0001	nd	0.0027	0.0001	0.0014	0.0001		0.0016	0.0001	0.0016	0.0001
25		2,3,4,7,8-PCDF	0.5		0.0034	0.0017	0.0034	0.0017		0.0029	0.0015	0.0029	0.0015	nd	0.0025	0.0013	0.0013	0.0006
26		PCDF Total	0	nd	0.0060	0.0000	0.0030	0.0000	nd	0.0056	0.0000	0.0028	0.0000	nd	0.0041	0.0000	0.0021	0.0000
27		1,2,3,4,7,8-HxCDF	0.1		0.0079	0.0008	0.0079	0.0008		0.0077	0.0008	0.0077	0.0008		0.0065	0.0007	0.0065	0.0007
28		1,2,3,6,7,8-HxCDF	0.1		0.0027	0.0003	0.0027	0.0003		0.003	0.0003	0.0030	0.0003		0.0027	0.0003	0.0027	0.0003
29		2,3,4,6,7,8-HxCDF	0.1	nd	0.0034	0.0003	0.0017	0.0002		0.0024	0.0002	0.0024	0.0002	nd	0.0033	0.0003	0.0017	0.0002
30		1,2,3,7,8,9-HxCDF	0.1	nd	0.0034	0.0003	0.0017	0.0002	nd	0.0033	0.0003	0.0017	0.0002	nd	0.0033	0.0003	0.0017	0.0002
31		HxCDF Total	0	nd	0.0174	0.0000	0.0087	0.0000		0.0164	0.0000	0.0164	0.0000		0.0158	0.0000	0.0158	0.0000
32		1,2,3,4,6,7,8-HpCDF	0.01		0.0220	0.0002	0.0220	0.0002		0.013	0.0001	0.0130	0.0001	nd	0.007	0.0001	0.0035	0.0000
33		1,2,3,4,7,8,9-HpCDF	0.01	nd	0.0250	0.0003	0.0125	0.0001	nd	0.0048	0.0000	0.0024	0.0000	nd	0.0046	0.0000	0.0023	0.0000
34		HpCDF Total	0	nd	0.0470	0.0000	0.0235	0.0000	nd	0.0178	0.0000	0.0089	0.0000	nd	0.0116	0.0000	0.0058	0.0000
35		OCDF	0.001		0.0160	0.0000	0.0160	0.0000		0.012	0.0000	0.0120	0.0000		0.01	0.0000	0.0100	0.0000
36																		
37		Gas sample volume (dscf)			154.15	154.15	154.15	154.15		157.70	157.70	157.70	157.70		159.50	159.50	159.50	159.50
38		O2 (%)			6.10	6.10	6.10	6.10		6.80	6.80	6.80	6.80		6.50	6.50	6.50	6.50
39																		
40		PCDD/PCDF (ng in sample)			0.1584	0.0200	0.1175	0.0183		0.1234	0.0197	0.1037	0.0181		0.1139	0.0212	0.0993	0.0189
41		PCDD/PCDF (ng/dscm @ 7% O2)		17.1	0.0341	0.0043	0.0253	0.0039	15.9	0.0273	0.0044	0.0229	0.0040	21.1	0.0244	0.0045	0.0212	0.0040
42																		
43		TEQ Avg			0.0040													
44		Total Avg			0.0231													