

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase I ID No.	478
4	EPA ID No.	MOD050226075
5	Facility Name	American Cyanamid Company
6	Facility Location	
7	City	Palmyra
8	State	MO
9	Unit ID Name/No.	Prowl Unit C
10	Other Sister Facilities	
11	Number of Sister Facilities	0
12	Combustor Class	Onsite incinerator
13	Combustor Type	Liquid injection
14	Combustor Characteristics	T-Thermal "C" incinerator
15		
16	Capacity (MMBtu/hr)	
17	Soot Blowing	
18	APCS Detailed Acronym	Q/VS/DM
19	APCS General Class	WQ, HEWS
20	APCS Characteristics	Quench, scrubber (Calvert fixed throat dual venturi), demister, water separator
21	Hazardous Wastes	Liq
22	Haz Waste Description	Liq organic, chemical wastes
23	Supplemental Fuel	Natural gas
24		
25	Stack Characteristics	
26	Diameter (ft)	3.50
27	Height (ft)	110.0
28	Gas Velocity (ft/sec)	19.8
29	Gas Temperature (°F)	187
30		
31	Permitting Status	Tier II for metals (Pb, Cr)
32	HWC Burn Status (Date if Terminated)	

	B	C
1	Condition Description	
2		
3	478C10	
4		
5	Report Name/Date	Test Report for the RCRA Trial Burn, February 2, 1998
6	Report Prepare	Midwest Research Institute (MRI)
7	Testing Firm	Midwest Research Institute (MRI)
8	Testing Dates	October 15-17, 1997
9	Cond Dates	Oct-97
10	Condition Descr	Trial burn, minimum oper cond
11	Content	PM, CO, HCl/Cl ₂ , DRE, metals, PCDD/F
12		
13	478C11	
14		
15	Report Name/Date	Test Report for Miniburn, June 1993
16	Report Prepare	Midwest Research Institute (MRI)
17	Testing Firm	Midwest Research Institute (MRI)
18	Testing Dates	May 27, 1993
19	Cond Dates	May-93
20	Condition Descr	Miniburn, normal oper cond (only 1 run)
21	Content	PM, CO, HCl/Cl ₂ , DRE, metals
22		
23	478C12	
24		
25	Report Name/Date	Test Report for VOST Retest, October 1998
26	Report Prepare	Midwest Research Institute (MRI)
27	Testing Firm	Midwest Research Institute (MRI)
28	Testing Dates	April 29-30, 1998
29	Cond Dates	Apr-98
30	Condition Descr	DRE burn, min temp, max feedrate
31	Content	CO, DRE
32		
33	478C1	
34		
35	Report Name/Date	Dioxin/Furan Emission Test Results for Incinerators Final Report, For American Cyanid Company, Prepared by MRI, Project # 4435, August 13, 1996
36	Report Prepare	MRI
37	Testing Firm	MRI
38	Cond Descr	DIOXIN/FURAN EMISSIONS TEST - AQUEOUS/ORGANIC WASTE
39	Testing Dates	March 21-22, 1996
40	Cond Dates	Mar-96

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions 1											
2												
3		Comments	Units	7% O2								
4												
5												
6	478C10	Trial Burn				R1		R2		R3		Cond Avg
7												
8	PM	E1	gr/dscf	y		0.0422		0.0488		0.0391		0.0434
9												
10	CO (RA)		ppmv	n		7		18		7		10.7
11	CO (MHRA)		ppmv	n		24		131		23		
12	HC (RA)		ppmv	n		22		28		0		
13	HC (MHRA)		ppmv	n		42.0		100.0		1.0		
14												
15	HCl	E1	ppmv	y		1.83		2.58		3.34		2.6
16	Cl2	E1	ppmv	y		0.13		0.26		0.24		0.2
17	Total Chlorine	E1	ppmv	y		2.08		3.10		3.82		3.0
18												
19	POHC DRE	MCB										
20	POHC Feedrate		lb/hr			754.6		754.6		754.6		
21	Emission Rate	E4	lb/hr			1.64E-02		1.43E-01		1.08E-01		
22	DRE	E4	%			99.9978		99.9811		99.9857		
23												
24	POHC DRE	Perc										
25	POHC Feedrate		lb/hr			263.0		263.0		263.0		
26	Emission Rate	E4	lb/hr			1.06E-02		1.27E-01		1.01E-01		
27	DRE	E4	%			99.996		99.9519		99.9614		
28												
29	Chromium (Hex)		ug/dscm	n		2.38		27.9		19.3		
30	Chromium		ug/dscm	n		5.55		4.87		6.2		
31	Lead		ug/dscm	n		108		99.8		113		
32												
33	Sampling Train	PM, HCl/Cl2	E1									
34	Stack Gas Flowrate		dscfm			20400		20200		20000		20200.0
35	O2		%			7.3		7.8		7.8		7.6
36	Moisture		%			55.1		54.8		55.2		55.0
37	Temperature		°F			184		185		183		184.0
38			E2									
39	Sampling Train	Metals										
40	Stack Gas Flowrate		dscfm			20500		20900		20800		20733.3
41	O2		%			7.3		7.8		7.6		7.6
42	Moisture		%			54.2		54.4		54.4		54.3
43	Temperature		°F			184		185		183		184.0
44												
45	Sampling Train	Cr+6	E3									
46	Stack Gas Flowrate		dscfm			20200		19700		20000		19966.7
47	O2		%									
48	Moisture		%			54		54.5		53.5		54.0
49	Temperature		°F			183		184		183		183.3
50												
51	Sampling Train	PCDD/F	E4									
52	Stack Gas Flowrate		dscfm			19600		19800		19500		19633.3
53	O2		%			7.5		7.9		7.6		7.7
54	Moisture		%			54.8		55.3		55.2		55.1
55	Temperature		°F			183		184		183		183.3
56												
57	CO (RA)	E1	ppmv	y		7.15		19.09		7.42		11.2
58	CO (MHRA)	E1	ppmv	y		24.53		138.94		24.39		62.6
59	HC (RA)	E1	ppmv	y		22.48		29.70		0.00		17.4
60	HC (MHRA)	E1	ppmv	y		42.92		106.06		1.06		50.0
61												
62	Chromium (Hex)	E3	ug/dscm	y		2.43		29.59		20.16		17.4
63	Chromium	E2	ug/dscm	y		5.67		5.17		6.48		5.8
64	Lead	E2	ug/dscm	y		110.36		105.85		118.06		111.4
65	LVM	E2	ug/dscm	y		5.67		5.17		6.48		5.8
66	SVM	E2	ug/dscm	y		110.36		105.85		118.06		111.4
67												
68	478C11	Miniburn				R1		R2		R3		Cond Avg
69												
70	PM	E1	gr/dscf	y		0.0317						0.0317
71	CO (RA)	E1	ppmv	y		31						31.0000

	B	C	D	E	F	G	H	I	J	K	L	M
72	HC (RA)	E1	ppmv	y		5						5.0000
73												
74	HCl		lb/hr	n		0.41						
75	Cl2		lb/hr	n		0.13						
76												
77	POHC DRE	Tetrachloroethylene										
78	POHC Feedrate		lb/hr			268.0						
79	Emission Rate	E3	lb/hr			1.30E-03						
80	DRE	E3	%			99.99951						
81												
82	POHC DRE	MCB										
83	POHC Feedrate		lb/hr			651.0						
84	Emission Rate	E3	lb/hr			1.15E-03						
85	DRE	E3	%			99.99982						
86												
87	Chromium (Hex)		ug/dscm	n		5.21						
88												
89	Sampling Train	PM, HCl/Cl2 E1										
90	Stack Gas Flowrate		dscfm			15512.4						
91	O2		%			7.2						
92	Moisture		%			56.3						
93	Temperature		°F			184						
94												
95	Sampling Train	Cr+6 E2										
96	Stack Gas Flowrate		dscfm			461						
97	O2		%			7.4						
98	Moisture		%			56.1						
99	Temperature		°F			184						
100												
101	Sampling Train	DRE E3										
102	Stack Gas Flowrate		dscfm			450						
103	O2		%									
104	Moisture		%									
105	Temperature		°F									
106												
107	HCl	E1	ppmv	y		4.79						4.8
108	Cl2	E1	ppmv	y		0.78						0.8
109	Total Chlorine	E1	ppmv	y		6.35						6.3
110												
111	Chromium (Hex)	E2	ug/dscm	y		5.36						5.4
112												
113	478C12	DRE Burn				R1	R2	R3	Cond Avg			
114												
115	CO (RA)	E1	ppmv	y		24	23	39				28.7
116	CO (MHRA)	E1	ppmv	y		26	25	40				30.3
117												
118	HC (RA)		ppmv	n		0	0.1	0.9				
119	HC (MHRA)		ppmv	n		1.1	10	21.8				
120												
121	POHC DRE	MCB										
122	POHC Feedrate		lb/hr			773.0	773.0	773.0				
123	Emission Rate	E1	lb/hr			2.38E-04	6.34E-04	2.78E-03				
124	DRE	E1	%			99.99997	99.99992	99.9996				
125												
126	POHC DRE	Perc										
127	POHC Feedrate		lb/hr			269.7	269.7	269.7				
128	Emission Rate	E1	lb/hr			2.78E-04	4.63E-04	5.29E-03				
129	DRE	E1	%			99.9999	99.9998	99.998				
130												
131	Sampling Train	PM, HCl/Cl2 E1										
132	Stack Gas Flowrate		dscfm			6067	6106	6173				6115.3
133	O2		%			6.6	6.3	5.9				6.3
134	Moisture		%			59.1	57.8	59.4				58.8
135	Temperature		°F			186	185	186				185.7
136												
137	HC (RA)	E1	ppmv	y		0.00	0.04	0.34				0.1
138	HC (MHRA)	E1	ppmv	y		0.44	4.02	8.21				4.2

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions 2											
2												
3												
4	478C1					R1	R2	R3	Cond Avg			
5												
6	CO (RA)	E1	ppmv	y		275.0	287.0	530.0	364.0			
7	HC (RA)	E1	ppmv	y		1.4	2.7	8.9	4.3			
8												
9	Sampling Train	Dioxin & Furan										
10	Stack Gas Flowrate		dscfm			12813.0	12083.0	12094.0				
11	O2		%			5.6	5.4	5.6				
12	Moisture		%			59.0	59.9	60.4				
13	Temperature		°F			186.0	188.0	187.0				

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
1	Feedstream 2																									
2																										
3																										
4	478C10	Trial burn			R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2		R3	
5																										
6	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2							
7	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW							
8	Feed Class 2																				HW		HW		HW	
9	Feedstream Description				Liq Organic		Liq Organic		Liq Organic		Liq Organic		Aqueous		Aqueous		Aqueous		Aqueous							
10	Feed Rate	lb/hr			87.3		87		87				353		353		358									
11	Feed Rate	scfm																								
12	Thermal Feedrate	MMBtu/hr			67.5		67.2		66.5		67.07		1.8		1.8		1.8		1.80							
13	Heating Value	Btu/lb			12823		12946		12864				84		84		84									
14	Viscosity	cSt			2.96		3.035		3.129				1.921		1.922		1.72									
15	Ash	%			0.0053		0.005		0.0048				23.07		23.07		20.79									
16	Chlorine	lb/hr			0.084	nd	0.052		0.052				0.21		0.53		0.32									
17	Chromium	lb/hr	nd		0.0016	nd	0.0016	nd	0.0016		nd		0.0064	nd	0.0066	nd	0.0064									
18	Lead	lb/hr	nd		0.0094	nd	0.0093	nd	0.0092				0.043		0.0485		0.0416									
19																										
20	Stack Gas Flowrate	dscfm			20400		20200		20000		20200.0		20400		20200		20000		20200.0							
21	Oxygen	%			7.3		7.8		7.8		7.6		7.3		7.8		7.8		7.6							
22																										
23	Estimated Firing Rate	MMBtu/hr																								
24																										
25	<i>Feedrate MTEC Calculations</i>																									
26	Ash	mg/dscm			0.06		0.06		0.06		0.06		1090.73		1143.26		1055.31		1096		1091		1143		1055	
27	Chlorine	ug/dscm			1125.1	100	730.0		737.3	28	864.12		2812.6		7440.4		4537.2		4930	0.0	3938	8.9	8170	0.0	5275	
28	Chromium	ug/dscm	100		21.4	100	22.5	100	22.7	100	22.19	100	85.7	100	92.7	100	90.7	100	90	100	107	100	115	100	113	
29	Lead	ug/dscm	100		125.9	100	130.6	100	130.4	100	128.97		575.9		680.9		589.8		616	17.9	702	16.1	811	18.1	720	
30	LVM	ug/dscm	100		21	100	22	100	23	100	22	100	86	100	93	100	91	100	90	100	107	100	115	100	113	
31	SVM	ug/dscm	100		126	100	131	100	130	100	129	0	576	0	681	0	590	0	616	18	702	16	811	18	720	
32																										
33	478C11	Miniburn			Cond Avg		Cond Avg		Cond Avg		Cond Avg		Cond Avg		Cond Avg		Cond Avg									
34																										
35	Feedstream Number				F1		F2		F3		F4		F5													
36	Feed Class				Liq HW		Liq HW		Spike		NG		Total													
37	Feed Class 2								Spike		MF		Total		HW											
38	Feedstream Description				Liq Organic		Aqueous		Spike		Natural gas		Total													
39	Feed Rate	lb/hr			60		300.7																			
40	Feed Rate	scfm									192.0															
41	Thermal Feedrate	MMBtu/hr			44.5				5.7		11.5		61.7													
42	Heating Value	Btu/lb			12364																					
43	Viscosity	cSt			33																					
44	Ash	%			0.016		12.47																			
45	Chlorine	lb/hr			2.41	nd	0.03		5.02																	
46	Chromium	lb/hr							98.1																	
47																										
48	Stack Gas Flowrate	dscfm			15512.4		15512.4		15512.4		15512.4		15512.4		15512.4											
49	Oxygen	%			7.2		7.2		7.2		7.2		7.2		7.2											
50																										
51	Estimated Firing Rate	MMBtu/hr											68.0													
52																										
53	<i>Feedrate MTEC Calculations</i>																									
54	Ash	mg/dscm			0.17		655.68						655.8		655.84											
55	Chlorine	ug/dscm			42141.1	100	262.3		87779.4	0.2	43394.28		173577.1		42403.41											
56	Chromium	ug/dscm							1715370.9				1715370.9		0.00											
57	LVM	ug/dscm							1715370.9				1715370.9		0.0											
58																										
59	478C12	Trial burn			R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg							
60																										

	B	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AN	AN	AC	AP	AQ	AR	AS	AT	AU	AV	AW	AX
1	Feedstream 2																							
2																								
3																								
4	478C10	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg							
5																								
6	Feedstream Number	F3	F3	F3	F3	F4	F4	F4	F4	F5	F5	F5	F5											
7	Feed Class	Spike	Spike	Spike	Spike	NG	NG	NG	NG	Total	Total	Total	Total											
8	Feed Class 2	Spike	Spike	Spike	Spike	MF	MF	MF	MF	Total	Total	Total	Total											
9	Feedstream Description	Spike	Spike	Spike	Spike	Natural gas	Natural gas	Natural gas	Natural gas	Total	Total	Total	Total											
10	Feed Rate	1030.6	1030.5	1028.5																				
11	Feed Rate					62.0	62.0	62.0																
12	Thermal Feedrate	9.6	9.6	9.6	9.55	3.7	3.7	3.7	3.70	82.6	82.3	81.6	82.1											
13	Heating Value	14000.0	14000.0	14000.0																				
14	Viscosity																							
15	Ash																							
16	Chlorine	464	464	464																				
17	Chromium	0.0401	0.0382	0.0382																				
18	Lead	0.118	0.118	0.118																				
19																								
20	Stack Gas Flowrate	20400	20200	20000	20200.0	20400	20200	20000	20200.0	20400	20200	20000	20200.0											
21	Oxygen	7.3	7.8	7.8	7.6	7.3	7.8	7.8	7.6	7.3	7.8	7.8	7.6											
22																								
23	Estimated Firing Rate																							85.7
24																								
25	<i>Feedrate MTEC Calcula:</i>																							
26	Ash									1090.8	1143.3	1055.4	1096.5											
27	Chlorine	6214603.8	6513866.9	6579005.6	6435825.5					6218541.5	6522037.3	6584280.2	6441619.7											
28	Chromium	537.1	536.3	541.6	538.3					13	644.2	14.2	651.4	14	655.1	14	650.2							
29	Lead	1580.4	1656.5	1673.1	1636.7					2282.3	2468.0	2393.4	2381.2											
30	LVM	537 0	536 0	542 0	538					13	644	14	651	14	655	14	650							
31	SVM	1580 0	1657 0	1673 0	1637					0	2282	0	2468	0	2393	0	2381							
32																								
33	478C11																							
34																								
35	Feedstream Number																							
36	Feed Class																							
37	Feed Class 2																							
38	Feedstream Description																							
39	Feed Rate																							
40	Feed Rate																							
41	Thermal Feedrate																							
42	Heating Value																							
43	Viscosity																							
44	Ash																							
45	Chlorine																							
46	Chromium																							
47																								
48	Stack Gas Flowrate																							
49	Oxygen																							
50																								
51	Estimated Firing Rate																							
52																								
53	<i>Feedrate MTEC Calcula:</i>																							
54	Ash																							
55	Chlorine																							
56	Chromium																							
57	LVM																							
58																								
59	478C12	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg															
60																								

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	
61	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2								
62	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW								
63	Feedstream Description				Liq Organic		Liq Organic		Liq Organic		Liq Organic		Aqueous		Aqueous		Aqueous		Aqueous								
64	Feed Rate		lb/hr		90.7		90.4		91				355		354		354										
65	Feed Rate		scfm																								
66	Thermal Feedrate		MM Btu/hr																								
67	Heating Value		Btu/lb																								
68	Viscosity		cSt																								
69	Ash		%																								

	B	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX
61	Feedstream Number	F3	F3	F3	F3	F3	F3	F3	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4	F4
62	Feed Class	NG	NG	NG	NG	NG	NG	NG	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
63	Feedstream Description	Natural gas	Natural gas	Natural gas	Natural gas	Natural gas	Natural gas	Natural gas	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
64	Feed Rate																						
65	Feed Rate	152.0	159.0	195.0																			
66	Thermal Feedrate																						
67	Heating Value																						
68	Viscosity																						
69	Ash																						

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	
1	Feedstream 2																													
2																														
3																														
4	478C1				R1		R2		R3		R1		R2		R3		R1		R2		R3		R1		R2		R3		Cond Avg	
5																														
6	Feedstream Number				F1		F1		F1		F2		F2		F2									F3		F3		F3		F3
7	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Liq HW		Liq HW									Total		Total		Total		Total
8	Feed Class 2																HW		HW		HW		Total		Total		Total		Total	
9	Feedstream Description				Aqueous liq		Aqueous liq		Aqueous liq		Organic liq		Organic liq		Organic liq								Total		Total		Total		Total	
10	Feedrate		lb/min		260.1		250.1		251		40		41		40								Total		Total		Total		Total	
11	Heating value		Btu/lb																											
12	Ash																													
13	Chlorine		ppmw		9330		8000		8620		35		41		38															
14																														
15	Gas flowrate		dscfm		12813		12083		12094		12813		12083		12094								12813		12083		12094		12330	
16	Oxygen		%		5.6		5.4		5.6		5.6		5.4		5.6								5.6		5.4		5.6		5.5	
17																														
18	Estimated Firing Rate		MMBtu/hr																				62.64		59.84		59.13		60.54	
19																														
20	Feedrate MTEC																													
21	Chlorine		ug/dscm		2762154.09		2383975.3		2609082		1594		2003		1833		2763748		2385978		2610915		2763748		2385978		2610915		2586880	

	B	C	D	E	F	G
1	Process Information					
2						
3	478C10			R1	R2	R3
4						
5	Comb Chamb Temp	°C		885	902	888
6	Comb Air Flow	10 ³ scfm		11.8	11.1	11
7	Fume Flow	scfm		1261	1310	1250
8	Venturi DP	in H2O		45	55	53
9	Venturi Flow	gpm		180	179	179
10	pH of Separator Liq	pH		5.9	5.6	5.5
11						
12	478C11			R1		
13						
14	Comb Chamb Temp	°F		852		
15	Comb Air Flow	10 ³ scfm		11.4		
16	Fume Flow	scfm		2034		
17	Venturi DP	in H2O		49		
18	Venturi Flow	gpm		177		
19	pH of Separator Liq	pH		7.3		
20						
21	478C12			R1	R2	R3
22						
23	Comb Chamb Temp	°C		899	900	900
24	Comb Air Flow	10 ³ scfm		14.7	14.5	14.6
25	Fume Flow	scfm		1368	1674	1733
26	Venturi DP	in H2O		52.1	52.1	52.4
27	Venturi Flow	gpm		162	156	163
28	pH of Separator Liq	pH		6.7	5.9	6.3

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:	American Cyanamid Company																
4	Condition ID:	478C10																
5	Condition/Test Date:	Trial burn, minimum oper cond																
6																		
7																		
8	I-TEF	Run 1				Run 2				Run 3								
9	Wght Fact	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	
10	Detected in sample volume (ng)	Full ND	Full ND	1/2 ND	1/2 ND	Full ND	Full ND	1/2 ND	1/2 ND	Full ND	Full ND	1/2 ND	1/2 ND	Full ND	Full ND	1/2 ND	1/2 ND	
11	2,3,7,8-TCDD	1	nd	0.012	0.012	0.006	0.006	nd	0.0124	0.01	0.01	0.01	nd	0.005	0.005	0.003	0.003	
12	1,2,3,7,8-PCDD	0.5		0.039	0.019	0.039	0.019		0.0238	0.01	0.02	0.01		0.020	0.010	0.020	0.010	
13	1,2,3,4,7,8-HxCDD	0.1		0.025	0.002	0.025	0.002		0.0129	0.00	0.01	0.00		0.011	0.001	0.011	0.001	
14	1,2,3,6,7,8-HxCDD	0.1		0.034	0.003	0.034	0.003		0.0216	0.00	0.02	0.00		0.013	0.001	0.013	0.001	
15	1,2,3,7,8,9-HxCDD	0.1		0.028	0.003	0.028	0.003		0.0171	0.00	0.02	0.00		0.009	0.001	0.009	0.001	
16	1,2,3,4,6,7,8-HpCDD	0.01		0.123	0.001	0.123	0.001		0.0895	0.00	0.09	0.00		0.067	0.001	0.067	0.001	
17	2,3,7,8-TCDF	0.1		0.187	0.019	0.187	0.019		0.208	0.02	0	0.02		0.093	0.009	0.093	0.009	
18	1,2,3,7,8-PCDF	0.05		0.073	0.004	0.073	0.004		0.0555	0.00	0	0.00		0.042	0.002	0.042	0.002	
19	2,3,4,7,8-PCDF	0.5		0.243	0.122	0.243	0.122		0.257	0.13	0	0.13		0.073	0.037	0.073	0.037	
20	1,2,3,4,7,8-HxCDF	0.1		0.098	0.010	0.098	0.010		0.0734	0.01	0	0.01		0.053	0.005	0.053	0.005	
21	1,2,3,6,7,8-HxCDF	0.1		0.104	0.010	0.104	0.010	nd	0.0731	0.01	0	0.00		0.052	0.005	0.052	0.005	
22	2,3,4,6,7,8-HxCDF	0.1		0.426	0.043	0.426	0.043		0.533	0.05	1	0.05		0.089	0.009	0.089	0.009	
23	1,2,3,7,8,9-HxCDF	0.1		0.070	0.007	0.070	0.007		0.0402	0.00	0	0.00		0.026	0.003	0.026	0.003	
24	1,2,3,4,6,7,8-HpCDF	0.01		0.326	0.003	0.326	0.003		0.218	0.00	0	0.00		0.151	0.002	0.151	0.002	
25	1,2,3,4,7,8,9-HpCDF	0.01		0.075	0.001	0.075	0.001		0.053	0.00	0	0.00		0.039	0.000	0.039	0.000	
26	Total TCDD	0		0.366	0.000	0.366	0.000		0.403	0.00	0	0.00		0.118	0.000	0.118	0.000	
27	Total PCDD	0		0.522	0.000	0.522	0.000		0.243	0.00	0	0.00		0.171	0.000	0.171	0.000	
28	Total HxCDD	0		0.421	0.000	0.421	0.000		0.237	0.00	0	0.00		0.133	0.000	0.133	0.000	
29	Total HpCDD	0		0.227	0.000	0.227	0.000		0.161	0.00	0	0.00		0.067	0.000	0.067	0.000	
30	OCDD	0.001		0.224	0.000	0.224	0.000		0.176	0.00	0	0.00		0.115	0.000	0.115	0.000	
31	Total TCDF	0		3.350	0.000	3.350	0.000		14	0.00	14	0.00		7.730	0.000	7.730	0.000	
32	Total PCDF	0		1.880	0.000	1.880	0.000		2.09	0.00	2	0.00		1.060	0.000	1.060	0.000	
33	Total HxCDF	0		1.240	0.000	1.240	0.000		1	0.00	1	0.00		0.531	0.000	0.531	0.000	
34	Total HpCDF	0		0.641	0.000	0.641	0.000		0.431	0.00	0	0.00		0.292	0.000	0.292	0.000	
35	OCDF	0.001		0.079	0.000	0.079	0.000		0.0692	0.00	0	0.00		0.064	0.000	0.064	0.000	
36																		
37	Gas sample volume (dscf)				116.254	116.254	116.254			117.00	117.00	117.00			114.700	114.700	114.700	
38	O2 (%)				7.400	7.400	7.400			7.8	7.8	7.8			7.700	7.700	7.700	
39																		
40	PCDD/PCDF (ng in sample)				0.259	8.950	0.253			0.257	18.8	0.248			0.091	10.281	0.089	
41	PCDD/PCDF (ng/dscm @ 7% O2)	4.7			0.081	2.800	0.079	7.7		0.08	6.03	0.08	5.5		0.030	3.334	0.029	
42																		
43	TEQ Cond Avg	0.06																
44	Total Cond Avg	4.05																

	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	478C1				R1				R2				R3	
2		I-TEF		Total	Total	TEQ		Total	Total	TEQ		Total	Total	TEQ
3	ng/dscm	Wt Fact		Full ND	1/2 ND	1/2 ND		Full ND	1/2 ND	1/2 ND		Full ND	1/2 ND	1/2 ND
4														
5	4D 2378	1	1	0.002	0.001	0.001	1	0.002	0.001	0.001	1	0.002	0.001	0.001
6	4D Other	0		0.000	0.000	0.000		0.000	0.000	0.000		0.000	0.000	0.000
7	4D Total	0	1	0.001	0.001	0.000	1	0.002	0.001	0.000	1	0.002	0.001	0.000
8	5D 12378	0.5	1	0.002	0.001	0.000	1	0.002	0.001	0.001	1	0.003	0.001	0.001
9	5D Other	0		0.000	0.000	0.000		0.000	0.000	0.000		0.000	0.000	0.000
10	5D Total	0	1	0.002	0.001	0.000	1	0.002	0.001	0.000	1	0.003	0.001	0.000
11	6D 123478	0.1	1	0.002	0.001	0.000	1	0.002	0.001	0.000	1	0.002	0.001	0.000
12	6D 123678	0.1		0.002	0.002	0.000	1	0.002	0.001	0.000	1	0.002	0.001	0.000
13	6D 123789	0.1	1	0.002	0.001	0.000	1	0.002	0.001	0.000	1	0.002	0.001	0.000
14	6D Other	0		0.004	0.004	0.000		-0.004	-0.004	0.000		0.000	0.000	0.000
15	6D Total	0		0.009	0.009	0.000	1	0.002	0.001	0.000		0.006	0.006	0.000
16	7D 1234678	0.01		0.012	0.012	0.000		0.006	0.006	0.000		0.009	0.009	0.000
17	7D Other	0		0.011	0.011	0.000		0.006	0.006	0.000		0.009	0.009	0.000
18	7D Total	0		0.023	0.023	0.000		0.012	0.012	0.000		0.018	0.018	0.000
19	8D	0.001		0.031	0.031	0.000		0.023	0.023	0.000		0.028	0.028	0.000
20	4F 2378	0.1	2	0.003	0.003	0.000	1	0.002	0.001	0.000	1	0.002	0.001	0.000
21	4F Other	0		0.034	0.034	0.000		0.003	0.003	0.000		0.020	0.020	0.000
22	4F Total	0		0.037	0.037	0.000		0.005	0.005	0.000		0.022	0.022	0.000
23	5F 12378	0.05	2	0.005	0.005	0.000	1	0.002	0.001	0.000	2	0.003	0.003	0.000
24	5F 23478	0.5	2	0.007	0.007	0.004		0.003	0.003	0.001	2	0.002	0.002	0.001
25	5F Other	0		0.012	0.012	0.000		-0.002	-0.002	0.000		0.014	0.014	0.000
26	5F Total	0		0.025	0.025	0.000		0.003	0.003	0.000		0.019	0.019	0.000
27	6F 123478	0.1		0.006	0.006	0.001		0.004	0.004	0.000		0.004	0.004	0.000
28	6F 123678	0.1		0.006	0.006	0.001		0.003	0.003	0.000		0.004	0.004	0.000
29	6F 123789	0.1	1	0.002	0.001	0.000	1	0.001	0.001	0.000	2	0.002	0.002	0.000
30	6F 234678	0.1		0.007	0.007	0.001		0.004	0.004	0.000		0.005	0.005	0.001
31	6F Other	0		0.021	0.021	0.000		0.009	0.009	0.000		0.012	0.012	0.000
32	6F Total	0		0.041	0.041	0.000		0.022	0.022	0.000		0.027	0.027	0.000
33	7F 1234678	0.01		0.019	0.019	0.000		0.010	0.010	0.000		0.014	0.014	0.000
34	7F 1234789	0.01	2	0.005	0.005	0.000	2	0.002	0.002	0.000	2	0.005	0.005	0.000
35	7F Other	0		0.003	0.003	0.000		-0.001	-0.001	0.000		-0.004	-0.004	0.000
36	7F Total	0		0.026	0.026	0.000		0.011	0.011	0.000		0.015	0.015	0.000
37	8F	0.001		0.013	0.013	0.000		0.008	0.008	0.000		0.014	0.014	0.000
38	Total PCDD/PCDF			0.209	0.208			0.090	0.087			0.155	0.153	
39	TEQ		32.7	0.010		0.008	59.3	0.006		0.005	55.2	0.007		0.005