

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase I ID No.	357
4	EPA ID No.	TN0890090004
5	Facility Name	DOE Oak Ridge K-25
6	Facility Location	
7	City	Oak Ridge
8	State	TN
9	Unit ID Name/No.	ETTP TSCA Incinerator
10	Other Sister Facilities	
11	Number of Sister Facilities	0
12	Combustor Class	Onsite Incinerator, government, mixed waste
13	Combustor Type	Rotary kiln
14	Combustor Characteristics	Rotary kiln, afterburner, International Waste Energy Systems, kiln is 6' diameter, 25' long
15		
16	Capacity (MMBtu/hr)	30
17	Soot Blowing	No
18	APCS Detailed Acronym	Q/VS/PBS/IWS
19	APCS General Class	WQ, HEWS, LEWS, IWS
20	APCS Characteristics	Quench, venturi scrubber, packed bed scrubber, ionizing wet scrubber (2 in series)
21	Hazardous Wastes	Liq, solid
22	Haz Waste Description	Radioactive (mixed) liquid, sludge, solid wastes, PCBs
23	Supplemental Fuel	Natural gas
24		
25	Stack Characteristics	
26	Diameter (ft)	4.5
27	Height (ft)	100.0
28	Gas Velocity (ft/sec)	21.4
29	Gas Temperature (°F)	176.0
30		
31	Permitting Status	RCRA 1997
32	HWC Burn Status (Date if Terminated)	

	B	C
1	Condition Description	
2		
3	357C10	
4		
5	Report Name/Date	Final Report, Trial Burn of the TSCA Incinerator, U.S. Department of Energy, Oak Ridge East Tennessee Technology Park, Oak Ridge Tennessee, September 7, 2001, TRC Project No. 02261 - 0020 - 00000
6	Report Prepare	TRC Environmental Corp
7	Testing Firm	TRC Environmental Corp
8	Testing Dates	May 23-24, 2001
9	Cond Dates	May-01
10	Condition Descr	Trial burn, low temp, DRE, solid PCBs
11	Content	PM, HCl/Cl2, D/F, VOC, PCB, HC/CO
12		
13	357C11	
14		
15	Report Name/Date	Final Report, Trial Burn of the TSCA Incinerator, U.S. Department of Energy, Oak Ridge East Tennessee Technology Park, Oak Ridge Tennessee, September 7, 2001, TRC Project No. 02261 - 0020 - 00000
16	Report Prepare	TRC Environmental Corp
17	Testing Firm	TRC Environmental Corp
18	Testing Dates	May 19-21, 2001
19	Cond Dates	May-01
20	Condition Descr	Trial burn, low temp, DRE, liquid PCBs
21	Content	PM, D/F, CO/HC, VOC, DRE
22		
23	357C12	
24		
25	Report Name/Date	Final Report, Trial Burn of the TSCA Incinerator, U.S. Department of Energy, Oak Ridge East Tennessee Technology Park, Oak Ridge Tennessee, September 7, 2001, TRC Project No. 02261 - 0020 - 00000
26	Report Prepare	TRC Environmental Corp
27	Testing Firm	TRC Environmental Corp
28	Testing Dates	May 15, 16, 25, 2001
29	Cond Dates	May-01
30	Condition Descr	Trial burn, max temp, max metals
31	Content	PM, HCl/Cl2, metals, CO/HC
32		
33	357C1	
34		
35	Report Name/Date	RCRA Trial Burn Report for a Dual Purpose RCRA/TSCA Incinerator at the U.S. Department of Energy's K-25 Facility in Oak Ridge, Tennessee, August 31, 1989
36	Report Prepare	IT Corp
37	Testing Firm	IT Corp
38	Testing Dates	June 12-14, 1989
39	Cond Dates	Jun-89
40	Condition Descr	Trial burn, MAX WASTE, CL, ASH FEED; MINIMUM TEMP
41	Content	08/31/89
42		
43	357C50	
44		
45	Condition Descr	PCDD/PCDF data from 1995 testing provided to EPA by DOE
46	Cond Dates	Jan-95

	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	357C10	Trial Burn				R1		R2		R3		Cond Avg
7												
8	CO (RA)	E1	ppmv	y		2.5		1.8		1.5		1.9
9	HC (RA)	E1	ppmv	y		33.3		1.3		4.38		13.0
10	NOx (RA)	E1	ppmv	y		88.3		63.0		65.8		72.3
11	HC levels considered unreasonably high, likely problems with HC analyzer											
12	PM	E1	gr/dscf	y		0.073		0.071		0.047		0.0637
13												
14	HCl		g/hr			26.9		67.4		56.2		
15	Cl2		g/hr			1.05		19.5		2.45		
16												
17	POHC DRE	Carbon Tetrachloride										
18	POHC Feedrate		lb/hr			22		20		18		
19	POHC Emissions	E1	g/s		nd	1.47E-05	nd	1.97E-05		2.05E-05		
20	POHC DRE	E1	%			99.99947		99.99922		99.99910		
21												
22	POHC DRE	PCB										
23	POHC Feedrate		lb/hr			113.36		107.15		84.74		
24	POHC Emissions	E1	g/s		nd	5.96E-08	nd	5.35E-08	nd	4.87E-08		
25	POHC DRE	E1	%		>	99.9999958	>	99.9999996	>	99.9999954		
26												
27	POHC DRE	Trichlorobenzene										
28	POHC Feedrate		lb/hr			66		66		63		
29	POHC Emissions	E1	g/s		nd	7.60E-06	nd	7.60E-06	nd	7.60E-06		
30	POHC DRE	E1	%			99.99990869		99.99990869		99.99990434		
31												
32	Sampling Train	PM, HCl/Cl2	E1									
33	Stack Gas Flowrate		dscfm			7891		7981		8138		8003.3
34	O2		%			9.6		9.1		8.5		9.1
35	Moisture		%			50.8		52.1		52.5		51.8
36	Temperature		°F			177		178		180		178.3
37												
38	HCl	E1	ppmv	y		1.7		4.0		3.1		3.0
39	Cl2	E1	ppmv	y		0.1		2.3		0.3		0.9
40	Total Chlorine	E1	ppmv	y		2.0		8.7		3.7		4.8
41												
42	357C11	Trial Burn				R1		R2		R3		Cond Avg
43												
44	CO (RA)	E1	ppmv	y		2.5		1.7		2.6		2.3
45	HC (RA)	E1	ppmv	y		2.09		4.8		66.93		24.6
46	NOx (RA)	E1	ppmv	y		87.18		82.47		84.98		84.9
47	HC levels considered unreasonably high, likely problems with HC analyzer											
48	PM	E1	gr/dscf	y		0.047		0.045		0.047		0.0463
49												
50	HCl		g/hr			26.1		24.1		23.3		
51	Cl2		g/hr		nd	2.45	nd	2.43	nd	2.28		
52												
53	POHC DRE	PCB										
54	POHC Feedrate		lb/hr			116		111		121		
55	POHC Emissions	E1	lb/hr		nd	6.32E-08	nd	6.44E-08	nd	6.41E-08		
56	POHC DRE	E1	%			99.9999957		99.9999954		99.9999958		
57												
58												
59	Sampling Train	PM, HCl/Cl2	E1									
60	Stack Gas Flowrate		dscfm			8793		8731		8892		8805.3
61	O2		%			9.8		9.7		9.7		9.7
62	Moisture		%			48.6		48.8		48.8		48.7
63	Temperature		°F			177		178		180		178.3
64												
65	HCl	E1	ppmv	y		1.5		1.4		1.3		1.4
66	Cl2	E1	ppmv	y		0.3		0.3		0.3		0.3
67	Total Chlorine	E1	ppmv	y		2.1		1.9		1.8		2.0
68												
69	357C12	Trial burn				R1		R2		R3		Cond Avg
70												
71	CO (RA)	E1	ppmv	y		4		3.6		1.9		3.2

	B	C	D	E	F	G	H	I	J	K	L	M
72	HC (RA)	E1	ppmv	y		5.85		2.64				4.2
73	NOx (RA)	E1	ppmv	y		119.16		113.24				116.2
74												
75	PM	E1	gr/dscf	y		0.034		0.023		0.024		0.0270
76												
77	HCl		g/hr			23.3		20.3		19.4		
78	Cl2		g/hr			1.91		2.08		1.34		
79												
80	Aluminum		ug/dscf	n		181.32		181.1		181.66		
81	Antimony		ug/dscf	n	nd	0.34	nd	0.42		0.45		
82	Arsenic		ug/dscf	n	nd	36.13	nd	31.75		31.69		
83	Barium		ug/dscf	n		1.15		1.2		1.12		
84	Beryllium		ug/dscf	n	nd	0.01	nd	0.01	nd	0.02		
85	Cadmium		ug/dscf	n		25.06		22.08		19.74		
86	Chromium		ug/dscf	n		22.69		20.35		8.38		
87	Cobalt		ug/dscf	n	nd	0.04	nd	0.04	nd	0.02		
88	Copper		ug/dscf	n		12.17		11		14.03		
89	Lead		ug/dscf	n		292.7		259.05		218.55		
90	Manganese		ug/dscf	n		1.05		0.98		1		
91	Mercury		ug/dscf	n	nd	0.55	nd	0.53	nd	0.32		
92	Nickel		ug/dscf	n		0.61		0.6		1.33		
93	Selenium		ug/dscf	n		0.75	nd	0.67		0.25		
94	Silver		ug/dscf	n	nd	0.03	nd	0.04	nd	0.02		
95	Thallium		ug/dscf	n	nd	0.01	nd	0.02	nd	0.01		
96	Vanadium		ug/dscf	n	nd	0.09	nd	0.1	nd	0.08		
97	Zinc		ug/dscf	n		34.45		35.65		14.11		
98												
99	Sampling Train	PM, HCl/Cl2	E1									
100	Stack Gas Flowrate		dscfm			8646		9530		8026		8734.0
101	O2		%			9		8.8		8.9		8.9
102	Moisture		%			50.2		43.5		51.7		48.5
103	Temperature		°F			177		178		181		178.7
104												
105	Sampling Train	Metals	E2									
106	Stack Gas Flowrate		dscfm			8869		8950		8585		
107	O2		%			9		8.8		8.9		
108	Moisture		%			50.5		50.3		49.5		
109	Temperature		°F			178		178		181		
110												
111	Aluminum	E2	ug/dscm	y		7474.9		7343.5		7427.0		7415.1
112	Antimony	E2	ug/dscm	y	nd	14.0	nd	17.0		18.4		16.5
113	Arsenic	E2	ug/dscm	y	nd	1489.5	nd	1287.4		1295.6		1357.5
114	Barium	E2	ug/dscm	y		47.4		48.7		45.8		47.3
115	Beryllium	E2	ug/dscm	y	nd	0.4	nd	0.4	nd	0.8		0.5
116	Cadmium	E2	ug/dscm	y		1033.1		895.3		807.1		911.8
117	Chromium	E2	ug/dscm	y		935.4		825.2		342.6		701.1
118	Cobalt	E2	ug/dscm	y	nd	1.6	nd	1.6	nd	0.8		1.4
119	Copper	E2	ug/dscm	y		501.7		446.0		573.6		507.1
120	Lead	E2	ug/dscm	y		12066.5		10504.3		8935.3		10502.0
121	Manganese	E2	ug/dscm	y		43.3		39.7		40.9		41.3
122	Mercury	E2	ug/dscm	y	nd	22.7	nd	21.5	nd	13.1	100	19.1
123	Nickel	E2	ug/dscm	y		25.1		24.3		54.4		34.6
124	Selenium	E2	ug/dscm	y		30.9	nd	27.2		10.2		22.8
125	Silver	E2	ug/dscm	y	nd	1.2	nd	1.6	nd	0.8		1.2
126	Thallium	E2	ug/dscm	y	nd	0.4	nd	0.8	nd	0.4		0.5
127	Vanadium	E2	ug/dscm	y	nd	3.7	nd	4.1	nd	3.3		3.7
128	Zinc	E2	ug/dscm	y		1420.2		1445.6		576.9		1147.6
129												
130	SVM	E2	ug/dscm	y		13099.6		11399.6		9742.3		11413.8
131	LVM	E2	ug/dscm	y		2425.3		2113.0		1639.1		2059.1
132												
133	HCl	E1	ppmv	y		1.3		1.0		1.1		1.1
134	Cl2	E1	ppmv	y		0.2		0.2		0.2		0.2
135	Total Chlorine	E1	ppmv	y		1.7		1.4		1.4		1.5

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions 2											
2												
3												
4	357C1					R1		R2		R3		Cond Avg
5												
6	PM	E1	gr/dscf	y		0.0327		0.0244		0.0177		0.0249
7	CO (RA)	E1	ppmv	y				16.0		6.0		9.5
8	HCl	E1	ppmv	y		9.6		6.7 nd		4.6		6.2
9	Total Chlorine	E1	ppmv	y		9.6		6.7		4.6		6.2
10												
11	Sampling Train	PM/HCl	E1									
12	Stack Gas Flowrate		dscfm			9284.0		9486.0		9412.0		
13	O2		%			12.1		12.1		11.8		
14	Moisture		%			44.4		45.7		46.0		
15	Temperature		°F			174.0		176.0		178.0		
16												
17	Carbon Tetrachloride	E1	%			99.999		99.99911		99.9983		
18	Hexachloroethane	E1	%			99.9973		99.9975		99.9975		
19	Trichlorofluoromethane	E1	%			99.99935		99.9965		99.9982		

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	Feedstream 2																							
2																								
3																								
4	357C10	Trial burn		R1	R2	R3	Cond Avg		R1	R2	R3	Cond Avg		R1	R2									
5																								
6	Feedstream Number			F1	F1	F1	F1		F2	F2	F2	F2		F3	F3									
7	Feed Class			Solid HW	Solid HW	Solid HW	Solid HW		Liq HW	Liq HW	Liq HW	Liq HW		Liq HW	Liq HW									
8	Feed Class 2																							
9	Feedstream Description			Solid Waste	Solid Waste	Solid Waste	Solid Waste		Primary Organic Liquid Waste	Primary Organic Liquid Waste	Primary Organic Liquid Waste	Primary Organic Liquid Waste		Secondary Organic Liquid Waste	Secondary Organic Liquid Waste									
10	Feed Rate	lb/hr		898	877	813			801	829	806			602	606									
11	Heating Value	Btu/lb							16232	17966	17228			16725	16610									
12	Chlorine	lb/hr		80	76	61			28	7	8			21	30									
13	Ash	lb/hr		644	629	583			0.6	0.7	0.6			0	0									
14																								
15	Stack Gas Flowrate	dscfm		7891	7981	8138			7891	7981	8138			7891	7981									
16	Oxygen	%		9.6	9.1	8.5			9.6	9.1	8.5			9.6	9.1									
17																								
18	Thermal Feedrate	MMBtu/hr		0	0	0			13.0	14.9	13.9			10.1	10.1									
19	Estimated Firing Rate	MMBtu/hr																						
20																								
21	<i>Feedrate MTEC Calculations</i>																							
22	Chlorine	ug/dscm	y	3328889	2995405	2244648	2856314		1165111	275893	294380			578461	873833									
23	Ash	mg/dscm	y	26797.6	24790.9	21453.0	24347		25.0	27.6	22.1			25	0.0									
24																								
25																								
26	357C11	Trial burn		R1	R2	R3	Cond Avg		R1	R2	R3	Cond Avg		R1	R2									
27																								
28	Feedstream Number			F1	F1	F1	F1		F2	F2	F2	F2		F3	F3									
29	Feed Class			Solid HW	Solid HW	Solid HW	Solid HW		Liq HW	Liq HW	Liq HW	Liq HW		Liq HW	Liq HW									
30	Feed Class 2																							
31	Feedstream Description			Solid Waste	Solid Waste	Solid Waste	Solid Waste		Primary Organic Liquid Waste	Primary Organic Liquid Waste	Primary Organic Liquid Waste	Primary Organic Liquid Waste		Secondary Organic Liquid Waste	Secondary Organic Liquid Waste									
32	Feed Rate	lb/hr		269	295	259			411	392	358			369	383									
33	Heating Value	Btu/lb							13799	29915	17609			15570	13681									
34	Chlorine	lb/hr		0	0	0			90	87	85			56	59									
35	Ash	lb/hr		79	86	76			0.8	0.4	0.4			6	7									
36																								
37	Stack Gas Flowrate	dscfm		8793	8731	8892			8793	8731	8892			8793	8731									
38	Oxygen	%		9.8	9.7	9.7			9.8	9.7	9.7			9.8	9.7									
39																								
40	Thermal Feedrate	MMBtu/hr		0	0	0			5.7	11.7	6.3			5.7	5.2									
41	Estimated Firing Rate	MMBtu/hr																						
42																								
43	<i>Feedrate MTEC Calculations</i>																							
44	Chlorine	ug/dscm	y	0	0	0	0		3420847	3300829	3166556			3296077	2128527									
45	Ash	mg/dscm	y	3002.7	3262.9	2831.3	3032		30.4	15.2	14.9			20	228.1									
46																								
47																								
48																								
49	357C12	Trial burn		R1	R2	R3	Cond Avg		R1	R2	R3	Cond Avg		R1	R2									
50																								
51	Feedstream Number			F1	F1	F1	F1		F2	F2	F2	F2		F3	F3									
52	Feed Class			Solid HW	Solid HW	Solid HW	Solid HW		Liq HW	Liq HW	Liq HW	Liq HW		Liq HW	Liq HW									
53	Feed Class 2																							
54	Feedstream Description			Solid Waste	Solid Waste	Solid Waste	Solid Waste		Primary Organic Liquid Waste	Primary Organic Liquid Waste	Primary Organic Liquid Waste	Primary Organic Liquid Waste		Secondary Organic Liquid Waste	Secondary Organic Liquid Waste									

	B	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AV	AW	AX	AZ		
1	Feedstream 2																											
2																												
3																												
4	357C10	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	
5	Feedstream Number	F3	F3	F4	F4	F4	F4	F5	F5	F5	F5	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	
6	Feed Class	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Spike	Spike	Spike	Spike	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	
7	Feed Class 2																											
8	Feedstream Description	Secondary Organic Liquid Waste	Secondary Organic Liquid Waste	Aqueous Waste	Aqueous Waste	Aqueous Waste	Aqueous Waste	Spike	Spike	Spike	Spike	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	
9	Feed Rate	610		450	493	490																						
10	Heating Value	17259		54	102	82																						
11	Chlorine	19		3	1	1		39	39	39		171	153	128														
12	Ash	0		2.4	2.8	2.5		15	20	20		662	652.5	606.1														
13	Stack Gas Flowrate	8138		7891	7981	8138		7891	7981	8138																		
14	Oxygen	8.5		9.6	9.1	8.5		9.6	9.1	8.5																		
15	Thermal Feedrate	10.5		0.0	0.1	0.0		0.0	0.0	0.0		23.1	25.0	24.5												24		
16	Estimated Firing Rate																											
17	<i>Feedrate MTEC Calculation</i>																											
18	Chlorine	699153	918461	124833	39413	36798	67015	1622833	1537116	1435103	1531684	7115500	6030222.8	4710082.1	5951934.942													
19	Ash	0.0	0	99.9	110.4	92.0	101	624.2	788.3	736.0	716	27547	25717	22303	25189													
20																												
21	357C11	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	
22	Feedstream Number	F3	F3	F4	F4	F4	F4	F5	F5	F5	F5	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	
23	Feed Class	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Spike	Spike	Spike	Spike	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	
24	Feed Class 2																											
25	Feedstream Description	Secondary Organic Liquid Waste	Secondary Organic Liquid Waste	Aqueous Waste	Aqueous Waste	Aqueous Waste	Aqueous Waste	Spike	Spike	Spike	Spike	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	
26	Feed Rate	389		300	307	307																						
27	Heating Value	13693		80	67	50																						
28	Chlorine	80		1	1	1						147	147	166														
29	Ash	7		5.9	5.4	5.9						91.7	98.8	89.3														
30	Stack Gas Flowrate	8892		8793	8731	8892		8793	8731	8892																		
31	Oxygen	9.7		9.8	9.7	9.7		9.8	9.7	9.7																		
32	Thermal Feedrate	5.3		0.0	0.0	0.0		0.0	0.0	0.0		11.44072	16.987072	11.645949												13		
33	Estimated Firing Rate																											
34	<i>Feedrate MTEC Calculation</i>																											
35	Chlorine	2980288	2449103	38009	37941	37254	37735	0	0	0	0	5587383	5577262.8	6184098.4	5782914.726													
36	Ash	260.8	251	224.3	204.9	219.8	216	0.0	0.0	0.0	0	3485	3749	3327	3520													
37																												
38	357C12	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg	
39	Feedstream Number	F3	F3	F4	F4	F4	F4	F5	F5	F5	F5	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	F6	
40	Feed Class	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Spike	Spike	Spike	Spike	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	
41	Feed Class 2																											
42	Feedstream Description	Secondary Organic Liquid Waste	Secondary Organic Liquid Waste	Aqueous Waste	Aqueous Waste	Aqueous Waste	Aqueous Waste	Spike	Spike	Spike	Spike	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	

	B	BA	BB	BC	BD	BE	BF	BG	BH
1	Feedstream 2								
2									
3									
4	357C10		R1		R2		R3		Cond Avg
5									
6	Feedstream Number								
7	Feed Class								
8	Feed Class 2								
	Feedstream Description								
9									
10	Feed Rate								
11	Heating Value								
12	Chlorine								
13	Ash								
14									
15	Stack Gas Flowrate								
16	Oxygen								
17									
18	Thermal Feedrate								
19	Estimated Firing Rate								
20									
21	<i>Feedrate MTEC Calculation</i>								
22	Chlorine		5492667		4493107		3274979		4420251
23	Ash		26922		24929		21567		24473
24									
25									
26	357C11		R1		R2		R3		Cond Avg
27									
28	Feedstream Number								
29	Feed Class								
30	Feed Class 2								
	Feedstream Description								
31									
32	Feed Rate								
33	Heating Value								
34	Chlorine								
35	Ash								
36									
37	Stack Gas Flowrate								
38	Oxygen								
39									
40	Thermal Feedrate								
41	Estimated Firing Rate								
42									
43	<i>Feedrate MTEC Calculation</i>								
44	Chlorine		5587382.993		5577262.759		6184098.43		5782914.726
45	Ash		3485		3749		3327		3520
46									
47									
48									
49	357C12		R1		R2		R3		Cond Avg
50									
51	Feedstream Number								
52	Feed Class								
53	Feed Class 2								
	Feedstream Description								
54									

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
55	Feed Rate		lb/hr		0		0		0				415		414		498				543		553	
56	Heating Value		Btu/lb		0		0		0				14078		14360		15286				14445		13940	
57	Chlorine		lb/hr		0		0		0				51		94		79				84		89	
58	Ash		lb/hr		0		0		0				0.7		0.4		0.7				0		0	
59	Antimony		lb/hr										1.66E-04		1.99E-04		1.45E-04				2.42E-04		2.58E-04	
60	Arsenic		lb/hr										2.08E-05		2.07E-05		2.59E-05				2.72E-05		2.77E-05	
61	Barium		lb/hr										3.05E-04		4.87E-04		1.40E-03				7.09E-04		7.63E-04	
62	Beryllium		lb/hr										2.08E-05		2.07E-05		1.20E-05				2.72E-05		2.77E-05	
63	Cadmium		lb/hr										4.86E-05		6.29E-05		3.44E-05				1.04E-04		1.14E-04	
64	Chromium		lb/hr										2.91E-04		4.52E-04		1.37E-03				7.58E-04		7.44E-04	
65	Cobolt		lb/hr										3.28E-05		2.94E-05		4.98E-05				5.05E-05		4.31E-05	
66	Lead		lb/hr										6.60E-04		1.07E-03		2.97E-03				1.59E-03		1.61E-03	
67	Manganese		lb/hr										1.60E-03		6.77E-04		3.34E-03				1.28E-03		1.07E-03	
68	Mercury		lb/hr										3.41E-04		5.07E-04		5.15E-04				8.30E-04		8.94E-04	
69	Nickel		lb/hr										2.91E-04		2.67E-04		6.68E-04				3.91E-04		7.66E-04	
70	Selenium		lb/hr										1.59E-04		2.37E-04		1.21E-03				3.21E-04		3.36E-04	
71	Silver		lb/hr										3.78E-05		6.75E-05		1.76E-04				8.63E-05		8.79E-05	
72	Thallium		lb/hr										6.23E-05		6.21E-05		7.47E-05				8.15E-05		8.30E-05	
73	Vanadium		lb/hr										2.08E-05		2.07E-05		2.49E-05				2.72E-05		2.77E-05	
74																								
75	Stack Gas Flowrate		dscfm		8869		8950		8585				8869		8950		8585				8869		8950	
76	Oxygen		%		9		8.8		8.9				9		8.8		8.9				9		8.8	
77																								
78	Thermal Feedrate		MMBtu/hr		0		0		0				5.8		5.9		7.6				7.8		7.7	
79	Estimated Firing Rate		MMBtu/hr																					
80																								
81	<i>Feedrate MTEC Calculations</i>																							
82	Chlorine		ug/dscm	y	0		0		0		0		1793744		3222487		2846739		2620990		2954402		3051078	
83	Ash		mg/dscm	y	0.0		0.0		0.0		0		24.6		13.7		25.2		21		0.0		0.0	
84	Antimony		ug/dscm	y									5.8		6.8		5.2				8.5		8.9	
85	Arsenic		ug/dscm	y									0.7		0.7		0.9				1.0		0.9	
86	Barium		ug/dscm	y									10.7		16.7		50.5				24.9		26.1	
87	Beryllium		ug/dscm	y									0.7		0.7		0.4				1.0		0.9	
88	Cadmium		ug/dscm	y									1.7		2.2		1.2				3.6		3.9	
89	Chromium		ug/dscm	y									10.2		15.5		49.2				26.7		25.5	
90	Cobolt		ug/dscm	y									1.2		1.0		1.8				1.8		1.5	
91	Lead		ug/dscm	y									23.2		36.7		107.1				56.0		55.2	
92	Manganese		ug/dscm	y									56.3		23.2		120.2				45.0		36.8	
93	Mercury		ug/dscm	y									12.0		17.4		18.6		16		29.2		30.7	
94	Nickel		ug/dscm	y									10.2		9.2		24.1				13.8		26.3	
95	Selenium		ug/dscm	y									5.6		8.1		43.4				11.3		11.5	
96	Silver		ug/dscm	y									1.3		2.3		6.3				3.0		3.0	
97	Thallium		ug/dscm	y									2.2		2.1		2.7				2.9		2.8	
98	Vanadium		ug/dscm	y									0.7		0.7		0.9				1.0		0.9	
99																								
100	SVM		ug/dscm	y									24.9		38.9		108.4		57.4		59.6		59.1	
101	LVM		ug/dscm	y									11.7		16.9		50.6		26.4		28.6		27.4	

	B	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AV	AW	AX	AZ		
5	Feed Rate	425				370		370		523																		
6	Heating Value	15708				50		50		128																		
7	Chlorine	46				1		1		2												136	184		127			
8	Ash	1				5.4		5.5		2.2				6	6		22					12.1	11.9		25.9			
9	Antimony	9.78E-05				1.53E-04		1.30E-04		9.20E-05																		
0	Arsenic	8.50E-06				3.53E-04		3.29E-04		2.68E-04				0.279	0.279		0.334											
1	Barium	8.17E-04				1.15E-03		1.01E-03		7.85E-04																		
2	Beryllium	4.68E-06				2.48E-05		2.31E-05		3.40E-05																		
3	Cadmium	1.66E-05				1.42E-04		1.31E-04		1.17E-04				0.213	0.213		0.212											
4	Chromium	5.22E-04				1.11E-02		1.01E-02		7.06E-03				0.284	0.284		0.298											
5	Cobolt	2.17E-05				1.84E-04		1.75E-04		1.21E-04																		
6	Lead	1.54E-03				4.74E-03		4.66E-03		2.42E-03				2.59	2.6		2.61											
7	Manganese	1.65E-03				6.14E-03		5.62E-03		1.24E-02																		
8	Mercury	2.61E-04				3.11E-03		1.14E-03		1.43E-03																		
9	Nickel	3.46E-04				3.45E-03		3.20E-03		2.98E-03																		
0	Selenium	3.75E-04				2.31E-02		2.21E-02		8.47E-03																		
1	Silver	1.01E-04				2.80E-04		2.55E-04		1.99E-04																		
2	Thallium	6.38E-05				5.55E-05		5.55E-05		7.85E-05																		
3	Vanadium	2.13E-05				5.77E-05		5.07E-05		2.62E-05																		
4																												
5	Stack Gas Flowrate	8585				8869		8950		8585				8869	8950		8585					8869	8950		8585	8801		
6	Oxygen	8.9				9		8.8		8.9				9	8.8		8.9					9	8.8		8.9	9		
7																												
8	Thermal Feedrate	6.7				0.0		0.0		0.1				0.0	0.0		0.0					13.70	13.67		14.36	14		
9	Estimated Firing Rate																									33.8		
0																												
1	<i>Feedrate MTEC Calculation</i>																											
2	Chlorine	1657595		2554358		35171		34282		72069		47174		0	0		0		0		0	4783318	6307847.1		4576402.9	5222523		
3	Ash	36.0		12		189.9		188.5		79.3		153		211.0	205.7		792.8		403		425.6	408.0		933.3	588.9			
4	Antimony	3.5				5.4		4.5		3.3				0.0	0.0		0.0		0		19.7	20.1		12.1	0.0			
5	Arsenic	0.3				12.4		11.3		9.7				9812.8	9564.6		12035.6		10471		9826.9	9577.6		12046.5	10471.0			
6	Barium	29.4				40.5		34.8		28.3				0.0	0.0		0.0		0		76.2	77.6		108.2	0.0			
7	Beryllium	0.2				0.9		0.8		1.2				0.0	0.0		0.0		0		2.6	2.5		1.8	0.0			
8	Cadmium	0.6				5.0		4.5		4.2				7491.5	7302.0		7639.3		7478		7501.9	7312.6		7645.4	7477.6			
9	Chromium	18.8				389.1		345.0		254.4				9988.7	9736.0		10738.3		10154		10414.7	10122.0		11060.8	10154.3			
0	Cobolt	0.8				6.5		6.0		4.4				0.0	0.0		0.0		0		9.4	8.5		6.9	0.0			
1	Lead	55.5				166.6		159.8		87.1				91094.1	89132.6		94050.5		91426		91339.8	89384.3		94300.2	91425.7			
2	Manganese	59.4				216.0		192.8		448.5				0.0	0.0		0.0		0		317.4	252.9		628.1	0.0			
3	Mercury	9.4		23		109.3		39.2		51.4		66.7		0.0	0.0		0.0		0		150.5	87.2		79.4	105.7			
4	Nickel	12.5				121.3		109.7		107.4		113		0.0	0.0		0.0		0		145.3	145.1		144.0	112.8			
5	Selenium	13.5				812.0		756.0		305.3				0.0	0.0		0.0		0		828.9	775.6		362.3	0.0			
6	Silver	3.6				9.9		8.7		7.2				0.0	0.0		0.0		0		14.2	14.1		17.2	0.0			
7	Thallium	2.3				2.0		1.9		2.8				0.0	0.0		0.0		0		7.0	6.9		7.8	0.0			
8	Vanadium	0.8				2.0		1.7		0.9				0.0	0.0		0.0		0		3.7	3.4		2.6	0.0			
9																												
0	SVM	56.1		58.3		171.6		164.3		91.3		142.4		98585.6	96434.6		101689.8		98903.4		98841.7	96696.9		101945.6	99161.4			
1	LVM	19.3		25.1		402.4		357.1		265.3		341.6		19801.5	19300.6		22773.9		20625.4		20244.2	19702.0		23109.1	21018.4			

	B	BA	BB	BC	BD	BE	BF	BG	BH
55	Feed Rate								
56	Heating Value								
57	Chlorine								
58	Ash								
59	Antimony								
60	Arsenic								
61	Barium								
62	Beryllium								
63	Cadmium								
64	Chromium								
65	Cobolt								
66	Lead								
67	Manganese								
68	Mercury								
69	Nickel								
70	Selenium								
71	Silver								
72	Thallium								
73	Vanadium								
74									
75	Stack Gas Flowrate								
76	Oxygen								
77									
78	Thermal Feedrate								
79	Estimated Firing Rate								
80									
81	<i>Feedrate MTEC Calculation</i>								
82	Chlorine		4783318		6307847		4576403		5222523
83	Ash		215		202		141		186
84	Antimony		20		20		12		17
85	Arsenic		14		13		11		13
86	Barium		76		78		108		87
87	Beryllium		3		2		2		2
88	Cadmium		10		11		6		9
89	Chromium		426		386		322		378
90	Cobolt		9		8		7		8
91	Lead		246		252		250		249
92	Manganese		317		253		628		399
93	Mercury		150		87		79		106
94	Nickel		145		145		144		145
95	Selenium		829		776		362		656
96	Silver		14		14		17		15
97	Thallium		7		7		8		7
98	Vanadium		4		3		3		3
99									
100	SVM		256		262		256		258
101	LVM		443		401		335		393

	B	AF	AG	AH	AI	AJ	AK	AL	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX
1	Feedstream 2																		
2																			
3																			
4	357C1	R2	R3	R1	R2	R3	Cond Avg	R1	R2	R3	Cond Avg								
5																			
6	Feedstream Number	F5	F5	F6	F6	F6	F6												
7	Feed Class	Solid HW	Solid HW	Total	Total	Total	Total												
8	Feed Class 2			Total	Total	Total	Total	HW	HW	HW	HW								
9	Feedstream Description			Total	Total	Total	Total												
10	Feed Rate	942	984																
11	Heating Value	0	0																
12	Thermal Feedrate																		
13	Ash	72.99	72.99																
14	Chlorine	1000 nd	1000																
15																			
16																			
17	Stack Gas Flowrate	9284	9412																
18	Oxygen	12.1	11.8																
19																			
20	<i>Feedrate MTEC Calculations</i>																		
21	Ash	31148	31048	36548	35535	35536	35873	36548	35535	35536	35873								
22	Chlorine	42675 nd	42537	10470074	10901922	9932765	10434920	10470074	10901922	9932765	10434920								

	B	C	D	E
1	Process Information			
2				
3	357C10			Cond Avg
4				
5	Kiln Exit Temperature	F		1580
6	Afterburner Exit Temperature	F		2205
7	Kiln Speed	rpm		0.71
8	Kiln Pressure	in WC		-0.71
9	Venturi Scrubber Pressure Drop	in WC		8.55
10	Venturi Scrubber Flowrate	gpm		122
11	Packed Bed pH			6.2
12	IWS #1 Voltage	V		20936
13	IWS #2 Voltage	V		18917
14	IWS Blowdown	gpm		3.7
15				
16	357C11			
17				
18	Kiln Exit Temperature	F		1590
19	Afterburner Exit Temperature	F		2204
20	Kiln Speed	rpm		0.72
21	Kiln Pressure	in WC		-0.8
22	Venturi Scrubber Pressure Drop	in WC		8.59
23	Venturi Scrubber Flowrate	gpm		186
24	Packed Bed pH			6.2
25	IWS #1 Voltage	V		24390
26	IWS #2 Voltage	V		21416
27	IWS Blowdown	gpm		14.4
28				
29	357C12			
30				
31	Kiln Exit Temperature	F		1921
32	Afterburner Exit Temperature	F		2259
33	Kiln Speed	rpm		0.63
34	Kiln Pressure	in WC		-0.81
35	Venturi Scrubber Pressure Drop	in WC		8.57
36	Venturi Scrubber Flowrate	gpm		159
37	Packed Bed pH			7.1
38	IWS #1 Voltage	V		24628
39	IWS #2 Voltage	V		22417
40	IWS Blowdown	gpm		13.7

	C	D	E	F	G
1	Process Information 2				
2					
3	357C1				
4					
5	VS Pressure Drop	in H2O	8.7	8.5	8.5
6	Kiln Temperature	F	1571	1575	1571
7	Afterburner Temperature	F	1876	1880	1878
8	PBS Temperature	F	183	180	179
9	PBS pH		6.1	6	6.2

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:	DOE Oak Ridge, TN															
4	Condition ID:	357C10															
5	Condition/Test Date:	Trial burn, low temp DRE, May 2001															
6																	
7		I-TEF	Run 1				Run 2				Run 3						
8		Wght Fact	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	
9			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
10	Detected in sample volume (pg)																
11	2,3,7,8-TCDD	1	nd	9.2	9.20	4.60	4.60	nd	7.3	7.30	3.65	3.65	nd	11.4	11.40	5.70	5.70
12	Other TCDD	0		109	0	109	0		70.1	0.00	70	0.00		85.7	0.00	86	0.00
13	1,2,3,7,8-PCDD	0.5		8.4	4.20	8.40	4.20		8.8	4.40	8.80	4.40		13	6.50	13.00	6.50
14	Other PCDD	0		113	0	113	0		94.3	0.00	94	0.00		75	0.00	75	0.00
15	1,2,3,4,7,8-HxCDD	0.1		4.5	0.45	4.50	0.45		5.3	0.53	5.30	0.53		9.6	0.96	9.60	0.96
16	1,2,3,6,7,8-HxCDD	0.1		8	0.80	8.00	0.80		7.4	0.74	7.40	0.74		11.1	1.11	11.10	1.11
17	1,2,3,7,8,9-HxCDD	0.1		9	0.90	9.00	0.90		10.8	1.08	10.80	1.08		16	1.60	16.00	1.60
18	Other HxCDD	0		142	0	142	0		70.6	0.00	71	0.00		79	0.00	79	0.00
19	1,2,3,4,6,7,8-HpCDD	0.01		25.3	0.25	25.30	0.25		31.8	0.32	31.80	0.32		58	0.58	58.00	0.58
20	Other HpCDD	0		21.7	0	22	0		24	0.00	24	0.00		30	0.00	30	0.00
21	OCDD	0.001		80	0.08	80.00	0.08		59	0.06	59	0.06		202	0.20	202	0.20
22	2,3,7,8-TCDF	0.1		43.5	4.35	43.50	4.35		63.9	6.39	64	6.39		62.1	6.21	62	6.21
23	Other TCDF	0		1596	0	1596	0		1941.9	0.00	1942	0.00		2242.1	0.00	2242	0.00
24	1,2,3,7,8-PCDF	0.05		60.2	3	60	3		79.8	3.99	80	3.99		89.3	4.47	89	4.47
25	2,3,4,7,8-PCDF	0.5		104	52	104	52		171.8	85.90	172	85.90		191.3	95.65	191	95.65
26	Other PCDF	0		975.8	0	976	0		1355.7	0.00	1356	0.00		1626	0.00	1626	0.00
27	1,2,3,4,7,8-HxCDF	0.1		163	16	163	16		223.5	22.35	224	22.35		272	27.20	272	27.20
28	1,2,3,6,7,8-HxCDF	0.1		67.4	7	67	7		87.2	8.72	87	8.72		121.4	12.14	121	12.14
29	2,3,4,6,7,8-HxCDF	0.1		47.9	5	48	5		77.6	7.76	78	7.76		95	9.50	95	9.50
30	1,2,3,7,8,9-HxCDF	0.1	nd	6.6	1	3	0		13.2	1.32	13	1.32		16	1.60	16	1.60
31	Other HxCDF	0		409.7	0	410	0		553.7	0.00	554	0.00		705.2	0.00	705	0.00
32	1,2,3,4,6,7,8-HpCDF	0.01		116	1	116	1		195.5	1.96	196	1.96		263.9	2.64	264	2.64
33	1,2,3,4,7,8,9-HpCDF	0.01		28.5	0	29	0		54.6	0.55	55	0.55		75.9	0.76	76	0.76
34	Other HpCDF	0		83.5	0	84	0		130.9	0.00	131	0.00		167	0.00	167	0.00
35	OCDF	0.001		91	0	91	0		132	0.13	132	0.13		241	0.24	241	0.24
36																	
37	Gas sample volume (dscf)				115.67	115.67	115.67			112.29	112.29	112.29			110.958	110.958	110.958
38	O2 (%)				9.6	9.6	9.6			9.1	9.1	9.1			8.5	8.5	8.5
39																	
40	PCDD/PCDF (ng in sample)				0.105	4.3	0.100			0.153	5.5	0.150			0.183	6.8	0.177
41	PCDD/PCDF (ng/dscm @ 7% O2)	9.4			0.039	1.619	0.038	4.8		0.057	2.02	0.055	6.2		0.065	2.41	0.063
42																	
43	TEQ Cond Avg	0.0521															
44	Total Cond Avg	2.0172															

	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:		DOE Oak Ridge, TN															
4	Condition ID:		357C11															
5	Condition/Test Date:		Trial burn, low temp DRE, May 2001															
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			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	Detected in sample volume (pg)																	
12	2,3,7,8-TCDD	1	nd	14	14.00	7.00	7.00	nd	12.7	12.70	6.35	6.35	nd	15.8	15.80	7.90	7.90	
13	Total TCDD	0		24	0	24	0		38	0.00	38	0.00		40.8	0.00	41	0.00	
14	1,2,3,7,8-PCDD	0.5	nd	10.4	5.20	5.20	2.60		9.9	4.95	9.90	4.95	nd	11.2	5.60	5.60	2.80	
15	Total PCDD	0		31.7	0	32	0		61.7	0.00	62	0.00		57	0.00	57	0.00	
16	1,2,3,4,7,8-HxCDD	0.1	nd	7.5	0.75	3.75	0.38	nd	7.1	0.71	3.55	0.36	nd	8.3	0.83	4.15	0.42	
17	1,2,3,6,7,8-HxCDD	0.1	nd	7.6	0.76	3.80	0.38	nd	7.1	0.71	3.55	0.36	nd	8.3	0.83	4.15	0.42	
18	1,2,3,7,8,9-HxCDD	0.1		9.4	0.94	9.40	0.94		10.5	1.05	10.50	1.05	nd	7.7	0.77	3.85	0.39	
19	Total HxCDD	0		35.9	0	36	0		49.2	0.00	49	0.00		38.9	0.00	39	0.00	
20	1,2,3,4,6,7,8-HpCDD	0.01		27	0.27	27.00	0.27		28.4	0.28	28.40	0.28		22.5	0.23	22.50	0.23	
21	Total HpCDD	0		13	0	13	0		22	0.00	22	0.00		19.5	0.00	20	0.00	
22	OCDD	0.001		115	0.12	115.00	0.12		74	0.07	74	0.07		141	0.14	141	0.14	
23	2,3,7,8-TCDF	0.1		68	6.80	68.00	6.80		35.7	3.57	36	3.57		45	4.50	45	4.50	
24	Total TCDF	0		1222	0	1222	0		1473.7	0.00	1474	0.00		975	0.00	975	0.00	
25	1,2,3,7,8-PCDF	0.05		48	2	48	2		47.9	2.40	48	2.40		39.4	1.97	39	1.97	
26	2,3,4,7,8-PCDF	0.5		82	41	82	41		112.9	56.45	113	56.45		56.3	28.15	56	28.15	
27	Total PCDF	0		830	0	830	0		1049	0.00	1049	0.00		467.4	0.00	467	0.00	
28	1,2,3,4,7,8-HxCDF	0.1		136	14	136	14		163.1	16.31	163	16.31		73.4	7.34	73	7.34	
29	1,2,3,6,7,8-HxCDF	0.1		48	5	48	5		60.4	6.04	60	6.04		27.8	2.78	28	2.78	
30	2,3,4,6,7,8-HxCDF	0.1		38	4	38	4		59	5.90	59	5.90		21.2	2.12	21	2.12	
31	1,2,3,7,8,9-HxCDF	0.1		9.1	1	9	1	nd	6.9	0.69	3	0.35	nd	9.1	0.91	5	0.46	
32	Total HxCDF	0		292.8	0	293	0		692	0.00	692	0.00		169.3	0.00	169	0.00	
33	1,2,3,4,6,7,8-HpCDF	0.01		112	1	112	1		135.5	1.36	136	1.36		62.7	0.63	63	0.63	
34	1,2,3,4,7,8,9-HpCDF	0.01		29.5	0	30	0		44.4	0.44	44	0.44		24.2	0.24	24	0.24	
35	Total HpCDF	0		64	0	64	0		111.1	0.00	111	0.00		43.1	0.00	43	0.00	
36	OCDF	0.001		102	0	102	0		108	0.11	108	0.11		47.1	0.05	47	0.05	
37	Gas sample volume (dscf)			112.677	112.677	112.677			113.4947	113.947	113.4947			116.143	116.143	116.143		
38	O2 (%)			9.8	9.8	9.8			9.7	9.7	9.7			9.7	9.7	9.7		
39																		
40	PCDD/PCDF (ng in sample)			0.097	3.4	0.087			0.114	4.4	0.106			0.073	2.4	0.061		
41	PCDD/PCDF (ng/dscm @ 7% O2)		21.4	0.038	1.316	0.034	13.0		0.044	1.692	0.041	33.9		0.027	0.91	0.023		
42																		
43	TEQ Cond Avg		0.0326															
44	Total Cond Avg		1.3044															

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	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:		DOE Oak Ridge, TN																
4	Condition ID:		357C50																
5	Condition/Test Date:		Normal testing, 1995																
6																			
7			I-TEF				Run 1				Run 2				Run 3				
8			Wght Fact		Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	
9					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
10	Detected in sample volume (pg)																		
11	2,3,7,8-TCDD		1																
12	Total TCDD		0																
13	1,2,3,7,8-PCDD		0.5																
14	Total PCDD		0																
15	1,2,3,4,7,8-HxCDD		0.1																
16	1,2,3,6,7,8-HxCDD		0.1																
17	1,2,3,7,8,9-HxCDD		0.1																
18	Total HxCDD		0																
19	1,2,3,4,6,7,8-HpCDD		0.01																
20	Total HpCDD		0																
21	OCDD		0.001																
22	2,3,7,8-TCDF		0.1																
23	Total TCDF		0																
24	1,2,3,7,8-PCDF		0.05																
25	2,3,4,7,8-PCDF		0.5																
26	Total PCDF		0																
27	1,2,3,4,7,8-HxCDF		0.1																
28	1,2,3,6,7,8-HxCDF		0.1																
29	2,3,4,6,7,8-HxCDF		0.1																
30	1,2,3,7,8,9-HxCDF		0.1																
31	Total HxCDF		0																
32	1,2,3,4,6,7,8-HpCDF		0.01																
33	1,2,3,4,7,8,9-HpCDF		0.01																
34	Total HpCDF		0																
35	OCDF		0.001																
36																			
37	Gas sample volume (dscf)																		
38	O2 (%)																		
39																			
40	PCDD/PCDF (ng in sample)																		
41	PCDD/PCDF (ng/dscm @ 7% O2)		0.005				0.200				0.200								
42																			
43	TEQ Cond Avg																		
44	Total Cond Avg																		