

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase I ID No.	346
4	EPA ID No.	TT0570090001
5	Facility Name	Johnston Atoll Chemical Agent Disposal System (JACADS)
6	Facility Location	
7	City	Johnston Atoll
8	State	Territory
9	Unit ID Name/No.	DFS Incinerator
10	Other Sister Facilities	
11	Number of Sister Facilities	0
12	Combustor Class	Onsite Incinerator, DoD government, chem demil
13	Combustor Type	Rotary kiln
14	Combustor Characteristics	Deactivation furnace system. Rotary kiln/heated discharge conveyor/cyclone/afterburner
15		
16	Capacity (MMBtu/hr)	
17	Soot Blowing	
18	APCS Detailed Acronym	WQ/V/S/PBS/DM
19	APCS General Class	WQ, HEWS, LEWS
20	APCS Characteristics	Quench tower, venturi scrubber (variable throat), packed bed scrubber, demister vessel
21	Hazardous Wastes	Solid
22	Haz Waste Description	Explosive components from chemical weapons (fuses, explosives, propellants)
23	Supplemental Fuel	Misc fuel
24		JP-5 (fuel source to primary & secondary combustion chambers)
25		
26	Stack Characteristics	Note: Common stack for 3 HWIs: LIC, MPF, and DFS; stack velocity & temp. below is for DFS only
27	Diameter (ft)	4.50
28	Height (ft)	100
29	Gas Velocity (ft/sec)	#REF!
30	Gas Temperature (°F)	#REF!
31		
32	Permitting Status	RCRA
33	HWC Burn Status (Date if Te	No longer burning waste; shutdown after all hazardous waste on island was treated.

	B	C
1	Condition Description	
2		
3	346C10	346C10
4		
5	Report Name/Date	JACADS- GB Trial Burn Report of the DFS Incinerator, July, 1998
6	Report Prepare	Raytheon Engineers & Construction
7	Testing Firm	TRC Environmental
8	Testing Dates	February 24, 26, 28 and March 2, 1998
9	Cond Dates	Feb-98
10	Condition Descr	GB Trial Burn
11	Content	PM, HCl/Cl ₂ /HF, metals, PCDD/PCDF, DRE, VOC/SVOC (Runs 3-6)
12		
13	346C1	
14		
	Report Name/Date	Results of the RCRA Trial Burn and TSCA Demonstration Burn of the Deactivation Furnace System with M55 VX Rockets at the Johnston Atoll Chemical Agent Disposal System, June 23, 1992, SRI-APC-92-385-7530.5.1-I-R3
15		
16	Report Prepare	Southern Research Institute
17	Testing Firm	Southern Research Institute
18	Cond Descr	Trial burn, NOMINAL CONDITIONS
19	Testing Dates	March 4 - 12, 1992
20	Cond Dates	Mar-92

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Stack Gas Emissions 1													
2														
3		Comments	Units	7% O2										
4														
5														
6	346C10	GB Trial Burn				R1		R2		R3		R4		Cond Avg
7														
8	CO (RA)	E1	ppmv	y		24.3		20.6		15.9		13.2		18.5
9														
10	PM	E1	gr/dscf	y		0.0006		0.0005		0.0003		0.0004		0.0005
11														
12	HCl		mg/dscf	n	nd	0.01	nd	0.01	nd	0.01	nd	0.01		0.01
13	Cl2		mg/dscf	n		0.01		0.01		0.01		0.01		0.01
14	HF		mg/dscf	n	nd	0.01	nd	0.01	nd	0.01	nd	0.01		0.01
15														
16	HCl	E1	ppmv	y		0.16		0.16		0.16		0.16		0.2
17	Cl2	E1	ppmv	y		0.16		0.16		0.08		0.08		0.1
18	Total Chlorine	E1	ppmv	y		0.47		0.48		0.33		0.33		0.4
19	HF	E1	ppmv	y		0.31		0.32		0.32		0.33		0.3
20														
21	POHC	2,4,6-TNT												
22	POHC Feedrate		lb/hr			105.3		118.2		112.1		122.7		114.6
23	Emission Rate	E1	lb/hr		nd	5.91E-06	nd	5.65E-06	nd	5.76E-06		6.00E-06		0.00000583
24	DRE	E1	%		>	99.999994	>	99.999995	>	99.999995		99.999995		99.999995
25														
26	Aluminum		ug/dscf	n		0.31		0.24		0.23		0.39		
27	Antimony		ug/dscf	n	nd	0.07		0.07	nd	0.07	nd	0.01		0.01
28	Arsenic		ug/dscf	n	nd	0.01		0.00	nd	0.01	nd	0.01		0.01
29	Barium		ug/dscf	n	nd	0.14		0.14	nd	0.01	nd	0.01		0.01
30	Beryllium		ug/dscf	n	nd	0.01	nd	0.01	nd	0.01	nd	0.01		0.01
31	Boron		ug/dscf	n	nd	0.63	nd	0.64	nd	0.44	nd	0.59		
32	Cadmium		ug/dscf	n		0.02	nd	0.02		0.01		0.02		
33	Chromium		ug/dscf	n		0.03		0.03	nd	0.03		0.03		
34	Chromium (Hex)		ug/dscf	n	nd	0.024	nd	0.025	nd	0.027	nd	0.027		
35	Cobalt		ug/dscf	n	nd	0.03	nd	0.03	nd	0.03	nd	0.03		0.03
36	Copper		ug/dscf	n	nd	0.06	nd	0.06	nd	0.07	nd	0.09		
37	Lead		ug/dscf	n		0.09		0.10		0.10		0.14		
38	Manganese		ug/dscf	n		3.00		8.18	nd	0.01	nd	0.01		
39	Mercury		ug/dscf	n		0.04		0.04		0.04		0.04		
40	Nickel		ug/dscf	n	nd	0.06		0.03	nd	0.01	nd	0.01		0.01
41	Selenium		ug/dscf	n	nd	0.07		0.07	nd	0.01	nd	0.01		0.01
42	Silver		ug/dscf	n	nd	0.03		0.03	nd	0.01	nd	0.01		0.01
43	Thallium		ug/dscf	n	nd	0.01		0.01	nd	0.01	nd	0.01		0.01
44	Tin		ug/dscf	n	nd	0.31	nd	0.31	nd	0.33	nd	0.31		
45	Vanadium		ug/dscf	n	nd	0.03	nd	0.03	nd	0.03	nd	0.03		0.03
46	Zinc		ug/dscf	n		0.43		0.43		0.34		0.45		
47														
48	Sampling Train	PM, HCl/Cl2, H E1												
49	Stack Gas Flowrate		dscfm			6525.2		6502.1		6418.7		6448		6473
50	O2		%			10.5		10.7		10.9		11.1		11
51	Moisture		%			46.1		46.6		46		47		46.4
52	Temperature		°F			177		178		177		178		178
53														
54	Sampling Train	Metals	E2											
55	Stack Gas Flowrate		dscfm			6641.4		6722		6754.1		6765.3		6721
56	O2		%			10.5		10.7		10.9		11.1		10.8
57	Moisture		%			46.1		46.6		45.9		46.7		46
58	Temperature		°F			178		179		179		179		179
59														
60	Aluminum	E2	ug/dscm	y		14.6		11.5		11.3		19.5		14.2
61	Antimony	E2	ug/dscm	y	nd	3.3	nd	3.3	nd	3.5	nd	0.3		2.6
62	Arsenic	E2	ug/dscm	y	nd	0.3		0.2	nd	0.4	nd	0.3		0.2
63	Barium	E2	ug/dscm	y		6.5		6.6		0.4		0.3		3.5
64	Beryllium	E2	ug/dscm	y	nd	0.3	nd	0.3	nd	0.4	nd	0.3		0.3
65	Boron	E2	ug/dscm	y	nd	29.7	nd	30.7	nd	21.6	nd	29.5		27.9
66	Cadmium	E2	ug/dscm	y		0.7	nd	0.7		0.7		0.9		0.7
67	Chromium	E2	ug/dscm	y		1.6		1.3	nd	1.6		1.7		1.6
68	Chromium (Hex)	E2	ug/dscm	y	nd	1.1	nd	1.2	nd	1.3	nd	1.3		1.3
69	Cobalt	E2	ug/dscm	y	nd	1.4	nd	1.4	nd	1.5	nd	1.5		1.5
70	Copper	E2	ug/dscm	y	nd	2.8	nd	2.9	nd	3.4	nd	4.5		3.4
71	Lead	E2	ug/dscm	y		4.3		4.7		4.9		7.0		5.2

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
72	Manganese	E2	ug/dscm	y		141.4		393.1		0.4		0.3		133.8
73	Mercury	E2	ug/dscm	y		1.7		2.0		1.8		1.8		1.8
74	Nickel	E2	ug/dscm	y	nd	2.6	nd	1.6	nd	0.4	nd	0.3		1.2
75	Selenium	E2	ug/dscm	y	nd	3.3	nd	3.3	nd	0.4	nd	0.3		1.8
76	Silver	E2	ug/dscm	y	nd	1.3	nd	1.3	nd	0.4	nd	0.3		0.8
77	Thallium	E2	ug/dscm	y	nd	0.7	nd	0.7	nd	0.7	nd	0.7		0.7
78	Tin	E2	ug/dscm	y	nd	14.6	nd	14.9	nd	16.2	nd	15.5		15.3
79	Vanadium	E2	ug/dscm	y	nd	1.4	nd	1.4	nd	1.5	nd	1.5		1.5
80	Zinc	E2	ug/dscm	y		20.3		20.7		16.7		22.5		20.0
81														
82	SVM	E2	ug/dscm	y		5.01		5.40		5.56		7.84		6.0
83	LVM	E2	ug/dscm	y		2.3		1.9		2.3		2.4		2.2

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Stack Gas Emissions 2													
2														
3														
4	346C1					R1	R2	R3	R4	Cond Avg				
5														
6	PM	E1	gr/dscf	y		0.0005	0.0020	0.0019	0.0007	0.0013				
7	CO (RA)	E1	ppmv	y		30.0	26.2	20.4	34.5	27.8				
8	HCl	E1	ppmv	y	nd	0.7	0.8	0.8	0.7	0.8				
9	Arsenic	E2	ug/dscm	y	nd	11.7	10.4	10.7	9.2	10.5				
10	Beryllium	E2	ug/dscm	y		1.6	10.4	10.7	9.2	8.0				
11	Cadmium	E2	ug/dscm	y		5.7	2.7	2.2	2.3	3.2				
12	Chromium	E2	ug/dscm	y		14.8	4.9	5.6	4.2	7.4				
13	Lead	E2	ug/dscm	y		109.2	93.3	67.7	101.3	92.9				
14	Mercury	E2	ug/dscm	y		0.5	0.2	0.6	0.9	0.6				
15	Thallium	E2	ug/dscm	y	nd	2.3	2.1	2.1	1.8	2.1				
16	Selenium	E2	ug/dscm	y	nd	11.7	10.4	10.7	9.2	10.5				
17	Barium	E2	ug/dscm	y	nd	23.3	20.7	21.4	18.4	21.0				
18	Silver	E2	ug/dscm	y	nd	4.7	4.1	4.3	3.7	4.2				
19	Antimony	E2	ug/dscm	y	nd	11.7	10.4	10.7	9.2	10.5				
20	Nickel	E2	ug/dscm	y		9.3	5.0	5.3	5.5	6.3				
21	Manganese	E2	ug/dscm	y		503.8	1235.9	161.7	393.9	573.8				
22														
23	SVM	E2	ug/dscm	y		114.8	96.1	69.9	103.6	96.1				
24	LVM	E2	ug/dscm	y		28.1	25.7	27.0	22.7	25.9				
25														
26	Sampling Train	Halogens	E1											
27	Stack Gas Flowrate		dscfm			11493.0	10919.0	10598.0	10684.0					
28	O2		%			13.9	12.9	13.0	13.0					
29	Moisture		%			39.5	39.1	39.2	39.0					
30	Temperature		°F			183.0	181.0	181.0	182.0					
31														
32	Sampling Train	Metals	E2											
33	Stack Gas Flowrate		dscfm			10413.0	10672.0	10420.0	12028.0					
34	O2		%			13.9	13.0	13.0	13.1					
35	Moisture		%			39.4	38.8	37.6	39.3					
36	Temperature		°F			182.0	182.0	178.0	184.0					
37														
38	Sampling Train	SVOC	E3											
39	Stack Gas Flowrate		dscfm			12161.0	11404.0	11370.0	11907.0					
40	O2		%			13.9	13.0	13.2	13.1					
41	Moisture		%			38.5	41.9	37.5	39.0					
42	Temperature		°F			181.0	181.0	180.0	181.0					
43														
44	Sampling Train	STEM	E4											
45	Stack Gas Flowrate		dscfm			12208.0	11531.0	11269.0	11631.0					
46	O2		%			13.9	13.0	13.2	13.2					
47	Moisture		%			40.3	39.2	39.4	39.4					
48	Temperature		°F			181.0	180.0	179.0	183.0					
49														
50	Nitroglycerine	DRE	%			99.99992	99.99884	99.99943	99.99962					
51	PCB	DRE	%			99.99999	99.99999	99.99999	99.99971					

	B	C	D
1	Feedstream 1		
2			
3			
4	346C10		
5			
6	Nothing available		
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			
59			
60	346C10	GB Trial Burn	

	B	C	D	E
1	Feedstream 2			
2				
3	346C1			
4				
5	No feedrate information is available			

	B	C	D	E
1	Process Information			
2				
3	346C10	GB Trial Burn	Cond Avg	
4				
5	Rotary kiln (Primary Comb Chamb) Temp	°F		1049
6	Afterburner Temp	°F		2022
7	Comb Cham Pressure	in H2O		-1
8	VS Pressure Drop	in H2O		20
9	VS Brine Flow	gpm		220
10	PBS pressure drop	in H2O		1.5
11	PBS Liquor Flow	gpm		1150
12	PBS Clean Liquor pH			8
13	Brine pH			8.5

	C	D	E	F	G	H
1	Process Information 2					
2						
3	346C1					
4						
5	Afterburner Temperature?	F	1050	1049	1050	1051
6	Kiln Temperature	F	2006	1998	1998	1998
7	WS Temperature	F	179	177	178	180
8	Quench Inlet Temperature?	F	1575	1553	1540	1572
9	PBS Pressure Drop	in H2O	4.1	3.5	3.1	4.9
10	VS Pressure Drop	in H2O	28	28.5	28	29.4
11	PBS pH		9.1	8.6	9.2	9.8
12	Quench pH		11.3	11	10.55	10.6

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:	JACADS, LIC																
4	Condition ID:	346C10																
5	Condition/Test Date:	GB trial burn, Feb 24, 26, 28, & Mar 2, 1998																
6																		
7		I-TEF				Run 3				Run 4				Run 5				
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	20	20.00	10.00	10.00	nd	17	17.00	8.50	8.50	nd	14	14	7	7	
12	Total TCDD	0	nd	20	0	10	0	nd	17	0.00	9	0.00	nd	14	0	7	0	
13	1,2,3,7,8-PCDD	0.5	nd	39	19.50	19.50	9.75	nd	30	15.00	15.00	7.50	nd	29	15	15	7	
14	Total PCDD	0	nd	39	0	20	0	nd	30	0.00	15	0.00	nd	29	0	15	0	
15	1,2,3,4,7,8-HxCDD	0.1	nd	39	3.90	19.50	1.95	nd	34	3.40	17.00	1.70	nd	27	3	14	1	
16	1,2,3,6,7,8-HxCDD	0.1	nd	37	3.70	18.50	1.85	nd	33	3.30	16.50	1.65	nd	26	3	13	1	
17	1,2,3,7,8,9-HxCDD	0.1	nd	35	3.50	17.50	1.75	nd	31	3.10	15.50	1.55	nd	24	2	12	1	
18	Total HxCDD	0	nd	39	0	20	0	nd	34	0.00	17	0.00	nd	27	0	14	0	
19	1,2,3,4,6,7,8-HpCDD	0.01	nd	19	0.19	9.50	0.10	nd	19	0.19	9.50	0.10	nd	16	0	8	0	
20	Total HpCDD	0	nd	19	0	10	0	nd	19	0.00	10	0.00	nd	16	0	8	0	
21	OCDD	0.001	nd	39	0.04	19.50	0.02	nd	39	0.04	20	0.02	nd	28	0	14	0	
22	2,3,7,8-TCDF	0.1	nd	24	2.40	12.00	1.20	nd	13	1.30	7	0.65	nd	10	1	5	1	
23	Total TCDF	0	nd	48	0	24	0	nd	13	0.00	7	0.00	nd	10	0	5	0	
24	1,2,3,7,8-PCDF	0.05	nd	19	1	10	0	nd	14	0.70	7	0.35	nd	11	1	6	0	
25	2,3,4,7,8-PCDF	0.5	nd	20	10	10	5	nd	14	7.00	7	3.50	nd	11	6	6	3	
26	Total PCDF	0	nd	20	0	10	0	nd	14	0.00	7	0.00	nd	11	0	6	0	
27	1,2,3,4,7,8-HxCDF	0.1	nd	24	2	12	1	nd	19	1.90	10	0.95	nd	17	2	9	1	
28	1,2,3,6,7,8-HxCDF	0.1	nd	25	3	13	1	nd	19	1.90	10	0.95	nd	17	2	9	1	
29	2,3,4,6,7,8-HxCDF	0.1	nd	27	3	14	1	nd	20	2.00	10	1.00	nd	18	2	9	1	
30	1,2,3,7,8,9-HxCDF	0.1	nd	29	3	15	1	nd	22	2.20	11	1.10	nd	20	2	10	1	
31	Total HxCDF	0	nd	29	0	15	0	nd	22	0.00	11	0.00	nd	20	0	10	0	
32	1,2,3,4,6,7,8-HpCDF	0.01	nd	12	0	6	0	nd	8	0.08	4	0.04	nd	7	0	4	0	
33	1,2,3,4,7,8,9-HpCDF	0.01	nd	16	0	8	0	nd	10	0.10	5	0.05	nd	9	0	5	0	
34	Total HpCDF	0	nd	16	0	8	0	nd	10	0.00	5	0.00	nd	9	0	5	0	
35	OCDF	0.001	nd	30	0	15	0	nd	20	0.02	10	0.01	nd	16	0	8	0	
36																		
37	Gas sample volume (dscf)				151.499	151.499	151.499			149.606	149.606	149.606			148.951	148.951	148.951	
38	O2 (%)				10.5	10.5	10.5			10.7	10.7	10.7			11	11	11	
39																		
40	PCDD/PCDF (ng in sample)				0.075	0.1	0.037			0.059	0.1	0.030			0.05	0.1	0.03	
41	PCDD/PCDF (ng/dscm @ 7% O2)	100.0			0.023	0.046	0.012	100.0		0.02	0.035	0.01	100.0		0.02	0.030	0.01	
42																		
43	TEQ Cond Avg				0.0109													
44	Total Cond Avg				0.0407													

A	B	S	T	U	V	W
1	PCDD/PCDF					
2	N					
3	Facility Name and ID:					
4	Condition ID:					
5	Condition/Test Date:					
6						
7					Run 6	
8			Total	TEQ	Total	TEQ
9			Full ND	Full ND	1/2 ND	1/2 ND
10	Detected in sample volume					
11	2,3,7,8-TCDD	nd	15	15	8	8
12	Total TCDD	nd	15	0	8	0
13	1,2,3,7,8-PCDD	nd	41	21	21	10
14	Total PCDD	nd	41	0	21	0
15	1,2,3,4,7,8-HxCDD	nd	53	5	27	3
16	1,2,3,6,7,8-HxCDD	nd	52	5	26	3
17	1,2,3,7,8,9-HxCDD	nd	48	5	24	2
18	Total HxCDD	nd	53	0	27	0
19	1,2,3,4,6,7,8-HpCDD	nd	17	0	9	0
20	Total HpCDD	nd	17	0	9	0
21	OCDD	nd	41	0	21	0
22	2,3,7,8-TCDF	nd	12	1	6	1
23	Total TCDF	nd	12	0	6	0
24	1,2,3,7,8-PCDF	nd	38	2	19	1
25	2,3,4,7,8-PCDF	nd	40	20	20	10
26	Total PCDF	nd	40	0	20	0
27	1,2,3,4,7,8-HxCDF	nd	23	2	12	1
28	1,2,3,6,7,8-HxCDF	nd	23	2	12	1
29	2,3,4,6,7,8-HxCDF	nd	25	3	13	1
30	1,2,3,7,8,9-HxCDF	nd	28	3	14	1
31	Total HxCDF	nd	28	0	14	0
32	1,2,3,4,6,7,8-HpCDF	nd	12	0	6	0
33	1,2,3,4,7,8,9-HpCDF	nd	16	0	8	0
34	Total HpCDF	nd	16	0	8	0
35	OCDF	nd	46	0	23	0
36						
37	Gas sample volume (dsc			149.799	149.799	149.799
38	O2 (%)			11.1	11.1	11.1
39						
40	PCDD/PCDF (ng in sam)			0.08	0.2	0.04
41	PCDD/PCDF (ng/dscm) (100.0		0.028	0.05	0.014
42						
43	TEQ Cond Avg					
44	Total Cond Avg					

	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	346C1																	
2																		
3	ng/dscm	I-TEF		Total	Run 1			Total	Run 2			Total	Run 3			Total	Run 4	
4		Wt Fact		Full ND	1/2 ND	TEQ		Full ND	1/2 ND	TEQ		Full ND	1/2 ND	TEQ		Full ND	1/2 ND	TEQ
5	4D 2378	1	1	0.013	0.006	0.006	1	0.011	0.006	0.006	1	0.012	0.006	0.006	1	0.012	0.006	0.006
6	4D Other	0		-0.006	-0.006	0.000		0.000	0.000	0.000		0.003	0.003	0.000		0.006	0.006	0.000
7	4D Total	0	1	0.006	0.003	0.000	1	0.011	0.006	0.000	2	0.016	0.016	0.000	2	0.018	0.018	0.000
8	5D 12378	0.5	1	0.064	0.032	0.016	1	0.057	0.028	0.014	1	0.062	0.031	0.016	1	0.060	0.030	0.015
9	5D Other	0		0.022	0.022	0.000		0.000	0.000	0.000		0.000	0.000	0.000		0.000	0.000	0.000
10	5D Total	0	2	0.086	0.086	0.000	1	0.057	0.028	0.000	1	0.062	0.031	0.000	1	0.060	0.030	0.000
11	6D 123478	0.1	1	0.064	0.032	0.003	1	0.057	0.028	0.003	1	0.062	0.031	0.003	1	0.060	0.030	0.003
12	6D 123678	0.1	1	0.064	0.032	0.003	1	0.057	0.028	0.003	1	0.062	0.031	0.003	1	0.060	0.030	0.003
13	6D 123789	0.1	2	0.064	0.064	0.006	1	0.057	0.028	0.003	1	0.062	0.031	0.003	1	0.060	0.030	0.003
14	6D Other	0		0.019	0.019	0.000		-0.079	-0.079	0.000		-0.125	-0.125	0.000		-0.119	-0.119	0.000
15	6D Total	0	2	0.211	0.211	0.000	2	0.091	0.091	0.000	1	0.062	0.031	0.000	1	0.060	0.030	0.000
16	7D 1234678	0.01	2	0.150	0.150	0.002	2	0.085	0.085	0.001	1	0.062	0.031	0.000	1	0.060	0.030	0.000
17	7D Other	0		0.109	0.109	0.000		0.045	0.045	0.000		0.000	0.000	0.000		0.000	0.000	0.000
18	7D Total	0	2	0.259	0.259	0.000	2	0.130	0.130	0.000	1	0.062	0.031	0.000	1	0.060	0.030	0.000
19	8D	0.001		0.319	0.319	0.000	2	0.184	0.184	0.000	1	0.187	0.093	0.000	1	0.119	0.060	0.000
20	4F 2378	0.1	1	0.013	0.006	0.001	1	0.011	0.006	0.001	2	0.012	0.012	0.001	1	0.012	0.006	0.001
21	4F Other	0		0.013	0.013	0.000		0.000	0.000	0.000		0.000	0.000	0.000		0.000	0.000	0.000
22	4F Total	0	2	0.026	0.026	0.000	1	0.011	0.006	0.000	2	0.012	0.012	0.000	1	0.012	0.006	0.000
23	5F 12378	0.05	1	0.064	0.032	0.002	1	0.057	0.028	0.001	1	0.062	0.031	0.002	1	0.060	0.030	0.001
24	5F 23478	0.5	2	0.080	0.080	0.040	1	0.057	0.028	0.014	1	0.062	0.031	0.016	1	0.060	0.030	0.015
25	5F Other	0		0.134	0.134	0.000		-0.057	-0.057	0.000		-0.062	-0.062	0.000		-0.060	-0.060	0.000
26	5F Total	0	2	0.278	0.278	0.000	2	0.057	0.057	0.000	1	0.062	0.031	0.000	1	0.060	0.030	0.000
27	6F 123478	0.1	2	0.077	0.077	0.008	1	0.057	0.028	0.003	1	0.062	0.031	0.003	1	0.060	0.030	0.003
28	6F 123678	0.1	1	0.064	0.032	0.003	1	0.057	0.028	0.003	1	0.062	0.031	0.003	1	0.060	0.030	0.003
29	6F 123789	0.1	1	0.064	0.032	0.003	1	0.057	0.028	0.003	1	0.062	0.031	0.003	1	0.060	0.030	0.003
30	6F 234678	0.1	2	0.089	0.089	0.009	1	0.057	0.028	0.003	1	0.062	0.031	0.003	1	0.060	0.030	0.003
31	6F Other	0		0.054	0.054	0.000		-0.153	-0.153	0.000		-0.187	-0.187	0.000		-0.179	-0.179	0.000
32	6F Total	0	2	0.348	0.348	0.000	2	0.074	0.074	0.000	1	0.062	0.031	0.000	1	0.060	0.030	0.000
33	7F 1234678	0.01	1	0.064	0.032	0.000	1	0.057	0.028	0.000	1	0.062	0.031	0.000	1	0.060	0.030	0.000
34	7F 1234789	0.01	2	0.109	0.109	0.001	2	0.096	0.096	0.001	2	0.072	0.072	0.001	1	0.060	0.030	0.000
35	7F Other	0		-0.003	-0.003	0.000		-0.040	-0.040	0.000		-0.072	-0.072	0.000		-0.060	-0.060	0.000
36	7F Total	0	2	0.169	0.169	0.000	2	0.113	0.113	0.000	1	0.062	0.031	0.000	1	0.060	0.030	0.000
37	8F	0.001	1	0.128	0.064	0.000	1	0.113	0.057	0.000	1	0.125	0.062	0.000	1	0.119	0.060	0.000
38	Total PCDD/PCDF			1.831	1.763			0.842	0.746			0.714	0.371			0.625	0.321	
39	TEQ		53.4	0.141		0.104	98.3	0.114		0.058	98.4	0.125		0.064	100.0	0.119		0.060
40																		
41																		
42																		
43	TEQ cond avg			0.071														