

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase I ID No.	344
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.	LIC
10	Other Sister Facilities	
11	Number of Sister Facilities	0
12	Combustor Class	Onsite Incinerator, DoD government, Chem Demil
13	Combustor Type	Liquid injection incinerator
14	Combustor Characteristics	Liquid injection incinerator made by T-Thermal (4' diameter, 12' high), with afterburner, LV-14 Vortex burner
15		
16	Capacity (MMBtu/hr)	
17	Soot Blowing	
18	APCS Detailed Acronym	WQ/VS/PBS/DM
19	APCS General Class	WQ, HEWS, LEWS
20	APCS Characteristics	Water quench, venturi scrubber, packed bed scrubber, demister. Variable throat venturi scrubber, packed bed with steel ring packing
21	Hazardous Wastes	Liq
22	Haz Waste Description	Chemical agent GB
23	Supplemental Fuel	Misc fuel
24		JP-5
25		
26	Stack Characteristics	Note: Common stack for 3 HWIs: LIC, MPF, and DFS; stack velocity & temp. below is for LIC only
27	Diameter (ft)	4.50
28	Height (ft)	100
29	Gas Velocity (ft/sec)	9.8
30	Gas Temperature (°F)	194
31		
32	Permitting Status	RCRA
33	HWC Burn Status (Date if Term	No longer burning waste; shutdown after all hazardous waste on island was treated.

	B	C
1	Condition Description	
2		
3	344C10	344C10
4		
5	Report Name/Date	JACADS Liquid Incinerator - Trial Burn Report, August 29, 1997
6	Report Prepare	Raytheon Engineers & Construction
7	Testing Firm	TRC Environmental
8	Testing Dates	April 11, 15, 16, and 17, 1997
9	Cond Dates	Apr-97
10	Condition Descr	Agent GB (Sarin) trial burn
11	Content	PM, HCl/HF, metals, PCDD/PCDF, VOC/SVOC (Runs 2-5)
12		
13	344C1	
14		
	Report Name/Date	Results of the RCRA Trial Burn with VX Feed for the Liquid Incinerator at the Johnston Atoll Chemical Agent Disposal System, Jun 23, 1992, prepared by Southern Research Institute, SRI-APC-92-384-7530.11.1-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 10-16, 1992
20	Cond Dates	Mar-92
21		
22	344C2	
23		
	Report Name/Date	Results of the RCRA Trial Burn with GB Feed fo the Liquid Incinerator at the Johnston Atoll Chemical Agent Disposal System, June 17, 1991, SRI-APC-91-190-6967-006-F-R4
24		
25	Report Prepare	Southern Research Institute
26	Testing Firm	Southern Research Institute
27	Cond Descr	Trial burn, NOMINAL CONDITIONS
28	Testing Dates	December 5-6, 1990
29	Cond Dates	Dec-90
30		
31	344C3	
32		
	Report Name/Date	Results of the Demonstration Test Burn for Thermal Destruction of Agent HD in the Johnston Atoll Chemical Agent Disposal System Liquid Incinerator, prepared by United Engineers and Constructors, Feburary, 1993
33		
34	Report Prepare	United Engineers and Constructors
35	Testing Firm	SRI, METCO
36	Cond Descr	STEADY STATE CONDITIONS
37	Testing Dates	August 19-25, 1992
38	Cond Dates	Aug-92

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Stack Gas Emissions 1													
2														
3	Comme Units 7% O2													
4														
5														
6	344C10	Agent GB (Sarin) trial bu				R1		R2		R3		R4		Cond Avg
7														
8	CO (RA)	E1	ppmv	y		16.4		13.4		15.4		18.7		16.0
9	CO (MHRA)	E1	ppmv	y										
10														
11	PM	E1	gr/dscf	y		0.0004		0.0002		0.0007		0.0004		0.0004
12														
13	HCl		mg/dscf	n	nd	0.01	nd	0.03	nd	0.03	nd	0.03		
14	Cl2		mg/dscf	n	nd	0.02	nd	0.02	nd	0.02	nd	0.02		
15														
16	HCl	E1	ppmv	y		0.14		0.41		0.40		0.40		0.3
17	Cl2	E1	ppmv	y		0.14		0.14		0.14		0.14		0.1
18	Total Chlorine	E1	ppmv	y		0.41		0.69		0.68		0.68		0.6
19														
20	POHC	Agent GB												
21	POHC Feedrate		lb/hr			1049		1048		1049		1048		
22	Emission Rate	E1	lb/hr		nd	3.71E-07	nd	3.81E-07	nd	3.87E-07	nd	3.82E-07		
23	DRE	E1	%		>	99.99999996	>	99.99999996	>	99.99999996	>	99.99999996		
24														
25	Aluminum		ug/dscf	n		0.5	nd	0.2	nd	0.3	nd	0.2		
26	Antimony		ug/dscf	n	nd	0.003	nd	0.004	nd	0.004	nd	0.004		
27	Arsenic		ug/dscf	n	nd	0.005	nd	0.004	nd	0.004	nd	0.004		
28	Barium		ug/dscf	n	nd	0.07	nd	0.02	nd	0.06	nd	0.02		
29	Beryllium		ug/dscf	n	nd	0.007	nd	0.004	nd	0.004	nd	0.004		
30	Boron		ug/dscf	n	nd	0.72	nd	0.21	nd	0.21	nd	0.21		
31	Cadmium		ug/dscf	n	nd	0.016	nd	0.011		0.010		0.010		
32	Chromium		ug/dscf	n		0.030		0.036	nd	0.021	nd	0.021		
33	Chromium (Hex)		ug/dscf	n	nd	0.027		0.046	nd	0.033	nd	0.031		
34	Cobolt		ug/dscf	n	nd	0.03	nd	0.02	nd	0.02	nd	0.02		
35	Copper		ug/dscf	n	nd	0.05	nd	0.04	nd	0.04	nd	0.04		
36	Lead		ug/dscf	n		0.002	nd	0.003		0.003	nd	0.002		
37	Manganese		ug/dscf	n		0.17	nd	0.08		0.04	nd	0.03		
38	Mercury		ug/dscf	n		0.010		0.013		0.012		0.014		
39	Nickel		ug/dscf	n	nd	0.13	nd	0.090	nd	0.09	nd	0.09		
40	Phosphorus		ug/dscf	n	nd	10	nd	4.1		4.1	nd	3.5		
41	Selenium		ug/dscf	n	nd	0.005	nd	0.004	nd	0.004	nd	0.004		
42	Silver		ug/dscf	n	nd	0.03	nd	0.02	nd	0.02	nd	0.02		
43	Thallium		ug/dscf	n	nd	0.002	nd	0.002	nd	0.002	nd	0.002		
44	Tin		ug/dscf	n	nd	0.33	nd	0.21	nd	0.21	nd	0.21		
45	Vanadium		ug/dscf	n	nd	0.03	nd	0.02	nd	0.02	nd	0.02		
46	Zinc		ug/dscf	n	nd	0.63	nd	0.04	nd	0.04	nd	0.04		
47														
48	Sampling Train	PM, HC E1												
49	Stack Gas Flowrate		dscfm			3842		3543		3754		3645		3759
50	O2		%			9		9.1		8.9		8.9		9.0
51	Moisture		%			49.8		51.4		51.6		51.9		51
52	Temperature		°F			192		193		196		197		194
53														
54	Sampling Train	Metals E2												
55	Stack Gas Flowrate		dscfm			3788		3762		3726		3693		3742
56	O2		%			9		9.1		8.9		8.9		9.0
57	Moisture		%			49.9		51.8		51.8		52.5		52
58	Temperature		°F			188		193		195		197		193
59														
60	Aluminum	E2	ug/dscm	y		20.6	nd	8.3	nd	12.3	nd	8.2		12.3
61	Antimony	E2	ug/dscm	y	nd	0.1	nd	0.2	nd	0.2	nd	0.2		0.2
62	Arsenic	E2	ug/dscm	y	nd	0.2	nd	0.2	nd	0.2	nd	0.2		0.2
63	Barium	E2	ug/dscm	y	nd	2.9	nd	0.8	nd	2.5	nd	0.8		1.7
64	Beryllium	E2	ug/dscm	y	nd	0.3	nd	0.2	nd	0.2	nd	0.2		0.2
65	Boron	E2	ug/dscm	y	nd	29.7	nd	8.7	nd	8.6	nd	8.6		13.9
66	Cadmium	E2	ug/dscm	y	nd	0.7	nd	0.4		0.4		0.4		0.5
67	Chromium	E2	ug/dscm	y		1.3		1.5	nd	0.9	nd	0.9		1.1
68	Chromium (Hex)	E2	ug/dscm	y	nd	1.1		1.9	nd	1.3	nd	1.3		1.4
69	Cobolt	E2	ug/dscm	y	nd	1.2	nd	0.8	nd	0.8	nd	0.8		0.9
70	Copper	E2	ug/dscm	y	nd	2.1	nd	1.7	nd	1.6	nd	1.6		1.7
71	Lead	E2	ug/dscm	y		0.1	nd	0.1		0.1	nd	0.1		0.1

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
72	Manganese	E2	ug/dscm	y		7.0	nd	3.3		1.6	nd	1.2		3.3
73	Mercury	E2	ug/dscm	y		0.4		0.5		0.5		0.6		0.5
74	Nickel	E2	ug/dscm	y	nd	5.4	nd	3.7	nd	3.7	nd	3.7		4.1
75	Phosphorus	E2	ug/dscm	y	nd	412.2	nd	170.4		167.6	nd	143.1		223.4
76	Selenium	E2	ug/dscm	y	nd	0.2	nd	0.2	nd	0.2	nd	0.2		0.2
77	Silver	E2	ug/dscm	y	nd	1.2	nd	0.8	nd	0.8	nd	0.8		0.9
78	Thallium	E2	ug/dscm	y	nd	0.1	nd	0.1	nd	0.1	nd	0.1		0.1
79	Tin	E2	ug/dscm	y	nd	13.6	nd	8.7	nd	8.6	nd	8.6		9.9
80	Vanadium	E2	ug/dscm	y	nd	1.2	nd	0.8	nd	0.8	nd	0.8		0.9
81	Zinc	E2	ug/dscm	y	nd	26.0	nd	1.7	nd	1.6	nd	1.6		7.7
82														
83	SVM	E2	ug/dscm	y		0.76		0.57		0.56		0.51		0.6
84	LVM	E2	ug/dscm	y		1.7		1.8		1.2		1.2		1.5

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Stack Gas Emissions 2													
2														
3														
4	344C1					R1		R2		R3		R4		Cond Avg
5														
6	PM	E1	gr/dscf	y		0.0020		0.0007		0.0018		0.0013		0.0014
7	CO (RA)	E1	ppmv	y		12.9		12.8		13.6		15.4		13.7
8	HC (RA)	E1	ppmv	y		3.6		2.8		1.1		1.9		2.3
9	HCl	E1	ppmv	y	nd	1.4	nd	1.4	nd	1.2	nd	1.4		1.3
10														
11	Mercury		ug/dscm	n	nd	0.5	nd	0.4	nd	0.4	nd	0.38		
12	Arsenic		ug/dscm	n	nd	6.7	nd	5.8	nd	6.4	nd	6.25		
13	Beryllium		ug/dscm	n	nd	0.7	nd	0.6	nd	0.6	nd	0.63		
14	Chromium		ug/dscm	n		2.2		1.8		2.6		2.88		
15	Lead		ug/dscm	n	nd	6.7	nd	5.8	nd	6.4	nd	6.25		
16	Cadmium		ug/dscm	n	nd	1.3	nd	1.2	nd	1.3	nd	1.25		
17	Thallium		ug/dscm	n	nd	1.3	nd	1.2	nd	1.3	nd	1.25		
18	Selenium		ug/dscm	n	nd	6.7	nd	5.8	nd	6.4	nd	6.25		
19	Barium		ug/dscm	n	nd	13.4		11.2	nd	12.8	nd	12.51		
20	Silver		ug/dscm	n	nd	2.7	nd	2.3	nd	2.6	nd	2.50		
21	Antimony		ug/dscm	n	nd	6.7	nd	5.8	nd	6.4	nd	6.25		
22	Cobalt		ug/dscm	n	nd	2.7	nd	2.3	nd	2.6	nd	2.50		
23	Nickel		ug/dscm	n	nd	4.0	nd	3.5	nd	3.8	nd	3.75		
24	Manganese		ug/dscm	n		719.0		48.2		3.7		320.79		
25														
26	Sampling Train	Halogens	E1											
27	Stack Gas Flowrate		dscfm			7865.0		7643.0		7540.0		7575.0		
28	O2		%			15.1		15.1		14.5		14.7		
29	Moisture		%			32.1		32.4		37.3		35.6		
30	Temperature		°F			188.0		188.0		192.0		189.0		
31														
32	Sampling Train	Metals	E2											
33	Stack Gas Flowrate		dscfm			7445.0		7321.0		7012.0		6779.0		
34	O2		%			15.1		15.0		15.0		14.7		
35	Moisture		%			32.8		34.1		33.8		38.4		
36	Temperature		°F			188.0		188.0		190.0		191.0		
37														
38	Sampling Train	SVOC	E3											
39	Stack Gas Flowrate		dscfm			9091.0		8777.0		8751.0		8655.0		
40	O2		%			15.1		15.0		14.8		14.7		
41	Moisture		%			31.3		32.7		34.9		34.4		
42	Temperature		°F			190.0		189.0		192.0		190.0		
43														
44	Sampling Train	PAH	E4											
45	Stack Gas Flowrate		dscfm			8133.7		7913.7		7767.7		7669.7		
46	O2		%			15.1		15.0		14.8		14.7		
47	Moisture		%											
48	Temperature		°F											
49														
50	VX-NERVE AGENT	DRE	%			100		100		100		100		
51														
52	Mercury	E2	ug/dscm	nd		1.27	nd	0.94	nd	0.90	nd	0.83	100	0.99
53	Arsenic	E2	ug/dscm	nd		15.91	nd	13.62	nd	14.97	nd	13.90	100	14.60
54	Beryllium	E2	ug/dscm	nd		1.59	nd	1.36	nd	1.50	nd	1.39	100	1.46
55	Chromium	E2	ug/dscm			5.28		4.25		6.12		6.39		5.51
56	Lead	E2	ug/dscm	nd		15.91	nd	13.62	nd	14.97	nd	13.90	100	14.60
57	Cadmium	E2	ug/dscm	nd		3.18	nd	2.72	nd	2.99	nd	2.78	100	2.92
58	Thallium	E2	ug/dscm	nd		3.18	nd	2.72	nd	2.99	nd	2.78	100	2.92
59	Selenium	E2	ug/dscm	nd		15.91	nd	13.62	nd	14.97	nd	13.90	100	14.60
60	Barium	E2	ug/dscm	nd		31.82		26.16	nd	29.93	nd	27.79		28.93
61	Silver	E2	ug/dscm	nd		6.36	nd	5.45	nd	5.99	nd	5.56	100	5.84
62	Antimony	E2	ug/dscm	nd		15.91	nd	13.62	nd	14.97	nd	13.90	100	14.60
63	Cobalt	E2	ug/dscm	nd		6.36	nd	5.45	nd	5.99	nd	5.56	100	5.84
64	Nickel	E2	ug/dscm	nd		9.55	nd	8.17	nd	8.98	nd	8.34	100	8.76
65	Manganese	E2	ug/dscm			1706.11		112.41		8.67		712.86		635.01
66														
67	SVM	E2	ug/dscm			19.09		16.35		17.96		16.68		17.52
68	LVM	E2	ug/dscm		77	22.78	78	19.24	73	22.58	71	21.68	74	21.57
69														
70														
71	344C2					R1		R2		R3		R4		Cond Avg

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
72														
73	PM	E1	gr/dscf	y		0.0016		0.0018		0.0017				0.0017
74	CO (RA)	E1	ppmv	y		19.0		26.0		18.0				21.0
75	HCl	E1	ppmv	y	nd	0.1	nd	1.9	nd	0.8				0.9
76														
77	Mercury		ug/dscm	n	nd	0.6	nd	0.7	nd	0.6				
78	Arsenic		ug/dscm	n	nd	12.7	nd	13.2	nd	12.8				
79	Beryllium		ug/dscm	n	nd	5.1	nd	5.3	nd	5.1				
80	Chromium		ug/dscm	n	nd	5.1	nd	5.3	nd	5.1				
81	Lead		ug/dscm	n		11.2	nd	4.3		2.1				
82	Cadmium		ug/dscm	n	nd	5.1	nd	5.3	nd	5.1				
83	Thallium		ug/dscm	n	nd	51.0	nd	5.3	nd	5.1				
84	Selenium		ug/dscm	n	nd	5.1	nd	5.3	nd	5.1				
85	Barium		ug/dscm	n		8.3		5.3	nd	5.1				
86	Silver		ug/dscm	n	nd	6.4	nd	6.6	nd	6.4				
87	Antimony		ug/dscm	n	nd	5.1	nd	5.3	nd	5.1				
88	Nickel		ug/dscm	n		5.9		35.6		6.6				
89	Manganese		ug/dscm	n		58.6		43.5		26.3				
90														
91	Sampling Train	Halogens	E1											
92	Stack Gas Flowrate		dscfm			6883.3		6900.0		6250.0				
93	O2		%			14.7		14.4		14.6				
94	Moisture		%			38.6		38.4		38.2				
95	Temperature		°F			197.0		196.0		197.0				
96														
97	Sampling Train	Metals	E2											
98	Stack Gas Flowrate		dscfm			6966.7		6600.0		6533.3				
99	O2		%			14.5		14.4		14.5				
100	Moisture		%			37.8		38.5		38.4				
101	Temperature		°F			198.0		196.0		198.0				
102														
103	Sampling Train	SVOC	E3											
104	Stack Gas Flowrate		dscfm			7383.3		7100.0		7366.7				
105	O2		%			14.6		14.4		14.6				
106	Moisture		%			37.7		37.2		36.8				
107	Temperature		°F			194.0		198.0		198.0				
108														
109	GB-NERVE AGENT	E3	%			100		100		100				
110														
111	Mercury	E2	ug/dscm	y	nd	1.37	nd	1.40	nd	1.38			100	1.38
112	Arsenic	E2	ug/dscm	y	nd	27.45	nd	27.95	nd	27.59			100	27.66
113	Beryllium	E2	ug/dscm	y	nd	10.98	nd	11.18	nd	11.04			100	11.07
114	Chromium	E2	ug/dscm	y	nd	10.98	nd	11.18	nd	11.04			100	11.07
115	Lead	E2	ug/dscm	y		24.02	nd	9.22		4.48			24	12.58
116	Cadmium	E2	ug/dscm	y	nd	10.98	nd	11.18	nd	11.04			100	11.07
117	Thallium	E2	ug/dscm	y	nd	109.80	nd	11.18	nd	11.04			100	44.00
118	Selenium	E2	ug/dscm	y	nd	10.98	nd	11.18	nd	11.04			100	11.07
119	Barium	E2	ug/dscm	y		17.84		11.18	nd	11.04				13.35
120	Silver	E2	ug/dscm	y	nd	13.72	nd	13.98	nd	13.79			100	13.83
121	Antimony	E2	ug/dscm	y	nd	10.98	nd	11.18	nd	11.04			100	11.07
122	Nickel	E2	ug/dscm	y		12.63		75.47		14.21				34.10
123	Manganese	E2	ug/dscm	y		126.27		92.24		56.56				91.69
124														
125	SVM		ug/dscm	y	31	35.00	100	20.40	71	15.52			60	23.64
126	LVM		ug/dscm	y	100	49.41	100	50.31	100	49.66			100	49.79
127														
128	344C3					R1		R2		R3		R4		Cond Avg
129														
130	PM	E1	gr/dscf	y		0.0012		0.0028		0.0025		0.0024		0.0022
131	HC (RA)	E1	ppmv	y		6.5		6.0		5.4		6.1		6.0
132														
133	HCl	E1	ppmv	y	nd	0.2	nd	0.2		0.9	nd	0.2		0.38
134														
135	Arsenic	E2	ug/dscm	y	nd	14.1	nd	13.6		42.3	nd	14.0	50	21.03
136	Barium	E2	ug/dscm	y	nd	28.2	nd	27.2	nd	27.8	nd	28.0		27.83
137	Beryllium	E2	ug/dscm	y	nd	5.7	nd	5.5	nd	5.6	nd	5.6	100	5.58
138	Boron	E2	ug/dscm	y		33.9		50.9		267.6		246.1		149.62
139	Cadmium	E2	ug/dscm	y	nd	7.1	nd	6.8	nd	7.0	nd	7.0	100	6.97
140	Chromium	E2	ug/dscm	y	nd	7.1	nd	6.8		6.6		5.5	54	6.49
141	Copper	E2	ug/dscm	y	nd	7.0	nd	7.2		10.1	nd	6.8		7.79
142	Lead	E2	ug/dscm	y	nd	14.1	nd	13.6		96.5		11.5	20	33.94

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
143	Manganese	E2	ug/dscm	y		18.6		95.4		137.9		512.6		191.13
144	Antimony	E2	ug/dscm	y	nd	28.2	nd	27.2	nd	27.8	nd	28.0		27.83
145	Mercury	E2	ug/dscm	y	nd	10.2	nd	9.8		16.8		9.0		11.43
146	Selenium	E2	ug/dscm	y	nd	14.1	nd	13.6		18.4	nd	14.0		15.03
147	Silver	E2	ug/dscm	y	nd	28.2	nd	27.2	nd	27.8	nd	28.0		27.83
148	Nickel	E2	ug/dscm	y	nd	14.1	nd	13.6	nd	13.9	nd	14.0		13.92
149	SVM	E2	ug/dscm	y	100	21.2	100	20.5	7	103.4	38	18.5	34	40.91
150	LVM	E2	ug/dscm	y	100	26.9	100	25.9	10	54.4	78	25.1	59	33.09
151														
152	Sampling Train	Halogens	E1											
153	Stack Gas Flowrate		dscfm			7165.0		7102.0		6674.0		6905.0		
154	O2		%			14.3		14.4		14.1		14.4		
155	Moisture		%			36.7		37.9		40.0		38.9		
156	Temperature		°F			192.0		193.0		195.0		195.0		
157														
158	Sampling Train	Metals	E2											
159	Stack Gas Flowrate		dscfm			7122.0		6406.0		6674.0		6896.0		
160	O2		%			14.8		14.1		14.2		14.6		
161	Moisture		%			37.4		41.7		14.2		39.3		
162	Temperature		°F			194.0		193.0		195.0		194.0		
163														
164	Sampling Train	SVOC	E3											
165	Stack Gas Flowrate		dscfm			9690.0		8217.0		8493.0		8578.0		
166	O2		%			14.5		14.2		14.0		14.5		
167	Moisture		%			35.7		37.4		39.5		38.1		
168	Temperature		°F			200.0		202.0		204.0		203.0		
169														
170	HD (Mustard Agent)	E3	%			99.99997		99.99995		99.99998		99.999972		

	B
1	Feedstream 1
2	
3	
4	344C10
5	
6	No information available

	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	AE	AF	AG	
1	Feedstream 2																																
2																																	
3																																	
4																																	
5	344C1	R1	R2	R3	R4	R1	R2	R3	R4	R1	R2	R3	R1	R2	R3	R4																	
6																																	
7	Feedstream Number	F1	F1	F1	F1	F2	F2	F2	F2	F3	F3	F3	F4	F4	F4	F4																	
8	Feed Class	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Liq HW																	
9	Feedstream Description	VX nerve : VX nerve ε VX nerve VX nerve a Decon sol Decon sol Decon so Decon sol GB nerve : GB nerve GB nerve HD mustard a HD mustard ε HD mustard ε HD mustard agent																															
10	Feedrate	lb/hr	696	700	699	699	3.03	3.31	3.34	3.19																							
11																																	
12																																	
13																																	
14	344C2	R1	R2	R3	R4	R1	R2	R3	R4	R1	R2	R3	R1	R2	R3	R4																	
15																																	
16	Feedstream Number										F1	F1	F1																				
17	Feed Class										Liq HW	Liq HW	Liq HW																				
18	Feedstream Description	VX nerve : VX nerve ε VX nerve VX nerve a Decon sol Decon sol Decon so Decon sol GB nerve : GB nerve GB nerve HD mustard a HD mustard ε HD mustard ε HD mustard agent																															
19	Feedrate	lb/hr										750	750	750																			
20																																	
21	344C3	R1	R2	R3	R4	R1	R2	R3	R4	R1	R2	R3	R1	R2	R3	R4																	
22																																	
23	Feedstream Number					F1	F1	F1	F1					F2	F2	F2	F2																
24	Feed Class					Liq HW	Liq HW	Liq HW	Liq HW					Liq HW	Liq HW	Liq HW	Liq HW																
25	Feedstream Description	VX nerve : VX nerve ε VX nerve VX nerve a Decon sol Decon sol Decon so Decon sol GB nerve : GB nerve GB nerve HD mustard a HD mustard ε HD mustard ε HD mustard agent																															
26	Feedrate	lb/hr					3.28	3.32	3.28	3.34					848.8	956.6	1319.7	1178.6															

	B	C	D	E
1	Process Information			
2				
3	344C10	Agent GB (Sar Cond Avg		
4				
5	Comb Chamb Temp	°F		2594
6	Afterburner Temp	°F		1909
7	Comb Cham Pressure	in H2O		-2.5
8	VS Pressure Drop	in H2O		24.9
9	PBS pressure drop	in H2O		2.3
10	PBS Liquor Flow	gpm		599
11	PBS Clean Liquor pH			8.2
12	Brine pH			8.4

	C	D	E	F	G	H
1	Process Information 2					
2						
3	344C1					
4						
5	Afterburner Temperature	F	2676	2705	2721	2730
6	Primary Comb Temperature	F	1985	1982	2064	1986
7	WS Temperature	F	171	172	178	181
8	Quench Inlet Temperature	F	1128	1158	1273	1296
9	PBS Pressure Drop	in H2O	5.9	6.2	6.7	6.9
10	DM Pressure Drop	in H2O	9.2	8.8	9.3	9.1
11	VS Pressure Drop	in H2O	28	30	26	24.9
12	VS pH		9.01	9	8.79	8.89
13	Quench pH		9.58	9.97	9.45	9.14
14						
15	344C2					
16						
17	Afterburner Temperature	F	2701	2701	2699	
18	Primary Comb Temperature	F	2001	2000	1998	
19	WS Temperature	F	184	180	181	
20	Quench Inlet Temperature	F	808	811	815	
21	PBS Pressure Drop	in H2O	4.2	4.2	4.1	
22	DM Pressure Drop	in H2O	9	9	9	
23	VS Pressure Drop	in H2O	31.9	32	32	
24	VS pH		9.27	9.25	9.27	
25	Quench pH		9.55	9.34	9.28	
26						
27	344C3					
28						
29	Afterburner Temperature	F	2710.34	2710.52	2708.42	2710.3
30	Primary Comb Temperature	F	2024.19	2007.59	2014.95	2001.98
31	WS Temperature	F	190.48	182.03	183.31	184.24
32	DM Pressure Drop	in H2O	4.46	5.4	10.5	4.12

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	PCDD/PCDF																		
2	N																		
3	Facility Name and ID:		JACADS, LIC																
4	Condition ID:		344C10																
5	Condition/Test Date:		GB trial burn, April 11, 15, 16,& 17, 1997																
6																			
7			I-TEF				Run 2				Run 3				Run 4				
8	Wght Fact		Total	TEQ	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	1/2 ND	
10	Detected in sample volume (pg)																		
11	2,3,7,8-TCDD		1	nd	14.00	14.00	7.00	7.00	nd	16.00	16.00	8.00	8.00	nd	12.00	12.00	6.00	6.00	nd
12	Total TCDD		0	nd	14.00	0.00	7.00	0.00	nd	16.00	0.00	8.00	0.00	nd	12.00	0.00	6.00	0.00	nd
13	1,2,3,7,8-PCDD		0.5	nd	20.00	10.00	10.00	5.00	nd	26.00	13.00	13.00	6.50	nd	21.00	10.50	10.50	5.25	nd
14	Total PCDD		0	nd	20.00	0.00	10.00	0.00	nd	26.00	0.00	13.00	0.00	nd	21.00	0.00	10.50	0.00	nd
15	1,2,3,4,7,8-HxCDD		0.1	nd	15.00	1.50	7.50	0.75	nd	24.00	2.40	12.00	1.20	nd	20.00	2.00	10.00	1.00	nd
16	1,2,3,6,7,8-HxCDD		0.1	nd	14.00	1.40	7.00	0.70	nd	21.00	2.10	10.50	1.05	nd	17.00	1.70	8.50	0.85	nd
17	1,2,3,7,8,9-HxCDD		0.1	nd	16.00	1.60	8.00	0.80	nd	23.00	2.30	11.50	1.15	nd	20.00	2.00	10.00	1.00	nd
18	Total HxCDD		0	nd	16.00	0.00	8.00	0.00	nd	24.00	0.00	12.00	0.00	nd	20.00	0.00	10.00	0.00	nd
19	1,2,3,4,6,7,8-HpCDD		0.01	nd	14.00	0.14	7.00	0.07	nd	18.00	0.18	9.00	0.09	nd	14.00	0.14	7.00	0.07	nd
20	Total HpCDD		0	nd	14.00	0.00	7.00	0.00	nd	18.00	0.00	9.00	0.00	nd	14.00	0.00	7.00	0.00	nd
21	OCDD		0.001	nd	73.00	0.07	36.50	0.04	nd	68.00	0.07	34.00	0.03	nd	81.00	0.08	40.50	0.04	nd
22	2,3,7,8-TCDF		0.1	nd	14.00	1.40	7.00	0.70	nd	14.00	1.40	7.00	0.70	nd	12.00	1.20	6.00	0.60	nd
23	Total TCDF		0	nd	14.00	0.00	7.00	0.00	nd	14.00	0.00	7.00	0.00	nd	12.00	0.00	6.00	0.00	nd
24	1,2,3,7,8-PCDF		0.05	nd	18.00	0.90	9.00	0.45	nd	25.00	1.25	12.50	0.63	nd	16.00	0.80	8.00	0.40	nd
25	2,3,4,7,8-PCDF		0.5	nd	16.00	8.00	8.00	4.00	nd	22.00	11.00	11.00	5.50	nd	14.00	7.00	7.00	3.50	nd
26	Total PCDF		0	nd	18.00	0.00	9.00	0.00	nd	25.00	0.00	12.50	0.00	nd	16.00	0.00	8.00	0.00	nd
27	1,2,3,4,7,8-HxCDF		0.1	nd	4.00	0.40	2.00	0.20	nd	8.70	0.87	4.35	0.44	nd	7.70	0.77	3.85	0.39	nd
28	1,2,3,6,7,8-HxCDF		0.1	nd	4.20	0.42	2.10	0.21	nd	9.60	0.96	4.80	0.48	nd	8.50	0.85	4.25	0.43	nd
29	2,3,4,6,7,8-HxCDF		0.1	nd	4.70	0.47	2.35	0.24	nd	12.00	1.20	6.00	0.60	nd	10.00	1.00	5.00	0.50	nd
30	1,2,3,7,8,9-HxCDF		0.1	nd	5.80	0.58	2.90	0.29	nd	14.00	1.40	7.00	0.70	nd	13.00	1.30	6.50	0.65	nd
31	Total HxCDF		0	nd	5.80	0.00	2.90	0.00	nd	14.00	0.00	7.00	0.00	nd	13.00	0.00	6.50	0.00	nd
32	1,2,3,4,6,7,8-HpCDF		0.01	nd	7.30	0.07	3.65	0.04	nd	9.40	0.09	4.70	0.05	nd	11.00	0.11	5.50	0.06	nd
33	1,2,3,4,7,8,9-HpCDF		0.01	nd	8.70	0.09	4.35	0.04	nd	12.00	0.12	6.00	0.06	nd	13.00	0.13	6.50	0.07	nd
34	Total HpCDF		0	nd	8.70	0.00	4.35	0.00	nd	12.00	0.00	6.00	0.00	nd	13.00	0.00	6.50	0.00	nd
35	OCDF		0.001	nd	19.00	0.02	9.50	0.01	nd	34.00	0.03	17.00	0.02	nd	26.00	0.03	13.00	0.01	nd
36																			
37	Gas sample volume (dscf)				177.916	177.916	177.916			167.508	167.508	167.508			160.467	160.467	160.467		
38	O2 (%)				9	9	9			9.1	9.1	9.1			8.9	8.9	8.9		
39																			
40	PCDD/PCDF (ng in sample)				0.041	0.1	0.021			0.054	0.1	0.027			0.04	0.1	0.02		
41	PCDD/PCDF (ng/dscm @ 7% O ₂ , 100.0				0.010	0.023	0.005	100.0		0.01	0.03	0.01	100.0		0.01	0.03	0.01	100.0	
42																			
43	TEQ Cond Avg		0.0053																
44	Total Cond Avg		0.0261																

	A	B	T	U	V	W
1		PCDD/PCDF				
2		N				
3		Facility Name and ID:				
4		Condition ID:				
5		Condition/Test Date:				
6						
7					Run 5	
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	9.30	9.30	4.65	4.65
12		Total TCDD	9.30	0.00	4.65	0.00
13		1,2,3,7,8-PCDD	14.00	7.00	7.00	3.50
14		Total PCDD	14.00	0.00	7.00	0.00
15		1,2,3,4,7,8-HxCDD	19.00	1.90	9.50	0.95
16		1,2,3,6,7,8-HxCDD	17.00	1.70	8.50	0.85
17		1,2,3,7,8,9-HxCDD	18.00	1.80	9.00	0.90
18		Total HxCDD	19.00	0.00	9.50	0.00
19		1,2,3,4,6,7,8-HpCDD	14.00	0.14	7.00	0.07
20		Total HpCDD	14.00	0.00	7.00	0.00
21		OCDD	52.00	0.05	26.00	0.03
22		2,3,7,8-TCDF	10.00	1.00	5.00	0.50
23		Total TCDF	10.00	0.00	5.00	0.00
24		1,2,3,7,8-PCDF	15.00	0.75	7.50	0.38
25		2,3,4,7,8-PCDF	14.00	7.00	7.00	3.50
26		Total PCDF	15.00	0.00	7.50	0.00
27		1,2,3,4,7,8-HxCDF	6.80	0.68	3.40	0.34
28		1,2,3,6,7,8-HxCDF	7.40	0.74	3.70	0.37
29		2,3,4,6,7,8-HxCDF	8.90	0.89	4.45	0.45
30		1,2,3,7,8,9-HxCDF	11.00	1.10	5.50	0.55
31		Total HxCDF	11.00	0.00	5.50	0.00
32		1,2,3,4,6,7,8-HpCDF	7.00	0.07	3.50	0.04
33		1,2,3,4,7,8,9-HpCDF	8.40	0.08	4.20	0.04
34		Total HpCDF	8.40	0.00	4.20	0.00
35		OCDF	16.00	0.02	8.00	0.01
36						
37		Gas sample volume (dsc		164.999	164.999	164.999
38		O2 (%)		8.9	8.9	8.9
39						
40		PCDD/PCDF (ng in sam)		0.03	0.1	0.02
41		PCDD/PCDF (ng/dscm @		0.008	0.02	0.004
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	344C3																	
2																		
3	ng/dscm	I-TEF		Total	Run 1	TEQ		Total	Run 2	TEQ		Total	Run 3	TEQ		Total	Run 4	TEQ
4		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		Full ND	1/2 ND	1/2 ND
5	4D 2378	1	1	0.008	0.004	0.004	1	0.009	0.004	0.004	1	0.008	0.004	0.004	1	0.009	0.005	0.005
6	4D Other	0		0.008	0.008	0.000		0.014	0.014	0.000		0.005	0.005	0.000		-0.001	-0.001	0.000
7	4D Total	0		0.016	0.016	0.000		0.023	0.023	0.000		0.014	0.014	0.000	1	0.008	0.004	0.000
8	5D 12378	0.5	1	0.041	0.020	0.010	1	0.044	0.022	0.011	1	0.042	0.021	0.011	1	0.047	0.023	0.012
9	5D Other	0		0.004	0.004	0.000		-0.001	-0.001	0.000		0.000	0.000	0.000		-0.006	-0.006	0.000
10	5D Total	0	1	0.045	0.023	0.000	1	0.043	0.022	0.000	1	0.042	0.021	0.000	1	0.041	0.020	0.000
11	6D 123478	0.1	1	0.041	0.020	0.002	1	0.044	0.022	0.002	1	0.042	0.021	0.002	1	0.047	0.023	0.002
12	6D 123678	0.1	1	0.041	0.020	0.002	1	0.044	0.022	0.002	1	0.042	0.021	0.002	1	0.047	0.023	0.002
13	6D 123789	0.1	1	0.041	0.020	0.002	1	0.044	0.022	0.002	1	0.042	0.021	0.002	1	0.047	0.023	0.002
14	6D Other	0		-0.077	-0.077	0.000		-0.088	-0.088	0.000		-0.085	-0.085	0.000		-0.099	-0.099	0.000
15	6D Total	0	1	0.045	0.023	0.000	1	0.043	0.022	0.000	1	0.042	0.021	0.000	1	0.041	0.020	0.000
16	7D 1234678	0.01	1	0.041	0.020	0.000	1	0.044	0.022	0.000	1	0.042	0.021	0.000	1	0.047	0.023	0.000
17	7D Other	0		0.004	0.004	0.000		-0.001	-0.001	0.000		0.098	0.098	0.000		0.007	0.007	0.000
18	7D Total	0	1	0.045	0.023	0.000	1	0.043	0.022	0.000		0.140	0.140	0.000		0.054	0.054	0.000
19	8D	0.001	1	0.090	0.045	0.000	1	0.086	0.043	0.000		0.112	0.112	0.000	1	0.082	0.041	0.000
20	4F 2378	0.1		0.017	0.017	0.002	1	0.009	0.004	0.000		0.008	0.008	0.001	1	0.009	0.005	0.000
21	4F Other	0		0.158	0.158	0.000		0.181	0.181	0.000		0.392	0.392	0.000		0.006	0.006	0.000
22	4F Total	0		0.174	0.174	0.000		0.189	0.189	0.000		0.400	0.400	0.000		0.015	0.015	0.000
23	5F 12378	0.05	1	0.041	0.020	0.001	1	0.044	0.022	0.001	1	0.042	0.021	0.001	1	0.047	0.023	0.001
24	5F 23478	0.5	1	0.041	0.020	0.010	1	0.044	0.022	0.011	1	0.042	0.021	0.011	1	0.047	0.023	0.012
25	5F Other	0		-0.034	-0.034	0.000		-0.040	-0.040	0.000		-0.059	-0.059	0.000		-0.052	-0.052	0.000
26	5F Total	0		0.047	0.047	0.000		0.047	0.047	0.000		0.026	0.026	0.000	1	0.041	0.020	0.000
27	6F 123478	0.1	1	0.041	0.020	0.002	1	0.044	0.022	0.002	1	0.042	0.021	0.002	1	0.047	0.023	0.002
28	6F 123678	0.1	1	0.041	0.020	0.002	1	0.044	0.022	0.002	1	0.042	0.021	0.002	1	0.047	0.023	0.002
29	6F 123789	0.1	1	0.041	0.020	0.002	1	0.044	0.022	0.002	1	0.042	0.021	0.002	1	0.047	0.023	0.002
30	6F 234678	0.1	1	0.041	0.020	0.002	1	0.044	0.022	0.002	1	0.042	0.021	0.002	1	0.047	0.023	0.002
31	6F Other	0		-0.107	-0.107	0.000		-0.132	-0.132	0.000		-0.128	-0.128	0.000		-0.029	-0.029	0.000
32	6F Total	0		0.056	0.056	0.000	1	0.043	0.022	0.000	1	0.042	0.021	0.000		0.157	0.157	0.000
33	7F 1234678	0.01	1	0.041	0.020	0.000	1	0.044	0.022	0.000	1	0.042	0.021	0.000		0.122	0.122	0.001
34	7F 1234789	0.01		0.047	0.047	0.000	1	0.044	0.022	0.000	1	0.042	0.021	0.000		0.093	0.093	0.001
35	7F Other	0		-0.043	-0.043	0.000		-0.045	-0.045	0.000		0.975	0.975	0.000		0.087	0.087	0.000
36	7F Total	0	1	0.045	0.023	0.000	1	0.043	0.022	0.000		1.060	1.060	0.000		0.302	0.302	0.000
37	8F	0.001	1	0.090	0.045	0.000	1	0.086	0.043	0.000		0.400	0.400	0.000		0.065	0.065	0.000
38	Total PCDD/PCDF			0.655	0.474			0.649	0.454			2.278	2.215			0.805	0.699	
39	TEQ		97.4	0.083		0.042	100.0	0.088		0.044	98.4	0.085		0.043	97.7	0.094		0.048