

US EPA ARCHIVE DOCUMENT

	B	C
1	<b>Source Description</b>	
2		
3	Phase I ID No.	347
4	EPA ID No.	UT5210090002
5	Facility Name	Deseret Army Depot, TOCDF, DEPARTMENT OF THE ARMY - SOUTH
6	Facility Location	
7	City	Tooele
8	State	UT
9	Unit ID Name/No.	DEACTIVATION FURNACE SYSTEM
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	Chemical weapon nerve agent destructor
15	Capacity (MMBtu/hr)	
16	Soot Blowing	
17	APCS Detailed Acronym	C/QT/VS/PBS/DM
18	APCS General Class	C, HEWS, LEWS
19	APCS Characteristics	Cyclone, quench, variable throat venturi, packed bed scrubber, demister
20	Hazardous Wastes	Solid
21	Haz Waste Description	Chemical weapon nerve agent decontamination
22	Supplemental Fuel	Oil
23		FUEL OIL
24		
25	Stack Characteristics	
26	Diameter (ft)	5.0
27	Height (ft)	100.0
28	Gas Velocity (ft/sec)	6.9
29	Gas Temperature (°F)	238.3
30		
31	Permitting Status	
32	HWC Burn Status (Date if Terminated)	

	B	C
1	<b>Condition Description</b>	
2		
3	<b>347C8</b>	
4		
5	Report Name/Date	Tooele Chemical Agent Disposal Facility (TOCDF), RCRA Agents GB Trial Burn Report for the Deactivation Furnace System (DFS), Prepared by EG & G Defense Materials, Inc., April 9, 1997
6	Report Prepare	EG&G
7	Testing Firm	EG&G
8	Cond Descr	DRE FOR AGENT FEED GB
9	Testing Dates	January 7-11, 1997
10	Cond Dates	Jan-97
11		
12	<b>347C9</b>	
13		
14	Report Name/Date	DFS GB ATB2 Report - Rev 1, July 7, 1999 (only have copy of select tables received in NODA comments, missing full report)
15	Report Prepare	
16	Testing Firm	
17	Cond Descr	Trial burn, agent GB
18	Testing Dates	Nov 18-21, 1998
19	Cond Dates	Nov-98

	B	C	D	E	F	G	H	I	J	K	L	M
1	<b>Stack Gas Emissions 2</b>											
2												
3												
4												
5												
6	<b>347C8</b>					R1		R2		R3		Cond Avg
7												
8	PM	E1	gr/dscf	y		0.0044		0.0017		0.0050		0.0037
9	HCl	E1	ppmv	y	nd	0.8	nd	0.9	nd	0.9		0.8
10	Aluminum	E2	ug/dscm	y		57.0		24.3		58.5		46.6
11	Antimony	E2	ug/dscm	y		2.8		1.4		5.1		3.1
12	Arsenic	E2	ug/dscm	y		0.6	nd	0.4		0.7		0.5
13	Barium	E2	ug/dscm	y		1.3		1.2		2.2		1.6
14	Beryllium	E2	ug/dscm	y	nd	0.2	nd	0.2	nd	0.2		0.2
15	Boron	E2	ug/dscm	y	nd	1.7	nd	2.2		13.5		5.8
16	Cadmium	E2	ug/dscm	y		42.1		7.9		47.8		32.6
17	Chromium	E2	ug/dscm	y		5.8		1.4		6.7		4.6
18	Chromium (Hex)	E3	ug/dscm	y	nd	2.5	nd	3.4	nd	3.5		3.1
19	Cobalt	E2	ug/dscm	y		0.3		0.9		0.4		0.6
20	Copper	E2	ug/dscm	y		3.1		2.0		4.4		3.2
21	Lead	E2	ug/dscm	y		1523.7		272.8		1372.6		1056.4
22	Manganese	E2	ug/dscm	y		3.6		3.2		2.6		3.1
23	Mercury	E2	ug/dscm	y		2.3		2.5		2.5		2.4
24	Nickel	E2	ug/dscm	y		1.8		3.7		2.3		2.6
25	Phosphorus	E2	ug/dscm	y		553.6		73.0		384.2		336.9
26	Selenium	E2	ug/dscm	y	nd	0.4	nd	0.4	nd	0.4		0.4
27	Silver	E2	ug/dscm	y	nd	0.1	nd	0.1	nd	0.1		0.1
28	Thallium	E2	ug/dscm	y	nd	0.2	nd	0.2	nd	0.2		0.2
29	Tin	E2	ug/dscm	y		1.7		0.9		1.1		1.2
30	Vanadium	E2	ug/dscm	y	nd	0.9	nd	1.0	nd	1.0		1.0
31	Zinc	E2	ug/dscm	y		258.1		65.7		189.7		171.2
32	SVM	E2	ug/dscm	y		1565.7		280.7		1420.4		1088.9
33	LVM	E2	ug/dscm	y		6.5		2.0		7.5		5.3
34												
35	Sampling Train	Particulate	E1									
36	Stack Gas Flowrate		dscfm			11000.0		10167.0		10167.0		
37	O2		%			9.0		9.5		9.6		
38	Moisture		%			49.2		49.2		48.7		
39	Temperature		°F			236.0		239.0		238.0		
40												
41	Sampling Train	Metals	E2									
42	Stack Gas Flowrate		dscfm			10833.0		10000.0		9833.0		
43	O2		%			9.0		9.5		9.6		
44	Moisture		%			49.2		49.3		48.4		
45	Temperature		°F			238.0		238.0		238.0		
46												
47	Sampling Train	Cr Hex	E3									
48	Stack Gas Flowrate		dscfm			11667.0		10167.0		9333.0		
49	O2		%			9.0		9.5		9.6		
50	Moisture		%			45.5		49.1		47.8		
51	Temperature		°F			240.0		239.0		239.0		
52												
53	Sampling Train	Dioxin & Fur	E4									
54	Stack gas flowrate					10921.0		10375.0		10008.0		
55	Oxygen		%			9.0		9.5		9.6		
56	Moisture		%			48.4		48.6		48.5		
57	Temperature		°F			0.0		0.0		0.0		
58												
59	GB Nerve Agent	E4	%		>	99.999994	>	99.999986	>	99.999995		
60												
61												
62	<b>347C9</b>					R1		R2		R3		Cond Avg
63												
64	PM	E1	gr/dscf	y		0.0011		0.0017		0.001		0.0013
65	HCl		mg/dscm		nd	0.53	nd	0.48	nd	0.47		
66	Cl2		mg/dscm			1.61		1.31		1.2		
67	HCl	E1	ppmv	y		0.43		0.39		0.38		0.4
68	Cl2	E1	ppmv	y		1.30		1.06		0.97		1.1
69	Total Chlorine	E1	ppmv	y		3.04		2.51		2.32		2.6
70												
71	Sampling Train	PM	E1									

	B	C	D	E	F	G	H	I	J	K	L	M
72	Stack Gas Flowrate					7904		8261		8877		
73	Oxygen					9.6		9.6		9.6		
74	Moisture					49.2		49.4		49.3		
75	Temperature					239		241		237		
76												
77	Aluminum		ug/dscm	n		64		62		64		
78	Antimony		ug/dscm	n		23		31		24		
79	Arsenic		ug/dscm	n		1.5		1.5		1.5		
80	Barium		ug/dscm	n		0.59		0.59		0.4		
81	Beryllium		ug/dscm	n		0.76		0.74		0.77		
82	Boron		ug/dscm	n		7.8		20		27		
83	Cadmium		ug/dscm	n		3.7		5.3		3.9		
84	Chromium		ug/dscm	n		1.4		1.7		1.6		
85	Cobalt		ug/dscm	n		0.76		0.74		0.77		
86	Copper		ug/dscm	n		0.86		0.62		1.4		
87	Lead		ug/dscm	n		229		265		233		
88	Manganese		ug/dscm	n		1.6		5.6		4.7		
89	Mercury		ug/dscm	n		2.3		2.4		2.3		
90	Nickel		ug/dscm	n		0.81		1.7		0.77		
91	Phosphorus		ug/dscm	n		66		70		70		
92	Selenium		ug/dscm	n		1.5		1.5		1.5		
93	Silver		ug/dscm	n		0.37		0.37		0.39		
94	Thallium		ug/dscm	n		0.76		0.74		0.77		
95	Tin		ug/dscm	n		2.6		5		5.7		
96	Vanadium		ug/dscm	n		3.8		3.7		3.9		
97	Zinc		ug/dscm	n		67		53		55		
98												
99	Aluminum	E2	ug/dscm	y		78.6		76.1		78.6		77.8
100	Antimony	E2	ug/dscm	y		28.2		38.1		29.5		31.9
101	Arsenic	E2	ug/dscm	y		1.8		1.8		1.8		1.8
102	Barium	E2	ug/dscm	y		0.7		0.7		0.5		0.6
103	Beryllium	E2	ug/dscm	y		0.9		0.9		0.9		0.9
104	Boron	E2	ug/dscm	y		9.6		24.6		33.2		22.4
105	Cadmium	E2	ug/dscm	y		4.5		6.5		4.8		5.3
106	Chromium	E2	ug/dscm	y		1.7		2.1		2.0		1.9
107	Cobalt	E2	ug/dscm	y		0.9		0.9		0.9		0.9
108	Copper	E2	ug/dscm	y		1.1		0.8		1.7		1.2
109	Lead	E2	ug/dscm	y		281.2		325.4		286.1		297.6
110	Manganese	E2	ug/dscm	y		2.0		6.9		5.8		4.9
111	Mercury	E2	ug/dscm	y		2.8		2.9		2.8		2.9
112	Nickel	E2	ug/dscm	y		1.0		2.1		0.9		1.3
113	Phosphorus	E2	ug/dscm	y		81.1		86.0		86.0		84.3
114	Selenium	E2	ug/dscm	y		1.8		1.8		1.8		1.8
115	Silver	E2	ug/dscm	y		0.5		0.5		0.5		0.5
116	Thallium	E2	ug/dscm	y		0.9		0.9		0.9		0.9
117	Tin	E2	ug/dscm	y		3.2		6.1		7.0		5.4
118	Vanadium	E2	ug/dscm	y		4.7		4.5		4.8		4.7
119	Zinc	E2	ug/dscm	y		82.3		65.1		67.5		71.6
120	SVM	E2	ug/dscm	y		285.8		331.9		290.9		302.9
121	LVM	E2	ug/dscm	y		4.5		4.8		4.8		4.7
122												
123	Sampling Train	metals	E2									
124	Stack Gas Flowrate					8580		8744		8596		
125	Oxygen					9.6		9.6		9.6		
126	Moisture					49.4		49.7		48.8		
127	Temperature					238		240		234		
128												
129	POHC	Agent GB										
130	POHC Feedrate		lb/hr			11.1		9.9		12.0		
131	Emission Rate		lb/hr		nd	2.78E-07	nd	2.76E-07	nd	2.71E-07		
132	DRE		%		>	99.9999975	>	99.9999972	>	99.9999977		
133												
134	POHC	PCB										
135	POHC Feedrate		lb/hr			0.5		0.5		0.5		
136	Emission Rate		lb/hr		nd	6.30E-08	nd	7.10E-08	nd	7.90E-08		
137	DRE		%		>	99.9999869	>	99.9999863	>	99.9999839		
138												
139	POHC	NG										
140	POHC Feedrate		lb/hr			141.4		154.2		151.5		
141	Emission Rate		lb/hr		nd	1.98E-04	nd	1.68E-04	nd	1.84E-04		
142	DRE		%		>	99.9998599	>	99.9998911	>	99.9998785		

	B	C	D	E	F	G	H	I	J	K	L	M
143												
144	POHC	2,4,6-TNT										
145	POHC Feedrate		lb/hr			38.5		42.0		41.3		
146	Emission Rate		lb/hr	nd		4.94E-05	nd	3.59E-05	nd	4.12E-05		
147	DRE		%	>		99.9998717	>	99.9999145	>	99.9999001		

	B	C	D	E	F	G	H	I	J	K	L
1	<b>Feedstream 2</b>										
2											
3	<b>347C8</b>										
4											
5	No feedrate information is available										
6											
7											
8	<b>347C9</b>										
9											
10	Feedrate information is not complete for all feedstreams? Only have Agent GB composition										

	C	D	E	F	G
1	<b>Process Information 2</b>				
2					
3	<b>347C8</b>				
4					
5	Combustion Temperature	F	2151	2150	2149
6	WS Temperature	F	173	172	172
7	WS Pressure Drop	in H2O	29.9	30.4	30.3



	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	<b>347C8</b>													
2														
3	ng/dscm	I-TEF		Total	Run 1			Total	Run 2			Total	Run 3	
4		Wt Fact		Full ND	1/2 ND	TEQ		Full ND	1/2 ND	TEQ		Full ND	1/2 ND	TEQ
5	4D 2378	1	1	0.001	0.000	0.000	1	0.000	0.000	0.000	1	0.001	0.001	0.001
6	4D Other	0		0.002	0.002	0.000	1	0.001	0.000	0.000		0.002	0.002	0.000
7	4D Total	0		0.003	0.003	0.000	1	0.001	0.000	0.000		0.003	0.003	0.000
8	5D 12378	0.5	1	0.001	0.001	0.000	1	0.002	0.001	0.001	1	0.002	0.001	0.001
9	5D Other	0	1	0.000	0.000	0.000	1	0.000	0.000	0.000	1	0.001	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	0.000	0.000	0.000	1	0.000	0.000	0.000	1	0.000	0.000	0.000
12	6D 123678	0.1	1	0.000	0.000	0.000	1	0.000	0.000	0.000	1	0.000	0.000	0.000
13	6D 123789	0.1	1	0.000	0.000	0.000	1	0.000	0.000	0.000	1	0.000	0.000	0.000
14	6D Other	0	1	0.000	0.000	0.000	1	-0.001	0.000	0.000	1	0.000	0.000	0.000
15	6D Total	0	1	0.001	0.000	0.000	1	0.000	0.000	0.000	1	0.001	0.001	0.000
16	7D 1234678	0.01	1	0.001	0.000	0.000	1	0.001	0.001	0.000	1	0.001	0.000	0.000
17	7D Other	0	1	0.000	0.000	0.000	1	0.000	0.000	0.000	1	0.000	0.000	0.000
18	7D Total	0	1	0.001	0.000	0.000	1	0.001	0.001	0.000	1	0.001	0.000	0.000
19	8D	0.001	1	0.003	0.002	0.000	1	0.004	0.002	0.000	1	0.005	0.002	0.000
20	4F 2378	0.1		0.005	0.005	0.000		0.006	0.006	0.001		0.006	0.006	0.001
21	4F Other	0		0.006	0.006	0.000		0.005	0.005	0.000		0.008	0.008	0.000
22	4F Total	0		0.011	0.011	0.000		0.011	0.011	0.000		0.013	0.013	0.000
23	5F 12378	0.05	1	0.001	0.000	0.000	1	0.001	0.001	0.000	1	0.002	0.001	0.000
24	5F 23478	0.5	1	0.001	0.000	0.000	1	0.001	0.001	0.000	1	0.001	0.001	0.000
25	5F Other	0	1	0.001	0.000	0.000	1	-0.001	-0.001	0.000	1	0.001	0.000	0.000
26	5F Total	0	1	0.002	0.001	0.000	1	0.001	0.001	0.000	1	0.003	0.002	0.000
27	6F 123478	0.1	1	0.001	0.000	0.000	1	0.000	0.000	0.000	1	0.001	0.000	0.000
28	6F 123678	0.1	1	0.000	0.000	0.000	1	0.001	0.000	0.000	1	0.000	0.000	0.000
29	6F 123789	0.1	1	0.001	0.000	0.000	1	0.001	0.000	0.000	1	0.000	0.000	0.000
30	6F 234678	0.1	1	0.000	0.000	0.000	1	0.001	0.000	0.000	1	0.000	0.000	0.000
31	6F Other	0	1	-0.002	-0.001	0.000	1	-0.001	-0.001	0.000	1	-0.001	0.000	0.000
32	6F Total	0	1	0.001	0.000	0.000	1	0.001	0.001	0.000	1	0.001	0.000	0.000
33	7F 1234678	0.01	1	0.000	0.000	0.000	1	0.001	0.000	0.000	1	0.001	0.001	0.000
34	7F 1234789	0.01	1	0.000	0.000	0.000	1	0.000	0.000	0.000	1	0.001	0.001	0.000
35	7F Other	0	1	0.000	0.000	0.000	1	0.000	0.000	0.000	1	-0.001	-0.001	0.000
36	7F Total	0	1	0.001	0.000	0.000	1	0.001	0.000	0.000	1	0.001	0.001	0.000
37	8F	0.001	1	0.001	0.000	0.000	1	0.001	0.000	0.000	1	0.001	0.001	0.000
38	Total PCDD/PCDF			0.025	0.019			0.023	0.017			0.032	0.024	
39	TEQ		82.9	0.003		0.002	79.7	0.003		0.002	83.4	0.004		0.002

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	<b>PCDD/PCDF</b>																	
2	N																	
3	Facility Name and ID:		TOCDF, DFS															
4	Condition ID:		347C9															
5	Condition/Test Date:		Agent GB trial burn 2, Nov. 1998															
6																		
7	I-TEF																	
8	Wght Fact																	
9																		
10	Detected in sample volume (pg)																	
11	Total TCDD																	
12	2,3,7,8-TCDD																	
13	Total PCDD																	
14	1,2,3,7,8-PCDD																	
15	Total HxCDD																	
16	1,2,3,4,7,8-HxCDD																	
17	1,2,3,6,7,8-HxCDD																	
18	1,2,3,7,8,9-HxCDD																	
19	Total HpCDD																	
20	1,2,3,4,6,7,8-HpCDD																	
21	OCDD																	
22	Total TCDF																	
23	2,3,7,8-TCDF																	
24	Total PCDF																	
25	1,2,3,7,8-PCDF																	
26	2,3,4,7,8-PCDF																	
27	Total HxCDF																	
28	1,2,3,4,7,8-HxCDF																	
29	1,2,3,6,7,8-HxCDF																	
30	2,3,4,6,7,8-HxCDF																	
31	1,2,3,7,8,9-HxCDF																	
32	Total HpCDF																	
33	1,2,3,4,6,7,8-HpCDF																	
34	1,2,3,4,7,8,9-HpCDF																	
35	OCDF																	
36																		
37	Gas sample volume (dscf)																	
38	O2 (%)																	
39																		
40	PCDD/PCDF (ng in sample)																	
41	PCDD/PCDF (ng/dscm @ 7% O2)																	
42																		
43	TEQ Cond Avg																	
44	Total Cond Avg																	