	B	C
1	**Source Description**	
2		
3	Phase I ID No.	3009
4	EPA ID No.	WID990829475
5	Facility Name	Waste Research and Reclamation
6	Facility Location	
7	City	Eau Claire
8	State	WI
9	Unit ID Name/No.	Waste solvent incinerator
10	Other Sister Facilities	
11	Number of Sister Facilities	0
12	Combustor Class	Onsite incinerator
13	Combustor Type	Controlled air
14	Combustor Characteristics	2 chamber incinerator, made by Sunbeam Equipment Corp, Model A-50, primary and secondary chambers, looks like controlled air design
15	Capacity (MMBtu/hr)	20
16	Soot Blowing	
17	APCS Detailed Acronym	WHB/VS
18	APCS General Class	WHB, HEWS
19	APCS Characteristics	Waste heat boiler, Anderson 2000 variable throat venturi scruber with cyclone separator and mist eliminator
20	Hazardous Wastes	Liq
21	Haz Waste Description	Liquid waste solvents, resin and paint particles
22	Supplemental Fuel	?
23		
24	Stack Characteristics	
25	Diameter (ft)	
26	Height (ft)	
27	Gas Velocity (ft/sec)	
28	Gas Temperature (°F)	
29		
30	Permitting Status	
31	HWC Burn Status (Date if Terminated)	

	B	C
1	**Condition Description**	
2		
3	**3009C1**	
4		
5	Report Name/Date	Results of the February 25, 1986, Performance Evaluation Test on the Incinerator Scrubber at the Waste Research and Reclamation Plant in Eau Claire, Wisconsin, March 7, 1986
6	Report Prepare	Interpoll Inc.
7	Testing Firm	Interpoll Inc.
8	Testing Dates	February 25, 1986
9	Cond Dates	Feb-86
10	Condition Descr	Performance test
11	Content	PM, HCl
12		
13	**3009C2**	
14		
15	Report Name/Date	Results of the July 1-3, 1986, Performance Tests on the Hazardous Waste Solvent Incinerator at the WR&R Plant in Eau Claire, Wisconsin, August 18, 1986
16	Report Prepare	Interpoll Inc.
17	Testing Firm	Interpoll Inc.
18	Testing Dates	July 1, 1986
19	Cond Dates	Jul-86
20	Condition Descr	Trial burn
21	Content	PM, Pb, Cr, HCl, CO, DRE
22		
23	**3009C3**	
24		
25	Report Name/Date	Results of the July 1-3, 1986, Performance Tests on the Hazardous Waste Solvent Incinerator at the WR&R Plant in Eau Claire, Wisconsin, August 18, 1986
26	Report Prepare	Interpoll Inc.
27	Testing Firm	Interpoll Inc.
28	Testing Dates	July 2, 1986
29	Cond Dates	Jul-86
30	Condition Descr	Trial burn
31	Content	PM, Pb, Cr, HCl, CO, DRE
32		
33	**3009C4**	
34		
35	Report Name/Date	Results of the July 1-3, 1986, Performance Tests on the Hazardous Waste Solvent Incinerator at the WR&R Plant in Eau Claire, Wisconsin, August 18, 1986
36	Report Prepare	Interpoll Inc.
37	Testing Firm	Interpoll Inc.
38	Testing Dates	July 3, 1986
39	Cond Dates	Jul-86
40	Condition Descr	Trial burn
41	Content	PM, Pb, Cr, HCl, CO, DRE
42		
43	**3009C5**	
44		
45	Report Name/Date	Results of the July 24, 1986, Diagnostic Test on the Incinerator Scrubber at the WR&R Plant in Eau Claire, Wisconsin, July 31, 1986, Report Number 6-2250
46	Report Prepare	
47	Testing Firm	Interpoll Inc.
48	Testing Dates	Interpoll Inc.
49	Condition Descr	July 24, 1986
50	Cond Dates	Jul-86
51	Condition Descr	Diagnostic test
52	Content	PM, Pb, CO
53		
54	**3009C6**	
55		
56	Report Name/Date	Results of the February 19, 1987, Particulate and Carbon Monoxide Emission Compliance Test on the Hazardous Waste Incinerator Wet Scrubber Stack at the WR&R Plant in Eau Claire, Wisconsin, February 23, 1987, Report Number 7-2336
57	Report Prepare	Interpoll Inc.
58	Testing Firm	Interpoll Inc.

	B	C
59	Testing Dates	February 19, 1987
60	Cond Dates	Feb-87
61	Condition Descr	Performance test
62	Content	PM, Pb, CO

	B	C	D	E	F	G	H	I	J	K	L	M
1	**Stack Gas Emissions 1**											
2												
3		Comm	Units	7% O2								
4												
5	**3009C1**					R1		R2		R3		Cond Avg
6												
7	PM	E1	gr/dscf	y		0.039		0.052		0.056		0.049
8	HCl		ppmv	n		0.61		0.59		0.6		
9	HCl	E1	ppmv	y		0.97		1.09		1.05		1.04
10												
11	Sampling Train	PM/HC	E1									
12	Stack Gas Flowrate		dscfm			4500		4800		4700		4666.7
13	O2		%			12.2		13.4		13		12.9
14	Moisture		%			25.98		26.52		27.3		26.6
15	Temperature		°F			150		151		152		151.0
16												
17												
18	**3009C2**					R1		R2		R3		Cond Avg
19												
20	PM	E1	gr/dscf	y		0.065		0.089		0.106		0.0867
21	Lead	E1	ug/dscm	y		56606.8		53031.6		60732.0		56790.1
22	Chromium	E1	ug/dscm	y		102.9		118.2		100.5		107.2
23	CO (RA)	E1	ppmv	y		5		5		5		5.00
24	HCl		ppmv	n		0.018		0.020		0.027		
25	HCl	E1	ppmv	y		0.023		0.025		0.036		0.028
26	Total Chlorine	E1	ppmv	y		0.023		0.025		0.036		0.028
27												
28	POHC	Toluene										
29	POHC Feedrate		lb/hr			188		188		188		
30	Emission Rate	E1	lb/hr							6.42E-05		
31	DRE	E1	%							99.99997		
32												
33	POHC	Chloroform										
34	POHC Feedrate		lb/hr			1.32		1.32		1.32		
35	Emission Rate	E1	lb/hr			2.04E-05		4.10E-06		2.45E-06		
36	DRE	E1	%			99.99845		99.99969		99.99981		
37												
38	POHC	PCE										
39	POHC Feedrate		lb/hr			9.03		9.03		9.03		
40	Emission Rate	E1	lb/hr			8.19E-04		5.65E-04		3.00E-05		
41	DRE	E1	%			99.99093		99.99375		99.99967		
42												
43	Sampling Train	PM, HC	E1									
44	Stack Gas Flowrate		dscfm			3618		3150		3539		3435.7
45	O2		%			10.2		10		10.6		10.3
46	Moisture		%			33.7		37.5		40.4		37.2
47	Temperature		°F			165		166		171		167.3
48												
49												
50	**3009C3**					R1		R2		R3		Cond Avg
51												
52	PM	E1	gr/dscf	y		0.082		0.096		0.109		0.0957
53	Lead	E1	ug/dscm	y		33826.6		63802.9		72442.9		56690.8
54	Chromium	E1	ug/dscm	y		89.9		140.0		118.7		116.2
55	CO (RA)	E1	ppmv	y		5		5		5		5.00
56	HCl		ppmv	n		0.0197		0.0287		0.312		
57	HCl	E1	ppmv	y		0.024		0.039		0.404		0.156
58	Total Chlorine	E1	ppmv	y		0.024		0.039		0.404		0.156
59												
60	POHC	Toluene										
61	POHC Feedrate		lb/hr			192		192		192		
62	Emission Rate	E1	lb/hr			6.68E-04		3.50E-04		1.16E-04		
63	DRE	E1	%			99.99965		99.99982		99.99994		
64												
65	POHC	Chloroform										
66	POHC Feedrate		lb/hr			1.15		1.15		1.15		
67	Emission Rate	E1	lb/hr			8.10E-06		6.30E-07		6.60E-06		
68	DRE	E1	%			99.99930		99.99995		99.99943		
69												
70	POHC	PCE										
71	POHC Feedrate		lb/hr			8.71		8.71		8.71		

	B	C	D	E	F	G	H	I	J	K	L	M
72	Emission Rate	E1	lb/hr			2.14E-04		1.50E-04		3.50E-05		
73	DRE	E1	%			99.99755		99.99828		99.99960		
74												
75	Sampling Train	PM, H(	E1									
76	Stack Gas Flowrate		dscfm			3391		3401		3536		3442.7
77	O2		%			9.6		10.6		10.2		10.1
78	Moisture		%			37.99		39.84		42.01		39.9
79	Temperature		°F			167		170		172		169.7
80												
81												
82	**3009C4**					R1		R2		R3		Cond Avg
83												
84	PM	E1	gr/dscf	y		0.1139		0.1179		0.1168		0.1162
85	Lead	E1	ug/dscm	y		86156.0		86434.6		104412.7		92334.4
86	Chromium	E1	ug/dscm	y		295.6		346.0		396.5		346.0
87	CO (RA)	E1	ppmv	y		5		5		5		5.00
88	HCl		ppmv	n		0.056		0.105		0.07		
89	HCl	E1	ppmv	y		0.074		0.136		0.092		0.101
90	Total Chlorine	E1	ppmv	y		0.074		0.136		0.092		0.101
91												
92	POHC	Toluene										
93	POHC Feedrate		lb/hr			206		206		206		
94	Emission Rate	E1	lb/hr			6.29E-05		6.94E-05		8.88E-05		
95	DRE	E1	%			99.99997		99.99997		99.99996		
96												
97	POHC	Chloroform										
98	POHC Feedrate		lb/hr			9.59		9.59		9.59		
99	Emission Rate	E1	lb/hr			0.00E+00		1.65E-06		0.00E+00		
100	DRE	E1	%			100.00000		99.99998		100.00000		
101												
102	POHC	PCE										
103	POHC Feedrate		lb/hr			21.5		21.5		21.5		
104	Emission Rate	E1	lb/hr			1.40E-05		6.80E-06		2.00E-06		
105	DRE	E1	%			99.99993		99.99997		99.999991		
106												
107	Sampling Train	PM, H(	E1									
108	Stack Gas Flowrate		dscfm			3532		3439		3542		3504.3
109	O2		%			10.4		10.2		10.4		10.3
110	Moisture		%			38.28		40.56		41.55		40.1
111	Temperature		°F			168		170		171		169.7
112												
113												
114	**3009C5**					R1		R2		R3		Cond Avg
115												
116	PM	E1	gr/dscf	y		0.0473		0.0511		0.0607		0.053
117	Lead	E1	ug/dscm	y		25799.4		32322.2		33247.4		30456.3
118	CO (RA)	E1	ppmv	y		3		3		3		3.0
119												
120	Sampling Train	PM	E1									
121	Stack Gas Flowrate		dscfm			3069		3007		2926		3000.7
122	O2		%			10.2		10		9.6		9.9
123	Moisture		%			29.69		33.09		37.24		33.3
124	Temperature		°F			155		160		165		160.0
125												
126												
127	**3009C6**					R1		R2		R3		Cond Avg
128												
129	PM	E1	gr/dscf	y		0.0568		0.0648		0.0641		0.062
130	Lead	E1	ug/dscm	y		57276.0		51977.4		55823.0		55025.4
131	CO (RA)	E1	ppmv	y		0		0		0		0.0
132												
133	Sampling Train	PM	E1									
134	Stack Gas Flowrate		dscfm			3038		3172		3160		3123.3
135	O2		%			10.4		10.4		10.4		10.4
136	Moisture		%			37.77		40.36		38.22		38.8
137	Temperature		°F			179		181		177		179.0

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	**Feedstream**																			
2																				
3																				
4	**3009C1**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg	
5																				
6	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2	
7	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Total		Total		Total		Total	
8	Feed Class 2				HW		HW		HW		HW		Total		Total		Total		Total	
9	Feedstream Description				Waste solvent		Waste solvent		Waste solvent		Waste solvent		Total		Total		Total		Total	
10	Feed Rate		gal/hr		110.0		110		110		110.0									
11																				
12	Stack Gas Flowrate		dscfm								4666.7									
13	Oxygen		%								12.9									
14																				
15	Thermal Feedrate		MMBtu/hr																	
16	Estimated Firing Rate		MMBtu/hr								12.0									
17																				
18	*Feedrate MTEC Calculations*																			
19	Ash		mg/dscm		424.9		566.1		714.5		568.5		424.9		566.1		714.5		568.5	
20	Chlorine		ug/dscm		24600		34900		47700		35733		24600.0		34900.0		47700.0		35733.3	
21																				
22	**3009C2**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg	
23																				
24	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2	
25	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Total		Total		Total		Total	
26	Feed Class 2				HW		HW		HW		HW		Total		Total		Total		Total	
27	Feedstream Description				Waste solvent		Waste solvent		Waste solvent		Waste solvent		Total		Total		Total		Total	
28	Feed Rate		gal/hr		112.0		112		112		112.0									
29	Heating Value		Btu/lb								14785.0									
30	Ash		% wt								1.0									
31	Chlorine		wt %								0.9									
32	Lead		ppmw								300.0									
33	Chromium		ppmw								73.0									
34																				
35	Stack Gas Flowrate		dscfm								3435.7									
36	Oxygen		%								10.3									
37																				
38	Thermal Feedrate		MMBtu/hr								13.2									
39	Estimated Firing Rate		MMBtu/hr								11.7									
40																				
41	*Feedrate MTEC Calculations*																			
42	Ash		mg/dscm								936.8								936.8	
43	Chlorine		ug/dscm								783999.6								783999.6	
44	Lead		ug/dscm								27285.4								27285.4	
45	Chromium		ug/dscm								6639.4								6639.4	
46	SVM		ug/dscm								27285.4								27285.4	Pb only
47	LVM		ug/dscm								6639.4								6639.4	Cr only
48																				
49	**3009C3**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg	
50																				
51	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2	
52	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Total		Total		Total		Total	
53	Feed Class 2				HW		HW		HW		HW		Total		Total		Total		Total	
54	Feedstream Description				Waste solvent		Waste solvent		Waste solvent		Waste solvent		Total		Total		Total		Total	
55	Feed Rate		gal/hr		114.0		114		114		114.0									
56	Heating Value		Btu/lb								13783									
57	Ash		% wt								2.03									
58	Chlorine		wt %								0.856									
59	Lead		ppmw								550									
60	Chromium		ppmw								130									

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
61																				
62	Stack Gas Flowrate		dscfm								3442.7									
63	Oxygen		%								10.1									
64																				
65	Thermal Feedrate		MMBtu/hr								12.6									
66	Estimated Firing Rate		MMBtu/hr								11.9									
67																				
68	*Feedrate MTEC Calculations*																			
69	Ash		mg/dscm								1852.4								1852.4	
70	Chlorine		ug/dscm								781130.3								781130.3	
71	Lead		ug/dscm								50189.4								50189.4	
72	Chromium		ug/dscm								11863.0								11863.0	
73	SVM		ug/dscm								50189.4								50189.4	Pb only
74	LVM		ug/dscm								50189.4								50189.4	Cr only
75																				
76	**3009C4**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg	
77																				
78	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2	
79	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Total		Total		Total		Total	
80	Feed Class 2				HW		HW		HW		HW		Total		Total		Total		Total	
81	Feedstream Description				Waste solvent		Waste solvent		Waste solvent		Waste solvent		Total		Total		Total		Total	
82	Feed Rate		gal/hr		116.5		116.5		116.5		116.5									
83	Heating Value		Btu/lb								14198									
84	Ash		% wt								1.03									
85	Chlorine		wt %								1.65									
86	Lead		ppmw								1600									
87	Chromium		ppmw								380									
88																				
89	Stack Gas Flowrate		dscfm								3504.3									
90	Oxygen		%								10.3									
91																				
92	Thermal Feedrate		MMBtu/hr								13.2									
93	Estimated Firing Rate		MMBtu/hr								11.9									
94																				
95	*Feedrate MTEC Calculations*																			
96	Ash		mg/dscm								961.3								961.3	
97	Chlorine		ug/dscm								1539968.8								1539968.8	
98	Lead		ug/dscm								149330.3								149330.3	
99	Chromium		ug/dscm								35465.9								35465.9	
100	SVM		ug/dscm								149330.3								149330.3	Pb only
101	LVM		ug/dscm								35465.9								35465.9	Cr only
102																				
103	**3009C5**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg	
104																				
105	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2	
106	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Total		Total		Total		Total	
107	Feed Class 2				HW		HW		HW		HW		Total		Total		Total		Total	
108	Feedstream Description				Waste solvent		Waste solvent		Waste solvent		Waste solvent		Total		Total		Total		Total	
109	Feed Rate		gal/hr		112.5		112.5		107		110.7									
110	Heating Value		Btu/lb								11500									
111	Ash		% wt								2.4									
112	Chlorine		wt %								1.05									
113	Lead		ppmw								1100									
114																				
115	Stack Gas Flowrate		dscfm								3000.7									
116	Oxygen		%								9.9									
117																				
118	Thermal Feedrate		MMBtu/hr								10.2									
119	Estimated Firing Rate		MMBtu/hr								10.5									
120																				

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
121	*Feedrate MTEC Calculations*																			
122	Ash		mg/dscm								2395.1								2395.1	
123	Chlorine		ug/dscm								1047870.8								1047870.8	
124	Lead		ug/dscm								109776.9								109776.9	
125	SVM		ug/dscm								109776.9								109776.9	
126																				
127																				
128	**3009C6**				R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg	
129																				
130	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2	
131	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Total		Total		Total		Total	
132	Feed Class 2				HW		HW		HW		HW		Total		Total		Total		Total	
133	Feedstream Description				Waste solvent		Waste solvent		Waste solvent		Waste solvent		Total		Total		Total		Total	
134	Feed Rate		gal/hr		95.7		95.7		95.7		95.7									
135	Heating Value		Btu/lb								13309									
136	Ash		% wt								1.87									
137	Chlorine		wt %								1.2									
138	Lead		ppmw								560									
139																				
140	Stack Gas Flowrate		dscfm								3123.3									
141	Oxygen		%								10.4									
142																				
143	Thermal Feedrate		MMBtu/hr								10.2									
144	Estimated Firing Rate		MMBtu/hr								10.5									
145																				
146	*Feedrate MTEC Calculations*																			
147	Ash		mg/dscm								1618.7								1618.7	
148	Chlorine		ug/dscm								1038736.0								1038736.0	
149	Lead		ug/dscm								48474.3								48474.3	
150	SVM		ug/dscm								48474.3								48474.3	

	B	C	D	E
1	**Process Information**			
2				Range
3	**3009C1**			
4				
5	**3009C2**			
6				
7	**3009C3**			
8				
9	**3009C4**			
10				
11	**3009C5**			
12				
13	Typical Operations			
14				
15	Primary Temperature	F		1800 - 1900
16	Secondary Temperature	F		2100 - 2250
17	Scrubber pH			6.0 - 7.3
18	Scrubber Liquid Rate	gpm		77 - 95