

US EPA ARCHIVE DOCUMENT

	B	C
1	<b>Source Description</b>	
2		
3	Phase II ID No.	813
4	EPA ID No.	LAD008213191
5	Facility Name	Rubicon, Inc.
6	Facility Location	
7	City	Geismar
8	State	LA
9	Unit ID Name/No.	Aniline II boiler
10	Other Sister Facilities	None
11	Number of Sister Facilities	0
12	Combustor Class	Liquid-fired boiler
13	Combustor Type	Liquid-fired
14	Combustor Characteristics	Turbulent burner chamber closed coupled to a water tube waste heat boiler and economizer, Steam of 25,000 lb/hr @ 350 psig.
15	Capacity (MMBtu/hr)	40
16	Soot Blowing	During Run 4 of 813C1 there were 6 minutes of Soot Blowing as reported in Section 3.2 of the Aniline II Compliance Trial Burn Report Submitted on December 29, 1997.
17	APCS Detailed Acronym	FF
18	APCS General Class	FF
19	APCS Characteristics	Fabric filter, collected dust high in Ni catalyst, sold as usable product
20	Hazardous Wastes	Liq
21	Haz Waste Description	Organic liquid wastes from aniline distillation. Dry purge residue (K083), wet purge residue (K083), reactor residue (D018, D036), reactor vent gas
22	Supplemental Fuel	
23		
24	Stack Characteristics	
25	Diameter (ft)	2.7
26	Height (ft)	75.0
27	Gas Velocity (ft/sec)	78.9
28	Gas Temperature (°F)	340
29		
30	Permitting Status	Adjusted Tier I
31	HWC Burn Status (Date if Terminated)	

	B	C
1	<b>Cond Description</b>	
2		
3	<b>813C1</b>	
4		
5	Report Name/Date	Risk Assessment Trial Burn Report, Dec. 29, 1997
6	Report Prepare	Focus Environmental Inc.
7	Testing Firm	Focus Environmental Inc.
8	Testing Dates	August 25-26, 1997
9	Cond Dates	Aug-97
10	Cond Description	Trial burn; min comb temp
11	Content	Organic destr
12		
13	<b>813C2</b>	
14		
15	Report Name/Date	Risk Assessment Trial Burn Report, Dec. 29, 1997
16	Report Prepare	Focus Environmental Inc.
17	Testing Firm	Focus Environmental Inc.
18	Testing Dates	August 26-27, 1997
19	Cond Dates	Aug-97
20	Cond Description	Trial burn; max waste feed rate
21	Content	PM, HCl/Cl2, CO
22		
23	<b>813C3</b>	
24		
25	Report Name/Date	Risk Assessment Trial Burn Report, Dec. 29, 1997
26	Report Prepare	Focus Environmental Inc.
27	Testing Firm	Focus Environmental Inc.
28	Testing Dates	August 27, 1997
29	Cond Dates	Aug-97
30	Cond Description	Risk burn; near max waste feed rate
31	Content	Metals, no spiking

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Stack Gas Emissions</b>												
2													
3		Comments	Units	7% O2									
4													
5	<b>813C1</b>					R1		R2		R3		Cond Avg	
6													
7	CO (MHRA)	E1	ppmv	y		6.3		8.2		8.2		7.6	
8	CO (RA)	E1	ppmv	y		2.3		7.3		7.5		5.7	
9													
10	POHC DRE	ODCB											
11	Feedrate												
12	Emission Rate		µg/dscm	n		0.134		0.638		0.236		0.336	
13	DRE	E1	%		>	99.999997	>	99.999986	>	99.999995			
14													
15	Sampling Train	Organic Destruction	E1										
16	Stack Gas Flowrate		dscfm			15743		15983		15786		15837	
17	O2		%			15.5		15.1		15.3		15.3	
18	Moisture		%			8.24		9.18		9.41		8.94	
19	Temperature		°F			338		339		337		338	
20													
21	<b>813C2</b>					R1		R2		R3		Cond Avg	
22													
23	PM	E1	gr/dscf	y		0.0252		0.0280		0.0363		0.0298	
24	CO (RA)	E1	ppmv	y		7.3		7.5		7.3		7.4	
25	CO (MHRA)	E1	ppmv	y		7.7		8.0		8.2		8.0	
26	HCl		mg/dscm	n		60.9		99.8		91.1			
27	Cl2		mg/dscm	n		0.1		0.2		0.2			
28													
29	Sampling Train	PM, HCl/Cl2	E1										
30	Stack Gas Flowrate		dscfm			15448		15761		15689		15633	
31	O2		%			14.2		14.7		14.5		14.5	
32	Moisture		%			10.3		9.9		11.59		10.60	
33	Temperature		°F			332		340		341		338	
34													
35	HCl	E1	ppmv	y		83.8		148.2		131.0		121.0	
36	Cl2	E1	ppmv	y		0.1		0.1		0.1		0.1	
37	Total Chlorine	E1	ppmv	y		83.9		148.4		131.3		121.2	
38													
39	<b>813C3</b>					R1		R2		R3		Cond Avg	
40													
41	CO (MHRA)	E1	ppmv	y		10.0		8.0		5.9		8.0	
42	CO (RA)	E1	ppmv	y		9.1		6.4		4.9		6.8	
43	Chromium (Hex)		µg/dscm	n		1.5		1.5		1.8			
44	Antimony		µg/dscm	n	nd	27.1	nd	29.7	nd	12.6			
45	Arsenic		µg/dscm	n	nd	4.9	nd	5.0	nd	15.4			
46	Barium		µg/dscm	n		54.8		48.1	nd	52.8			
47	Beryllium		µg/dscm	n	nd	0.1	nd	0.1	nd	0.2			
48	Cadmium		µg/dscm	n		0.4	nd	0.5	nd	0.6			
49	Chromium		µg/dscm	n	nd	3.6		4.9	nd	3.0			
50	Lead		µg/dscm	n	nd	6.9	nd	7.8	nd	16.5			
51	Mercury		µg/dscm	n	nd	0.4	nd	0.9	nd	0.7			
52	Nickel		µg/dscm	n		8290.0		9560.0		15100.0			
53	Selenium		µg/dscm	n	nd	4.0		7.4	nd	6.3			
54	Silver		µg/dscm	n	nd	0.5	nd	0.6	nd	1.7			
55	Thallium		µg/dscm	n	nd	12.1	nd	12.5	nd	19.0			
56													
57	Sampling Train	Metals	E1										
58	Stack Gas Flowrate		dscfm			16265		15703		15296		15755	
59	O2		%			13.8		13.4		13.8		13.7	
60	Moisture		%			10.2		8.18		12.85		10.4	
61	Temperature		°F			346		342		340		343	
62													
63	Sampling Train	Organics	E2										
64	Stack Gas Flowrate		dscfm			15679		15411		14981		15357	
65	O2		%			12.1		14.4		13.7		13.4	
66	CO2		%			2.7		4		4		3	
67	Moisture		%			10.3		11		9		10	
68	Temperature		°F			343		343		348		345	
69													
70	Chromium (Hex)	E1	µg/dscm	y		2.8		2.8		3.5		3.0	
71	Antimony	E1	µg/dscm	y	nd	105.4	nd	109.4	nd	49.0		87.9	

	B	C	D	E	F	G	H	I	J	K	L	M	N
72	Arsenic	E1	µg/dscm	y	nd	18.9	nd	18.5	nd	59.9		32.5	high nds?
73	Barium	E1	µg/dscm	y		106.6		88.6		205.3		133.5	
74	Beryllium	E1	µg/dscm	y	nd	0.2	nd	0.4	nd	0.7		0.4	
75	Cadmium	E1	µg/dscm	y		0.8	nd	1.9	nd	2.5		1.7	
76	Chromium	E1	µg/dscm	y	nd	14.2		9.0	nd	11.7		11.6	
77	Lead	E1	µg/dscm	y	nd	26.9	nd	28.8	nd	64.2		40.0	high nds?
78	Mercury	E1	µg/dscm	y	nd	1.6	nd	3.2	nd	2.8		2.5	
79	Nickel	E1	µg/dscm	y		16119.4		17610.5		29361.1		21030.4	
80	Selenium	E1	µg/dscm	y	nd	15.4		13.5	nd	24.3		17.8	
81	Silver	E1	µg/dscm	y	nd	2.1	nd	2.0	nd	6.7		3.6	
82	Thallium	E1	µg/dscm	y	nd	47.1	nd	46.1	nd	73.9		55.7	
83	SVM	E1	µg/dscm	y		27.7		30.7		66.7		41.7	
84	LVM	E1	µg/dscm	y		33.3		27.9		72.3		44.5	

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
1	Feedstreams																						
2																							
3																							
4	813C1																						
5	Feedstream Number																						
6	Feed Class																						
7	Feed Class 2																						
8	Feedstream Description																						
9	Feed Rate																						
10	Estimated Firing Rate																						
11																							
12																							
13	Stack Gas Flowrate																						
14	Oxygen																						
15																							
16																							
17	813C2																						
18	Feedstream Number																						
19	Feed Class																						
20	Feed Class 2																						
21	Feedstream Description																						
22	Feed Rate																						
23	Ash																						
24	Chlorine																						
25	Antimony																						
26	Arsenic																						
27	Barium																						
28	Beryllium																						
29	Cadmium																						
30	Chromium																						
31	Lead																						
32	Mercury																						
33	Silver																						
34	Thallium																						
35																							
36	Stack Gas Flowrate																						
37	O2																						
38																							
39	Estimated Firing Rate																						
40																							
41	Feedrate MTEC Calculations																						
42	Ash																						
43	Chlorine																						
44	Antimony																						
45	Arsenic																						
46	Barium																						
47	Beryllium																						
48	Cadmium																						
49	Chromium																						
50	Lead																						
51	Mercury																						
52	Silver																						
53	Thallium																						
54																							
55	SVM																						
56	LVM																						
57																							
58																							
59																							
60																							

B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	
				R1	R1	R2	R3	R3	R3	Cond Avg	R1	R1	R2	R2	R3	R3	Cond Avg	F2	F2	F2	F2	Cond Avg	
				F1 Liq HW HW	F1 Liq HW HW	F1 Liq HW HW	F1 Liq HW HW	F1 Liq HW HW	F1 Liq HW HW	F1 Liq HW HW	F2 Total Total	F2 Total Total	F2 Total Total	F2 Total Total	F2 Total Total	F2 Total Total	F2 Total Total	F2 Total Total	F2 Total Total	F2 Total Total	F2 Total Total	F2 Total Total	
61	81	3C3																					
62																							
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	A	B	C	D	E	F
1	<b>Process Information</b>					
2						
3						
4		Units	Run 1	Run 2	Run 3	Avg
5	<b>813C1</b>					
6						
7	Comb Cham Temp	°F	1772	1771	1766	1770
8	Baghouse					
9	Pressure Drop	in H2O	16.9	15.1	14.4	15
10	Inlet Temp	F	409	407	409	408
11						
12	<b>813C2</b>					
13						
14	Comb Cham Temp	°F	2005	2015	1991	2004
15	Baghouse					
16	Pressure Drop	in H2O	17.8	15.8	16.2	17
17	Inlet Temp	F	405	408	407	407
18						
19	<b>813C3</b>					
20		(A metal runs)				
21	Comb Cham Temp	°F	1989	2012	2009	2003
22	Baghouse					
23	Pressure Drop	in H2O	16	16	14	15
24	Inlet Temp	F	416	410	405	410



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:																
4	Condition ID:																
5	Condition/Test Date:																
6																	
7																	
8																	
9																	
10	Stack Gas Conc (ng/dscm)																
11	2,3,7,8-TCDD	1	nd	0.119	0.1192	0.060	0.060	nd	0.045	0.0448	0.022	0.022	nd	0.030	0.0302	0.015	0.015
12	TCDD Other	0		0.868	0.434	0.434	0.434	nd	0.424	0.212	0.212	0.106	nd	0.190	0.0952	0.095	0.048
13	1,2,3,7,8-PCDD	0															
14	PCDD Other	0															
15	1,2,3,4,7,8-HxCDD	0.1		0.636	0.0636	0.636	0.636	nd	0.668	0.0668	0.334	0.033		0.163	0.0163	0.163	0.016
16	1,2,3,6,7,8-HxCDD	0.1		0.701	0.0701	0.701	0.701	nd	0.726	0.0726	0.363	0.036		0.202	0.0202	0.202	0.020
17	1,2,3,7,8,9-HxCDD	0.1		0.738	0.0738	0.738	0.738	nd	0.846	0.0846	0.423	0.042		0.230	0.023	0.230	0.023
18	HxCDD Other	0															
19	1,2,3,4,6,7,8-HpCDD	0.01		2.680	0.0268	2.680	2.680	0.027	1.460	0.0146	1.460	0.015		0.864	0.00864	0.864	0.009
20	HpCDD Other	0															
21	OCDD	0.001		1.880	0.00188	1.880	1.880	0.002	0.971	0.000971	0.971	0.001		0.650	0.00065	0.650	0.001
22	2,3,7,8-TCDF	0.1	nd	0.994	0.0994	0.497	0.497	0.050	0.301	0.0301	0.301	0.030		0.169	0.0169	0.169	0.017
23	TCDF Other	0															
24	1,2,3,7,8-PCDF	0.05		0.686	0.0343	0.686	0.686	0.034	0.724	0.0362	0.362	0.018	nd	0.381	0.01904	0.190	0.010
25	2,3,4,7,8-PCDF	0.5		1.152	0.576	1.152	1.152	0.576	1.320	0.66	0.660	0.330		0.308	0.154	0.308	0.154
26	PCDF Other	0															
27	1,2,3,4,7,8-HxCDF	0.1		1.480	0.148	1.480	1.480	0.148	1.440	0.144	0.720	0.072		0.351	0.0351	0.351	0.035
28	1,2,3,6,7,8-HxCDF	0.1		0.756	0.0756	0.756	0.756	0.076	0.782	0.0782	0.391	0.039		0.202	0.0202	0.202	0.020
29	2,3,4,6,7,8-HxCDF	0.1		0.676	0.0676	0.676	0.676	0.068	0.662	0.0662	0.331	0.033		0.181	0.0181	0.181	0.018
30	1,2,3,7,8,9-HxCDF	0.1	nd	0.188	0.01876	0.094	0.094	0.009	0.099	0.00986	0.049	0.005	nd	0.060	0.00604	0.030	0.003
31	HxCDF Other	0															
32	1,2,3,4,6,7,8-HpCDF	0.01		0.756	0.00756	0.756	0.756	0.008	0.000	0	0.000	0.000		0.000	0	0.000	0.000
33	1,2,3,4,7,8,9-HpCDF	0.01		0.216	0.00216	0.216	0.216	0.002	0.226	0.00226	0.113	0.001	nd	0.124	0.001238	0.062	0.001
34	HpCDF Other	0															
35	OCDF	0.001		0.225	0.000225	0.225	0.225	0.000	0.173	0.000173	0.173	0.000	nd	0.181	0.000181	0.091	0.000
36																	
37	Gas sample volume (dscm)				3.24		3.24	3.24		3.35		3.35			3.31		3.31
38	O2 (%)				12.10		12.10	12.10		14.40		14.40			14.40		14.40
39																	
40	PCDD/PCDF (ng in sample)				5.89		5.89	4.81		5.10		2.63			1.54		1.29
41	PCDD/PCDF (ng/dscm @ 7% O2)		36.9		2.86		2.86	2.33	97.0	3.23		1.66	32.7		0.99		0.83
42																	
43	TEQ Cond Avg																