

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase II ID No.	738
4	EPA ID No.	IND000807107
5	Facility Name	Reilly Industries, Inc.
6	Facility Location	
7	City	Indianapolis
8	State	IN
9	Unit ID Name/No.	Boiler 28K (**unit is now considered a sister unit to 737 (30K)**)
10	Other Sister Facilities	This unit is now considered a sister unit to 737 (30K)
11	Number of Sister Facilities	0
12	Combustor Class	Liquid-fired boiler
13	Combustor Type	Liquid-fired
14	Combustor Characteristics	Watertube boiler. Babcock and Wilcox type FM; max thermal input of 36.8 MMBtu/hr; max operating pressure of 250 psig, steam production rate of 28000 lb/hr
15	Capacity (MMBtu/hr)	36.8
16	Soot Blowing	Yes, 4 times/day, 5 minutes/event (run 3, cond 1)
17	APCS Detailed Acronym	None
18	APCS General Class	
19	APCS Characteristics	
20	Hazardous Wastes	Liq
21	Haz Waste Description	Pyridine and pyridine-derived organic chemical production waste
22	Supplemental Fuel	Natural gas
23		
24	Stack Characteristics	
25	Diameter (ft)	4.0
26	Height (ft)	43.0
27	Gas Velocity (ft/sec)	23.4
28	Gas Temperature (°F)	
29		
30	Permitting Status	Tier I metals except Cr+6 (Tier III)
31	HWC Burn Status (Date if Terminated)	

	B	C
1	Cond Description	
2		
3	738C1	
4		
5	Report Name/Date	Revised Certification of Compliance Test Report for Boilers 70K, 30K, and 28K, August 21, 1996
6	Report Prepare	Spectrum Compliance Resources, Inc.
7	Testing Firm	Spectrum Compliance Resources, Inc., METCO Environmental, B3 Systems, Inc
8	Testing Dates	June 18-19, 1996
9	Cond Dates	Jun-96
10	Cond Description	CoC, high feed rate
11	Content	PM, CO, Cr+6, HCl/Cl2
12		
13	738C2	
14		
15	Report Name/Date	Revised Certification of Compliance Test Report for Boilers 70K, 30K, and 28K, August 21, 1996
16	Report Prepare	Spectrum Compliance Resources, Inc.
17	Testing Firm	Spectrum Compliance Resources, Inc., METCO Environmental, B3 Systems, Inc
18	Testing Dates	June 19-20, 1996
19	Cond Dates	Jun-96
20	Cond Description	CoC, min comb chamb temp
21	Content	CO

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions											
2												
3												
4		Comments	Units	7% O2				soot blow				
5	738C1					R1	R2	R3		Cond Avg		
6												
7	PM	E1	gr/dscf	y		0.0471	0.0456	0.1951		0.072		
8	CO (MHRA)	E1	ppmv	y		34.29	11.22	10.77		18.8		
9	CO (RA)	E1	ppmv	y		14.71	12.66	10.45		12.6		
10	Chromium (Hex)		g/hr			0.1216	0.0894	0.4536		0.17		
11	HCl		g/hr			0.907	0.454	0.907		0.72		
12	Cl2		g/hr			0.454	1.361	0.454		0.83		
13												
14	Chromium (Hex)	E1	µg/dscm	y		8.0	5.9	29.9		10.9		
15												
16	HCl	E1	ppmv	y		0.04	0.02	0.04		0.03		
17	Cl2	E1	ppmv	y		0.02	0.06	0.02		0.04		
18	Total Chlorine	E1	ppmv	y		0.08	0.14	0.08		0.10		
19												
20	Sampling Train	PM, HCl/Cl2E1										
21	Stack Gas Flowrate		dscfm			8039	8034	8188		8087		
22	O2		%			5.4	5.4	5.7		5.5		
23	Moisture		%									
24	Temperature		°F			541	434	441		472		
25												
26												
27	738C2					R1	R2	R3		Cond Avg		
28												
29	CO (MHRA)	E1	ppmv	y		22.44	27.02	20.05		23.17		
30												
31	Sampling Train	CO E1										
32	Stack Gas Flowrate		dscfm									
33	O2		%			6.36	6.42	6.49		6.42		
34	Moisture		%									
35	Temperature		°F									

	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	738C1		R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2		
5																							
6	Feedstream Number		F1		F1		F1		F1		F2		F2		F2		F2		F3		F3		
7	Feed Class		Liq HW		Liq HW		Liq HW		Liq HW		NG		NG		NG		NG		Spike		Spike		
8	Feed Class 2		HW		HW		HW		HW		MF		MF		MF		MF		Spike		Spike		
9	Feedstream Description		Waste Fuel		Waste Fuel		Waste Fuel		Waste Fuel		City Gas		City Gas		City Gas		City Gas		Spike		Spike		
10	Feed Rate	lb/hr	2158		2170		2164		2164		383		374		332		363						
11	Density	g/ml	0.964		0.964		0.964		0.964														
12	Heat Content	Btu/lb	14794		14773		14746		14771		21214		21214		21214		21214						
13	Thermal Feedrate	MMBtu/hr	31.9		32.1		31.9		32.0		8.1		7.9		7.0		7.7						
14	MCB	lb/hr																					
15	Ash	g/hr	1027.8		1210.7		1266.3		1168.3									nd	1236.4	nd	1265.2		
16	Chlorine	g/hr	313.24		314.98		294.48		307.6	nd	0.18	nd	0.17	nd	0.15		0.17		320.62	nd	426.97		
17	Chromium (Hex)	g/hr																	0.2		0.2		
18	Antimony	g/hr	nd	0.2447	nd	0.2461	nd	0.2356	0.24	nd	0.0009	nd	0.0008	nd	0.0007		0.0008	nd	0.0043	nd	0.0043		
19	Arsenic	g/hr	nd	0.0685	nd	0.0787	nd	0.0687	0.07	nd	0.0006	nd	0.0005	nd	0.0005		0.001	nd	0.0068	nd	0.0072		
20	Barium	g/hr	nd	0.0979	nd	0.0984	nd	0.0982	0.10	nd	0.0325	nd	0.0317	nd	0.0281		0.031	nd	0.0018	nd	0.002		
21	Beryllium	g/hr	nd	0.0196	nd	0.0197	nd	0.0196	0.02	nd	0.0001	nd	0.0001	nd	0.0001		0.0001	nd	0.0085	nd	0.0008		
22	Cadmium	g/hr	nd	0.0489	nd	0.0492	nd	0.0491	0.05	nd	0.0005	nd	0.0004	nd	0.0004		0.00	nd	0.0037	nd	0.0014		
23	Chromium	g/hr		0.31324		0.29529		0.373	0.33	nd	0.00075	nd	0.00073	nd	0.00065		0.00071	nd	0.23185	nd	0.23938		
24	Lead	g/hr	nd	0.0685	nd	0.0689	nd	0.0687	0.07	nd	0.0002	nd	0.0002	nd	0.0001		0.0002	nd	0.0082	nd	0.0082		
25	Mercury	g/hr		0.0489		0.0295		0.0393	0.04	nd	0.0002	nd	0.0002	nd	0.0002		0.0002	nd	0.0009	nd	0.0008		
26	Silver	g/hr	nd	0.2643	nd	0.4626	nd	0.4712	0.40	nd	0.0005	nd	0.0004	nd	0.0004		0.0004	nd	0.0049	nd	0.0049		
27	Thallium	g/hr	nd	0.2477	nd	0.2461	nd	0.2356	0.24	nd	0.0001	nd	0.0001	nd	0.0001		0.0001	nd	0.0043	nd	0.0043		
28																							
29	Stack Gas Flowrate	dscfm	8039		8034		8188		8087		8039		8034		8188		8087		8039		8034		
30	O2	%	5.4		5.4		5.7		5.5		5.4		5.4		5.7		5.5		5.4		5.4		
31																							
32	Estimated Firing Rate	MMBtu/hr																					
33																							
34	<i>Feedrate MTEC Calculations</i>																						
35	Ash	mg/dscm	67.6		79.6		83.3		76.9								100		81.3	100	83.2		
36	Chlorine	ug/dscm	20594.0		20721.3		19381.0		20232.1	100	11.8	100	11.2	100	9.9		11.0		21079.2		28088.7		
37	Chromium (Hex)	ug/dscm																	13.1		13.2		
38	Antimony	ug/dscm	100	16.1	100	16.2	100	15.5	100	15.9	100	0.06	100	0.05	100	0.05	100	0.05	100	0.3	100	0.3	
39	Arsenic	ug/dscm	100	4.5	100	5.2	100	4.5	100	4.7	100	0.04	100	0.03	100	0.03	0	0.04	100	0.4	100	0.5	
40	Barium	ug/dscm	100	6.4	100	6.5	100	6.5	100	6.5	100	2.14	100	2.09	100	1.85	100	2.02	100	0.1	100	0.1	
41	Beryllium	ug/dscm	100	1.3	100	1.3	100	1.3	100	1.3	100	0.01	100	0.01	100	0.01	100	0.01	100	0.6	100	0.1	
42	Cadmium	ug/dscm	100	3.2	100	3.2	100	3.2	100	3.2	100	0.03	100	0.03	100	0.03	100	0.03	100	0.2	100	0.1	
43	Chromium	ug/dscm		20.6		19.4		24.5	0	21.5	100	0.05	100	0.05	100	0.04	100	0.05	100	15.2	100	15.7	
44	Lead	ug/dscm	100	4.5	100	4.5	100	4.5	100	4.5	100	0.01	100	0.01	100	0.01	100	0.01	100	0.5	100	0.5	
45	Mercury	ug/dscm		3.2		1.9		2.6	0	2.6	100	0.01	100	0.01	100	0.01	100	0.01	100	0.1	100	0.1	
46	Silver	ug/dscm	100	17.4	100	30.4	100	31.0	100	26.3	100	0.03	100	0.03	100	0.03	100	0.03	100	0.3	100	0.3	
47	Thallium	ug/dscm	100	16.3	100	16.2	100	15.5	100	16.0	100	0.01	100	0.01	100	0.01	100	0.01	100	0.3	100	0.3	
48																							
49	SVM	ug/dscm	100	7.72	100	7.77	100	7.75	100	7.7	100	0.05	100	0.04	100	0.03	100	0.04	100	0.78	85	0.63	
50	LVM	ug/dscm	22	26.4	25	25.9	19	30.4	22	27.5	59	0.1	62	0.1	60	0.1	60	0.09	100	16.2	100	16.3	
51																							
52																							
53	BIF Tier I Feedrate Limits																						
54																							
55	Antimony	g/hr		334																			
56	Arsenic	g/hr		2.56																			
57	Barium	g/hr		55577																			
58	Beryllium	g/hr		4.67																			

	B	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	Feedstreams												
2													
3													
4	738C1		R3		Cond Avg		R1		R2		R3		Cond Avg
5													
6	Feedstream Number		F3		F3		F4		F4		F4		F4
7	Feed Class		Spike		Spike		Total		Total		Total		Total
8	Feed Class 2		Spike		Spike		Total		Total		Total		Total
9	Feedstream Description		Spike		Spike		Total		Total		Total		Total
10	Feed Rate												
11	Density												
12	Heat Content												
13	Thermal Feedrate						40.1		40.0		39.0		39.7
14	MCB				3.3								
15	Ash	nd	1236.5		1246.0								
16	Chlorine		370.63		372.7								
17	Chromium (Hex)		0.2		0.2								
18	Antimony	nd	0.0045		0.004								
19	Arsenic	nd	0.0075		0.01								
20	Barium	nd	0.0018		0.002								
21	Beryllium	nd	0.0004		0.003								
22	Cadmium	nd	0.0022		0.002								
23	Chromium	nd	0.22376		0.23								
24	Lead	nd	0.0078		0.01								
25	Mercury	nd	0.0005		0.0007								
26	Silver	nd	0.0051		0.0050								
27	Thallium	nd	0.0043		0.0043								
28													
29	Stack Gas Flowrate		8188		8087								
30	O2		5.7		5.5								
31													
32	Estimated Firing Rate						39.8		39.8		39.8		39.8
33													
34	<i>Feedrate MTEC Calculation</i>												
35	Ash	100	81.4	100	82.0	55	148.9	51	162.9	49	164.7	52	158.8
36	Chlorine		24392.8	0	24520.2	0	41685.1	0	48821.2	0	43783.7	0	44763.3
37	Chromium (Hex)		13.2	0	13.2	0	13.1	0	13.2	0	13.2	0	13.2
38	Antimony	100	0.3	100	0.29	100	16.4	100	16.5	100	15.8	100	16.3
39	Arsenic	100	0.5	100	0.47	99	5.0	99	5.7	99	5.0	99	5.2
40	Barium	100	0.1	100	0.12	100	8.7	100	8.7	100	8.4	100	8.6
41	Beryllium	100	0.0	100	0.21	100	1.9	100	1.4	100	1.3	100	1.5
42	Cadmium	100	0.1	80.8	0.16	100	3.5	97	3.4	100	3.4	99	3.4
43	Chromium	100	14.7	100	15.24	43	35.9	45	35.2	38	39.3	42	36.8
44	Lead	100	0.5	100	0.53	100	5.1	100	5.1	100	5.0	100	5.1
45	Mercury	100	0.0	100	0.05	2	3.3	3	2.0	2	2.6	2	2.6
46	Silver	100	0.3	100	0.33	100	17.7	100	30.8	100	31.4	100	26.6
47	Thallium	100	0.3	100	0.28	100	16.6	100	16.5	100	15.8	100	16.3
48													
49	SVM	100	0.66	96	0.7	100	8.5	99	8.4	100	8.4	100	8.5
50	LVM	100	15.2	100	15.9	52	42.7	54	42.3	46	45.7	51	43.6
51													
52													
53	BIF Tier I Feedrate Limits												
54													
55	Antimony												
56	Arsenic												
57	Barium												
58	Beryllium												

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
59	Cadmium		g/hr		6.23																		
60	Chromium		g/hr		3.68																		
61	Lead		g/hr		100																		
62	Mercury		g/hr		334																		
63	Silver		g/hr		3335																		
64	Thallium		g/hr		556																		
65	Chlorine		g/hr		4850																		

	B	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
59	Cadmium												
60	Chromium												
61	Lead												
62	Mercury												
63	Silver												
64	Thallium												
65	Chlorine												

	A	B	C
1	Process Information		
2			
3			Cond Avg
4	738C1		
5			
6	Comb Temp	°F	1620
7	Steam Production Rate	lb/hr	30010
8			
9	738C2		
10			
11	Comb Temp	°F	1151.1
12	Steam Production Rate	lb/hr	6700