

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase I ID No.	3000
4	EPA ID No.	ARD006354161
5	Facility Name	Reynolds Metals Company
6	Facility Location	
7	City	Gum Springs
8	State	AR
9	Unit ID Name/No.	Reynolds Potliner thermal treatment process
10	Other Sister Facilities	None
11	Number of Sister Facilities	0
12	Combustor Class	Onsite incinerator
13	Combustor Type	Rotary kiln
14	Combustor Characteristics	2 rotary kilns with a common afterburner
15	Capacity (MMBtu/hr)	
16	Soot Blowing	
17	APCS Detailed Acronym	DS/FF/AB
18	APCS General Class	DS, FF, AB
19	APCS Characteristics	Dry scrubber, fabric filter, Afterburner. Afterburner is natural gas fired and operates at 1750 - 1800 °F with a residence time of 2 seconds.
20	Hazardous Wastes	Liq, solid
21	Haz Waste Description	Potliner mixture - having from spent aluminum potliner; landfill leachate
22	Supplemental Fuel	Natural gas
23		
24	Stack Characteristics	
25	Diameter (ft)	
26	Height (ft)	
27	Gas Velocity (ft/sec)	23.3
28	Gas Temperature (°F)	1100
29		
30	Permitting Status	Tier I for all metals except Tier III for arsenic, beryllium, and chromium (test 1), chlorine (test 2)
31	HWC Burn Status (Date if Terminated)	

	B	C
1	Condition Description	
2		
3	3000C1	
4		
5	Report Name/Date	Trial Burn Report, Oct 2000
6	Report Prepare	Focus
7	Testing Firm	Entropy
8	Testing Dates	November 4-6, 1998
9	Cond Dates	Nov-98
10	Condition Descr	TB, One kiln operating, max metals feed, Worst case for spiked metals (As, Be, Cr), max temp
11	Content	DRE, metals, D/F
12		
13	3000C2	
14		
15	Report Name/Date	Trial Burn Report, Oct 2000
16	Report Prepare	Focus
17	Testing Firm	Entropy
18	Testing Dates	November 9-11, 1998
19	Cond Dates	Nov-98
20	Condition Descr	TB, Two kilns operating, worst case for PM and HCl, min temp, no spiking
21	Content	PM, HCl/Cl ₂ , DRE, metals, D/F

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Stack Gas Emissions 1														
2															
3															
4	1	3000C1	Trial Burn				R1		R2		R3		Cond Avg		
5															
6		CO (RA)	E1	ppmv	y		0		0		0		0.0		
7		HC (RA)	E1	ppmv	y		0		0		0		0.0		
8															
9		POHC DRE	Cyanide												
10		POHC Feedrate		lb/hr			11.2		22		5.01				
11		Emission Rate	E2	lb/hr		nd	4.29E-04	nd	4.76E-04	nd	4.22E-04				
12		DRE	E2	%		>	99.9962	>	99.9978	>	99.9916				
13															
14		POHC DRE	Napthalene												
15		POHC Feedrate		lb/hr			9.97E+01		9.97E+01		9.98E+01				
16		Emission Rate	E2	lb/hr			6.21E-04		2.08E-03		1.80E-03				
17		DRE	E2	%			99.9994		99.9979		99.9982				
18															
19		Antimony		ug/dscm	n	nd	1.8	nd	1.3	nd	1.8				
20		Aluminum		ug/dscm	n		617.0		445.0	nd	275.0				
21		Arsenic		ug/dscm	n		0.5	nd	0.3	nd	0.4				
22		Barium		ug/dscm	n	nd	3.9	nd	3.2	nd	2.7				
23		Beryllium		ug/dscm	n		0.1		0.1	nd	0.1				
24		Cadmium		ug/dscm	n		0.6	nd	0.1	nd	0.1				
25		Copper		ug/dscm	n	nd	2.6	nd	1.2	nd	1.3				
26		Chromium		ug/dscm	n	nd	29.3	nd	16.7	nd	11.2				
27		Lead		ug/dscm	n		6.3		3.4		2.2				
28		Mercury		ug/dscm	n	nd	2.4	nd	2.0	nd	2.6				
29		Nickel		ug/dscm	n	nd	4.7	nd	2.4	nd	2.2				
30		Selenium		ug/dscm	n	nd	1.8	nd	1.4	nd	1.8				
31		Silver		ug/dscm	n		0.2	nd	0.1	nd	0.2				
32		Thallium		ug/dscm	n	nd	0.2	nd	0.2	nd	0.2				
33		Zinc		ug/dscm	n	nd	28.7	nd	5.8	nd	4.4				
34															
35		Sampling Train	Metals	E1											
36		Stack Gas Flowrate		dscfm			33588		42106		32635		36110.0		
37		O2		%			10.4		10.6		11.2		10.7		
38		Moisture		%			12.9		12.4		11.5		12.3		
39		Temperature		°F			1038		1046		1026		1037.0		
40															
41		Sampling Train	DRE	E2											
42		Stack Gas Flowrate		dscfm			37287		41602		37195		38694.7		
43		O2		%			10.5		10.8		11.1		10.8		
44		Moisture		%			12.3		11.7		11.3		11.8		
45		Temperature		°F			1042		1042		1028		1037.3		
46															
47		Antimony	E1	ug/dscm	y	nd	2.41	nd	1.74	nd	2.53		2.23		
48		Aluminum	E1	ug/dscm	y		822.67		610.78	nd	388.89		607.45		
49		Arsenic	E1	ug/dscm	y		0.67	nd	0.42	nd	0.53		0.54		
50		Barium	E1	ug/dscm	y	nd	5.16	nd	4.45	nd	3.76		4.46		
51		Beryllium	E1	ug/dscm	y		0.12		0.08	nd	0.11		0.10		
52		Cadmium	E1	ug/dscm	y		0.80	nd	0.08	nd	0.11		0.33		
53		Copper	E1	ug/dscm	y	nd	3.41	nd	1.58	nd	1.81		2.27		
54		Chromium	E1	ug/dscm	y	nd	39.07	nd	22.92	nd	15.84		25.94	high nd?	
55		Lead	E1	ug/dscm	y		8.45		4.65		3.17		5.42		
56		Mercury	E1	ug/dscm	y	nd	3.17	nd	2.79	nd	3.63		3.20		
57		Nickel	E1	ug/dscm	y	nd	6.32	nd	3.32	nd	3.14		4.26		
58		Selenium	E1	ug/dscm	y	nd	2.33	nd	1.88	nd	2.57		2.26		
59		Silver	E1	ug/dscm	y		0.23	nd	0.17	nd	0.21		0.20		
60		Thallium	E1	ug/dscm	y	nd	0.30	nd	0.25	nd	0.32		0.29		
61		Zinc	E1	ug/dscm	y	nd	38.27	nd	7.91	nd	6.21		17.46		
62		SVM	E1	ug/dscm	y		9.25		4.74		3.27		5.75		
63		LVM	E1	ug/dscm	y		39.86		23.42		16.48		26.59		
64															
65	2	3000C2	Trial Burn				R1		R2		R3		Cond Avg		
66															
67		PM	E1	gr/dscf	y		0.00022		0.001		0.00168		0.0010		
68		CO (RA)	E1	ppmv	y		0		0		0		0		
69		HC	E1	ppmv	y		0		0		0		0		
70															
71		HCl		lb/hr			0.0246		0.0364		0.0256				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
72		Cl2		lb/hr			0.0143		0.0376		0.00825				
73															
74		POHC DRE	Cyanide												
75		POHC Feedrate		lb/hr			15.7		37.3		32.5				
76		Emission Rate	E1	lb/hr		nd	7.49E-04	nd	7.59E-04	nd	6.49E-04				
77		DRE	E1	%		>	99.9952	>	99.998	>	99.998				
78															
79		Antimony		ug/dscm	n	nd	2.0	nd	2.0	nd	1.7				
80		Aluminum		ug/dscm	n		551.0		615.0	nd	451.0				
81		Arsenic		ug/dscm	n	nd	0.4	nd	0.4	nd	0.3				
82		Barium		ug/dscm	n	nd	4.3	nd	3.5	nd	2.7				
83		Beryllium		ug/dscm	n	nd	0.1	nd	0.1	nd	0.1				
84		Cadmium		ug/dscm	n	nd	0.1	nd	0.1		0.3				
85		Copper		ug/dscm	n	nd	0.9	nd	1.1	nd	1.1				
86		Chromium		ug/dscm	n		32.3		12.6		12.7				
87		Lead		ug/dscm	n		1.9		4.5		3.7				
88		Mercury		ug/dscm	n	nd	2.7	nd	2.8	nd	2.2				
89		Nickel		ug/dscm	n	nd	2.5	nd	4.7	nd	2.5				
90		Selenium		ug/dscm	n	nd	2.0	nd	2.0	nd	1.7				
91		Silver		ug/dscm	n	nd	0.1	nd	0.2	nd	0.1				
92		Thallium		ug/dscm	n	nd	0.2	nd	0.2	nd	0.2				
93		Zinc		ug/dscm	n	nd	4.8	nd	5.3	nd	16.9				
94															
95		Sampling Train	PM, HCl/CE1												
96		Stack Gas Flowrate		dscfm			52623		52198		54544		53121.7		
97		O2		%			9.8		9.2		9.4		9.5		
98		Moisture		%			16.1		14.9		14.6		15.2		
99		Temperature		°F			1204		1217		1226		1215.7		
100															
101		Sampling Train	Metals	E2											
102		Stack Gas Flowrate		dscfm			53025		51918		53445		52796.0		
103		O2		%			9.8		9.2		9.4		9.6		
104		Moisture		%			17.2		16		14.9		16.0		
105		Temperature		°F			1202		1210		1221		1211.0		
106															
107		HCl	E1	ppmv	y		0.10		0.15		0.10		0.12		
108		Cl2	E1	ppmv	y		0.03		0.08		0.02		0.04		
109		Total Chlorine	E1	ppmv	y		0.17		0.30		0.13		0.20		
110															
111		Antimony	E2	ug/dscm	y	nd	2.45	nd	2.37	nd	1.99	100	2.27		
112		Aluminum	E2	ug/dscm	y		688.75		729.66	nd	544.31		654.24		
113		Arsenic	E2	ug/dscm	y	nd	0.45	nd	0.46	nd	0.39	100	0.43		
114		Barium	E2	ug/dscm	y	nd	5.40	nd	4.18	nd	3.22	100	4.27		
115		Beryllium	E2	ug/dscm	y	nd	0.09	nd	0.09	nd	0.08	100	0.09		
116		Cadmium	E2	ug/dscm	y	nd	0.09	nd	0.09	nd	0.40	100	0.19		
117		Copper	E2	ug/dscm	y	nd	1.17	nd	1.26	nd	1.35	100	1.26		
118		Chromium	E2	ug/dscm	y		40.38		14.95		15.33		23.55		
119		Lead	E2	ug/dscm	y		2.39		5.39		4.43		4.07		
120		Mercury	E2	ug/dscm	y	nd	3.40	nd	3.30	nd	2.70	100	3.13		
121		Nickel	E2	ug/dscm	y	nd	3.18	nd	5.55	nd	2.97	100	3.90		
122		Selenium	E2	ug/dscm	y	nd	2.49	nd	2.38	nd	2.08	100	2.32		
123		Silver	E2	ug/dscm	y	nd	0.18	nd	0.18	nd	0.16	100	0.17		
124		Thallium	E2	ug/dscm	y	nd	0.27	nd	0.28	nd	0.24	100	0.26		
125		Zinc	E2	ug/dscm	y	nd	6.01	nd	6.29	nd	20.40	100	10.90		
126		SVM	E2	ug/dscm	y		2.48		5.48		4.83		4.26		
127		LVM	E2	ug/dscm	y		40.92		15.50		15.80		24.07		

1	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	Feedstream 1																							
2																								
3	3000C1	Trial burn			R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2	
4					F1		F1		F1		F1		F2		F2		F2		F2		F2		F2	
5	Feedstream Number				Solid HW		Solid HW		Solid HW		Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix	
6	Feed Class																							
7	Feed Class 2																							
8	Feedstream Description				Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix	
9	Feed Rate	lb/hr			60000		60000		60000		60000		60000		60000		60000		60000		60000		60000	
10	Ash	lb/hr			43800		43800		45600		44000.0		187		192		189		2500		2500		2500	
11	Chlorine	lb/hr	nd		2.4	nd	2.4	nd	2.4	nd	2.4	nd	0.1	nd	0.1	nd	0.26		0.15		0.15		0.15	
12	Fluoride	lb/hr			2160		1740		2580		2160.0		0.42		0.32		0.69							
13	Phosphorus	lb/hr			36		16.8		18		23.6		0.12		0.13		0.13							
14	Antimony	lb/hr	nd		0.18	nd	0.18	nd	0.18	nd	0.18	nd	0.05	nd	0.05	nd	0.05		0.05		0.05		0.05	
15	Arsenic	lb/hr	nd		1.2	nd	1.2	nd	1.2	nd	1.20	nd	0.05	nd	0.05	nd	0.05		0.05		0.05		0.05	
16	Barium	lb/hr			2.94		3.54		5.1		3.86		0.05		0.05		0.05		0.05		0.05		0.05	
17	Beryllium	lb/hr			0.13		0.2		0.31		0.2		0.02		0.02		0.02		0.02		0.02		0.02	
18	Cadmium	lb/hr	nd		0.02	nd	0.02	nd	0.02	nd	0.02	nd	0.02	nd	0.02	nd	0.02		0.02		0.02		0.02	
19	Chromium	lb/hr			0.72		0.47		0.66		0.6		0.01		0.01		0.01		0.01		0.01		0.01	
20	Lead	lb/hr	nd		0.24	nd	0.24	nd	0.24	nd	0.24	nd	0.01		0.01		0.01		0.01		0.01		0.01	
21	Mercury	lb/hr	nd		0.01	nd	0.01	nd	0.01	nd	0.01	nd	0.01	nd	0.01	nd	0.01		0.01		0.01		0.01	
22	Nickel	lb/hr			0.6		0.51		0.41		0.50		0.01		0.01		0.01		0.01		0.01		0.01	
23	Silver	lb/hr	nd		0.04	nd	0.04	nd	0.04	nd	0.04	nd	0.07	nd	0.07	nd	0.07		0.07		0.07		0.07	
24	Selenium	lb/hr	nd		0.42	nd	0.42	nd	0.42	nd	0.42	nd	0.05	nd	0.05	nd	0.05		0.05		0.05		0.05	
25	Thallium	lb/hr	nd		1.2	nd	1.2	nd	1.2	nd	1.25	nd	0.05	nd	0.05	nd	0.05		0.05		0.05		0.05	
26	Stack Gas Flowrate	dsdcm			33588		42106		32635		36110		33588		42106		32635		36110		36110		36110	
27	Oxygen	%			10.4		10.6		11.2		10.7		10.4		10.6		11.2		10.7		10.7		10.7	
28	Estimated Firing Rate	MMBtu/hr																						
29																								
30																								
31																								
32	Feedrate MTEC Calculations																							
33	Ash	mg/dscm			460501		374406		533705		456204		1966		1641		2212		1940		462467		376047	
34	Chlorine	ug/dscm	100		25233	100	20515	100	28090	100	24613	100	1051	100	855	100	3043	100	1650	100	26284	100	21370	100
35	Fluoride	ug/dscm			227096240		14873669		30196473		90722127		4416		2735		8076		5076		227100656		14876405	
36	Phosphorus	ug/dscm			378494		149608		210673		244258		1262		1111		1522		1298		379755		144719	
37	Antimony	ug/dscm	100		1892	100	1539	100	2107	100	1846	100	526	100	427	100	585	100	513	100	2418	100	1966	100
38	Arsenic	ug/dscm	100		12616	100	10258	100	14045	100	12306	100	526	100	427	100	585	100	513	100	13142	100	10685	100
39	Barium	ug/dscm			30910		30260		59691		40287		0		0		0		0		30910		30260	
40	Beryllium	ug/dscm			1367		1710		3628		2235		0		0		0		0		1367		1710	
41	Cadmium	ug/dscm	100		210	100	171	100	234	100	205	100	0	100	0	100	0	100	0	100	210	100	171	100
42	Chromium	ug/dscm			7570		4018		7725		6437		0		0		0		0		7570		4018	
43	Lead	ug/dscm	100		2523	100	2052	100	2809	100	2461	100	210	100	171	100	234	100	205	100	2734	100	2223	100
44	Mercury	ug/dscm	100		105	100	85	100	117	100	103	100	0	100	0	100	0	100	0	100	105	100	85	100
45	Nickel	ug/dscm			6308		4360		4799		5155	100	105	100	85	100	117	100	103	2	6413	2	4445	2
46	Silver	ug/dscm	100		421	100	342	100	468	100	410	100	0	100	0	100	0	100	0	100	421	100	342	100
47	Selenium	ug/dscm	100		4416	100	3590	100	4916	100	4307	100	736	100	598	100	819	100	718	100	5152	100	4189	100
48	Thallium	ug/dscm	100		12616	100	10258	100	14045	100	12306	100	526	100	427	100	585	100	513	100	13142	100	10685	100
49	SVM	ug/dscm	100		2734	100	2223	100	3043	100	2666	100	210	100	171	100	234	100	205	100	2944	100	2393	100
50	LVM	ug/dscm	59		21553	64	15985	55	25398	59	20979	100	526	100	427	100	585	100	513	60	22079	65	16412	56
51																								
52	3000C2	Trial burn			R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2	
53					F1		F1		F1		F1		F2		F2		F2		F2		F2		F2	
54	Feedstream Number				Solid HW		Solid HW		Solid HW		Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix	
55	Feed Class																							
56	Feed Class 2																							
57	Feedstream Description				Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix		Potliner mix	
58	Feed Rate	lb/hr			120,000.0		120,000.0		120,000.0		120,000.0		120,000.0		120,000.0		120,000.0		120,000.0		120,000.0		120,000.0	

Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR
1																		
2																		
3	R3	Cond Avg		R1	R2	R3	Cond Avg	R3	Cond Avg	R1	R2	R3	Cond Avg					
4				F3	F3	F3	F3	F3	F3	F4	F4	F4	F4	F4	F4	F4	F4	F4
5				Spike	Spike	Spike	Spike	Spike	Spike	Total	Total	Total	Total	Total	Total	Total	Total	Total
6				Spike	Spike	Spike	Spike	Spike	Spike	Total	Total	Total	Total	Total	Total	Total	Total	Total
7	HW	HW		Spike	Spike	Spike	Spike	Spike	Spike	Total	Total	Total	Total	Total	Total	Total	Total	Total
8																		
9																		
10				1.5	1.5	1.5	1.5	1.5	1.5	43988.5	43988.5	45790.5	43993.5	45790.5	44191.5			
11										2.5	2.5	2.7	2.5	2.7	2.6			
12																		
13																		
14										0.2	0.2	0.2	0.2	0.2	0.2			
15				1	1	1	1	1	1	2.3	2.3	2.3	2.3	2.3	2.3			
16										2.9	3.5	5.1	3.5	5.1	3.9			
17				0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.8	0.7	0.8	0.7			
18										0.0	0.0	0.0	0.0	0.0	0.0			
19				1.04	1.04	1.02	1.02	1.02	1.02	1.8	1.5	1.7	1.5	1.7	1.6			
20										0.3	0.3	0.3	0.3	0.3	0.3			
21										0.0	0.0	0.0	0.0	0.0	0.0			
22										0.6	0.5	0.4	0.5	0.4	0.5			
23										0.0	0.0	0.0	0.0	0.0	0.1			
24										0.5	0.5	0.5	0.5	0.5	0.5			
25										1.3	1.3	1.3	1.3	1.3	1.3			
26																		
27				33588	42106	32635	36110	32635	36110	33588	42106	32635	42106	32635	36110			
28				10.4	10.6	11.2	10.7	11.2	10.7	10.4	10.6	11.2	10.6	11.2	10.7			
29																		
30										113.0	139.0	101.5	139.0	101.5	118.1			
31																		
32																		
33	535917	458144		16	13	17	15	17	15	462483	376060	535935	462483	535935	458159			
34	31133 100	26262								26284 100	21370 100	31133 100	21370 100	31133 100	26262			
35	30204549	90727203								227100656	14876405	30204549	14876405	30204549	90727203			
36	212195	245556								379755	144719	212195	144719	212195	245556			
37	2692 100	2359								2418 100	1966 100	2692 100	1966 100	2692 100	2359			
38	14630 100	12819								23656 56	19233 56	26334 56	19233 56	26334 56	23074			
39	59691	40287		10514	8548	11704	10255 56	11704	10255 56	30910	30260	59691	30260	59691	40287			
40	3628	2235		5257	4274	5852	5128	5852	5128	6624	5984	40287	5984	9480	7363			
41	234 100	205								210 100	171 100	234 100	171 100	234 100	205			
42	7725	6437		10934	8890	11938	10587	11938	10587	18504	12908	17025	12908	19663	17025			
43	3043 100	2666								2734 100	2223 100	3043 100	2223 100	3043 100	2666			
44	117 100	103								105 100	85 100	117 100	85 100	117 100	103			
45	4916 2	5258								6413 2	4445 2	4916 1	4445 2	4916 1	5258			
46	468 100	410								421 100	342 100	468 100	342 100	468 100	410			
47	5735 100	5025								5152 100	4189 100	5735 100	4189 100	5735 100	5025			
48	14630 100	12819								13142 100	10685 100	14630 100	10685 100	14630 100	12819			
49	3277 100	2871								2944 100	2393 100	3277 100	2393 100	3277 100	2871			
50	25983 60	21491		21448	17438	23642	20843 30	23642	20843 30	43527 32	33850 29	49625 30	33850 29	49625 30	42334			
51																		
52	R3	Cond Avg		R1	R2	R3	Cond Avg	R3	Cond Avg	R1	R2	R3	Cond Avg					
53				F3	F3	F3	F3	F3	F3	F4	F4	F4	F4	F4	F4	F4	F4	F4
54				Spike	Spike	Spike	Spike	Spike	Spike	Total	Total	Total	Total	Total	Total	Total	Total	Total
55				Spike	Spike	Spike	Spike	Spike	Spike	Total	Total	Total	Total	Total	Total	Total	Total	Total
56	HW	HW		Spike	Spike	Spike	Spike	Spike	Spike	Total	Total	Total	Total	Total	Total	Total	Total	Total
57																		
58																		

B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
59	Ash	lb/hr	nd	87600	87600	87600	96000	96000	96000	90400.0	90400.0	307	307	313	306	308.7							
60	Chlorine	lb/hr	nd	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	0.19	0.19	0.2	0.2	0.2							
61	Fluoride	lb/hr	3600	3600	5160	3720	3720	3720	3720	4160.0	4160.0	1.39	1.39	2.07	1.99	1.8							
62	Phosphorus	lb/hr	32.4	32.4	27.6	26.4	26.4	26.4	26.4	30.0	30.0	0.2	0.2	0.26	0.21	0.2							
63	Antimony	lb/hr	nd	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.1	0.1	0.1	0.1	0.10							
64	Arsenic	lb/hr	nd	2.4	2.4	2.4	2.4	2.4	2.4	2.40	2.40	0.1	0.1	0.1	0.1	0.1							
65	Barium	lb/hr	9.12	9.12	7.44	9	9	9	9	8.5	8.5	nd	nd	0.01	0.01	0.01							
66	Beryllium	lb/hr	0.3	0.3	0.31	0.48	0.48	0.48	0.48	0.36	0.36	0	0	0	0	0							
67	Cadmium	lb/hr	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.05	0.05	0	0	0	0	0							
68	Chromium	lb/hr	1.56	1.56	1.32	1.32	1.32	1.32	1.32	1.4	1.4	0	0	0	0	0							
69	Lead	lb/hr	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.05	0.05	0.05	0.05	0.05							
70	Mercury	lb/hr	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01							
71	Nickel	lb/hr	1.32	1.32	0.95	1.15	1.15	1.15	1.15	1.10	1.10	0.1	0.1	0.15	0.15	0.15							
72	Silver	lb/hr	0.08	0.08	0.08	0.19	0.19	0.19	0.19	0.1	0.1	0	0	0	0	0							
73	Selenium	lb/hr	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.14	0.14	0.15	0.15	0.15							
74	Thallium	lb/hr	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	0.1	0.1	0.1	0.1	0.1							
75																							
76	Stack Gas Flowrate	dscfm	53025	53025	51918	53445	53445	53445	53445	52796	52796	53025	53025	51918	53445	52796							
77	Oxygen	%	9.8	9.8	9.2	9.4	9.4	9.4	9.4	9.6	9.6	9.8	9.8	9.2	9.4	9.6							
78																							
79	Estimated Firing Rate	MMBtu/hr																					
80																							
81	Feedrate MTEC Calculations																						
82	Ash	mg/dscm	552143	552143	535242	57963	57963	57963	57963	381783	381783	1935	1935	1912	1848	1898							
83	Chlorine	ug/dscm	30254	30254	29328	28982	28982	28982	28982	29521	29521	1198	1198	1222	1208	1209							
84	Fluoride	ug/dscm	22690810	22690810	31527965	22460741	22460741	22460741	22460741	25559839	25559839	8761	8761	12648	12015	11141							
85	Phosphorus	ug/dscm	204217	204217	168638	1599399	1599399	1599399	1599399	177418	177418	1261	1261	1589	1268	1372							
86	Antimony	ug/dscm	2269	2269	2200	2174	2174	2174	2174	2214	2214	630	630	611	604	615							
87	Arsenic	ug/dscm	15127	15127	14664	14491	14491	14491	14491	14761	14761	630	630	611	604	615							
88	Barium	ug/dscm	57483	57483	45459	54341	54341	54341	54341	52428	52428	0	0	61	60	40							
89	Beryllium	ug/dscm	1891	1891	1894	2898	2898	2898	2898	2228	2228	0	0	0	0	0							
90	Cadmium	ug/dscm	315	315	306	362	362	362	362	328	328	0	0	0	0	0							
91	Chromium	ug/dscm	9833	9833	8065	7970	7970	7970	7970	8623	8623	0	0	0	0	0							
92	Lead	ug/dscm	3025	3025	2933	2898	2898	2898	2898	2952	2952	315	315	306	302	308							
93	Mercury	ug/dscm	63	63	61	60	60	60	60	62	62	0	0	0	0	0							
94	Nickel	ug/dscm	8320	8320	5605	6944	6944	6944	6944	7023	7023	63	63	122	121	102							
95	Silver	ug/dscm	504	504	489	1147	1147	1147	1147	713	713	0	0	0	0	0							
96	Selenium	ug/dscm	5295	5295	5132	5072	5072	5072	5072	5166	5166	882	882	917	906	902							
97	Thallium	ug/dscm	15127	15127	14664	14491	14491	14491	14491	14761	14761	630	630	611	604	615							
98	SVM	ug/dscm	3341	3341	3238	3260	3260	3260	3260	3280	3280	315	315	306	302	308							
99	LVM	ug/dscm	26851	26851	24624	25359	25359	25359	25359	25611	25611	630	630	611	604	615							

Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR
59												87907.00		87913.00		9906.00		90708.7
60												4.99		5.00		5.00		5.0
61												3601.39		5162.07		3721.99		4161.8
62												32.60		27.86		26.61		30.2
63												0.46		0.46		0.46		0.5
64												2.50		2.50		2.50		2.5
65												9.12		7.45		9.01		8.5
66												0.30		0.31		0.48		0.4
67												0.05		0.05		0.06		0.1
68												1.56		1.32		1.32		1.4
69												0.53		0.53		0.53		0.5
70												0.01		0.01		0.01		0.0
71												1.33		0.97		1.17		1.1
72												0.08		0.08		0.19		0.1
73												0.98		0.99		0.99		1.0
74												2.50		2.50		2.50		2.5
75												53025		51918		53445		52796
76												9.8		9.2		9.4		9.6
77																		
78																		
79																		191.1
80																		
81																		
82	59811	383681										554078		537155		59811		383681
83	30189 100	30731									100	31452 100		30550 100		30189 100		30731
84	22472756	25570980										22699571		31540613		22472756		25570980
85	160667	178790										205478		170227		160667		178790
86	2777 100	2829									100	2899 100		2811 100		2777 100		2829
87	15095 100	15376									100	15758 100		15275 100		15095 100		15376
88	54401	52468										57483		45520		54401		52468
89	2898	2228										1891		1894		2898		2228
90	362 100	328									100	315 100		306 100		362 100		328
91	7970	8623										9833		8065		7970		8623
92	3200 100	3260									100	3341 100		3238 100		3200 100		3260
93	60 100	62									100	63 100		61 100		60 100		62
94	7064 1	7125									1	8383 2		5927 2		7064 1		7125
95	1147 100	713									100	504 100		489 100		1147 100		713
96	5977 100	6068									100	6177 100		6049 100		5977 100		6068
97	15095 100	15376									100	15758 100		15275 100		15095 100		15376
98	3562 100	3587									100	3656 100		3544 100		3562 100		3587
99	25963 59	26226									57	27481 61		25235 58		25963 59		26226

	B	C	D	E	F
1	Process Information				
2					
3	3000C1	Trial burn	Run 1	Run 2	Run 3
4					
5	Kiln Hot End Temp	°F	1336	1301	1357
6	Afterburner Temp	°F	1750	1750	1750
7	Baghouse Pressure Drop	in. w.c.	4.3	2.5	3.4
8	Baghouse Inlet Temp	°F	230	344	345
9					
10		Operator considers this data suspect			
11	3000C2	Trial burn	Run 1	Run 2	Run 3
12					
13	Kiln (1) Hot End Temp	°F	1081	1059	1146
14	Kiln (2) Hot End Temp	°F	1100	1142	1149
15	Kiln (1) Cold End Temp	°F	374	368	369
16	Kiln (2) Cold End Temp	°F	400	400	410
17	Afterburner Temp	°F	1750	1750	1750
18	Baghouse Pressure Drop	in. w.c.	2.9	2.7	2.8
19	Baghouse Inlet Temp	°F	372	363	374
20					
		Operator considers this data suspect			

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	
																		PCDD/PCDF
1	PCDD/PCDF																	
2	N																	
3	Facility Name and ID:	Reynolds Metals, Gum Springs, AR																
4	Condition ID:	3000C1																
5	Condition/Test Date:	TB, Nov. 1998																
6																		
7		I-TEF																
8		Wght Fact																
9																		
10		Detected in sample volume (ng)																
11	2,3,7,8-TCDD	1	nd	0.01	0.010	0.005	0.005	nd	0.009	0.009	0.005	0.005	nd	0.005	0.005	0.003	0.003	
12	1,2,3,7,8-PCDD	0.5		0.03	0.015	0.030	0.015	0.015	0.05	0.025	0.050	0.025	0.025	0.02	0.010	0.020	0.010	
13	1,2,3,4,7,8-HxCDD	0.1		0.03	0.003	0.030	0.003	0.003	0.1	0.010	0.100	0.010	0.010	0.05	0.005	0.050	0.005	
14	1,2,3,6,7,8-HxCDD	0.1		0.05	0.005	0.050	0.005	0.005	0.16	0.016	0.160	0.016	0.016	0.07	0.007	0.070	0.007	
15	1,2,3,7,8,9-HxCDD	0.1		0.06	0.006	0.060	0.006	0.006	0.24	0.024	0.240	0.024	0.024	0.11	0.011	0.110	0.011	
16	1,2,3,4,6,7,8-HpCDD	0.01		0.46	0.005	0.460	0.005	0.005	3.2	0.032	3.200	0.032	0.032	1.5	0.015	1.500	0.015	
17	OCDD	0.001		1.32	0.001	1.320	0.001	0.001	12.3	0.012	12.300	0.012	0.012	5.1	0.005	5.100	0.005	
18	2,3,7,8-TCDF	0.1		0.05	0.005	0.050	0.005	0.005	0.04	0.004	0.040	0.004	0.004	0.02	0.002	0.020	0.002	
19	1,2,3,7,8-PCDF	0.05		0.18	0.009	0.180	0.009	0.009	0.08	0.004	0.080	0.004	0.004	0.03	0.002	0.030	0.002	
20	2,3,4,7,8-PCDF	0.5		0.12	0.060	0.120	0.060	0.060	0.15	0.075	0.150	0.075	0.075	0.06	0.030	0.060	0.030	
21	1,2,3,4,7,8-HxCDF	0.1		0.74	0.074	0.740	0.074	0.074	0.44	0.044	0.440	0.044	0.044	0.2	0.020	0.200	0.020	
22	1,2,3,6,7,8-HxCDF	0.1		0.26	0.026	0.260	0.026	0.026	0.22	0.022	0.220	0.022	0.022	0.1	0.010	0.100	0.010	
23	2,3,4,6,7,8-HxCDF	0.1		0.15	0.015	0.150	0.015	0.015	0.35	0.035	0.350	0.035	0.035	0.15	0.015	0.150	0.015	
24	1,2,3,7,8,9-HxCDF	0.1		0.04	0.004	0.040	0.004	0.004	0.02	0.002	0.020	0.002	0.002	0.01	0.001	0.010	0.001	
25	1,2,3,4,6,7,8-HpCDF	0.01		1.8	0.018	1.800	0.018	0.018	2	0.020	2.000	0.020	0.020	0.9	0.009	0.900	0.009	
26	1,2,3,4,7,8,9-HpCDF	0.01		0.69	0.007	0.690	0.007	0.007	0.36	0.004	0.360	0.004	0.004	0.18	0.002	0.180	0.002	
27	OCDF	0.001		7.3	0.007	7.300	0.007	0.007	2.3	0.002	2.300	0.002	0.002	1	0.001	1.000	0.001	
28	Total TCDD	0		0.09	0.000	0.090	0.000	0.000	0.06	0.000	0.060	0.000	0.000	0.02	0.000	0.020	0.000	
29	Total PCDD	0		0.16	0.000	0.160	0.000	0.000	0.33	0.000	0.330	0.000	0.000	0.14	0.000	0.140	0.000	
30	Total HxCDD	0		0.4	0.000	0.400	0.000	0.000	1.5	0.000	1.500	0.000	0.000	0.68	0.000	0.680	0.000	
31	Total HpCDD	0		0.77	0.000	0.770	0.000	0.000	5.5	0.000	5.500	0.000	0.000	2.4	0.000	2.400	0.000	
32	Total TCDF	0		0.8	0.000	0.800	0.000	0.000	0.89	0.000	0.890	0.000	0.000	0.32	0.000	0.320	0.000	
33	Total PCDF	0		1.1	0.000	1.100	0.000	0.000	1.4	0.000	1.400	0.000	0.000	0.48	0.000	0.480	0.000	
34	Total HxCDF	0		1.9	0.000	1.900	0.000	0.000	1.9	0.000	1.900	0.000	0.000	0.81	0.000	0.810	0.000	
35	Total HpCDF	0		3.2	0.000	3.200	0.000	0.000	3.3	0.000	3.300	0.000	0.000	1.5	0.000	1.500	0.000	
36																		
37	Gas sample volume (dsf)			130.82	130.82	130.82	130.82	130.82	141.54	141.54	141.54	141.54	141.54	145.96	145.96	145.96	145.96	
38	O2 (%)			10.50	10.50	10.50	10.50	10.50	10.9	10.9	10.9	10.9	10.9	11.00	11.00	11.00	11.00	
39																		
40	PCDD/PCDF (ng in sample)			0.27	0.27	0.27	0.27	0.27	0.340	0.340	0.340	0.340	0.340	0.15	0.15	0.15	0.15	
41	PCDD/PCDF (ng/dscm @ 7% O2)	3.7		0.097	0.097	0.097	0.097	0.095	0.118	0.118	0.118	0.118	0.116	0.051	0.051	0.051	0.050	
42																		
43	TEQ Cond Avg	0.09																
44	Total Cond Avg	6.85																

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	
																		Run 1
1	PCDD/PCDF			Total Full ND	TEQ Full ND	Total 1/2 ND	TEQ 1/2 ND	Total Full ND	TEQ Full ND	Total 1/2 ND	TEQ 1/2 ND	Total Full ND	TEQ Full ND	Total 1/2 ND	TEQ 1/2 ND	Total Full ND	TEQ Full ND	
2	N																	
3	Facility Name and ID:	Reynolds Metals, Gum Springs, AR																
4	Condition ID:	3000C2																
5	Condition/Test Date:	TB, Nov. 1998																
6																		
7		I-TEF																
8		Wght Fact																
9																		
10		Detected in sample volume (ng)																
11		2,3,7,8-TCDD	1	nd	0.010	0.005	0.005 nd	0.007	0.007	0.004	0.004 nd	0.01	0.010	0.005	0.010	0.005	0.005	
12		1,2,3,7,8-PCDD	0.5		0.060	0.060	0.030 nd	0.006	0.003	0.003	0.002 nd	0.02	0.010	0.010	0.010	0.005	0.005	
13		1,2,3,4,7,8-HxCDD	0.1		0.050	0.050	0.005	0.03	0.003	0.030	0.003 nd	0.02	0.002	0.002	0.010	0.001	0.001	
14		1,2,3,6,7,8-HxCDD	0.1		0.080	0.080	0.008	0.06	0.006	0.060	0.006	0.04	0.004	0.004	0.040	0.004	0.004	
15		1,2,3,7,8,9-HxCDD	0.1		0.130	0.130	0.013	0.07	0.007	0.070	0.007	0.06	0.006	0.006	0.060	0.006	0.006	
16		1,2,3,4,6,7,8-HpCDD	0.01		0.630	0.630	0.006	0.72	0.007	0.720	0.007	0.64	0.006	0.006	0.640	0.006	0.006	
17		OCDD	0.001		1.400	1.400	0.001	2.5	0.003	2.500	0.003	1.7	0.002	0.002	1.700	0.002	0.002	
18		2,3,7,8-TCDF	0.1		0.050	0.050	0.005 nd	0.01	0.001	0.005	0.001 nd	0.01	0.001	0.001	0.005	0.001	0.001	
19		1,2,3,7,8-PCDF	0.05		0.130	0.130	0.007	0.03	0.002	0.030	0.002 nd	0.01	0.001	0.001	0.005	0.000	0.000	
20		2,3,4,7,8-PCDF	0.5		0.190	0.190	0.095	0.03	0.015	0.030	0.015	0.04	0.020	0.020	0.040	0.020	0.020	
21		1,2,3,4,7,8-HxCDF	0.1		0.540	0.540	0.054	0.22	0.022	0.220	0.022	0.13	0.013	0.013	0.130	0.013	0.013	
22		1,2,3,6,7,8-HxCDF	0.1		0.320	0.320	0.032	0.1	0.010	0.100	0.010	0.07	0.007	0.007	0.070	0.007	0.007	
23		2,3,4,6,7,8-HxCDF	0.1		0.310	0.310	0.031	0.11	0.011	0.110	0.011	0.08	0.008	0.008	0.080	0.008	0.008	
24		1,2,3,7,8,9-HxCDF	0.1		0.030	0.030	0.003	0.01	0.001	0.010	0.001 nd	0.02	0.002	0.002	0.010	0.001	0.001	
25		1,2,3,4,6,7,8-HpCDF	0.01		1.200	1.200	0.012	0.66	0.007	0.660	0.007	0.45	0.005	0.005	0.450	0.005	0.005	
26		1,2,3,4,7,8,9-HpCDF	0.01		0.200	0.200	0.002	0.18	0.002	0.180	0.002	0.08	0.001	0.001	0.080	0.001	0.001	
27		OCDF	0.001		0.760	0.760	0.001	0.98	0.001	0.980	0.001	0.44	0.000	0.000	0.440	0.000	0.000	
28		Total TCDD	0		0.090	0.090	0.000	0.03	0.000	0.030	0.000 nd	0.01	0.000	0.000	0.005	0.000	0.000	
29		Total PCDD	0		0.200	0.200	0.000	0.06	0.000	0.003	0.000 nd	0.02	0.000	0.000	0.010	0.000	0.000	
30		Total HxCDD	0		0.810	0.810	0.000	0.43	0.000	0.430	0.000	0.38	0.000	0.000	0.380	0.000	0.000	
31		Total HpCDD	0		1.200	1.200	0.000	1.3	0.000	1.300	0.000	1.1	0.000	0.000	1.100	0.000	0.000	
32		Total TCDF	0		0.970	0.970	0.000	0.05	0.000	0.050	0.000 nd	0.01	0.000	0.000	0.005	0.000	0.000	
33		Total PCDF	0		1.900	1.900	0.000	0.21	0.000	0.210	0.000	0.04	0.000	0.000	0.040	0.000	0.000	
34		Total HxCDF	0		2.300	2.300	0.000	0.68	0.000	0.680	0.000	0.44	0.000	0.000	0.440	0.000	0.000	
35		Total HpCDF	0		1.900	1.900	0.000	1.1	0.000	1.100	0.000	0.65	0.000	0.000	0.650	0.000	0.000	
36																		
37		Gas sample volume (dscf)			131.50	131.50	131.50	130.45	130.45	130.45	130.45	137.67	137.67	137.67	137.67	137.67	137.67	
38		O2 (%)			9.10	9.10	9.10	9.1	9.1	9.1	9.1	9.20	9.20	9.20	9.20	9.20	9.20	
39																		
40		PCDD/PCDF (ng in sample)			0.31	11.5	0.31	0.107	0.107	7.3	0.101	0.10	0.10	0.10	4.8	0.08	0.08	
41		PCDD/PCDF (ng/dscm @ 7% O2)		3.2	0.100	3.65	0.098	0.034	0.034	2.32	0.032	0.030	0.030	1.45	0.026	0.026		
42																		
43		TEQ Cond Avg		0.05														
44		Total Cond Avg		2.47														