

	B	C
1	Source Description	
2		
3	Phase I ID No.	805
4	EPA ID No.	MOD050226075
5	Facility Name	American Cyanamid
6	Facility Location	
7	City	Hannibal
8	State	MO
9	Unit ID Name/No.	TRANE/BRULE Unit D
10	Other Sister Facilities	None
11	Number of Sister Facilities	0
12	Combustor Class	Onsite incinerator
13	Combustor Type	Fixed hearth controlled air, liquid injection
14	Combustor Characteristics	Brule multi chamber unit, Trane liquid injection, to common APCS
15	Capacity (MMBtu/hr)	
16	Soot Blowing	
17	APCS Detailed Acronym	QT/QS/VS/ES/PBS
18	APCS General Class	WQ, HEWS, LEWS
19	APCS Characteristics	Quench, separator, venturi, entrainment separator, packed bed scrubber
20	Hazardous Wastes	Liq, solid
21	Haz Waste Description	organic and aqueous liquid wastes
22	Supplemental Fuel	Natural gas
23		
24	Stack Characteristics	
25	Diameter (ft)	3.5
26	Height (ft)	75.0
27	Gas Velocity (ft/sec)	12.9
28	Gas Temperature (°F)	189.3
29		
30	Permitting Status	
31	HWC Burn Status (Date if Terminated)	

	B	C
1	Condition Description	
2		
3	805C1	
4		
5	Report Name/Date	Test Report for Trial Burns on the Thimet/ Counter Incinerators at the American Cyanamid Facility in Hannibal, Missouri, Prepared by MRI, Project No. 9353-L(02), August 9, 1989
6	Report Prepare	MRI
7	Testing Firm	MRI
8	Cond Descr	Trial burn, ORGANICS SPIKED INTO SOLID/LIQUID WASTE
9	Testing Dates	May 5-11, 1989
10	Cond Dates	Aug-89
11		
12	805C2	
13		
14	Report Name/Date	Retest Trial Burn on the Thimet/Counter (Trane/Brule) Incinerators at the American Cyanamid Facility in Hannibal, Missouri, MRI Project No. 9353-L-03, September 20, 1989
15	Report Prepare	MRI
16	Testing Firm	MRI
17	Cond Descr	Trial burn retest, ORGANICS SPIKED INTO SOLID/LIQUID WASTE
18	Testing Dates	August 4-5, 1989
19	Cond Dates	Sep-89
20		
21	805C3	
22		
23	Report Name/Date	Dioxin/Furan Emission Test Results for Incinerators C, B, and D, MRI Project No. 4435, August 13, 1996
24	Report Prepare	MRI
25	Testing Firm	MRI
26	Cond Descr	DIOXIN/FURAN EMISSIONS TEST - AQUEOUS/ORGANIC WASTE
27	Testing Dates	March 28-29, 1996
28	Cond Dates	Aug-96

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions 2											
2												
3												
4	805C1					R1		R2		R3		Cond Avg
5												
6	PM	E1	gr/dscf	y		0.0566		0.0577		0.0489		0.0544
7	CO (RA)	E1	ppmv	y		373.0		536.1		118.9		342.7
8	HC (RA)	E1	ppmv	y		13.8		3.1		4.4		7.1
9	HCl	E1	ppmv	y		8.3		11.4		10.2		9.96
10	Total Chlorine	E1	ppmv	y		8.3		11.4		10.2		10.0
11												
12	Sampling Train	PM/HCl	E1									
13	Stack Gas Flowrate		dscfm			10233.0		10013.0		11341.0		
14	O2		%			5.8		5.2		5.1		
15	Moisture		%			58.4		60.1		57.5		
16	Temperature		°F			185.0		187.0		185.0		
17												
18	Formic acid	E1	%			99.9346		99.984		99.9801		
19	Tetrachloroethylene	E1	%			99.99998		99.99999		99.998		
20												
21	805C2					R1		R2		R3		Cond Avg
22												
23	CO (RA)	E1	ppmv	y		399.7		312.8		274.4		329.0
24												
25	Sampling Train	VOC	E1									
26	Stack Gas Flowrate		dscfm			9530.0		10447.0		10386.0		
27	O2		%			5.4		3.4		4.4		
28	Moisture		%			64.5		60.5		60.9		
29	Temperature		°F			203.0		187.0		188.0		
30												
31	Chlorobenzene	E1	%			99.99935		99.99984		99.99986		
32												
33												
34	805C3					R1		R2		R3		Cond Avg
35												
36	CO (RA)	E1	ppmv	y		166.0		136.0		144.0		148.7
37	HC (RA)	E1	ppmv	y		2.0		1.4		1.4		1.6
38												
39	Sampling Train	D/F	E1									
40	Stack Gas Flowrate		dscfm			9408.0		7100.0		6699.0		
41	O2		%			5.0		5.2		4.8		
42	Moisture		%			60.3		62.0		61.3		
43	Temperature		°F			189.0		190.0		189.0		

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	Feedstream 2																					
2																						
3																						
4	805C1																					
5	Feedstream Number																					
6	Feed Class																					
7	Feed Class 2																					
8	Feedstream Description																					
9	Feed Rate																					
10	Heating value																					
11	Ash																					
12	Chlorine																					
13	Stack Gas Flowrate																					
14	Oxygen																					
15	Thermal Feedrate																					
16	Estimated Firing Rate																					
17																						
18																						
19																						
20	Feedrate MTEC Calculations																					
21	Ash																					
22	Chlorine																					
23																						
24																						
25																						
26																						
27																						
28	805C2																					
29	Feedstream Number																					
30	Feed Class																					
31	Feed Class 2																					
32	Feedstream Description																					
33	Feed Rate																					
34	Heating value																					
35	Ash																					
36	Chlorine																					
37	Stack Gas Flowrate																					
38	Oxygen																					
39	Thermal Feedrate																					
40	Estimated Firing Rate																					
41																						
42																						
43																						
44	Feedrate MTEC Calculations																					
45	Chlorine																					

	B	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV
1	Feedstream 2																									
2																										
3																										
4	805C1	R1	R2	R3	F4	F4	F5	R1	R2	R2	F5	R3	R1	R1	R2	R2	R3	R3	R1	R1	R2	R2	R3	R3		
5	Feedstream Number																									Cond Avg
6	Feed Class	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	F6
7	Feed Class 2																									Total
8	Feedstream Descriptio	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Total
9	Feed Rate	198	198	198	198	198	198	198	198	198	198	198	198	198	198	198	198	198	198	198	198	198	198	198	198	Total
10	Heating value	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Total
11	Ash	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Total
12	Chlorine																									Total
13																										Total
14																										Total
15	Stack Gas Flowrate	10233	10013	11341	11341	11341	10233	10233	10013	10013	10233	11341	11341	10233	10013	10013	11341	11341	10233	10013	10013	10013	11341	11341	10233	10529
16	Oxygen	5.8	5.2	5.1	5.1	5.1	5.8	5.8	5.2	5.2	5.8	5.1	5.1	5.8	5.2	5.2	5.1	5.1	5.8	5.2	5.2	5.2	5.1	5.1	5.8	5.37
17	Thermal Feedrate																									52.3
18	Estimated Firing Rate																									
19																										
20	Feedrate MTEC Calct																									
21	Ash																									54094
22	Chlorine																									2818259
23																										
24																										
25																										
26																										
27	805C2	R1	R2	R3	F4	F4	F5	R1	R2	R2	F5	R3	R1	R1	R2	R2	R3	R3	R1	R1	R2	R2	R3	R3		
28	Feedstream Number																									Cond Avg
29	Feed Class	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	Solid HW	F6
30	Feed Class 2																									Total
31	Feedstream Descriptio	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Solid organics	Total
32	Feed Rate	12629	12629	12629	12629	12629	12629	12629	12629	12629	12629	12629	12629	12629	12629	12629	12629	12629	12629	12629	12629	12629	12629	12629	12629	Total
33	Heating value	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Total
34	Ash	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Total
35	Chlorine																									Total
36																										Total
37																										Total
38	Stack Gas Flowrate	9530	10447	10386	10386	10386	9530	9530	10447	10447	9530	10386	10386	9530	10447	10447	10386	10386	9530	10447	10447	10447	10386	10386	9530	10121
39	Oxygen	5.4	3.4	4.4	4.4	4.4	5.4	5.4	3.4	3.4	5.4	4.4	4.4	5.4	3.4	3.4	4.4	4.4	5.4	3.4	3.4	3.4	4.4	4.4	5.4	4.40
40	Thermal Feedrate																									53.3
41	Estimated Firing Rate																									
42																										
43																										
44	Feedrate MTEC Calct																									4466594
45	Chlorine																									

	C	D	E	F	G
1	Process Information 2				
2					
3	805C1		R1	R2	R3
4					
5	Fixed Hearth SCC Temperature	F		1515	1508
6	Fixed Hearth Temperature	F	1439	1419	1380
7	Trane Temperature	F	1600	1637	1599
8	WS Pressure Drop	in H2O	58.5	57.3	58
9	WS pH		5.94	5.74	6.05
10					
11	805C2		R1	R2	R3
12					
13	Fixed Hearth SCC Temperature	F	1560	1562	1562
14	Fixed Hearth Temperature	F	1423	1392	1424
15	Trane Temperature	F	1597	1603	1608
16	WS Pressure Drop	in H2O	53	58	58
17	WS pH		7.6	7.4	7.4

	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	805C3													
2		I-TEF			Run 1	TEQ		Total	Run 2	TEQ		Total	Run 3	TEQ
3	ng/dscm	Wt Fact		Total	1/2 ND	1/2 ND		Full ND	1/2 ND	1/2 ND		Full ND	1/2 ND	1/2 ND
4				Full ND										
5	4D 2378	1	2	0.001	0.001	0.001	1	0.002	0.001	0.001	2	0.005	0.005	0.005
6	4D Other	0		0.000	0.000	0.000		0.004	0.004	0.000		0.001	0.001	0.000
7	4D Total	0	1	0.001	0.001	0.000		0.006	0.006	0.000		0.005	0.005	0.000
8	5D 12378	0.5	1	0.002	0.001	0.001	1	0.003	0.001	0.001	1	0.004	0.002	0.001
9	5D Other	0		0.001	0.001	0.000		0.000	0.000	0.000		0.000	0.000	0.000
10	5D Total	0		0.004	0.004	0.000	1	0.003	0.001	0.000	1	0.004	0.002	0.000
11	6D 123478	0.1	1	0.002	0.001	0.000	1	0.004	0.002	0.000	1	0.005	0.003	0.000
12	6D 123678	0.1	2	0.003	0.003	0.000	1	0.003	0.002	0.000	1	0.004	0.002	0.000
13	6D 123789	0.1	1	0.002	0.001	0.000	1	0.004	0.002	0.000	2	0.006	0.006	0.001
14	6D Other	0		0.001	0.001	0.000		-0.003	-0.003	0.000		0.008	0.008	0.000
15	6D Total	0		0.008	0.008	0.000		0.008	0.008	0.000		0.024	0.024	0.000
16	7D 1234678	0.01	2	0.012	0.012	0.000		0.019	0.019	0.000		0.017	0.017	0.000
17	7D Other	0		0.000	0.000	0.000		0.017	0.017	0.000		0.018	0.018	0.000
18	7D Total	0		0.012	0.012	0.000		0.035	0.035	0.000		0.034	0.034	0.000
19	8D	0.001		0.034	0.034	0.000		0.073	0.073	0.000		0.044	0.044	0.000
20	4F 2378	0.1	1	0.004	0.002	0.000	1	0.003	0.001	0.000	2	0.004	0.004	0.000
21	4F Other	0		0.012	0.012	0.000		0.013	0.013	0.000		0.012	0.012	0.000
22	4F Total	0		0.015	0.015	0.000		0.016	0.016	0.000		0.015	0.015	0.000
23	5F 12378	0.05		0.003	0.003	0.000	1	0.003	0.001	0.000	2	0.006	0.006	0.000
24	5F 23478	0.5		0.005	0.005	0.002	1	0.003	0.001	0.001		0.008	0.008	0.004
25	5F Other	0		0.028	0.028	0.000		0.021	0.021	0.000		0.018	0.018	0.000
26	5F Total	0		0.036	0.036	0.000		0.027	0.027	0.000		0.032	0.032	0.000
27	6F 123478	0.1	2	0.006	0.006	0.001		0.007	0.007	0.001		0.012	0.012	0.001
28	6F 123678	0.1		0.006	0.006	0.001	2	0.008	0.008	0.001		0.013	0.013	0.001
29	6F 123789	0.1	1	0.002	0.001	0.000	1	0.003	0.001	0.000	1	0.003	0.002	0.000
30	6F 234678	0.1		0.006	0.006	0.001		0.007	0.007	0.001		0.012	0.012	0.001
31	6F Other	0		0.016	0.016	0.000		0.019	0.019	0.000		0.051	0.051	0.000
32	6F Total	0		0.036	0.036	0.000		0.043	0.043	0.000		0.091	0.091	0.000
33	7F 1234678	0.01		0.026	0.026	0.000		0.026	0.026	0.000		0.045	0.045	0.000
34	7F 1234789	0.01		0.005	0.005	0.000	2	0.004	0.004	0.000		0.009	0.009	0.000
35	7F Other	0		0.008	0.008	0.000		0.016	0.016	0.000		0.018	0.018	0.000
36	7F Total	0		0.039	0.039	0.000		0.046	0.046	0.000		0.073	0.073	0.000
37	8F	0.001		0.016	0.016	0.000		0.020	0.020	0.000		0.032	0.032	0.000
38	Total PCDD/PCDF		23.6	0.202	0.202	0.202	70.4	0.276	0.275	0.275	18.5	0.355	0.353	0.016
39	TEQ			0.009	0.009	0.008		0.009	0.006	0.006		0.018	0.018	0.016