

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase II ID No.	720
4	EPA ID No.	TXD078432457
5	Facility Name	Celanese Ltd., Chemical Group Clear Lake Plant
6	Facility Location	
7	City	Pasadena
8	State	TX
9	Unit ID Name/No.	MH5A
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	
15	Capacity (MMBtu/hr)	
16	Soot Blowing	
17	APCS Detailed Acronym	None
18	APCS General Class	
19	APCS Characteristics	NA
20	Hazardous Wastes	Liq
21	Haz Waste Description	Waste methanol
22	Supplemental Fuel	Natural gas
23		
24	Stack Characteristics	
25	Diameter (ft)	4.2
26	Height (ft)	133
27	Gas Velocity (ft/sec)	32.4
28	Gas Temperature (°F)	
29		
30	Permitting Status	Low risk waste exemption facility
	HWC Burn Status (Date if	
31	Terminated)	

	B	C
1	Cond Description	
2		
3	720C10	
4		
5	Report Name/Date	Risk Burn Report, 1999
6	Report Prepar	AirSource Technologies, Inc.
7	Testing Firm	AirSource Technologies, Inc.
8	Testing Dates	December 9-17, 1998
9	Cond Dates	Dec-98
10	Cond Description	Risk burn
11	Content	Total organics, CO, volatile organics, PCDD/PCDFs, SV organics, aldehydes/ketones, PM size distribution; metals, chlorine in feedstreams

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions											
2												
3		Comments	Units	7% O2								
4												
5												
6	720C10	(risk burn)				R1		R2		R3		Cond Avg
7												
8	CO (RA)	E1	ppmv	y								1.66
9	PM	E1	gr/dscf	y								0.00010
10		from PSD sampling train										
11												
12	Sampling Train	Total organicsE1										
13	Stack Gas Flowrate		dscfm									14376
14	O2		%									9
15	Moisture		%									13.2
16	Temperature		°F									497.0
17												
18												
19	Particle Size Distribution in microns					25 wt% > 13 um						
20						75 wt% < 0.5 um						

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Feedstreams																
2																	
3																	
4	720C10				R1		R2		R3		Cond Avg		Cond Avg		Cond Avg		Cond Avg
5																	
6	Feedstream Number				F1		F1		F1		F1		F2		F3		F4
7	Feed Class				Liq HW		Liq HW		Liq HW		Liq HW		Process Gas		NG		Total
8	Feed Class 2				HW		HW		HW		HW		Non-HW		MF		Total
9	Feedstream Description				Liq.waste methanol		Liq.waste methanol		Liq.waste methanol		Liq.waste methanol		Vent gas		Nat gas		Total
10	Feed Rate	g/hr			442695		450435		440009		444379		183254				
11	Feed Rate	scfh													29739		
12	Heating Value	Btu/lb			5230.2		5140.4		5262.2		5210.4						
13	Specific Gravity	g/ml			0.9035		0.903		0.8825		0.896						
14	Chlorine	ppmw	nd		100	nd	100	nd	100		100						
15	Mercury	ppbw	nd		10	nd	10	nd	10		10						
16	Lead	ppbw	nd		30	nd	30	nd	30		30		1.147842				
17	Cadmium	ppbw	nd		2.5	nd	2.5	nd	2.5		3						
18	Arsenic	ppbw	nd		50	nd	50	nd	50		50						
19	Beryllium	ppbw	nd		1	nd	1	nd	1		1						
20	Chromium	ppbw			160		130		110		133						
21	Nickel	ppbw			62		65		92		73						
22	Antimony	ppbw	nd		50	nd	50	nd	50		50						
23	Selenium	ppbw	nd		50	nd	50	nd	50		50						
24																	
25	Stack Gas Flowrate	dscfm			14376		14376		14376		14376		14376				14376
26	O2	%			8.9		8.9		8.9		9		8.9				8.9
27																	
28	Thermal Feedrate	MMBtu/hr			5.1		5.1		5.1		5.1		3.3		27.0		35.4
29	Estimated Firing Rate	MMBtu/hr															55.2
30																	
31	<i>Feedrate MTEC Calculations</i>																
32	Chlorine	µg/dscm	100		2098.3	100	2135.0	100	2085.6	100	2106.3					100	2106.3
33	Mercury	µg/dscm	100		0.2	100	0.2	100	0.2	100	0.21					100	0.21
34	Lead	µg/dscm	100		0.6	100	0.6	100	0.6	100	0.63		0.010			98	0.64
35	Cadmium	µg/dscm	100		0.1	100	0.1	100	0.1	100	0.05					100	0.05
36	Arsenic	µg/dscm	100		1.0	100	1.1	100	1.0	100	1.05					100	1.05
37	Beryllium	µg/dscm	100		0.0	100	0.0	100	0.0	100	0.02					100	0.02
38	Chromium	µg/dscm			3.4		2.8		2.3	0	2.81					0	2.81
39	Nickel	µg/dscm	100		1.3	100	1.4	100	1.9	100	1.54					100	1.54
40	Antimony	µg/dscm	100		1.0	100	1.1	100	1.0	100	1.05					100	1.05
41	Selenium	µg/dscm	100		1.0	100	1.1	100	1.0	100	1.05					100	1.05
42																	
43	SVM	µg/dscm	100		0.7	100	0.7	100	0.7	100	0.68					100	0.68
44	LVM	µg/dscm	24		4.4	28	3.9	32	3.4	28	3.88					28	3.88

	A	B	C
1	Process Information		
2			
3		Units	Cond Avg
4			
5	720C10		
6			
7	Firebox Temp	°F	1529
8	Combustion Air Flowrate	Mscfh	596
9	Steam Production Rate	Mlb/hr	114

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:	Celanese Clear Lake, Pasadena, TX, MH5A Unit															
4	Condition ID:	720C10															
5	Condition/Test Date:	15-Dec-98															
6																	
7		I-TEF	Run 201				Run 202				Run 203						
8		Wght Fact	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	Total	TEQ	
9			Full ND	Full ND	1/2 ND	1/2 ND	Full ND	Full ND	1/2 ND	1/2 ND	Full ND	Full ND	1/2 ND	1/2 ND	Full ND	Full ND	1/2 ND
10	Detected in sample volume (ng)																
11	2,3,7,8-TCDD	1	nd	0.0300	0.0300	0.0150	0.0150	nd	0.02	0.0200	0.0100	0.0100	0.002	0.0020	0.0020	0.0020	0.0020
12	TCDD Total	0	nd	0.0300	0.0000	0.0150	0.0000	nd	0.02	0.0000	0.0100	0.0000	0.004	0.0000	0.0040	0.0000	0.0000
13	1,2,3,7,8-PCDD	0.5	nd	0.0300	0.0150	0.0150	0.0075	nd	0.02	0.0100	0.0100	0.0050	nd	0.002	0.0010	0.0010	0.0005
14	PCDD Total	0	nd	0.0300	0.0000	0.0150	0.0000	nd	0.02	0.0000	0.0100	0.0000	0.006	0.0000	0.0060	0.0000	0.0000
15	1,2,3,4,7,8-HxCDD	0.1	nd	0.0300	0.0030	0.0150	0.0015	nd	0.02	0.0020	0.0100	0.0010	nd	0.002	0.0002	0.0010	0.0001
16	1,2,3,6,7,8-HxCDD	0.1	nd	0.0300	0.0030	0.0150	0.0015	nd	0.02	0.0020	0.0100	0.0010	nd	0.002	0.0002	0.0010	0.0001
17	1,2,3,7,8,9-HxCDD	0.1	nd	0.0300	0.0030	0.0150	0.0015	nd	0.02	0.0020	0.0100	0.0010	nd	0.002	0.0002	0.0010	0.0001
18	HxCDD Total	0	nd	0.0300	0.0000	0.0150	0.0000	nd	0.02	0.0000	0.0100	0.0000	0.02	0.0000	0.0200	0.0000	0.0000
19	1,2,3,4,6,7,8-HpCDD	0.01	nd	0.0500	0.0005	0.0250	0.0003	nd	0.04	0.0004	0.0200	0.0002	0.008	0.0001	0.0080	0.0001	0.0001
20	HpCDD Total	0	nd	0.0500	0.0000	0.0250	0.0000	nd	0.04	0.0000	0.0200	0.0000	0.007	0.0000	0.0070	0.0000	0.0000
21	OCDD	0.001	nd	0.1000	0.0001	0.0500	0.0001	nd	0.08	0.0001	0.0400	0.0000	0.02	0.0000	0.0200	0.0000	0.0000
22	2,3,7,8-TCDF	0.1	nd	0.0100	0.0010	0.0050	0.0005	nd	0.008	0.0008	0.0040	0.0004	0.01	0.0010	0.0100	0.0010	0.0010
23	TCDF Total	0	nd	0.0100	0.0000	0.0050	0.0000	nd	0.008	0.0000	0.0040	0.0000	0.05	0.0000	0.0500	0.0000	0.0000
24	1,2,3,7,8-PCDF	0.05	nd	0.0200	0.0010	0.0100	0.0005	nd	0.01	0.0005	0.0050	0.0003	0.003	0.0002	0.0030	0.0002	0.0002
25	2,3,4,7,8-PCDF	0.5	nd	0.0200	0.0100	0.0100	0.0050	nd	0.01	0.0050	0.0050	0.0025	0.004	0.0020	0.0040	0.0020	0.0020
26	PCDF Total	0	nd	0.0200	0.0000	0.0100	0.0000	nd	0.01	0.0000	0.0050	0.0000	0.02	0.0000	0.0200	0.0000	0.0000
27	1,2,3,4,7,8-HxCDF	0.1	nd	0.0200	0.0020	0.0100	0.0010	nd	0.01	0.0010	0.0050	0.0005	0.005	0.0005	0.0050	0.0005	0.0005
28	1,2,3,6,7,8-HxCDF	0.1	nd	0.0200	0.0020	0.0100	0.0010	nd	0.01	0.0010	0.0050	0.0005	0.003	0.0003	0.0030	0.0003	0.0003
29	2,3,4,6,7,8-HxCDF	0.1	nd	0.0200	0.0020	0.0100	0.0010	nd	0.01	0.0010	0.0050	0.0005	0.004	0.0004	0.0040	0.0004	0.0004
30	1,2,3,7,8,9-HxCDF	0.1	nd	0.0200	0.0020	0.0100	0.0010	nd	0.01	0.0010	0.0050	0.0005	0.001	0.0001	0.0010	0.0001	0.0001
31	HxCDF Total	0	nd	0.0200	0.0000	0.0100	0.0000	nd	0.01	0.0000	0.0050	0.0000	0.02	0.0000	0.0200	0.0000	0.0000
32	1,2,3,4,6,7,8-HpCDF	0.01	nd	0.0300	0.0003	0.0150	0.0002	nd	0.02	0.0002	0.0100	0.0001	0.007	0.0001	0.0070	0.0001	0.0001
33	1,2,3,4,7,8,9-HpCDF	0.01	nd	0.0400	0.0004	0.0200	0.0002	nd	0.02	0.0002	0.0100	0.0001	0.002	0.0000	0.0020	0.0000	0.0000
34	HpCDF Total	0	nd	0.0300	0.0000	0.0150	0.0000	nd	0.02	0.0000	0.0100	0.0000	0.01	0.0000	0.0100	0.0000	0.0000
35	OCDF	0.001	nd	0.0800	0.0001	0.0400	0.0000	nd	0.07	0.0001	0.0350	0.0000	0.01	0.0000	0.0100	0.0000	0.0000
36																	
37	Gas sample volume (dscf)			125.49	125.49	125.49	125.49		132.17	132.17	132.17	132.17	129.95	129.95	129.95	129.95	129.95
38	O2 (%)			10.00	10.00	10.00	10.00		10.23	10.23	10.23	10.23	10.02	10.02	10.02	10.02	10.02
39																	
40	PCDD/PCDF (ng in sample)			0.4000	0.0754	0.2000	0.0377		0.2980	0.0473	0.1490	0.0236	0.1670	0.0083	0.1670	0.0075	0.0075
41	PCDD/PCDF (ng/dscm @ 7% O2)		100.0	0.1433	0.0270	0.0716	0.0135	100.0	0.1036	0.0164	0.0518	0.0082	19.4	0.0579	0.0029	0.0579	0.0026
42																	
43	TEQ Cond Avg		0.0081														
44	Total Cond Avg		0.0604														