

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase I ID No.	473
4	EPA ID No.	TXD0007349327
5	Facility Name	Texas Industries Inc.
6	Facility Location	
7	City	Midlothian
8	State	TX
9	Unit ID Name/No.	Kiln No. 2
10	Other Sister Facilities	None
11	Number of Sister Facilities	0
12	Combustor Class	Cement Kiln (CK)
13	Combustor Type	Wet, long
14	Combustor Characteristics	
15	Capacity (MMBtu/hr)	
16	Soot Blowing	
17	APCS Detailed Acronym	ESP
18	APCS General Class	ESP
19	APCS Characteristics	
20	Hazardous Wastes	Liq
21	Haz Waste Description	
22	Supplemental Fuel	Coal
23		
24	Stack Characteristics	
25	Diameter (ft)	8.0
26	Height (ft)	200.0
27	Gas Velocity (ft/sec)	16.1
28	Gas Temperature (°F)	367.2
29		
30	Permitting Status	
31	HWC Burn Status (Date if Terminated)	

	B	C
1	Condition Description	
2		
3	473C1	
4		
5	Report Name/Date	Re-certification of Compliance, Texas Industries Resource Recovery Program, May 8, 1995, prepared by Entellect
6	Report Prepare	Entellect
7	Testing Firm	Entellect
8	Cond Descr	CoC, METALS MODE, HIGH COMB TEMP
9	Testing Dates	June 3, 1995
10	Cond Dates	Jun-95
11		
12	473C2	
13		
14	Report Name/Date	Re-certification of Compliance, Texas Industries Resource Recovery Program, May 8, 1995, prepared by Entellect
15	Report Prepare	Entellect
16	Testing Firm	Entellect
17	Cond Descr	CoC, PARTICULATE MODE, HIGH COMB TEMP
18	Testing Dates	March 8, 1995
19	Cond Dates	Mar-95
20		
21	473C3	
22		
23	Report Name/Date	Re-certification of Compliance, Texas Industries Resource Recovery Program, May 8, 1995, prepared by Entellect
24	Report Prepare	Entellect
25	Testing Firm	Entellect
26	Cond Descr	CoC, COLD MODE, LOW COMB TEMP
27	Testing Dates	March 10, 1995
28	Cond Dates	Mar-95

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Stack Gas Emissions 1												
2													
3													
4	473C1					R1		R2		R3		Cond Avg	
5													
6	Antimony	E1	ug/dscm	y		64.18		59.19		60.67		61.34	
7	Arsenic	E1	ug/dscm	y	nd	8.36	nd	8.20	nd	8.14	100	8.23	high As ND?
8	Barium	E1	ug/dscm	y		1107.37		1250.58		1208.92		1188.96	
9	Beryllium	E1	ug/dscm	y	nd	0.07	nd	0.07	nd	0.05		0.06	
10	Cadmium	E1	ug/dscm	y		3.34		6.60		3.75		4.57	
11	Chromium	E1	ug/dscm	y		1.48		1.83		2.05		1.79	
12	Lead	E1	ug/dscm	y	nd	5.66		56.49		9.79		23.98	
13	Mercury	E1	ug/dscm	y		14.23		13.57		22.62		16.81	
14	Thallium	E1	ug/dscm	y	nd	17.95		13.47		13.98		15.14	
15	SVM	E1	ug/dscm	y		9.00		63.10		13.55		28.55	
16	LVM	E1	ug/dscm	y		9.92		10.10		10.23		10.08	
17													
18	Sampling Train	Metals	E1										
19	Stack Gas Flowrate		dscfm			52833		54737		55483			
20	O2		%			5.8		5.4		5.7			
21	Moisture		%			36.7		38.1		39.3			
22	Temperature		°F			363.2		368.8		364.2			
23													
24	473C2					R1		R2		R3		Cond Avg	
25													
26	PM	E1	gr/dscf	y		0.01157		0.00961		0.00849		0.00989	
27													
28	Sampling Train	Particulate	E1										
29	Stack Gas Flowrate		dscfm			61499.51		61453.02		61546			
30	O2		%			5.4		6.1		5.6			
31	Moisture		%			0		39.1		40.1			
32	Temperature		°F			0		366		368			
33													
34	473C3					R1		R2		R3		Cond Avg	
35													
36	HCl	E1	ppmv	y		24.14		19.32		29.17		24.21	
37	Cl2	E1	ppmv	y		0.44		0.22		1.09		0.58	
38	Total Chlorine	E1	ppmv	y		25.02		19.76		31.34		25.37	
39													
40	Sampling Train	Halogens	E1										
41	Stack Gas Flowrate		dscfm			53883		59911		58800			
42	O2		%			8.6		7.7		7.7			
43	Moisture		%			37.6		39.8		42.1			
44	Temperature		°F			316.9		337.3		342.5			

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
1	Feedstream 2																						
2																							
3	473C1				R1		R2		R3		R1		R2		R3		R1		R2		R3	Cond Avg	
4																							
5	Feedstream Number				F1		F1		F1		F2		F2		F2		F3		F3		F3	F3	
6	Feed Class				Liq HW		Liq HW		Liq HW		Raw material		Raw material		Raw material		Total		Total		Total	Total	
7	Feed Class 2				HW		HW		HW		RM		RM		RM		Total		Total		Total	Total	
8	Feedstream Description				Liquid waste		Liquid waste		Liquid waste		Raw material slurry		Raw material s		Raw material s		Total		Total		Total	Total	
9	Feedrate	lb/hr			14395		15638		17193														
10	Heating Value	Btu/lb			13181		13181		13181														
11	Thermal Feedrate	MMBtu/hr			189.7		206.1		226.6								189.7		206.1		226.6	207.5	
12	Antimony	lb/hr			3.102		3.370		3.705		0.227		0.243		0.234								
13	Arsenic	lb/hr			0.213		0.231		0.254		0.488		0.606		0.602								
14	Barium	lb/hr			26.653		28.955		30.779		7.600		6.020		9.642								
15	Beryllium	lb/hr			0.061		0.066		0.073		0.019		0.019		0.024								
16	Cadmium	lb/hr			2.521		2.739		3.000		0.031		0.033		0.032								
17	Chromium	lb/hr			10.993		11.942		12.912		0.102		0.013		0.013								
18	Lead	lb/hr			25.175		27.349		29.043		18.298		14.473		33.029								
19	Mercury	lb/hr			0.087		0.094		0.106		0.007		0.004		0.008								
20	Thallium	lb/hr			1.218		1.323		1.455		2.957		3.330		3.804								
21																							
22	Gas flowrate				52833		54737		55483		52833		54737		55483		52833		54737		55483	54351	
23	Oxygen				5.8		5.4		5.7		5.8		5.4		5.7		5.8		5.4		5.7	5.6	
24																							
25	Estimated Firing Rate	MMBtu/hr																				265	
26																							
27	Antimony	ug/dscm			14459		14773		16338		1058		1067		1031		15517		15840		17369	16242	
28	Arsenic	ug/dscm			993		1015		1122		2275		2654		2657		3268		3669		3779	3572	
29	Barium	ug/dscm			124237		126930		135723		35426		26390		42516		159663		153321		178240	163741	
30	Beryllium	ug/dscm			284		291		321		87		81		105		371		372		426	390	
31	Cadmium	ug/dscm			11751		12005		13230		145		146		141		11896		12152		13371	12473	
32	Chromium	ug/dscm			51239		52350		56937		474		57		55		51712		52407		56992	53704	
33	Lead	ug/dscm			117346		119890		128066		85291		63444		145644		202637		183334		273710	219894	
34	Mercury	ug/dscm			403		412		467		35		18		35		438		430		502	457	
35	Thallium	ug/dscm			5676		5799		6414		13782		14596		16773		19458		20396		23187	21014	
36	SVM	ug/dscm			129096		131896		141296		85436		63590		145786		214532		195486		287081	232366	
37	LVM	ug/dscm			52516		53655		58380		2835		2793		2817		55352		56448		61197	57665	
38																							
39	473C3				R1		R2		R3		R1		R2		R3		R1		R2		R3	Cond Avg	
40																							
41	Feedstream Number				F1		F1		F1		F2		F2		F2		F3		F3		F3	F3	
42	Feed Class				Liq HW		Liq HW		Liq HW		Raw material		Raw material		Raw material		Total		Total		Total	Total	
43	Feed Class 2				HW		HW		HW		RM		RM		RM		Total		Total		Total	Total	
44	Feedstream				Liquid waste		Liquid waste		Liquid waste		Raw material slurry		Raw material s		Raw material s		Total		Total		Total	Total	
45	Feed Rate	lb/min			260		257		253								260		257		253		
46	Heating Value	Btu/lb			12369.5		12369.5		12369.5								0		0		0		
47	Thermal Feedrate	MMBtu/hr			193.0		190.7		187.8								193.0		190.7		187.8	190.5	
48	Chlorine	lb/hr															219.1		214.0		150.2		
49																							
50	Gas Flowrate																53883		59911		58800	57531	
51	Oxygen																8.6		7.7		7.7	8.0	
52																							
53	Chlorine	ug/dscm															1227552		1005294		719163	984003	
54																							
55	Estimated Firing Rate	MMBtu/hr																				237	

	C	D	E	F	G
1	Process Information 2				
2					
3	473C1		R1	R2	R3
4					
5	Combustion Temperature (kiln back end)	F	528	526	531
6	ESP Temperature	F	420	423	428
7					
8	473C2				
9					
10	Combustion Temperature (kiln back end)	F	538	528	526
11	ESP Temperature	F	427	418	421
12					
13	473C3				
14					
15	Combustion Temperature (kiln back end)	F	426	463	409