

US EPA ARCHIVE DOCUMENT

Data Summary: Cement Kilns, Mercury

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1	2	3	4	5	6	7	8	11	12	13	15	16	17	18	19	20
Source ID Number	Cond ID Number	Facility Information		Combustor Information			APCS Detailed Acronym	Short Kiln	ILRM Status	Hazardous Wastes	Munitions Popping Furnace	Chemical Weapons Demil	Mixed Radioactive Waste	Comm vs On-site	Gov't	Cond Dates
		Facility Name	City	Combustor Category	Combustor Class	Combustor Type										
200	200C1	Giant Cement	Harleyville	Cement kiln	Cement Kiln (Wet, long	FF	No		Liq	No	No	No	Comm	No	8/21/1992	
201	201C1	Giant Cement	Harleyville	Cement kiln	Cement Kiln (Wet, long	FF	No		Liq	No	No	No	Comm	No	8/21/1992	
201	201C2	Giant Cement	Harleyville	Cement kiln	Cement Kiln (Wet, long	FF	No		Liq	No	No	No	Comm	No	1/30/1991	
203	203C10	Holcim (US) Inc.	Artesia	Cement kiln	Cement Kiln (Long, Wet	ESP	No		Liq	No	No	No	Comm	No	5/1/2000	
203	203C5	Holcim (US) Inc.	Artesia	Cement kiln	Cement Kiln (Long, Wet	ESP	No		Liq	No	No	No	Comm	No	8/16/1996	
203	203C2	Holcim (US) Inc.	Artesia	Cement kiln	Cement Kiln (Long, Wet	ESP	No		Liq	No	No	No	Comm	No	5/24/1994	
203	203C1	Holcim (US) Inc.	Artesia	Cement kiln	Cement Kiln (Long, Wet	ESP	No		Liq	No	No	No	Comm	No	7/19/1993	
204	204B2	Holcim (US) Inc.	Clarksville	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liquid	No	No	No	Comm	No	5/1/1996	
204	204B3	Holcim (US) Inc.	Clarksville	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liquid	No	No	No	Comm	No	5/1/1996	
204	204C1	Holcim (US) Inc.	Clarksville	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liquid	No	No	No	Comm	No	4/1/1992	
207	207C12	Keystone	Bath	Cement kiln	Cement kiln (Wet, long	ESP	No		Liq, sludge	No	No	No	Comm	No	8/1/2000	
207	207C11	Keystone	Bath	Cement kiln	Cement kiln (Wet, long	ESP	No		Liq, sludge	No	No	No	Comm	No	12/1/1999	
207	207C10	Keystone	Bath	Cement kiln	Cement kiln (Wet, long	ESP	No		Liq, sludge	No	No	No	Comm	No	9/1/1998	
207	207C3	Keystone	Bath	Cement kiln	Cement kiln (Wet, long	ESP	No		Liq, sludge	No	No	No	Comm	No	1/1/1997	
207	207C1	Keystone	Bath	Cement kiln	Cement kiln (Wet, long	ESP	No		Liq, sludge	No	No	No	Comm	No	1/1/1993	
208	208C10	Keystone	Bath	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, sludge	No	No	No	Comm	No	9/1/1998	
208	208C11	Keystone	Bath	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, sludge	No	No	No	Comm	No	12/1/1999	
208	208C3	Keystone	Bath	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, sludge	No	No	No	Comm	No	10/1/1996	
208	208C1	Keystone	Bath	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, sludge	No	No	No	Comm	No	7/1/1992	
228	228C12	Ash Grove Cement Company	Foreman	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq and solid	No	No	No	Comm	No	12/1/1997	
228	228C6	Ash Grove Cement Company	Foreman	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, solid	No	No	No	Comm	No	10/1/1988	
228	228C7	Ash Grove Cement Company	Foreman	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, solid	No	No	No	Comm	No	10/1/1988	
300	300C11	Essroc	Logansport	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, solid	No	No	No	Comm	No	10/1/1998	
300	300C13	Essroc	Logansport	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, solid	No	No	No	Comm	No	10/1/1998	
302	302C10	Lafarge	Paulding	Cement kiln	Cement Kiln (Wet, long	FF	No		Liq	No	No	No	Comm	No	5/1/1998	
302	302C12	Lafarge	Paulding	Cement kiln	Cement Kiln (Wet, long	FF	No		Liq	No	No	No	Comm	No	5/1/1998	
302	302C3	Lafarge	Paulding	Cement kiln	Cement Kiln (Wet, long	FF	No		Liq	No	No	No	Comm	No	7/1/1995	
303	303C7	LONE STAR INDUSTRIES, INCCAPE GIRARDI		Cement kiln	Cement Kiln (Dry, preheater, prec: QC/FF main, FF bypass	Yes	off		Liq, sludge	No	No	No	Comm	No	10/1/1995	
303	303C9	LONE STAR INDUSTRIES, INCCAPE GIRARDI		Cement kiln	Cement Kiln (Dry, preheater, prec: QC/FF main, FF bypass	Yes	on		Liq, sludge	No	No	No	Comm	No	10/1/1995	
303	303C1	LONE STAR INDUSTRIES, INCCAPE GIRARDI		Cement kiln	Cement Kiln (Dry, preheater, prec: QC/FF main, FF bypass	Yes	on		Liq, sludge	No	No	No	Comm	No	4/1/1992	
303	303C3	LONE STAR INDUSTRIES, INCCAPE GIRARDI		Cement kiln	Cement Kiln (Dry, preheater, prec: QC/FF main, FF bypass	Yes	off		Liq, sludge	No	No	No	Comm	No	6/1/1992	
303	303C6	LONE STAR INDUSTRIES, INCCAPE GIRARDI		Cement kiln	Cement Kiln (Dry, preheater, prec: QC/FF main, FF bypass	Yes	on		Liq, sludge	No	No	No	Comm	No	4/1/1992	
318	473C1	Texas Industries Inc.	Midlothian	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq	No	No	No	Comm	No	6/8/1995	
319	319D6	CONTINENTAL CEMENT COM HANNIBAL		Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, sludge, so	No	No	No	Comm	No	2/1/1996	
319	319D9	CONTINENTAL CEMENT COM HANNIBAL		Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, sludge, so	No	No	No	Comm	No	9/1/1996	
319	319C1	CONTINENTAL CEMENT COM HANNIBAL		Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, sludge, so	No	No	No	Comm	No	5/5/1992	
322	322C8	LAFARGE	FREDONIA	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, sludge	No	No	No	Comm	No	9/1/1995	
323	323B1	LAFARGE	FREDONIA	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, sludge	No	No	No	Comm	No	2/1/1995	
323	323B2	LAFARGE	FREDONIA	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, sludge	No	No	No	Comm	No	2/1/1995	
323	323C9	LAFARGE	FREDONIA	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, sludge	No	No	No	Comm	No	2/1/1995	
323	323B3	LAFARGE	FREDONIA	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, sludge	No	No	No	Comm	No	9/1/1995	
403	403C10	Ash Grove Cement Company	Foreman	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq and solid	No	No	No	Comm	No	12/1/1997	
403	403C3	Ash Grove Cement Company	Foreman	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq and solid	No	No	No	Comm	No	11/1/1994	
403	403C1	Ash Grove Cement Company	Foreman	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq and solid	No	No	No	Comm	No	5/1/1992	
404	404C10	Ash Grove Cement Company	Foreman	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, solid	No	No	No	Comm	No	1/1/1998	
404	404C4	Ash Grove Cement Company	Foreman	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, solid	No	No	No	Comm	No	1/17/1995	
404	404C1	Ash Grove Cement Company	Foreman	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, solid	No	No	No	Comm	No	7/1/1992	
473	473C1	Texas Industries Inc.	Midlothian	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq	No	No	No	Comm	No	6/8/1995	
491	300C11	Essroc	Logansport	Cement kiln	Cement Kiln (Wet, long	ESP	No		Liq, solid	No	No	No	Comm	No	10/1/1998	

Data Summary: Cement Kilns, Mercury

	2	21	22	25	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	57	58
2	Cond ID	Condition Information	Hg		Hg Emissions Rating			Hg Stack Emissions (ug/dscfm)																	
3	Number	Cond Description	Spiking	Tier	Camp Number	Rating	Rating Comments	R1		R2		R3		R4		R5		R6		R7		R8		Cond Avg	
4								ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss
5																									
6	200C1	CoC, MAX HW FEED, SPIKED METAL	N	1	2	N			12.2		3.4		8.1		0.1										6.0
7	201C1	CoC, MAX HW FEED, SPIKED METAL	N	1	2	N			1.2		15.9		3.0		16.8										9.2
8	201C2	DRE TEST, also PM, metals, HCl; pre fN	N	1	3	NA	Not evaluated: Pre-BIF rule d		857.4		1,145.6		893.1												965.4
9	203C10	CoC: Max comb temp, max metal and cN	N	1	1	N			18.4		12.4		14.7												15.2
10	203C5	CoC, MAX COMB ZONE TEMP, MAX IN	N	1	2	N			16.3		7.5		5.1												9.6
11	203C2	State of MS testing, ANNUAL STACK	N	1	3	N			28.0		24.2		50.8												34.3
12	203C1	CoC, MAX HW FEED	N	1	4	N			18.2		7.3		21.0												15.5
13	204B2	NORMAL KILN OPERATING CONDITI	N	1	1	N			6.3		6.0		8.1												6.8
14	204B3	CoC, MAX COMB ZONE TEMP, MAX	N	1	1	N			11.8		9.0		14.7												11.9
15	204C1	CoC, MAX COMB TEMP	N	1	2	N			16.7		20.3		14.0												17.0
16	207C12	CoC, max metals, waste, slurry	N	1	1	N			17.7	100	10.7		23.3										21		17.2
17	207C11	Trial burn; Low temp POHC DRE, PCD	N		1.5	N			1.9		2.8		1.1												1.9
18	207C10	CoC; max metals, chlorine, waste, slurr	Y	1	2	NA	Research testing		112.4		132.0		147.0												130.5
19	207C3	purpose of testing not clear	N	1	3	N		100	6.3	100	7.4		2.5										85		5.4
20	207C1	CoC, MAX PROD, MAX TIER III SPIKEN	N	1	4	N			12.6		21.9		19.3		14.1										17.0
21	208C10	CoC; max metals, chlorine, waste, slurr	Y	1	1	NA	Research testing		103.8		88.0		124.9												105.6
22	208C11	TB, low temp, POHC DRE	N		1.5	N			6.6		2.9		11.0												6.8
23	208C3	purpose of test not clear	N	1	2	N			2.1		2.4		2.2												2.2
24	208C1	CoC, MAX PROD, MAX TIER III SPIKEN	N	1	3	N		100	12.1		21.5		20.0		25.0								15		19.6
25	228C12	Trial burn: Max comb temp, max metals	N	1	1	NA	Hg data from 403C10		46.7		32.8		39.8		34.8										38.5
26	228C6	FIRING HW SOLID WASTE AND COA	N		2	NA	Not evaluated: pre-BIF testing		0.3		0.3		0.1												0.2
27	228C7	FIRING HW SOLID, LIQUID WASTE A	N		2	NA	Not evaluated: pre-BIF testing		1.2		0.2		0.4						0.2				0.3		0.5
28	300C11	CoC; Max operating temp, max temp, fr	N	1	1	N			71.6		80.7		134.2												95.5
29	300C13	Risk burn, normal operations	N		1	N			45.3		36.8		44.5												42.2
30	302C10	CoC; high temperature, max metals, pr	N	1	1	N			10.5		7.6		10.1												9.4
31	302C12	Risk burn, normal operations	N		1	N			14.1		14.0		22.8												17.0
32	302C3	CoC, MAX OPERATING CONDITIONS	N	1	2	N			18.1		14.5		12.2												15.0
33	303C7	Trial burn, HIGH COMB TEMP, IN-LINE	U	1	1	N	ILRM off.		300.0		293.0		303.0												298.7
34	303C9	NORMAL OPERATING CONDITIONS	N		1	N	ILRM on.		69.7		40.4		19.9												43.3
35	303C1	BASELINE, no haz waste	N		2	NA	Not evaluated: not burning hazardous waste						5.5		3.9			3.9							4.4
36	303C3	CoC, HIGH COMB TEMP, IN-LINE RA	U	1	2	N	ILRM off.		55.3		47.7		172.0												91.7
37	303C6	FUEL: COAL/TIRE COMBINATION	N		3	NA	Not evaluated: not burning hazardous waste						47.6		21.3			87.5							52.1
38	473C1	CoC, METALS MODE, HIGH COMB	TFN	1	1	NA	Data from sister kiln 473		14.2		13.6		22.6												16.8
39	319D6	TB, MAXIMUM TEMPERATURE CON	N	1	1	N			6.0		12.6		13.7												10.7
40	319D9	TB, NORMAL OPERATING CONDITIO	N		1	N			16.8		24.0		29.8												23.5
41	319C1	CoC, HIGH COMB TEMP	N	1	3	N			53.3		58.7		55.7												55.9
42	322C8	CoC, MAXIMUM OPERATING CONDIT	N	1	1	N			21.6		33.5		37.5												30.9
43	323B1	LOW CHLORINE, HIGH ESP INLET TEMPERATURE	N		1	NA	Not evaluated: not burning ha		19.3				11.3												15.3
44	323B2	HIGH CHLORINE, LOW ESP INLET	TFN	1	1	NA	Not evaluated: demonstration		62.9		67.4		57.6												62.6
45	323C9	HIGH CHLORINE, HIGH ESP INLET	T N	1	1	NA	Not evaluated: demonstration		39.5		35.6		38.4												37.8
46	323B3	CoC, MAX OPERATING CONDITIONS	N	1	2	N			30.4		40.4		36.4												35.7
47	403C10	Trial burn: Max comb temp, max metals	N	1	1	N			46.7		32.8		39.8		34.8										38.5
48	403C3	CoC, HIGH COMB TEMP, HIGH CL	FEN	1	2	N			47.7		8.1	100	14.2		13.9										21.0
49	403C1	CoC, HIGH COMB TEMP, MIN ESP	PCN	1	3	N			7.8	100	14.3	100	5.8	100	5.5										5.1
50	404C10	Trial burn: Max comb temp, max metals	N	1	1	N			15.2		13.4		15.5		17.7										15.4
51	404C4	CoC, MAX FEED, PRODUCTION, CHL	N	1	2	N			83.7		85.1		68.0		233.0										117.5
52	404C1	CoC, HIGH COMB TEMP, MIN ESP	PCN	1	3	N		100	3.8	100	4.6	100	3.6	100	6.9	100	4.9	100	2.5						4.4
53	473C1	CoC, METALS MODE, HIGH COMB	TFN	1	1	N			14.2		13.6		22.6												16.8
54	300C11	CoC; Max operating temp, max temp, fr	N	1	1	NA	Data in lieu		71.6		80.7		134.2												95.5

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	2	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	82	83	86	87	88	89	90	91	92	93	94	95	96	97	100	105	
2	Cond ID	Hg SRE			Hg SRE (%)											Hg SRE Used for Ranking Purposes (%)																	
3	Number	Camp	Rating	Comments	R1	R2	R3	R4	R5	R6	Cond Avg	R1	R2	R3	R4	R5	R6	Cond Avg															
4	Number	Number																															
5																																	
6	200C1																																
7	201C1																																
8	201C2																																
9	203C10	1	NA	Hg not controlled >	-21.5 >	49.7	71.2				>	50.0	NA	NA	NA																	NA	
10	203C5																																
11	203C2																																
12	203C1	4	NA	Hg not controlled >	29.8 >	21.2 >	-46.6				>	6.1	NA	NA	NA																	NA	
13	204B2																																
14	204B3																																
15	204C1																																
16	207C12	1	NA	Hg not controlled	45.8 >	68.1	54.7				>	56.2	NA	NA	NA																	NA	
17	207C11																																
18	207C10	2	NA	Hg not controlled	61.4	54.2	48.0					54.6	NA	NA	NA																	NA	
19	207C3																																
20	207C1	4	NA	Hg not controlled	80.1	64.7	67.4	79.2				73.1	NA	NA	NA	NA																NA	
21	208C10	1	NA	Hg not controlled	57.1	63.7	53.0					57.7	NA	NA	NA																	NA	
22	208C11																																
23	208C3																																
24	208C1	3	NA	Hg not controlled >	80.2	66.6	71.3	57.2			>	69.0	NA	NA	NA	NA																NA	
25	228C12	1	NA	Hg not controlled	53.1	61.4	48.6	58.7				55.4	NA	NA	NA	NA																NA	
26	228C6																																
27	228C7																																
28	300C11	1	NA	Hg not controlled	97.3	97.3	95.3					96.6	NA	NA	NA																	NA	
29	300C13																																
30	302C10	1	NA	Hg not controlled	43.9	54.7	54.7					51.1	NA	NA	NA																	NA	
31	302C12																																
32	302C3																																
33	303C7	1	NA	Hg not controlled								76.2																				NA	
34	303C9	1	NA	Hg not controlled								96.0																				NA	
35	303C1	2	NA	Hg not controlled				97.1	97.6	98.8		98.1													NA		NA					NA	
36	303C3	2	NA	Hg not controlled	84.3	87.6	56.7					75.7	NA	NA	NA																	NA	
37	303C6																																
38	473C1	1	NA	Hg not controlled	96.8	96.8	95.5					96.3	NA	NA	NA																	NA	
39	319D6	1	NA	Hg not controlled >	48.2	46.8	47.8					47.6	NA	NA	NA																	NA	
40	319D9	1	NA	Hg not controlled >	-272.6 >	-418.0 >	-245.7				>	-295.4	NA	NA	NA																	NA	
41	319C1																																
42	322C8	1	NA	Hg not controlled	69.5	54.3	48.8					57.4	NA	NA	NA																	NA	
43	323B1	1	NA	Hg not controlled	-85.6	>	-275.5				>	-212.0	NA	NA	NA																	NA	
44	323B2	1	NA	Hg not controlled >	58.3 >	66.0 >	47.4				>	59.0	NA	NA	NA																	NA	
45	323C9	1	NA	Hg not controlled	-42.6 >	-7.9 >	-148.7				>	-49.2	NA	NA	NA																	NA	
46	323B3	2	NA	Hg not controlled	71.8	67.7	67.0					68.8	NA	NA	NA																	NA	
47	403C10	1	NA	Hg not controlled	53.1	61.4	48.6	58.7				55.4	NA	NA	NA																	NA	
48	403C3	2	NA	Hg not controlled >	44.1 >	93.5 >	77.7 >	89.9			>	79.5	NA	NA	NA	NA																NA	
49	403C1	3	NA	Hg not controlled >	89.3 >	90.0 >	69.5 >	49.3			>	91.6	NA	NA	NA	NA																NA	
50	404C10	1	NA	Hg not controlled	69.2	69.9	68.5	65.9				68.3	NA	NA	NA	NA																NA	
51	404C4	2	NA	Hg not controlled >	1.5 >	19.5 >	7.2 >	-138.8			>	-30.0	NA	NA	NA	NA																NA	
52	404C1	3	NA	Hg not controlled >	87.2 >	87.6 >	92.2 >	47.6 >	79.5 >	89.0 >		84.8	NA	NA	NA	NA									NA		NA					NA	
53	473C1	1	NA	Hg not controlled	96.8	96.8	95.5					96.3	NA	NA	NA																	NA	
54	300C11	1	NA	Hg not controlled	97.3	97.3	95.3					96.6	NA	NA	NA																	NA	

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	2	108	109	110	111	113	114	115	116	117	118	119	120	121	122	123	124	125	138	139	140	141	142	143	144	145	146	147	164	165			
2	Cond ID	Hg Feedrate, Cond Avg (ug/dscm)					Hg Feedrate Total (ug/dscm)										Hg HW + Spike (W/ ND %) Feedrate (ug/dscm)																
3	Number	HW	Spike	RM	Coal	Total	R1		R2		R3		R4		R5		R6		Cond Avg		R1		R2		R3		R4		Cond Avg				
4							ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
5																																	
6	200C1																																
7	201C1																																
8	201C2																																
9	203C10	17.6		6.2	6.6	30.4	0	15.2	0	24.7		51.2							0	30.4	0.0	8	0	9	0	36		0	18				
10	203C5																																
11	203C2																																
12	203C1		11.1	27.2	5.4	43.7	53	55.6	72	33.3	66	42.2							62	43.7	0.0	20	0	4	0	9		0	11				
13	204B2																																
14	204B3																																
15	204C1	4.2		87.1	4.0	95.3	100	89.7	100	91.4	100	104.7							100	95.3	100.0	4	100	4	100	5		0	4				
16	207C12	8.2	0.0	28.0	3.1	39.4		32.7		33.5		51.5								39.4	0.0	2	0	2	0	21		0	8				
17	207C11																																
18	207C10	2.0	267.3	15.9	2.1	287.3		291.1		288.1		282.9									287.3	0.0	272	0	273	0	264		0	269			
19	207C3																																
20	207C1		5.8	82.6	16.0	104.4		63.4		61.9		59.3		67.7							63.1	0.0	7	0	6	0	6	0	4	0	6		
21	208C10	5.4	219.0	21.0	4.4	249.8		242.2		242.3		265.8									249.8	0.0	218	0	214	0	243		0	224			
22	208C11																																
23	208C3																																
24	208C1	2.6	2.4	87.7	13.7	107.1		61.1		64.2		69.5		58.5							63.3	0.0	5	0	6	0	14	0	0	0	5		
25	228C12	13.3	0.0	71.5	0.5	86.5		99.5		85		77.5		84.4							86.5												
26	228C6																																
27	228C7																																
28	300C11	434.2	0.0	2,398.6		2,839.3		2683.4		2965		2881.3									2839.3	0.0	410	0	454	0	441		0	434			
29	300C13																																
30	302C10	17.1	0.0	2.1		19.2		18.7		16.7		22.3									19.2	0.0	18	0	14	0	19		0	17			
31	302C12																																
32	302C3	49.8		631.5		681.3	100	680	100	703.8	100	660.2									100	681.3	100.0	52	100	50	100	47		0	50		
33	303C7	27.6	0.0	1,220.9	8.7	1,257.2																1257.2								0	28		
34	303C9	8.6	0.0	1,075.0		1,089.8																1089.8								0	9		
35	303C1			222.8	231.1	231.1							191.1		165.7		336.6					231.1											
36	303C3	52.5		320.3		377.5		351.9		383.5		397.1										377.5	0.0	56	0	43	0	59		0	53		
37	303C6																																
38	473C1	456.8				456.8		438.2		429.7		502.5										456.8											
39	319D6	18.9	0.0	0.8	0.8	20.5	2	11.8		23.6		26.2										20.5	0.0	11	0	22	0	24		0	19		
40	319D9	5.9		0.7	0.3	7.9	38	7.2	27	6.3	15	10.1										7.9	0.0	5	0	5	0	9		0	6		
41	319C1	5.3	0.0	48.3	1.7	27.7																								100	5		
42	322C8	71.4		1.2		72.5		70.9		73.3		73.3										72.5	0.0	70	0	73	0	71		0	71		
43	323B1			3.1	3.6	6.7		10.4	67	4	47	5.7										6.7											
44	323B2	152.9		5.4		158.2	3	155.9	3	204.1	4	114.6										3	158.2	0.0	151	0	198	0	110		0	153	
45	323C9	24.0		3.1		27.0		27.7	7	35.3	15	18.1										6	27	0.0	23	0	33	0	15		0	24	
46	323B3	112.8		3.4		114.5		107.9		125.2		110.3											114.5	0.0	106	0	123	0	109		0	113	
47	403C10	13.3	0.0	71.5	0.5	86.5		99.5		85		77.5		84.4								86.5	0.0	30	0	9	0	6	0	9	0	13	
48	403C3	84.8	99.9	9.5	7.3	112.0	11	95.8	7	132.9	13	73.5	6	145.7									112	0.0	154	0	225	0	108	0	251	0	185
49	403C1		59.0	8.2	4.9	72.1	10	80.7	5	151.9	30	27.1	62	28.8								15	72.1	0.0	67	0	139	0	14	60	15	0	59
50	404C10	4.4	0.0	40.9	2.0	48.7		49.2		44.5		49.2		52									48.7	0.0	4	0	4	0	4	0	4	0	4
51	404C4	86.9		8.0	7.5	98.4	9	92.9	7	114.2	10	81.8	7	104.9									98.4	0.0	83	0	103	0	72	0	89	0	87
52	404C1	27.8		8.8	5.9	42.5	24	38.8	32	54.2	18	55.5	71	44.7	24	31.4	26	30.4	33				42.5	0.0	25	21	36	0	38	75	31	0	28
53	473C1	456.8				456.8		438.2		429.7		502.5											456.8	0.0	438	0	430	0	503		0	457	
54	300C11	434.2	0.0	2,398.6		2,839.3		2683.4		2965		2881.3										2839.3											

Data Summary: Cement Kilns, Mercury

US EPA ARCHIVE DOCUMENT

2	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	188	189	190	191
Kiln ID Number	Thermal Feed Cond Avg (MMBtu/hr)					Thermal Emissions Rating			Hg HW Thermal Emiss (lb/10 ¹² Btu)															
	HW	Coal	MF	Total	Est Tot	Camp No	Rating	Rating Comments	R1	R2	R3	R4	R5	R6	Cond Avg	R1								
00C1	104.3	14.9		119.2	175.2																			
01C1	119.8	30.2		149.9	197.4																			
01C2																								
03C10	274.7	120.5		405.5	363.9	1	NA	Normal		9.93	4.96	10.90										8.60	0.008	
03C5	162.0	187.9		349.9	483.0																			
03C2																								
03C1	166.7	118.0		284.7	426.0	4	NA	Normal		28.07	7.30	28.41										21.26	0	0.040
04B2																								
04B3	377.7	649.3		1,063.0	1,677.5																			
04C1	666.3	493.3		1,159.6	1,042.6																		100	0.006
07C12	78.3	14.0		92.3	147.8	1	NA	Normal		1.45	0.82	16.41										6.23		0.003
07C11					186.0																			
07C10	66.0	15.0		81.0	138.5	2	NA	Research testing		172.95	223.91	253.67										216.84		0.448
07C3																								
07C1	49.8	59.4		109.2	123.9	4	NA	Normal		2.77	4.38	4.26	2.10									3.38		0.014
08C10	266.7	143.7		410.4	535.6	1	NA	Research testing		145.12	128.34	229.08										167.52		0.339
08C11					465.0																			
08C3																								
08C1	161.5	127.8		289.3	250.6	3	NA	Normal	100	2.26	4.23	9.09	0.21									3.95		0.011
28C12	233.8	55.9	26.2	317.8	315.2	1	NA	Data in lieu																0.033
28C6																								
28C7																								
00C11	218.6		1.9	220.5	298.9	1	NA	Normal		13.48	14.01	24.06										17.19		0.506
00C13	194.6		19.0	213.7	294.2																			
02C10	190.7			190.7	262.7	1	NA	Normal		11.74	7.46	9.66										9.62		0.021
02C12	184.3			184.3	257.8																			
02C3	165.3			165.3	141.1																		100	0.040
03C7	211.5	408.2		619.6	823.2	1	NA	Normal														21.266		
03C9	192.1	369.6		561.7	817.5	1	NA	Normal														1.263		
03C1		440.0		440.0	879.7																			
03C3	277.4	272.7		550.0	880.4	2	NA	Normal		23.08	14.73	67.08										34.96		0.147
03C6																								
73C1	207.5			207.5	265.1	1	NA	Data in lieu		16.09	15.01	22.64										17.91		0.495
19D6	322.2	144.5		466.7	673.8	1	NA	Normal		10.41	20.76	20.86										17.34		0.020
19D9	216.4	243.8		460.2	629.1	1	NA	Normal		46.90	59.00	63.71										56.54		0.013
19C1	332.0	88.0		420.0	704.6																			
22C8	130.3			130.3	161.4	1	NA	Normal		21.51	35.44	37.61										31.52		0.071
23B1		110.4		110.4	232.9																			
23B2	166.7			166.7	211.9	1	NA	Demo testing		61.15	73.92	65.86										66.98		0.147
23C9	170.0			170.0	230.6	1	NA	Demo testing		39.06	38.24	45.26										40.85		0.027
23B3	200.3			200.3	239.6	2	NA	Normal		31.04	39.13	35.48										35.22		0.110
03C10	233.8	55.9	26.2	317.8	315.2	1	NA	Normal		15.58	3.62	3.65	3.90									6.69		0.033
03C3	406.9	58.2		465.1	323.9	2	NA	Normal		50.18	9.49	16.36	19.84									23.97		0.090
03C1	222.3	106.9		329.1	303.0	3	NA	Normal		10.73	100	18.24	100	5.34	8.80							10.78		0.100
04C10	248.3	97.4	41.2	384.4	450.1	1	NA	Normal		1.96	1.96	2.06	2.38									2.09		0.006
04C4	280.0	126.0		402.0	464.2	2	NA	Normal		132.84	114.32	99.57	255.88									150.65		0.135
04C1	235.6	181.8		417.4	456.9	3	NA	Normal	100	4.94	100	7.46	100	4.63	100	28.10	100	6.56	100	3.18		9.15		0.039
73C1	207.5			207.5	265.1	1	NA	Normal		16.09	15.01	22.64										17.91		0.495
00C11	218.6		1.9	220.5	298.9	1	NA	Data in lieu		13.48	14.01	24.06										17.19		0.506

Data Summary: Cement Kilns, Mercury

	2	192	193	194	195	196	197	198	199	200	201	204	205
2	Cond ID	Hg in HW (lb/10 ⁹ Btu)											
3	Number	R2		R3		R4		R5		R6		Cond Avg	
4													
5													
6	200C1												
7	201C1												
8	201C2												
9	203C10		0.010		0.038								0.02
10	203C5												
11	203C2												
12	203C1	0	0.009	0	0.019								0.02
13	204B2												
14	204B3												
15	204C1	100	0.006	100	0.007								0.01
16	207C12		0.003		0.036								0.01
17	207C11												
18	207C10		0.489		0.488								0.47
19	207C3												
20	207C1		0.012		0.013		0.010						0.01
21	208C10		0.353		0.488								0.39
22	208C11												
23	208C3												
24	208C1		0.013		0.032		0.000						0.01
25	228C12		0.009		0.007		0.009						0.01
26	228C6												
27	228C7												
28	300C11		0.514		0.517								0.51
29	300C13												
30	302C10		0.016		0.021								0.02
31	302C12												
32	302C3	100	0.041	100	0.031								0.04
33	303C7												0.090
34	303C9												0.032
35	303C1												
36	303C3		0.118		0.155								0.14
37	303C6												
38	473C1		0.476		0.503								0.49
39	319D6		0.039		0.040								0.03
40	319D9		0.011		0.018								0.01
41	319C1									100			0.010
42	322C8		0.078		0.074								0.07
43	323B1												
44	323B2		0.217		0.125								0.16
45	323C9		0.035		0.018								0.03
46	323B3		0.121		0.108								0.11
47	403C10		0.009		0.007		0.009						0.01
48	403C3		0.145		0.073		0.196						0.13
49	403C1		0.183		0.018		0.017						0.08
50	404C10		0.007		0.007		0.007						0.01
51	404C4		0.142		0.107		0.107						0.12
52	404C1	21	0.060		0.059		0.054		0.032		0.029		0.05
53	473C1		0.476		0.503								0.49
54	300C11		0.514		0.517								0.51

Data Summary: Cement Kilns, Mercury

1	2	3	4	5	6	7	8	11	12	13	15	16	17	18	19	20
Source ID Number	Cond ID Number	Facility Information		Combustor Information			APCS Detailed Acronym	Short Kiln	ILRM Status	Hazardous Wastes	Munitions Popping Furnace	Chemical Weapons Demil	Mixed Radioactive Waste	Comm vs On-site	Gov't	Cond Dates
		Facility Name	City	Combustor Category	Combustor Class	Combustor Type										
491	300C13	Essroc	Logansport	Cement kiln	Cement Kiln (Wet, long	ESP	No			Liq, solid	No	No	No	Comm	No	10/1/1998
491	491C1	Essroc Corporation	Logansport	Cement kiln	Cement Kiln (Wet, long	ESP	No			Liq, solid	No	No	No	Comm	No	5/1/1995
680	680C1	Giant Cement Company	Harleyville	Cement kiln	Cement Kiln (Wet, long	FF	No			Liq	No	No	No	Comm	No	11/11/1993
681	681C1	Giant Cement Company	Harleyville	Cement kiln	Cement Kiln (Wet, long	FF	No			Liq	No	No	No	Comm	No	11/10/1993
681	681C2	Giant Cement Company	Harleyville	Cement kiln	Cement Kiln (Wet, long	FF	No			Liq	No	No	No	Comm	No	6/5/1991
3029	3029C11	Lone Star	Greencastle	Cement kiln	Cement Kiln (Semi-dry, short, pref	ESP (main), FF (bypass)	Yes	on		Liq	No	No	No	Comm	No	12/1/2000
3030	3030C1	TXI	Midlothian	Cement kiln	Cement Kiln (Wet, long	ESP	No			Liq	No	No	No	Comm	No	3/1/2001
3030	473C1	Texas Industries Inc.	Midlothian	Cement kiln	Cement Kiln (Wet, long	ESP	No			Liq	No	No	No	Comm	No	6/8/1995
3031	3031C1	ASH GROVE CEMENT COMP	CHANUTE	Cement kiln	Cement Kiln (Preheater/precalcine	FF (main), FF (bypass)	Yes	on			No	No	No	Comm	No	12/1/2001
3031	3031C2	ASH GROVE CEMENT COMP	CHANUTE	Cement kiln	Cement Kiln (Preheater/precalcine	FF (main), FF (bypass)	Yes	off			No	No	No	Comm	No	3/1/2002
302A	302C10	Lafarge	Paulding	Cement kiln	Cement Kiln (Wet, long	FF	No			Liq	No	No	No	Comm	No	5/1/1998
302A	302C12	Lafarge	Paulding	Cement kiln	Cement Kiln (Wet, long	FF	No			Liq	No	No	No	Comm	No	5/1/1998
302A	302C3	Lafarge	Paulding	Cement kiln	Cement Kiln (Wet, long	FF	No			Liq	No	No	No	Comm	No	7/1/1995
473A	473C1	Texas Industries Inc.	Midlothian	Cement kiln	Cement Kiln (Wet, long	ESP	No			Liq	No	No	No	Comm	No	6/8/1995
Sources Shutdown or No Longer Burning Hazardous Wastes																
205	205C10	Holcim (US) Inc	Holly Hill	Cement kiln	Cement Kiln (Wet, long	ESP	No			Liq	No	No	No	Comm	No	1/1/2000
205	205C5	Holcim (US) Inc	Holly Hill	Cement kiln	Cement Kiln (Wet, long	ESP	No			Liq	No	No	No	Comm	No	6/1/1995
205	205C7	Holcim (US) Inc	Holly Hill	Cement kiln	Cement Kiln (Wet, long	ESP	No			Liq	No	No	No	Comm	No	6/1/1995
205	205C1	Holcim (US) Inc	Holly Hill	Cement kiln	Cement Kiln (Wet, long	ESP	No			Liq	No	No	No	Comm	No	6/1/1992
206	206C10	Holcim (US) Inc	Holly Hill	Cement kiln	Cement Kiln (Wet, long	ESP	No			Liq	No	No	No	Comm	No	11/1/1999
206	206C5	Holcim (US) Inc	Holly Hill	Cement kiln	Cement Kiln (Wet, long	ESP	No			Liq	No	No	No	Comm	No	5/1/1995
206	206C1	Holcim (US) Inc	Holly Hill	Cement kiln	Cement Kiln (Wet, long	ESP	No			Liq	No	No	No	Comm	No	7/1/1992

Data Summary: Cement Kilns, Mercury

	2	21	22	25	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	57	58
2	Cond ID	Condition Information	Hg		Hg Emissions Rating			Hg Stack Emissions (ug/dscm)																	
3	Number	Cond Description	Spiking	Tier	Camp	Rating	Rating Comments	R1		R2		R3		R4		R5		R6		R7		R8		Cond Avg	
4					Number			ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss	ND	Emiss
5																									
55	300C13	Risk burn, normal operations	N		1	NA	Data in lieu		45.3		36.8		44.5												42.2
56	491C1	CoC, MAX COMB TEMP, MAX METAL	N	1	2	N	Data from source 300 represe		21.3		25.5		32.7												26.5
57	680C1	?	U	1	1	N	Data from source 200 represe		26.0		27.5		26.7												26.7
58	681C1	State of South Carolina emissions testir	UL	1	1	N	Data from source 200 represe		230.8		31.4		30.8												97.7
59	681C2	State of South Carolina emissions testir	L	1	2	NA	Pre BIF rule data		1,317.0		1,123.0		1,273.0												1,237.7
60	3029C11	CoC	N	1	1	N	ILRM on.		6.3		5.3		2.9												4.8
61	3030C1	Periodic air emissions evaluation	N	1	1	N			10.5		14.7		22.4												15.9
62	473C1	CoC, METALS MODE, HIGH COMB TEN	N	1	2	NA	Data from sister kiln 473		14.2		13.6		22.6												16.8
63	3031C1	Comp Perf Test, raw mill on	N	1	1	N	MACT New Source; data not i		63.9		48.6		32.8		33.5										44.7
64	3031C2	Comp Perf Test, raw mill off	N	1	1	N	MACT New Source; data not i		70.2		292.1		22.7												128.3
65	302C10	CoC; high temperature, max metals, pr	N	1	1	NA	Data in lieu		10.5		7.6		10.1												9.4
66	302C12	Risk burn, normal operations	N		1	NA	Data in lieu		14.1		14.0		22.8												17.0
67	302C3	CoC, MAX OPERATING CONDITIONS	N	1	2	NA	Data in lieu		18.1		14.5		12.2												15.0
68	473C1	CoC, METALS MODE, HIGH COMB TEN	N	1	1	NA	Data from sister kiln 473		14.2		13.6		22.6												16.8
69																									
70																									
71		utdown or																							
72	205C10	Max comb temp, max metals, max chlo	N	1	1	N			33.5		31.5		26.0												30.3
73	205C5	ReCoC, HIGH COMB TEMP, HIGH MEN	N	1	2	N			10.3		8.1		10.3												9.6
74	205C7	NORMAL WASTE FUEL OPERATIONS	N		2	N			29.5		19.9		19.2												22.9
75	205C1	CoC, MAX COMB TEMP	N	1	3	N			28.7		36.6		22.7												29.4
76	206C10	Max comb temp, max metals, max chlo	N	1	1	N			36.4		47.6		44.7												42.9
77	206C5	CoC, MAX COMB TEMPS AND MAX IN	N	1	2	N			23.5		19.7		20.3												21.2
78	206C1	CoC, MAX COMB TEMP	N	1	3	N			13.5		23.2		16.0												17.6

Data Summary: Cement Kilns, Mercury

2	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	82	83	86	87	88	89	90	91	92	93	94	95	96	97	100	105	
2	Hg SRE			Hg SRE (%)												Hg SRE Used for Ranking Purposes (%)																
3	Cond ID	Camp	Rating	Comments	R1	R2	R3	R4	R5	R6	Cond Avg	R1	R2	R3	R4	R5	R6	Cond Avg	R1	R2	R3	R4	R5	R6	Cond Avg							
4	Number	Number																														
55	300C13																															
56	491C1	1	NA	Hg not controlled	97.4	98.0	96.5				97.3	NA	NA	NA																	NA	
57	680C1																															
58	681C1																															
59	681C2																															
60	3029C11	1	NA	Hg not controlled	11.9	36.3	67.0				39.5	NA	NA	NA																	NA	
61	3030C1																															
62	473C1	1	NA	Hg not controlled	96.8	96.8	95.5				96.3	NA	NA	NA																	NA	
63	3031C1	1	NA	Hg not controlled	92.0	95.3	92.2	92.8			93.4	NA	NA	NA	NA										NA						NA	
64	3031C2	1	NA	Hg not controlled	35.4	10.7		85.9			35.5	NA	NA	NA	NA									NA							NA	
65	302C10	1	NA	Hg not controlled	43.9	54.7	54.7				51.1	NA	NA	NA																	NA	
66	302C12																															
67	302C3																															
68	473C1	1	NA	Hg not controlled	96.8	96.8	95.5				96.3	NA	NA	NA																	NA	
69																																
70																																
71	Shutdown or																															
72	205C10	1	NA	Hg not controlled	60.2	61.7	68.3				63.3	NA	NA	NA																	NA	
73	205C5																															
74	205C7																															
75	205C1	4	NA	Hg not controlled	12.4	-9.7	35.0				12.9	NA	NA	NA																	NA	
76	206C10	1	NA	Hg not controlled	67.1	53.9	64.1				61.8	NA	NA	NA																	NA	
77	206C5																															
78	206C1	3	NA	Hg not controlled >	44.1 >	-11.6 >	-13.0				>	11.0	NA	NA	NA																NA	

Data Summary: Cement Kilns, Mercury

2	108	109	110	111	113	114	115	116	117	118	119	120	121	122	123	124	125	138	139	140	141	142	143	144	145	146	147	164	165	
2	Hg Feedrate, Cond Avg (ug/dscm)					Hg Feedrate Total (ug/dscm)											Hg HW + Spike (W/ ND %) Feedrate (ug/dscm)													
3	HW	Spike	RM	Coal	Total	R1		R2		R3		R4		R5		R6		Cond Avg		R1		R2		R3		R4		Cond Avg		
4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
5																														
55	300C13																													
56	491C1	413.8		1,315.7	995.8		803.7	1247.9		935.8	1307.5								995.8	0.0	212	0	543	0	317	0	583	0	414	
57	680C1																													
58	681C1																													
59	681C2																													
60	3029C11	4.1	0.0	2.9	1.0	8.0		7.2	8.3	8.8									8	0.0	3	0	5	0	5			0	4	
61	3030C1																													
62	473C1	456.8				456.8	438.2	429.7		502.5									456.8	0.0	438	0	430	0	503			0	457	
63	3031C1					682.1	800.6	1042.3		421.1	464.6								682.1											
64	3031C2					199.1	108.7	327.1			161.5								199.1											
65	302C10	17.1	0.0	2.1		19.2	18.7	16.7		22.3									19.2	0.0	18	0	14	0	19			0	17	
66	302C12																													
67	302C3	49.8		631.5		681.3	100	680	100	703.8	100	660.2							100	681.3	100.0	52	100	50	100	47		0	50	
68	473C1	456.8				456.8	438.2	429.7		502.5									456.8	0.0	438	0	430	0	503			0	457	
69																														
70				2,398.6	231.1																									
71	Shutdown or																													
72	205C10	4.0	0.0	76.7	2.0	82.7		84.1	82.2	81.8									82.7											
73	205C5																													
74	205C7																													
75	205C1	9.8		46.1	1.7	33.7		32.8	33.4	34.9									33.7											
76	206C10	19.0	0.0	91.0	2.4	112.4		110.6	103.2	124.3									112.4											
77	206C5																													
78	206C1	19.7		63.0	3.2	85.9	74	92.2	76	87.1	82	78.4							77	85.9										

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Data Summary: Cement Kilns, Mercury

2	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	188	189	190	191	
Kiln ID Number	Thermal Feed Cond Avg (MMBtu/hr)					Thermal Emissions Rating			Hg HW Thermal Emiss (lb/10 ¹² Btu)																
	HW	Coal	MF	Total	Est Tot	Camp No	Rating	Rating Comments	R1	R2	R3	R4	R5	R6	Cond Avg	R1									
00C13	194.6		19.0	213.7	294.2																				
01C1	228.8		25.7	242.3	343.9	1	NA	Data in lieu	7.90	12.58	14.65											11.71		0.299	
080C1																									
081C1																									
081C2																									
029C11	273.2	496.6		772.2	1,177.9	1	NA	Normal	11.60	9.63	4.98											8.73		0.013	
030C1																									
073C1	207.5			207.5	265.1	1	NA	Data in lieu	16.09	15.01	22.64											17.91		0.495	
031C1		343.2		326.9	1,037.5																				
031C2				479.4	960.8																				
022C10	190.7			190.7	262.7	1	NA	Data in lieu	11.74	7.46	9.66											9.62		0.021	
022C12	184.3			184.3	257.8																				
022C3	165.3			165.3	141.1																			100	0.040
073C1	207.5			207.5	265.1	1	NA	Data in lieu	16.09	15.01	22.64											17.91		0.495	
05C10	208.9	100.5		309.4	437.7	1	NA	Normal	3.46	2.27	2.35											2.69		0.009	
05C5	163.0	146.3		309.3	390.6																				
05C7																									
05C1	173.0	74.2		247.2	407.7	4	NA	Normal	14.66	24.24	14.68											17.86		0.017	
06C10	361.5	221.1		582.7	749.4	1	NA	Normal	10.82	13.68	12.75											12.42		0.033	
06C5	324.3	204.7		529.0	717.2																				
06C1	252.1	206.6		458.8	622.5	3	NA	Normal	26.15	47.30	35.78											36.41		0.047	

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Data Summary: Cement Kilns, Mercury

2	192	193	194	195	196	197	198	199	200	201	204	205
2	Hg in HW (lb/10 ⁹ Btu)											
3	Cond ID	R2		R3		R4		R5		R6		Cond Avg
4	Number											
5												
55	300C13											
56	491C1	0.616		0.420		0.000						0.33
57	680C1											
58	681C1											
59	681C2											
60	3029C11	0.015		0.015								0.01
61	3030C1											
62	473C1	0.476		0.503								0.49
63	3031C1											
64	3031C2											
65	302C10	0.016		0.021								0.02
66	302C12											
67	302C3	100	0.041	100	0.031							0.04
68	473C1	0.476		0.503								0.49
69												
70												
71	Shutdown or											
72	205C10	0.006		0.007								0.01
73	205C5											
74	205C7											
75	205C1	0.022		0.023								0.02
76	206C10	0.030		0.035								0.03
77	206C5											
78	206C1	0.042		0.032								0.04