

US EPA ARCHIVE DOCUMENT

	A	B	C
1		Source Description	
2			
3		Phase I ID No.	203
4		EPA ID No.	MSD077655876
5		Facility Name	Holcim (US) Inc. (previously Holnam)
6		Facility Location	
7		City	Artesia
8		State	MS
9		Unit ID Name/No.	No. 1
10		Other Sister Facilities	
11		Number of Sister Facilities	0
12		Combustor Class	Cement Kiln (CK)
13		Combustor Type	Long, Wet
14		Combustor Characteristics	
15		Capacity (MMBtu/hr)	1584 tons/day clinker
16		Soot Blowing	
17		APCS Detailed Acronym	ESP
18		APCS General Class	ESP
19		APCS Characteristics	Minimum power limit to ESP of 119 kW, Western Precipitation ESP, 4 fields in 2 compartments, 220 SCA, 72360 ft2 plate area
20		Hazardous Wastes	Liq
21		Haz Waste Description	
22		Supplemental Fuel	Coal
23			
24		Stack Characteristics	
25		Diameter (ft)	12
26		Height (ft)	200
27		Gas Velocity (ft/sec)	12.3
28		Gas Temperature (°F)	386.7
29			
30		Permitting Status	Tier I for Hg, Ba, Sb, Ag, and Tl; Tier III for As, Be, Cd, Cr, Pb
31		HWC Burn Status (Date if Terminated)	

	B	C
1	Cond Description	
2		
3	203C10	
4		
5	Report Name/Date	Trial Burn and Recertification of Compliance Test Report, Sept 2000
6	Report Prepare	Schreiber, Yonley & Associates
7	Testing Firm	TRC Environmental Corporation
8	Testing Dates	May 1-6, 2000
9	Cond Dates	May-00
10	Condition Descr	CoC: Max comb temp, max metal and chlorine feed rate, max prod rate, min ESP power
11	Content	PM, HCl, metals (Cl2 not measured by accident)
12		
13	203C11	
14		
15	Report Name/Date	Trial Burn and Recertification of Compliance Test Report, Sept 2000
16	Report Prepare	Schreiber, Yonley & Associates
17	Testing Firm	TRC Environmental Corporation
18	Testing Dates	May 5, 2000
19	Cond Dates	May-00
20	Condition Descr	CoC: Min comb temp. max feed rate, max ESP temp
21	Content	PCDD/F, DRE
22		
23	203C1	
24		
25	Report Name/Date	BIF Certification of Compliance Report, Holnam Artesia, Mississippi, prepared by SciTech, August 19, 1993
26	Report Prepare	SciTech
27	Testing Firm	
28	Cond Descr	CoC, MAX HW FEED
29	Testing Dates	July 14-15, 1993
30	Cond Dates	Jul-93
31		
32	203C2	
33		
34	Report Name/Date	Annual Stack Test Report, Holnam Artesia, Mississippi; Stack Sampling Report, Holnam Inc., Artesia Mississippi, July 1994
35	Report Prepare	Team Environmental Services, Cemtech LP
36	Testing Firm	Team Environmental Services, Cemtech LP
37	Cond Descr	State of MS testing, ANNUAL STACK SAMPLING WITH SF6 SPIKE
38	Testing Dates	May 24, 1993
39	Cond Dates	May-94
40		
41	203C3	
42		
43	Report Name/Date	BIF Certification of Compliance Report, Holnam, Artesia MS, August 19, 1993
44	Report Prepare	Cemtech
45	Testing Firm	
46	Cond Descr	CoC, DRE TESTING FOR PERC AND TCB
47	Testing Dates	June 12-13, 1993
48	Cond Dates	Jun-93
49		
50	203C4	
51		
52	Report Name/Date	Annual Stack Test Report, Holnam Artesia, Mississippi; Stack Sampling Report, Holnam Inc., Artesia Mississippi
53	Report Prepare	Team Environmental Services, Cemtech LP
54	Testing Firm	Team Environmental Services, Cemtech LP
55	Cond Descr	State of Mississippi required annual testing, DRE TEST USING SF6
56	Testing Dates	December 1, 1993
57	Cond Dates	Dec-93
58		
59	203C5	
60		
61	Report Name/Date	Recertification of Compliance Test Report, Holnam Artesia MS, August 16, 1996
62	Report Prepare	Safety Kleen Corp and TRC Environmental
63	Testing Firm	TRC
64	Cond Descr	CoC, MAX COMB ZONE TEMP, MAX METALS/CHLORINE FEED RATES

	B	C
65	Testing Dates	June 4, 1996
66	Cond Dates	Aug-96
67		
68	203C6	
69		
70	Report Name/Date	Recertification of Compliance Test Report, Holnam Artesia MS, August 16, 1996
71	Report Prepare	Safety Kleen Corp and TRC Environmental
72	Testing Firm	TRC
73	Cond Descr	CoC, DRE DEMONSTRATION, min comb temp?
74	Testing Dates	June 5-6, 1996
75	Cond Dates	Jun-96

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions 1											
2												
3												
4	203C10	Trial Burn				R1		R2		R3		Cond Avg
5												
6	PM	E1	gr/dscf	y		0.0144		0.0188		0.182		0.017
7	HC (MHRA)	E1	ppmv	y		20.4		19.4		19.8		19.9
8	HC (RA)	E1	ppmv	y		19.9		18.9		19.2		19.3
9												
10	**ESP went offline during test run no 3, results not reported in CoC											
11												
12	NOx		ppmv	n		906.4		763.5		417.9		
13	SO2		ppmv	n		57.1		381.7		38.73		
14												
15	HCl		g/s			1.882		4.229		0.403		
16	Cl2	not measured by accident; used previous testing results to demonstrate compliance										
17												
18	Antimony		g/hr			0.254		0.07		0.116		
19	Arsenic		g/hr			0.049		0.052		0.239		
20	Barium		g/hr			3.88		4.99		9.84		
21	Beryllium		g/hr			0.014		0.013		0.028		
22	Cadmium		g/hr			0.204		0.386		0.753		
23	Chromium		g/hr			2.58		1.96		5.35		
24	Lead		g/hr			0.739		0.898		0.866		
25	Mercury		g/hr			2.49		1.74		1.8		
26	Silver		g/hr			0.024		0.112		0.245		
27	Thallium		g/hr			0.14		0.13		0.494		
28	Nickel		g/hr			63.1		116		261		
29	Selenium		g/hr			0.12		0.451		0.93		
30												
31	Sampling Train	PM, HCE1										
32	Stack Gas Flowrate		dscfm			94955		95789		97634		96126
33	O2		%			8.12		7.88		9.53		8.5
34	Moisture		%			35.9		37.2		33		35.4
35	Temperature		°F			428		387		409		408
36												
37	Sampling Train	Metals E2										
38	Stack Gas Flowrate		dscfm			86507		88023		87816		87449
39	O2		%			8.12		7.88		9.53		8.5
40	Moisture		%			36.3		37.7		35.3		36.4
41	Temperature		°F			423		383		400		402
42												
43	HCl	E1	ppmv	y		30.1		65.8		7.0		34.3
44	Cl2	E1	ppmv	y		1.0		1.0		1.0		1.0
45	Total Chlorine	E1	ppmv	y		32.09		67.80		9.04		36.3
46												
47	Antimony	E2	ug/dscm	y		1.9		0.5		0.9		1.1
48	Arsenic	E2	ug/dscm	y		0.4		0.4		2.0		0.9
49	Barium	E2	ug/dscm	y		28.7		35.6		80.5		48.3
50	Beryllium	E2	ug/dscm	y		0.1		0.1		0.2		0.1
51	Cadmium	E2	ug/dscm	y		1.5		2.8		6.2		3.5
52	Chromium	E2	ug/dscm	y		19.1		14.0		43.8		25.6
53	Lead	E2	ug/dscm	y		5.5		6.4		7.1		6.3
54	Mercury	E2	ug/dscm	y		18.4		12.4		14.7		15.2
55	Silver	E2	ug/dscm	y		0.2		0.8		2.0		1.0
56	Thallium	E2	ug/dscm	y		1.0		0.9		4.0		2.0
57	Nickel	E2	ug/dscm	y		466.9		828.2		2136.5		1143.9
58	Selenium	E2	ug/dscm	y		0.9		3.2		7.6		3.9
59												
60	SVM	E2	ug/dscm	y		7.0		9.2		13.3		9.8
61	LVM	E2	ug/dscm	y		19.6		14.5		46.0		26.7
62												
63	203C11					R1		R2		R3		Cond Avg
64												
65	CO (RA)	E1	ppmv	y		384		371		397		384.0
66	CO (MHRA)	E1	ppmv	y		409		388		414		403.7
67	HC (RA)	E1	ppmv	y		18.7		19		19		18.9
68	HC (MHRA)	E1	ppmv	y		19.4		19.4		19.4		19.4
69												
70	NOx		ppmv	n		881.9		916.9		626.2		
71	SO2		ppmv	n		204.5		181.3		83.4		

	B	C	D	E	F	G	H	I	J	K	L	M
72												
73	POHC DRE	Trichlorobenzene										
74	POHC Feedrate	g/hr				67977		67973		67977		
75	Emissions Rate	g/hr				4.31		4.22		4.13		
76	DRE	%				99.9937		99.9938		99.9938		
77												
78	POHC DRE	Perchloroethylene PERC										
79	POHC Feedrate	g/hr				92931		92931		115545		
80	Emissions Rate	E1 g/hr			nd	1.04	nd	0.86	nd	1		
81	DRE	E1 %			>	99.9989	>	99.9991	>	99.9991		
82												
83	POHC DRE	SF6 Sulfur Hexafluoride										
84	POHC Feedrate	g/hr				9271		7412		7511		
85	Emissions Rate	E1 g/hr				0.055		0.012		0.0078		
86	DRE	E1 %				99.9998		99.9997		99.9998		
87												
88	Sampling Train	Method E1										
89	Stack Gas Flowrate	dscfm				100862		93362		93540		95921.3
90	O2	%				8		7.89		8.21		8.0
91	Moisture	%				35.6		35.8		34.9		35.4
92	Temperature	°F				429		421		433		427.7
93												
94	Sampling Train	Method E2										
95	Stack Gas Flowrate	dscfm				89170		87337		87081		87862.7
96	O2	%				8		7.89		8.21		8.0
97	Moisture	%				36		36.3		35.9		36.1
98	Temperature	°F				428		422		434		428.0

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Stack Gas Emissions 2														
2															
3															
4	203C1					R1	R2	R3	Cond Avg						
5															
6	PM	E1	gr/dscf	y		0.01367	0.01729	0.01058	0.01385						
7	CO (MHRA)	E1	ppmv	y		312.00	276.00	312.00	300.0						
8	CO (RA)	E1	ppmv	y		273.00	270.00	291.00	278.0						
9	HC (MHRA)	E1	ppmv	y		19.80	18.50	19.00	19.1						
10	HC (RA)	E1	ppmv	y		18.60	18.40	18.50	18.5						
11	HCl	E1	ppmv	y		130.68	114.12	97.80	114.2						
12	Cl2	E1	ppmv	y		0.79	8.40 nd	0.67	3.3						
13	Total Chlorine	E1	ppmv	y		132.27	130.92	99.14	120.8						
14															
15	Antimony	E2	ug/dscm	y	nd	12.58 nd	11.37 nd	12.18	100	12.0					
16	Arsenic	E2	ug/dscm	y		1.50	11.24	1.13	4.6						
17	Barium	E2	ug/dscm	y		7.40	4.52	9.98	7.3						
18	Beryllium	E2	ug/dscm	y	nd	0.13 nd	0.12 nd	0.12	100	0.1					
19	Cadmium	E2	ug/dscm	y		37.92	47.33	41.72	42.3						
20	Chromium	E2	ug/dscm	y		12.64	19.53	14.52	15.6						
21	Lead	E2	ug/dscm	y		424.31	570.02	515.88	503.4						
22	Mercury	E2	ug/dscm	y		18.18	7.27	20.97	15.5						
23	Silver	E2	ug/dscm	y	nd	6.56 nd	5.91 nd	6.34	100	6.3					
24	Thallium	E2	ug/dscm	y		1.97 nd	45.50 nd	48.77	100	32.1					
25	SVM	E2	ug/dscm	y		462.22	617.35	557.60	545.72						
26	LVM	E2	ug/dscm	y	0.9	14.27	0.37	30.89	0.8	15.77	0.6	20.31			
27															
28	Sampling Train	Particulate	E1												
29	Stack Gas Flowrate	dscfm			108068	105638	105710								
30	O2	%			8.4	7.4	8.3								
31	Moisture	%			33	31.97	31.64								
32	Temperature	°F			495.8	536.6	528.9								
33															
34	Sampling Train	Metals	E2												
35	Stack Gas Flowrate	dscfm			98573	105103	104398								
36	O2	%			8.4	7.4	8.3								
37	Moisture	%													
38	Temperature	°F													
39															
40	Sampling Train	Dioxin & Fur	E3												
41	Stack Gas Flowrate	dscfm			104083	101244	98530								
42	O2	%			8.4	7.4	8.3								
43	Moisture	%			33	31.1	31.04								
44	Temperature	°F			470.3	530.4	522.4								
45															
46	203C2					R1	R2	R3	Cond Avg						
47															
48	PM	E1	gr/dscf	y		0.01290	0.02030	0.01960	0.01760						
49	HCl	E1	ppmv	y		41.45	44.44	21.60	35.83						
50	Arsenic	E2	ug/dscm	y	nd	2.55 nd	2.58 nd	2.61	100	2.58					
51	Beryllium	E2	ug/dscm	y	nd	0.07 nd	0.07 nd	0.07	100	0.07					
52	Cadmium	E2	ug/dscm	y		1.73	1.29	0.99	1.34						
53	Chromium	E2	ug/dscm	y		32.69	5.17	5.64	14.50						
54	Lead	E2	ug/dscm	y		89.76	51.65	37.08	59.50						
55	Mercury	E2	ug/dscm	y		28.00	24.23	50.81	34.34						
56	SVM	E2	ug/dscm	y		91.49	52.95	38.07	60.83						
57	LVM	E2	ug/dscm	y	7.4	35.31	33.9	7.82	32	8.32	15.4	17.15			
58															
59	Sampling Train	Particulate	E1												
60	Stack Gas Flowrate	dscfm			100109	97662	98118								
61	O2	%			8.6	8.5	8.5								
62	Moisture	%			31.54	31.55	31.11								
63	Temperature	°F			466.3	477.3	489.1								
64															
65	Sampling Train	Metals	E2												
66	Stack Gas Flowrate	dscfm			102628	101742	104595								
67	O2	%			8	8.3	8.5								
68	Moisture	%			32.07	31.49	32.05								
69	Temperature	°F			476.5	495.2	500								
70															
71	Sulfur Hexafluoride	E1	%			99.99998	99.99998	99.99998							

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
72															
73	203C3					R1		R2		R3		Cond Avg			
74															
75	Sampling Train	SVOC	E1												
76	Stack Gas Flowrate		dscfm			115709		118327		112853					
77	O2		%			11.2		11.6		11.8					
78	Moisture		%			30.51		29.02		29.15					
79	Temperature		°F			455.3		443		455.7					
80															
81	1,2,4-Trichlorobenzene	E1	%			99.9972		99.9925		99.9943					
82	Tetrachloroethene	E1	%			99.9955		99.9924		99.9939					
83															
84	203C4					R1		R2		R3		Cond Avg			
85															
86	PM	E1	gr/dscf	y		0.01720		0.01340		0.01770		0.01610			
87	HCl		g/hr	n		39827		40892		36583					
88	Cl2		g/hr	n		286		152		113					
89	HCl		ug/dscm	n		188848		200505		178176					
90	Cl2		ug/dscm	n		1357.5		744.8		552.3					
91	HCl	E1	ppmv	y		128.00		132.51		117.75		126.1			
92	Cl2	E1	ppmv	y		0.46		0.25		0.19		0.3			
93	Total Chlorine	E1	ppmv	y		128.92		133.02		118.13		126.7			
94	Beryllium	E1	ug/dscm	y	nd	0.08	nd	0.07	nd	0.08	100	0.1			
95	Cadmium	E1	ug/dscm	y		2.53		2.58		2.58		2.6			
96	Chromium	E1	ug/dscm	y		1.99		2.01		2.52		2.2			
97	Lead	E1	ug/dscm	y		63.36		68.75		66.85		66.3			
98	SVM	E1	ug/dscm	y		65.89		71.33		69.43		68.89			
99	LVM	E1	ug/dscm	y	3.8	2.07	3.58	2.08	2.9	2.60	3.4	2.25			
100															
101	Sampling Train	Particulate	E1												
102	Stack Gas Flowrate		dscfm			133756		129348		133296					
103	O2		%			8		8		8.3					
104	Moisture		%			28.43		34.19		31.26					
105	Temperature		°F			457.7		466.8		460.4					
106															
107	Sulfur Hexafluoride	E1	%			99.99989		99.9999		99.99994					
108															
109	203C5					R1		R2		R3		Cond Avg			
110															
111	PM	E1	gr/dscf	y		0.01270		0.00680		0.00820		0.00923			
112	CO (RA)	E1	ppmv	y		242.00		238.00		230.00		236.7			
113	HC (MHRA)	E1	ppmv	y		18.90		18.50		19.40		18.9			
114	HC (RA)	E1	ppmv	y		17.70		16.70		17.90		17.4			
115	HCl	E1	ppmv	y		144.60		113.96		118.74		125.8			
116	Cl2	E1	ppmv	y	nd	2.70	nd	2.70	nd	2.10	100	2.5			
117	Total Chlorine	E1	ppmv	y	3.6	150.01	4.52	119.36	3.4	122.94	3.83	130.8			
118	Antimony	E2	ug/dscm	y	nd	1.15	nd	1.23	nd	1.20	100	1.2			
119	Arsenic	E2	ug/dscm	y	nd	2.87	nd	3.07	nd	2.99	100	3.0			
120	Barium	E2	ug/dscm	y	nd	1.15	nd	1.23	nd	1.20	100	1.2			
121	Beryllium	E2	ug/dscm	y	nd	0.03	nd	0.03	nd	0.03	100	0.0			
122	Cadmium	E2	ug/dscm	y	nd	0.03	nd	0.06	nd	0.10	100	0.1			
123	Chromium	E2	ug/dscm	y	nd	0.23	nd	0.25	nd	0.24	100	0.2			
124	Chromium (Hex)	E3	ug/dscm	y	nd	0.49	nd	0.62	nd	0.80	100	0.6			
125	Lead	E2	ug/dscm	y	nd	1.15	nd	1.23	nd	1.20	100	1.2			
126	Mercury	E2	ug/dscm	y	nd	16.29	nd	7.46	nd	5.09	100	9.6			
127	Silver	E2	ug/dscm	y	nd	1.15	nd	1.23	nd	1.20	100	1.2			
128	Thallium	E2	ug/dscm	y	nd	1.15	nd	1.23	nd	1.20	100	1.2			
129	SVM	E2	ug/dscm	y		1.18	95.4	1.29	93	1.29	64.5	1.3			
130	LVM	E2	ug/dscm	y		3.13		3.34		3.26	0	3.2			
131															
132	Sampling Train	Particulate	E1												
133	Stack Gas Flowrate		dscfm			119452		114846		120503					
134	O2		%			7.96		8.02		8.22					
135	Moisture		%			28.5		27.1		29.6					
136	Temperature		°F			383.42		392.5		384.92					
137															
138	Sampling Train	Metals	E2												
139	Stack Gas Flowrate		dscfm			122281		112928		113123					
140	O2		%			8.1		8.29		8.05					
141	Moisture		%			29.8		30.8		31.3					
142	Temperature		°F			389.17		381		384.08					

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
143															
144	Sampling Train	Cr (Hex)	E3												
145	Stack Gas Flowrate		dscfm			128795		111654		112678					
146	O2		%			8.1		8.29		8.05					
147	Moisture		%			32.9		33		32.9					
148	Temperature		°F			370.17		385.58		400.67					
149															
150	Sampling Train	Dioxin & Fur	E4												
151	Stack Gas Flowrate		dscfm			126816		116713		115944					
152	O2		%			8.11		8.19		8.08					
153	Moisture		%			31.1		30.8		31.7					
154	Temperature		°F			388.75		388.83		391.83					
155															
156	203C6					R1		R2		R3		Cond Avg			
157															
158	PM	E1	gr/dscf			0.02180		0.00910		0.01360		0.01483			
159	CO (MHRA)	E1	ppmv			330.00		409.00		518.00		419.0			
160	CO (RA)	E1	ppmv			275.00		324.00		356.00		318.3			
161	HC (MHRA)	E1	ppmv			19.70		19.60		19.50		19.6			
162	HC (RA)	E1	ppmv			18.30		18.20		17.90		18.1			
163															
164	Sampling Train	Particulate	E1												
165	Stack Gas Flowrate		dscfm			119409		114060		114702					
166	O2		%			9.01		8.71		9.21					
167	Moisture		%			30.9		30.6		31					
168	Temperature		°F			376.17		395.33		390.17					
169															
170	1,2,4-Trichlorobenzene	E1	%			99.99955		99.99954		99.99949					
171	Sulfur Hexafluoride	E1	%			99.99997		99.999971		99.999267					
172	Tetrachloroethene	E1	%			99.99982		99.99982		99.99984					

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z		
1	Feedstreams 1																										
2																											
3	203C10	CoC			R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2		R3		
4																											
5	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2		F3		F3		F3		
6	Feed Class				Coal		Coal		Coal		Coal		Raw Material		Raw Material		Raw Material		Raw Material		Liq HW		Liq HW		Liq HW		
7	Feed Class 2				Coal		Coal		Coal		Coal		RM		RM		RM		RM		HW		HW		HW		
8	Feedstream Description				Coal		Coal		Coal		Coal		Raw Matl		Raw Matl		Raw Matl		Raw Matl		Haz Waste		Haz Waste		Haz Waste		
9	Feed Rate				g/hr		3,084,000		2,268,000		8,981,000		4,777,667		95,760,000		94,800,000		96,880,000		95,813,333		9,536,000		9,781,000		
0	Heating Value				Btu/lb		11,718		12,011		11,222		11,454										13,521		13,229		
1	Thermal Feedrate				MMBtu/hr		79.6		60.0		222.0		120.5		0.0		0.0		0.0		0.00		284		285		
2	Chlorine				g/hr		752.5		648.6		2,245.3		4,558.2		14,788.8		18,407.2					32,708.5		38,830.6		31,888.1	
3	Antimony				g/hr	nd	185.0	nd	136.1	nd	538.9		517.1		445.6		629.7					60.1		58.7		233.1	
4	Arsenic				g/hr		36.4		81.6		190.4		172.4		208.6		222.8					129.7		131.1		79.3	
5	Barium				g/hr		77.4		46.5		246.1		7,459.7		7,356.5		7,372.6					5,607.2		6,034.9		7,198.1	
6	Beryllium				g/hr	nd	15.4	nd	11.3	nd	10.8		95.8	nd	94.8	nd	96.9			nd		4.8	nd	4.9	nd	4.7	
7	Cadmium				g/hr	nd	15.4	nd	11.3	nd	44.9		95.8	nd	94.8	nd	96.9					19.1		20.5		20.5	
8	Chromium				g/hr		30.8		22.0		94.3		1,264.0		1,308.2		1,327.3					728.6		687.6		608.9	
9	Lead				g/hr		15.4		16.8		67.4		210.7		170.6		174.4					1,144.3		1,075.9		1,398.6	
0	Mercury				g/hr		0.3		1.4		0.9		0.7		0.8		1.0					1.0		1.3		4.4	
1	Silver				g/hr	nd	30.8	nd	22.7	nd	89.8		191.5	nd	189.6	nd	193.8					15.3		16.6		15.9	
2	Thallium				g/hr	nd	30.8	nd	22.7	nd	89.8		nd	383.0		104.3		41.7				47.7	nd	48.9	nd	46.6	
3																											
4	Stack Gas Flowrate				dscfm		86507		88023		87816		87449		86507		88023		87816		87449		86507		88023		87816
5	Oxygen				%		8.12		7.88		9.53		8.51		8.12		7.88		9.53		8.51		8.12		7.88		9.53
6																											
7	<i>Feedrate MTEC Calculations</i>																										
8	Chlorine				ug/dscm		5,568		4,631		18,379		9,526		33,730		105,583		150,675		96,663		242,038		277,226		261,025
9	Antimony				ug/dscm	100	1,369	100	972	100	4,411	100	2,251		3,826		3,181		5,155		4,054		445		419		1,908
0	Arsenic				ug/dscm		269		583		1,559		804		1,275		1,489		1,824		1,529		960		936		649
1	Barium				ug/dscm		573		332		2,014		973		55,201		52,521		60,349		56,024		41,492		43,085		58,921
2	Beryllium				ug/dscm	100	114	100	81	100	88	100	94	100	709	100	677	100	793	100	726	100	35	100	35	100	38
3	Cadmium				ug/dscm	100	114	100	81	100	368	100	188	100	709	100	677	100	793	100	726		141		147		168
4	Chromium				ug/dscm		228		157		772		386		9,354		9,340		10,864		9,853		5,391		4,909		4,984
5	Lead				ug/dscm		114		120		551		262		1,559		1,218		1,427		1,402		8,468		7,681		11,448
6	Mercury				ug/dscm		3		10		7		7		5		6		8		6		8		9		36
7	Silver				ug/dscm	100	228	100	162	100	735	100	375		1,417		1,354		1,586		1,452		113		119		130
8	Thallium				ug/dscm	100	228	100	162	100	735	100	375	100	2,834	100	744	100	341	100	1,307		353	100	349	100	382
9																											
0	SVM				ug/dscm	50	228	40	201	40	919	42	449	31	2,268	36	1,895	36	2,220	34	2,128		8,609		7,828		11,616
1	LVM				ug/dscm	19	612	10	821	15	2,419	15	1,284	6	11,338	6	11,506	6	13,481	6	12,108	1	6,386	1	5,880	1	5,671
2																											
3	203C11	CoC			R1		R2		R3		Cond Avg		R1		R2		R3		Cond Avg		R1		R2		R3		
4																											
5	Feedstream Number				F1		F1		F1		F1		F2		F2		F2		F2		F3		F3		F3		
6	Feed Class				Coal		Coal		Coal		Coal		Raw Material		Raw Material		Raw Material		Raw Material		Liq HW		Liq HW		Liq HW		
7	Feed Class 2				Coal		Coal		Coal		Coal		RM		RM		RM		RM		HW		HW		HW		
8	Feedstream Description				Coal		Coal		Coal		Coal		Raw Matl		Raw Matl		Raw Matl		Raw Matl		Haz Waste		Haz Waste		Haz Waste		
9	Feed Rate				g/hr		1,360,000		998,000		816,000		1,058,000		89,500,000		90,100,000		87,500,000		89,033,333		11,100,000		11,100,000		11,200,000
0	Thermal Feedrate				MMBtu/hr		36.3		22.4		18		25.6		0		0.0		0.0		0.0		305		309		286
1																											
2	Stack Gas Flowrate				dscfm																						
3	Oxygen				%																						

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	Feedstreams 2																			
2																				
3																				
4	203C1				R1		R2		R3		R1		R2		R3		R1		R2	
5																				
6	Feedstream Number				F1		F1		F1		F2		F2		F2		F3		F3	
7	Feed Class				Coal		Coal		Coal		Spike		Spike		Spike		Raw Material		Raw Material	
8	Feed Class 2				Coal		Coal		Coal								RM		RM	
9	Feedstream Description				Coal		Coal		Coal		Spiked waste		Spiked waste		Spiked waste		Raw Material		Raw Material	
0	Feed Rate	lb/hr			9,200		11,000		7,300		14,000		14,400		14,000		197,000		183,800	
1	Heating Value	Btu/lb			11,739		12,000		12,000		0		0		0					
2	Thermal Feedrate	MMBtu/hr			108		135		111		165		165		170					
3	Chlorine	lb/hr	nd		2.76	nd	3.3		2.41		556		424		490	nd	0.10	nd	0.09	nd
4	Antimony	lb/hr	nd		0.028	nd	0.033	nd	0.022		0.63		1.44		0.05	nd	0.59	nd	0.55	nd
5	Arsenic	lb/hr			0.044		0.147		0.088		0.34		0.42		0.31		0.32		0.42	
6	Barium	lb/hr			0.728		0.816		0.212		0.41		0.76		0.63		4.14		6.62	
7	Beryllium	lb/hr			0.008		0.009		0.007		0.02		0.02		0.02		0.02		0.02	
8	Cadmium	lb/hr			0.006		0.008		0.004		4.19		4.29		3.87		0.08		0.07	
9	Chromium	lb/hr			0.059		0.066		0.047		13.00		13.10		11.10		0.71		0.63	
0	Lead	lb/hr			0.088		0.089		0.073		56.80		57.10		49.30		1.32		0.83	
1	Mercury	lb/hr			0.002		0.002		0.002		0.01		0.00		0.00	nd	0.01	nd	0.01	nd
2	Silver	lb/hr	nd		0.006	nd	0.008	nd	0.005	nd	0.04	nd	0.04	nd	0.04	nd	0.14	nd	0.13	nd
3	Thallium	lb/hr	nd		0.005	nd	0.006	nd	0.004	nd	0.01	nd	0.01	nd	0.01	nd	0.10	nd	0.09	nd
4																				
5	Stack Gas Flowrate	dscfm			98573		105103		104398		98573		105103		104398		98573		105103	
6	Oxygen	%			8.4		7.4		8.3		8.4		7.4		8.3		8.4		7.4	
7																				
8	<i>Feedrate MTEC Calculations</i>																			
9	Chlorine	ug/dscm	100		8,318	100	8,642		6,804		1,675,685		1,110,345		1,383,396	100	297	100	241	100
0	Antimony	ug/dscm	100		83	100	86	100	62		1,902		3,771		134	100	1,781	100	1,444	100
1	Arsenic	ug/dscm			133		385		248		1,013		1,095		870		949		1,108	
2	Barium	ug/dscm			2,194		2,137		599		1,224		1,998		1,781		12,477		17,336	
3	Beryllium	ug/dscm			25		23		19		68		42		55		71		58	
4	Cadmium	ug/dscm			19		20		11		12,628		11,234		10,926		238		193	
5	Chromium	ug/dscm			178		173		134		39,180		34,305		31,338		2,140		1,637	
6	Lead	ug/dscm			266		234		206		171,185		149,530		139,187		3,978		2,166	
7	Mercury	ug/dscm			6		5		5		20		4		9	100	30	100	24	100
8	Silver	ug/dscm	100		19	100	20	100	14	100	127	100	113	100	119	100	416	100	337	100
9	Thallium	ug/dscm	100		14	100	14	100	10	100	21	100	19	100	20	100	297	100	241	100
0	SVM	ug/dscm			286		254		217		183,813		160,764		150,113		4,216		2,358	
1	LVM	ug/dscm			336		581		400		40,260		35,442		32,263		3,160		2,802	
2																				
3	203C2																			
4																				
5	Feedrate																			
6	Heating value																			
7																				
8	203C3																			
9																				
0	Feedrate																			
1	Heating value																			
2																				
3	203C4																			
4																				
5	Feedrate																			
6	Heating value																			
7																				
8	203C5				R1		R2		R3		R1		R2		R3		R1		R2	
9																				
0	Feedstream Number				F1		F1		F1		F2		F2		F2		F3		F3	

	B	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	
1	Feedstreams 2																						
2																							
3																							
4	203C1	R3		R1		R2		R3		R1		R2		R3		R1		R2		R3		Cond Avg	
5																							
6	Feedstream Number	F3		F4		F4		F4		F4		F5		F5		F5		F5		F5		F5	
7	Feed Class	Raw Material		Spike		Spike		Spike		Spike		Total		Total		Total		Total		Total		Total	
8	Feed Class 2	RM								Spike		Spike		Spike		Total		Total		Total		Total	
9	Feedstream Description	Raw Material		Metal spike		Metal spike		Metal spike								Total		Total		Total		Total	
0	Feed Rate	197,600		0		0		0															
1	Heating Value			0		0		0															
2	Thermal Feedrate									165		165		170		273		300		281		285	
3	Chlorine	0.10																					
4	Antimony	0.59																					
5	Arsenic	0.46		0.62		0.62		0.62															
6	Barium	7.32																					
7	Beryllium	0.02		0.09		0.09		0.09															
8	Cadmium	0.14																					
9	Chromium	1.66		3.4		3.4		3.4															
0	Lead	1.21																					
1	Mercury	0.01																					
2	Silver	0.14																					
3	Thallium	0.10																					
4																							
5	Stack Gas Flowrate	104398		98573		105103		104398															
6	Oxygen	8.3		8.4		7.4		8.3															
7																							
8	<i>Feedrate MTEC Calcula</i>																						
9	Chlorine	279		0		0		0		1,675,685		1,110,345		#####	0	1,684,300		0		1,119,228		0	
0	Antimony	1,674		0		0		0		1,902		3,771		134	50	3,766		29		5,301		95	
1	Arsenic	1,285		1,854		1,611		1,736		2,866		2,705		2,606		3,948				4,198		4,138	
2	Barium	20,666		0		0		0		1,224		1,998		1,781		15,895				21,471		23,046	
3	Beryllium	67		266		231		249		334		273		304		430				353		390	
4	Cadmium	390		0		0		0		12,628		11,234		10,926		12,885				11,447		11,326	
5	Chromium	4,687		10,247		8,904		9,599		49,427		43,209		40,937		51,744				45,019		45,758	
6	Lead	3,416		0		0		0		171,185		149,530		139,187		175,430				151,930		142,809	
7	Mercury	28		0		0		0		20		4		9	53	56		72		33		66	
8	Silver	391		0		0		0		100		127	100	113	100	119		100		562	100	470	100
9	Thallium	279		0		0		0		100		21	100	19	100	20		100		332	100	274	100
0	SVM	3,806		0		0		0		183,813		160,764		150,113		188,315				163,377		154,135	
1	LVM	6,038		12,366		10,745		11,584		52,626		46,187		43,847		56,122				49,570		50,286	
2																							
3	203C2																						
4																							
5	Feedrate																						
6	Heating value																						
7																							
8	203C3																						
9																							
0	Feedrate																						
1	Heating value																						
2																							
3	203C4																						
4																							
5	Feedrate																						
6	Heating value																						
7																							
8	203C5	R3		R1		R2		R3		Cond Avg													
9																							
0	Feedstream Number	F3		F4		F4		F4		F4		F4		F4		F4		F4		F4		F4	

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	Feed Class				Coal		Coal		Coal		Spike		Spike		Spike		Raw Material		Raw Material	
2	Feed Class 2				Coal		Coal		Coal		Spike		Spike		Spike		RM		RM	
3	Feedstream Description				Coal		Coal		Coal		Spiked waste		Spiked waste		Spiked waste		Raw Material		Raw Material	
4	Feed Rate	lb/hr			16,226		16,469		15,432		10,406		11,751		12,853		189,377		189,818	
5	Heating Value	Btu/lb			12,098		11,442		11,594		15,568		13,786		12,604					
6	Thermal Feedrate	MMBtu/hr			196		188		179		162		162		162					
7	Chlorine	lb/hr		nd	32.4		16.5	nd	15.4		242.7		246.6		310.0		946.8		569.7	nd
8	Arsenic	lb/hr			0.2		0.1		0.1		1.3		2.1		1.9		0.8		1.1	
9	Beryllium	lb/hr			0.0		0.0		0.0		0.4		0.4		0.5		0.1		0.1	
0	Cadmium	lb/hr		nd	0.0		0.0	nd	0.0		3.9		5.9		5.4	nd	0.0	nd	0.0	nd
1	Chromium	lb/hr			0.3		0.4		0.2		23.5		22.0		23.2		3.2		3.6	
2	Lead	lb/hr			0.1		0.2		0.1		21.1		27.6		25.3		0.2		0.1	
3																				
4	Stack Gas Flowrate	dscfm			122281		112928		113123		122281		112928		113123		122281		112928	
5	Oxygen	%			8.1		8.29		8.05		8.1		8.29		8.05		8.1		8.29	
6																				
7	<i>Feedrate MTEC Calculations</i>																			
8	Chlorine	ug/dscm			77,003	100	42,953	100	39,427		575,995		643,080		792,090		2,246,783		1,485,804	100
9	Arsenic	ug/dscm			462		348		367		3,186		5,451		4,794		1,978		2,771	
0	Beryllium	ug/dscm			58		52		59		993		1,052		1,387		126		159	
1	Cadmium	ug/dscm			9	100	7	100	7		9,260		15,432		13,762	100	76	100	84	100
2	Chromium	ug/dscm			731		945		513		55,810		57,282		59,205		7,638		9,412	
3	Lead	ug/dscm			277		558		256		50,102		71,863		64,607		359		297	
4	SVM	ug/dscm			286	1	566	3	263		59,362		87,294		78,369	19	398	25	339	22
5	LVM	ug/dscm			1,251		1,344		938		59,989		63,784		65,386		9,742		12,342	
6																				
7																				
8	203C6				R1		R2		R3		Cond Avg									
9																				
0	Feedstream Number				1		1		1		1		1							
1	Feed Class				Coal		Coal		Coal		Coal		Coal							
2	Feed Rate				11508		11045		10009		10854									
3	Heating Value				12339		12041		12189		12190									

	B	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	
1	Feed Class	Raw Material		Total		Total		Total		Total													
2	Feed Class 2	RM		Total		Total		Total		Total													
3	Feedstream Description	Raw Material		Total		Total		Total		Total													
4	Feed Rate	192,464																					
5	Heating Value																						
6	Thermal Feedrate			358		350		341		350													
7	Chlorine	192.5																					
8	Arsenic	0.8																					
9	Beryllium	0.1																					
0	Cadmium	0.0																					
1	Chromium	3.8																					
2	Lead	0.1																					
3																							
4	Stack Gas Flowrate	113123																					
5	Oxygen	8.05																					
6																							
7	<i>Feedrate MTEC Calcula</i>																						
8	Chlorine	491,851		2,899,781	2	2,171,837	40	1,323,368	54	2,131,662													
9	Arsenic	2,112		5,625		8,570		7,273		7,156													
0	Beryllium	172		1,177		1,262		1,618		1,352													
1	Cadmium	84	1	9,345	1	15,523	1	13,852	25	12,907													
2	Chromium	9,836		64,179		67,639		69,553		67,124													
3	Lead	344		50,739		72,718		65,208		62,888													
4	SVM	386	0	60,046	0	88,199	0	79,018	0	75,754													
5	LVM	12,120		70,981		77,470		78,445		75,632													
6																							
7																							
8	203C6																						
9																							
0	Feedstream Number																						
1	Feed Class																						
2	Feed Rate																						
3	Heating Value																						

	B	C	D	E	F	G
1	Process Information 1					
2						
3	203C10		1	2	3	Avg
4						
5	MaxCombustion Cham Temp F			3,022	3,014	3,018
6	Min ESP Power kW		130	122	118	123
7						
8	203C11		4	5	6	Avg
9						
10	Min Combustion Cham Temp F		2,344	2,395	2,308	2,349
11	Max ESP Inlet Temp (RA) F		483	477	501	487
12	Max ESP Inlet Temp (MHRA) F		499	490	514	501

	C	D	E	F	G
1	Process Information 2				
2			R1	R2	R3
3	203C1				
4					
5	Combustion Temperature		2,731	2,770	2,791
6	ESP Temperature	F	355	422	373
7	ESP Power	kVA	140	142	141
8					
9	203C3				
10					
11	Combustion Temperature	F	2,448	2,441	2,418
12					
13	203C5				
14					
15	Combustion Temperature	F	2,718	2,728	2,672
16	ESP Temperature	F	489	481	483
17					
18	203C6				
19					
20	Combustion Temperature	F	2,318	2,595	2,545

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:	Holnam, Artesia, MS															
4	Condition ID:	203C11															
5	Condition/Test Date:	CoC, minimum combustion chamber temperature															
6																	
7		I-TEF	Run 4				Run 5				Run 6						
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	
10	Detected in sample volume (ng)																
11	2,3,7,8-TCDD	1	0.439	0.4	0.4	0.4	0.452	0.5	0.5	0.5	0.507	0.5	0.5	0.5	0.5	0.5	
12	Total TCDD	0															
13	1,2,3,7,8-PCDD	0.5	1.416	0.7	1.4	0.7	1.534	0.8	1.5	0.8	3.161	1.6	3.2	1.6	3.2	1.6	
14	Total PCDD	0															
15	1,2,3,4,7,8-HxCDD	0.1	2.221	0.2	2.2	0.2	2.249	0.2	2.2	0.2	4.934	0.5	4.9	0.5	4.9	0.5	
16	1,2,3,6,7,8-HxCDD	0.1	5.932	0.6	5.9	0.6	7.021	0.7	7.0	0.7	18.332	1.8	18.3	1.8	18.3	1.8	
17	1,2,3,7,8,9-HxCDD	0.1	2.624	0.3	2.6	0.3	3.404	0.3	3.4	0.3	8.729	0.9	8.7	0.9	8.7	0.9	
18	Total HxCDD	0															
19	1,2,3,4,6,7,8-HpCDD	0.01	38.172	0.4	38.2	0.4	48.13	0.5	48.1	0.5	122.97	1.2	123.0	1.2	123.0	1.2	
20	Total HpCDD	0															
21	OCDD	0.001	6.398	0.0	6.4	0.0	9.94	0.0	9.9	0.0	23.89	0.0	23.9	0.0	23.9	0.0	
22	2,3,7,8-TCDF	0.1	2.221	0.2	2.2	0.2	2.326	0.2	2.3	0.2	3.415	0.3	3.4	0.3	3.4	0.3	
23	Total TCDF	0															
24	1,2,3,7,8-PCDF	0.05	1.82	0.1	1.8	0.1	2.034	0.1	2.0	0.1	3.86	0.2	3.9	0.2	3.9	0.2	
25	2,3,4,7,8-PCDF	0.5	4.23	2.1	4.2	2.1	5.18	2.6	5.2	2.6	8.64	4.3	8.6	4.3	8.6	4.3	
26	Total PCDF	0															
27	1,2,3,4,7,8-HxCDF	0.1	1.318	0.1	1.3	0.1	1.835	0.2	1.8	0.2	4.97	0.5	5.0	0.5	5.0	0.5	
28	1,2,3,6,7,8-HxCDF	0.1	1.114	0.1	1.1	0.1	1.534	0.2	1.5	0.2	3.473	0.3	3.5	0.3	3.5	0.3	
29	2,3,4,6,7,8-HxCDF	0.1	1.215	0.1	1.2	0.1	1.339	0.1	1.3	0.1	3.59	0.4	3.6	0.4	3.6	0.4	
30	1,2,3,7,8,9-HxCDF	0.1	0.253	0.0	0.3	0.0	0.319	0.0	0.3	0.0	0.782	0.1	0.8	0.1	0.8	0.1	
31	Total HxCDF	0															
32	1,2,3,4,6,7,8-HpCDF	0.01	0.819	0.0	0.8	0.0	1.335	0.0	1.3	0.0	2.886	0.0	2.9	0.0	2.9	0.0	
33	1,2,3,4,7,8,9-HpCDF	0.01	0.249	0.0	0.2	0.0	0.426	0.0	0.4	0.0	1.017	0.0	1.0	0.0	1.0	0.0	
34	Total HpCDF	0															
35	OCDF	0.001	0.143	0.0	0.1	0.0	0.282	0.0	0.3	0.0	0.503	0.0	0.5	0.0	0.5	0.0	
36																	
37	Gas sample volume (dscf)			116.40	116.40	116.40		116.04	116.04	116.04			116.61	116.61	116.61		
38	O2 (%)			8.00	8.00	8.00		7.9	7.9	7.9			8.20	8.20	8.20		
39																	
40	PCDD/PCDF (ng in sample)			5.44		5.44		6.42		6.42			12.7		12.7		
41	PCDD/PCDF (ng/dscm @ 7% O ₂)	0.0		1.78		1.78	0.0	2.09		2.09	0.0		4.21		4.21		
42																	
43	TEQ Cond Avg		2.69	ng TEQ/dscm													

	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	203C1	I-TEF			R1				R2				R3	
2		Wght Fact		Total	Total	TEQ		Total	Total	TEQ		Total	Total	TEQ
3	ng/dscm			Full ND	1/2 ND	1/2 ND		Full ND	1/2 ND	1/2 ND		Full ND	1/2 ND	1/2 ND
4														
5	4D 2378			0.1111	0.1111	0.0000		0.3510	0.3510	0.0000		0.2877	0.2877	0.0000
6		0												
7		0												
8	5D 12378	0.5		0.3344	0.3344	0.1672		1.4309	1.4309	0.7154		0.9282	0.9282	0.4641
9		0												
10		0												
11	6D 123478	0.1		0.7478	0.7478	0.0748		1.8941	1.8941	0.1894		1.3449	1.3449	0.1345
12	6D 123678	0.1		1.6000	1.6000	0.1600		3.3353	3.3353	0.3335		2.9543	2.9543	0.2954
13	6D 123789	0.1		1.4111	1.4111	0.1411		4.7147	4.7147	0.4715		4.9276	4.9276	0.4928
14		0												
15		0												
16	7D 1234678	0.01		7.6111	7.6111	0.0761		13.6912	13.6912	0.1369		13.5591	13.5591	0.1356
17		0												
18		0												
19	8D	0.001		0.7956	0.7956	0.0008		1.9559	1.9559	0.0020		1.6976	1.6976	0.0017
20	4F 2378	0.1		0.8422	0.8422	0.0842		5.0544	5.0544	0.5054		3.2409	3.2409	0.3241
21		0												
22		0												
23	5F 12378	0.05		0.6044	0.6044	0.0302		3.2632	3.2632	0.1632		1.9512	1.9512	0.0976
24	5F 23478	0.5		1.6000	1.6000	0.8000		6.5574	6.5574	3.2787		4.6520	4.6520	2.3260
25		0												
26		0												
27	6F 123478	0.1		1.1011	1.1011	0.1101		6.0529	6.0529	0.6053		4.4646	4.4646	0.4465
28	6F 123678	0.1		0.6289	0.6289	0.0629		3.0162	3.0162	0.3016		2.1937	2.1937	0.2194
29	6F 123789	0.1		0.1233	0.1233	0.0123		0.9800	0.9800	0.0980		0.6989	0.6989	0.0699
30	6F 234678	0.1		1.0711	1.0711	0.1071		4.4882	4.4882	0.4488		2.8000	2.8000	0.2800
31		0												
32		0												
33	7F 1234678	0.01		0.5067	0.5067	0.0051		2.8206	2.8206	0.0282		2.0835	2.0835	0.0208
34	7F 1234789	0.01		0.1567	0.1567	0.0016		0.7021	0.7021	0.0070		0.6052	0.6052	0.0061
35		0												
36		0												
37	8F	0.001		0.0590	0.0590	0.0001		0.3943	0.3943	0.0004		0.3550	0.3550	0.0004
38	Total PCDD/PCDF													
39	TEQ		0	1.9447		1.8336	9	7.6364		7.2854	#	5.6024		5.3147

	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	203C5	I-TEF			R1				R2				R3	
2		Wght Fact		Total	Total	TEQ		Total	Total	TEQ		Total	Total	TEQ
3	ng/dscm			Full ND	1/2 ND	1/2 ND		Full ND	1/2 ND	1/2 ND		Full ND	1/2 ND	1/2 ND
4														
5	4D 2378			0.0938	0.0938	0.0000		0.0881	0.0881	0.0000		0.0859	0.0859	0.0000
6	4D Other	0		6.8932	6.8932	0.0000		6.9489	6.9489	0.0000		7.3665	7.3665	0.0000
7	4D Total	0		6.9870	6.9870	0.0000		7.0370	7.0370	0.0000		7.4523	7.4523	0.0000
8	5D 12378	0.5		0.0890	0.0890	0.0445		0.0910	0.0910	0.0455		0.1046	0.1046	0.0523
9	5D Other	0		0.7722	0.7722	0.0000		1.1967	1.1967	0.0000		1.0333	1.0333	0.0000
10	5D Total	0		0.8611	0.8611	0.0000		1.2877	1.2877	0.0000		1.1380	1.1380	0.0000
11	6D 123478	0.1		0.0714	0.0714	0.0071		0.0744	0.0744	0.0074		0.0954	0.0954	0.0095
12	6D 123678	0.1		0.1058	0.1058	0.0106		0.1242	0.1242	0.0124		0.1673	0.1673	0.0167
13	6D 123789	0.1	1	0.0953	0.0477	0.0048	1	0.0787	0.0393	0.0039	1	0.1307	0.0654	0.0065
14	6D Other	0		3.7095	3.7095	0.0000		4.4675	4.4675	0.0000		3.8817	3.8817	0.0000
15	6D Total	0		3.9820	3.9820	0.0000		4.7448	4.7448	0.0000		4.2751	4.2751	0.0000
16	7D 1234678	0.01		0.1189	0.1189	0.0012		0.5494	0.5494	0.0055		0.4853	0.4853	0.0049
17	7D Other	0		0.0699	0.0699	0.0000		0.1580	0.1580	0.0000		0.0983	0.0983	0.0000
18	7D Total	0		0.1887	0.1887	0.0000		0.7074	0.7074	0.0000		0.5836	0.5836	0.0000
19	8D	0.001		0.0654	0.0654	0.0001		0.0738	0.0738	0.0001		0.1059	0.1059	0.0001
20	4F 2378	0.1		0.1443	0.1443	0.0144		0.1616	0.1616	0.0162		0.1838	0.1838	0.0184
21	4F Other	0		6.8311	6.8311	0.0000		6.2103	6.2103	0.0000		6.3230	6.3230	0.0000
22	4F Total	0		6.9754	6.9754	0.0000		6.3719	6.3719	0.0000		6.5068	6.5068	0.0000
23	5F 12378	0.05		0.1532	0.1532	0.0077		0.1752	0.1752	0.0088		0.1571	0.1571	0.0079
24	5F 23478	0.5		0.3928	0.3928	0.1964		0.4597	0.4597	0.2298		0.4551	0.4551	0.2276
25	5F Other	0		7.3443	7.3443	0.0000		8.9090	8.9090	0.0000		7.6317	7.6317	0.0000
26	5F Total	0		7.8903	7.8903	0.0000		9.5439	9.5439	0.0000		8.2439	8.2439	0.0000
27	6F 123478	0.1		0.1439	0.1439	0.0144		0.1902	0.1902	0.0190		0.1981	0.1981	0.0198
28	6F 123678	0.1		0.0961	0.0961	0.0096		0.1083	0.1083	0.0108		0.1310	0.1310	0.0131
29	6F 123789	0.1	1	0.0329	0.0164	0.0016	1	0.0367	0.0184	0.0018	1	0.0223	0.0111	0.0011
30	6F 234678	0.1		0.1189	0.1189	0.0119		0.1476	0.1476	0.0148	1	0.0178	0.0089	0.0009
31	6F Other	0		9.1783	9.1783	0.0000		6.3391	6.3391	0.0000		6.6467	6.6467	0.0000
32	6F Total	0		9.5700	9.5700	0.0000		6.8218	6.8218	0.0000		7.0160	7.0160	0.0000
33	7F 1234678	0.01		0.0699	0.0699	0.0007		0.1037	0.1037	0.0010		0.0983	0.0983	0.0010
34	7F 1234789	0.01	1	0.0209	0.0105	0.0001	1	0.0247	0.0124	0.0001	1	0.0289	0.0145	0.0001
35	7F Other	0		0.9392	0.9392	0.0000		1.4073	1.4073	0.0000		1.3835	1.3835	0.0000
36	7F Total	0		1.0301	1.0301	0.0000		1.5358	1.5358	0.0000		1.5107	1.5107	0.0000
37	8F	0.001	1	0.0138	0.0069	0.0000	1	0.0127	0.0063	0.0000	1	0.0143	0.0072	0.0000
38	Total PCDD/PCDF			37.5639	37.5570			38.1368	38.1304			36.8466	36.8395	
39	TEQ		##	0.4254		0.3250	##	0.4712		0.3772	###	0.4745		0.3799