

US EPA ARCHIVE DOCUMENT

	B	C
1	Source Description	
2		
3	Phase I ID No.	312
4	EPA ID No.	VAD046970521
5	Facility Name	Solite Corp
6	Facility Location	
7	City	Cascade
8	State	Virginia
9	Unit ID Name/No.	Kiln #4
10	Other Sister Facilities	
11	Number of Sister Facilities	0
12	Combustor Class	Lightweight Aggregate Kiln (LWAK)
13	Combustor Type	
14	Combustor Characteristics	
15	Capacity (MMBtu/hr)	
16	Soot Blowing	
17	APCS Detailed Acronym	QS/FF
18	APCS General Class	FF
19	APCS Characteristics	Quench system (air and water). Baghouse (reverse air cleaning, 580 bags, cloth area = 29,155 ft ² , net air to cloth ratio = 2.23:1, design operating temp < 450 °F at inlet), fiberglass bag material
20	Hazardous Wastes	Liq
21	Haz Waste Description	The raw material was excavated from the Virginia Solite quarry
22	Supplemental Fuel	Natural gas
23		
24	Stack Characteristics	
25	Diameter (ft)	4.3
26	Height (ft)	80
27	Gas Velocity (ft/sec)	16.1
28	Gas Temperature (°F)	352
29		
30	Permitting Status	
31	HWC Burn Status (Date if Terminated)	

	B	C
1	Condition Description	
2		
3	312C10	
4		
5	Report Name/Date	RCRA Testing, Kilns 1,2,3,4, Certification of Compliance, August 1999
6	Report Preparation	Solite/Entropy/Blue Ridge
7	Testing Firm	Entropy
8	Testing Dates	May 25-26, 1999
9	Cond Dates	May-99
10	Condition Descr	COC, Metals SRE
11	Content	CO, PM, HCl/Cl2, Metals, Cr ⁺⁶
12		
13	312C11	
14		
15	Report Name/Date	Trial Burn Report, Solite Corp, Virginia Solite Div., March 2000
16	Report Preparation	Solite/Entropy/Blue Ridge
17	Testing Firm	Entropy
18	Testing Dates	November 8-19, 1999
19	Cond Dates	Nov-99
20	Condition Descr	Trial Burn, organics DRE, HCl/Cl2 emissions limits
21	Content	CO, PM, HCl/Cl2, POHC DRE, PCCD/F
22		
23	312C12	
24		
25	Report Name/Date	Trial Burn Report, Kiln 1 DRE Retest, Kilns 1-4 D/F. Solite Corp, Virginia Solite Div., July 2000
26	Report Preparation	Solite/Entropy/B3 Systems
27	Testing Firm	Entropy
28	Testing Dates	May 9-19, 2000
29	Cond Dates	May-00
30	Condition Descr	Trial Burn, D/F Retest
31	Content	D/F, CO
32		
33	312C1	
34		
35	Report Name/Date	Emission Test Report for No. 4 Aggregate Kiln Solite Corporation, Leaksville Plant, Cascade, Virginia, Prepared by IEA August 8, 1992
36	Report Prepare	IEA
37	Testing Firm	IEA
38	Cond Descr	CoC, MAX HW FEED, MAX RAW MATERIAL
39	Testing Dates	
40	Cond Dates	Aug-92
41		
42		
43	312C2	
44		
45	Report Name/Date	Stationary Source Sampling Report, Reference # 13967, Virginia Solite Company, Leaksville Plant, Cascade, Virginia, May 1995
46	Report Prepare	Virginia Solite Company
47	Testing Firm	Entropy
48	Cond Descr	CoC
49	Testing Dates	May 25, 1995
50	Cond Dates	May-95

	B	C	D	E	F	G	H	I	J	K	L	M
1	Stack Gas Emissions 1											
2												
3												
4	312C10	CoC				R1		R2		R3		Cond Avg
5												
6	PM	E1	gr/dscf	y		0.0062		0.0044		0.0027		0.0044
7	CO (RA)	E1	ppmv	y		37.8		35.9		43.4		39.0
8	CO (MHRA)	E1	ppmv	y		66.0		57.3		51.7		58.3
9	HCl	E1	ppmv	y		859		1013		1184		1019
10	Cl2	E1	ppmv	y		0.93		1.61		2.52		1.7
11	Total Chlorine	E1	ppmv	y		861		1016		1189		1022
12												
13	Antimony		lb/hr		nd	3.79E-05	nd	4.46E-05	nd	4.72E-05		
14	Arsenic		lb/hr			3.78E-04		4.02E-04		4.14E-04		
15	Barium		lb/hr			4.41E-04		4.87E-04		3.38E-04		
16	Beryllium		lb/hr			3.94E-05		4.11E-05		4.34E-05		
17	Cadmium		lb/hr			1.18E-04		9.94E-05		1.01E-04		
18	Chromium		lb/hr			3.49E-04		5.49E-04		7.22E-04		
19	Chromium (Hex)		lb/hr		nd	6.26E-05	nd	6.84E-05	nd	6.27E-05		
20	Cobalt		lb/hr		nd	3.79E-05	nd	4.46E-05		1.07E-04		
21	Copper		lb/hr			3.78E-04		4.56E-04		3.01E-04		
22	Lead		lb/hr			1.87E-03		2.79E-03		2.70E-03		
23	Manganese		lb/hr			1.20E-03		1.72E-03		2.30E-03		
24	Mercury		lb/hr			1.53E-04		1.71E-04		2.08E-04		
25	Nickel		lb/hr			7.48E-04		1.35E-04		2.76E-03		
26	Selenium		lb/hr			8.75E-04		4.23E-04		4.51E-04		
27	Silver		lb/hr		nd	1.52E-05	nd	1.78E-05	nd	1.75E-05		
28	Thallium		lb/hr		nd	3.79E-05	nd	4.46E-05	nd	4.37E-05		
29	Zinc		lb/hr			5.32E-04		5.83E-04		4.04E-04		
30												
31	Sampling Train	PM, F E1										
32	Stack Gas Flowrate		dscfm			27436		29549		29919		28968
33	O2		%			15.0		16.0		16.9		16.0
34	Moisture		%			12.8		6.8		5.3		8.3
35	Temperature		°F			360		331		343		345
36												
37	Sampling Train	Metal E2										
38	Stack Gas Flowrate		dscfm			27559		28855		29386		
39	O2		%			15.0		16.0		16.9		
40	Moisture		%			13		7.9		5.3		
41	Temperature		°F			354		324		337		
42												
43												
44	Antimony	E2	ug/dscm	y	nd	0.9	nd	1.2	nd	1.5	100	1.16
45	Arsenic	E2	ug/dscm	y		8.6		10.4		12.9		10.62
46	Barium	E2	ug/dscm	y		10.0		12.6		10.5		11.04
47	Beryllium	E2	ug/dscm	y		0.9		1.1		1.3		1.10
48	Cadmium	E2	ug/dscm	y		2.7		2.6		3.1		2.80
49	Chromium	E2	ug/dscm	y		7.9		14.2		22.4		14.86
50	Chromium (Hex)	E2	ug/dscm	y	nd	1.4	nd	1.8	nd	1.9	100	1.71
51	Cobalt	E2	ug/dscm	y	nd	0.9	nd	1.2		3.3		1.78
52	Copper	E2	ug/dscm	y		8.6		11.8		9.4		9.91
53	Lead	E2	ug/dscm	y		42.3		72.4		83.9		66.20
54	Manganese	E2	ug/dscm	y		27.2		44.6		71.5		47.75
55	Mercury	E2	ug/dscm	y		3.5		4.4		6.5		4.79
56	Nickel	E2	ug/dscm	y		16.9		3.5		85.7		35.39
57	Selenium	E2	ug/dscm	y		19.8		11.0		14.0		14.93
58	Silver	E2	ug/dscm	y	nd	0.3	nd	0.5	nd	0.5	100	0.45
59	Thallium	E2	ug/dscm	y	nd	0.9	nd	1.2	nd	1.4	100	1.12
60	Zinc	E2	ug/dscm	y		12.0		15.1		12.6		13.24
61												
62	LVM	E2	ug/dscm	y		17.3		25.7		36.6		26.58
63	SVM	E2	ug/dscm	y		45.0		75.0		87.0		69.00
64												
65	312C11	Trial Burn				R1		R2		R3		Cond Avg
66												
67	PM	E1	gr/dscf	y		0.0041		0.0069		0.0052		0.0054
68	HCl	E1	ppmv	y		1369		1402		1717		1496
69	Cl2	E1	ppmv	y		0.74		1.12		1.30		1.05
70	Total Chlorine	E1	ppmv	y		1370		1404		1720		1498
71												

	B	C	D	E	F	G	H	I	J	K	L	M
72	POHC DRE	Perchloroethylene										
73	POHC Feedrate		lb/hr			45.54		44.15		44.33		44.67
74	Emission Rate	E2	lb/hr			0.000954		0.000827		0.000619		0.00080
75	DRE	E2	%			99.99791		99.99813		99.99860		
76												
77	POHC DRE	1,2,4 Trichlorobenzene										
78	POHC Feedrate		lb/hr			45.59		44.2		44.38		44.72
79	Emission Rate	E2	lb/hr			0.00116		0.000996		0.000964		0.00104
80	DRE	E2	%			99.99746		99.99775		99.99783		
81												
82	Sampling Train	PM, F E1										
83	Stack Gas Flowrate		dscfm			32462		28498		29100		30020
84	O2		%			16.1		16.5		16.4		16.3
85	Moisture		%			8.8		9.8		9.2		9.3
86	Temperature		°F			325		335		337		332
87												
88	Sampling Train	D/F	E2									
89	Stack Gas Flowrate		dscfm			32261		30828		28416		30502
90	O2		%			16.1		16.5		16.4		16.3
91	Moisture		%			8.6		8.6		8.9		8.7
92	Temperature		°F			328		331		337		332
93												
94	312C12	Trial Burn				R1		R2		R3		Cond Avg
95												
96	CO (RA)	E1	ppmv	y		35.6		49.9		52.6		46.0
97												
98	Sampling Train	D/F										
99	Stack Gas Flowrate		dscfm			27311		27719		26369		27133
100	O2		%			16.0		15.9		11.6		14.5
101	Moisture		%			14.5		14.1		14.3		14.3
102	Temperature		°F			303		304		303		303

	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Stack Gas Emissions 2												
2													
3													
4	312C1					R1		R2		R3		Cond Avg	
5													
6	PM	E1	gr/dscf	y		0.00700		0.00500		0.01800		0.01000	
7	CO (MHRA)	E1	ppmv	y		194.40		86.60		67.60		116.20	
8	CO (RA)	E1	ppmv	y		128.10		74.70		61.10		87.97	
9	HC (MHRA)	E1	ppmv	y		5.90		3.50		2.20		3.87	
10	HC (RA)	E1	ppmv	y		4.70		3.20		1.60		3.17	
11	HCl	E1	ppmv	y		1267.09		1312.47		1078.18		1219.25	
12	Cl2	E1	ppmv	y		25.20		0.18		8.28		11.22	
13	Total Chlorine	E1	ppmv	y		1317.49		1312.83		1094.74		1241.69	
14	Antimony	E2	ug/dscm	y		4.26		3.77		6.26		4.76	
15	Arsenic	E2	ug/dscm	y		4.40		9.64		4.47		6.17	
16	Barium	E2	ug/dscm	y	nd	13.13	nd	33.38	nd	28.60		25.04	
17	Beryllium	E2	ug/dscm	y	nd	1.09	nd	2.25	nd	1.04		1.46	
18	Cadmium	E2	ug/dscm	y		64.46		82.38		10.72		52.52	
19	Chromium	E2	ug/dscm	y		27.07	nd	37.69	nd	11.05		25.27	high nds?
20	Chromium (Hex)	E3	ug/dscm	y	nd	2.96		5.13	nd	3.46		3.85	
21	Lead	E2	ug/dscm	y		105.29		527.69		431.91		354.97	
22	Mercury	E2	ug/dscm	y	nd	10.53	nd	7.65	nd	8.79	100	8.99	
23	Silver	E2	ug/dscm	y	nd	4.96	nd	5.79	nd	4.47	100	5.07	
24	Thallium	E2	ug/dscm	y	nd	1.08	nd	1.16	nd	1.88	100	1.37	
25	LVM	E2	ug/dscm	y		32.56		49.58		16.56		32.90	
26	SVM	E2	ug/dscm	y		169.75		610.08		442.64		407.49	
27													
28	Sampling Train	Halogen:	E1										
29	Stack Gas Flowrate		dscfm			27100		27100		27500			
30	O2		%			15.9		15.9		16.2			
31	Moisture		%			9.7		10		9.5			
32	Temperature		°F			346.2		333.5		349.5			
33													
34	Sampling Train	Metals	E2										
35	Stack Gas Flowrate		dscfm			28000		28100		30000			
36	O2		%			16.2		15.8		16.3			
37	Moisture		%			10.3		10.9		6.7			
38	Temperature		°F			340		340.1		347.5			
39													
40	Sampling Train	Cr Hex	E3										
41	Stack Gas Flowrate		dscfm			29100		28300		27100			
42	O2		%			15.8		15.9		15.9			
43	Moisture		%			9.1		12.7		14			
44	Temperature		°F			346.2		343		351.5			
45													
46	312C2					R1		R2		R3		Cond Avg	
47													
48	PM	E1	gr/dscf	y		0.01470		0.01350		0.01110		0.01310	
49	HCl	E1	ppmv	y		543.07		469.05		559.63		523.92	
50	Cl2	E1	ppmv	y		0.53		0.38		0.26		0.39	
51	Total Chlorine	E1	ppmv	y		544.13		469.81		560.15		524.70	
52	Antimony	E2	ug/dscm	y		3.00		2.78		2.91		2.90	
53	Arsenic	E2	ug/dscm	y		20.46		26.49		26.33		24.42	
54	Barium	E2	ug/dscm	y		70.10		89.35		101.63		87.03	
55	Beryllium	E2	ug/dscm	y		2.92		4.62		6.21		4.59	
56	Cadmium	E2	ug/dscm	y		36.54		55.23		63.87		51.88	
57	Chromium	E2	ug/dscm	y		72.88		103.05		137.89		104.61	
58	Chromium (Hex)	E3	ug/dscm	y	nd	2.44	nd	2.46	nd	2.44	100	2.45	
59	Lead	E2	ug/dscm	y		264.13		417.58		504.93		395.55	
60	Mercury	E2	ug/dscm	y		4.01		5.14		4.32		4.49	
61	Nickel	E2	ug/dscm	y		4.23		4.09		3.91		4.07	
62	Selenium	E2	ug/dscm	y	nd	1.59	nd	1.61	nd	1.78	100	1.66	
63	Silver	E2	ug/dscm	y		0.70		1.79	nd	0.71		1.07	
64	Thallium	E2	ug/dscm	y	nd	1.59	nd	1.61	nd	1.78	100	1.66	
65	LVM	E2	ug/dscm	y		96.26		134.16		170.43		133.62	
66	SVM	E2	ug/dscm	y		300.67		472.80		568.80		447.43	
67													
68	Sampling Train	Particula	E1										
69	Stack Gas Flowrate		dscfm			28128		26347		25897			
70	O2		%			14.9		14.8		14.4			
71	Moisture		%			12.3		12.8		13.7			

	B	C	D	E	F	G	H	I	J	K	L	M	N
72	Temperature		°F			358		353		351			
73													
74	Sampling Train	Metals	E2										
75	Stack Gas Flowrate		dscfm			30853		26852		26244			
76	O2		%			14.9		14.8		14.4			
77	Moisture		%			5.8		12.9		13.3			
78	Temperature		°F			355		347		355			
79													
80	Sampling Train	Cr Hex	E3										
81	Stack Gas Flowrate		dscfm			26903		24771		23663			
82	O2		%			14.9		14.8		14.4			
83	Moisture		%			11.6		12.9		14.1			
84	Temperature		°F			352		347		350			

	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	AA	AB	AC	AD
1	Feedstream 1																												
2																													
3																													
4	312C10	CoC			R1		R2		R3		R1		R2		R3		R1		R2		R3		R1		R2		R3		Cond Avg
5																													
6	Feedstream Number				F1		F1		F1		F2		F2		F2		F3		F3		F3		F4		F4		F4		F4
7	Feed Class				Raw Material		Raw Material		Raw Material		Liq HW		Liq HW		Liq HW		Spike		Spike		Spike		Total		Total		Total		Total
8	Feed Class 2				RM		RM		RM		HW		HW		HW		Spike		Spike		Spike		Total		Total		Total		Total
9	Feedstream Description				Raw Material		Raw Material		Raw Material		LBM		LBM		LBM		Spike		Spike		Spike		Total		Total		Total		Total
0	Feed Rate	lb/hr			30380		30400		31320		3055.8		2726.4		2380.2		191.9		192		191.9		33628		33318		33892		33613
1	Density	g/cc									0.906		0.942		0.94														
2	Heating Value	Btu/lb									14841		13104		13026														
3																													
4	Ash	%									4.24		4.285		4.6														
5	Chlorine	g/hr	nd		4092.8	nd	3890.8	nd	355.5		3914.6		4451.3		4382.7		19598.1		19558.8		18149.0		27605		27901		22887		26131
6																													
7	Antimony	g/hr	nd		3.45	nd	3.45	nd	3.55		4.050		4.280		4.270								7		8		8		8
8	Arsenic	g/hr			169.5		203.3		284.1		1.29		1.09		1.25		407.66		473.8		482.95		578		678		768		
9	Barium	g/hr			1805.2		1696.3		1505.9		233.48		263.26		272.98								2039		1960		1779		
0	Beryllium	g/hr			29.49		28.27		20.88	nd	0.03	nd	0.03	nd	0.03		88.22		100.68		75.59		118		129		96		
1	Cadmium	g/hr	nd		1.38	nd	1.38	nd	1.42		0.99		0.94		1.00		220.95		230		213.2		223		232		216		
2	Chromium	g/hr			763.4		759.3		801.3		19.99		19.59		23.67		1504.53		1515.9		1515.9		2288		2295		2341		
3	Lead	g/hr			191.6		210.0		251.5		25.45		24.80		30.68		5228		5328		5228		5445		5562		5510		
4	Manganese	g/hr			13036		11767		12062		202.7		202.2		195.3								13239		11969		12257		
5	Mercury	g/hr	nd		0.13	nd	0.14	nd	0.14	nd	0.01	nd	0.01	nd	0.01								0.1		0.2		0.1		
6	Nickel	g/hr			469.9		504.9		505.8		11.52		10.71		10.32								481		516		516		
7	Silver	g/hr			2.960		3.470		3.480	nd	0.14		0.29		0.41								3.1		3.8		3.9		
8	Thallium	g/hr			7.790		7.510		8.420	nd	0.35	nd	0.31	nd	0.27								8.1		7.8		8.7		
9																													
0																													
1	Stack Gas Flowrate	dscfm			27559		28855		29386		27559		28855		29386		27559		28855		29386		27559		28855		29386		28600
2	Oxygen	%			15.0		16.0		16.9		15		16		16.9		15		16		16.9		15		16		16.9		16
3																													
4	Thermal Feedrate	MMBtu/hr									45.4		35.7		31.0								45.4		35.7		31.0		37
5	Estimated Firing Rate	MMBtu/hr																					52.5		45.8		38.2		46
6																													
7																													
8	<i>Feedrate MTEC Calculations</i>																												
9	Ash	mg/dscm									175984		181864		204101														
0	Chlorine	ug/dscm			204076		222348		24327		195194		254382		299924		977212		1117743		1241994		1,376,483		1,594,474		1,566,244		1512400
1																													
2	Antimony	ug/dscm			172		197		243		202		245		292		0		0		0		374		442		535		450
3	Arsenic	ug/dscm			8452		11618		19445		64		62		86		20327		27077		33050		28843		38756		52580		40060
4	Barium	ug/dscm			90014		96941		103055		11642		15045		18681		0		0		0		101656		111986		121736		111792
5	Beryllium	ug/dscm			1470		1616		1429		2		2		2		4399		5754		5173		5871		7371		6604		6615
6	Cadmium	ug/dscm			69		79		97		49		54		68		11017		13144		14590		11135		13277		14756		13056
7	Chromium	ug/dscm			38067		43392		54833		997		1120		1620		75020		86630		103738		114083		131142		160190		135139
8	Lead	ug/dscm			9551		12002		17208		1269		1417		2100		260666		304464		357746		271486		317884		377054		322141
9	Manganese	ug/dscm			650021		672431		825408		10108		11556		13368		0		0		0		660130		683987		838775		727631
0	Mercury	ug/dscm			7		8		9	nd	1	nd	1	nd	1		0		0		0		7.2		8.6		10.0		9
1	Nickel	ug/dscm			23431		28852		34611		574		612		706		0		0		0		24005		29464		35317		29595
2	Silver	ug/dscm			148		198		238		7		17		28		0		0		0		155		215		266		212
3	Thallium	ug/dscm			388		429		576		17		18		18		0		0		0		406		447		595		482
4																													
5	SVM	ug/dscm			9620		12081		17305		1318		1471		2168		271683		317608		372336		282622		331160		391810		335197
6	LVM	ug/dscm			47989		56625		75706		1063		1184		1707		99746		119461		141960		148797		177270		219374		181814
7																													
8																													
9	312C11	Trial burn			R1		R2		R3		R1		R2		R3		R1		R2		R3		R1		R2		R3		Cond Avg
0																													

	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	AA	AB	AC	AD	
1	Feedstream Number				F1	F1	F1		F2	F2	F2		F3	F3	F3		F4	F4	F4		F4	F4	F4		F4	F4	F4	F4		
2	Feed Class				Raw Material	Raw Material	Raw Material		Liq HW	Liq HW	Liq HW		Spike	Spike	Spike		Total	Total	Total		Total	Total	Total		Total	Total	Total	Total		
3	Feed Class 2				RM	RM	RM		HW	HW	HW		Spike	Spike	Spike		Total	Total	Total		Total	Total	Total		Total	Total	Total	Total		
4	Feedstream Description				Raw Material	Raw Material	Raw Material		LBM	LBM	LBM		Spike	Spike	Spike		Total	Total	Total		Total	Total	Total		Total	Total	Total	Total		
5	Feed Rate		lb/min						43.78	41.9	39.58																			
6	Density		g/cc						0.916	0.91	0.915																			
7																														
8	Heating Value		Btu/lb						10884	11480	11234																			
9																														
0	Ash		%						3.44	3.47	0.51																			
1	Chlorine		%		0.017	0.0195	0.0175		0.67	0.67	0.62																			
2																														
3	Chlorine		g/hr																										37657	
4																														
5	Stack Gas Flowrate		dscfm		32462	28498	29100		32462	28498	29100		32462	28498	29100		32462	28498	29100		32462	28498	29100		32462	28498	29100	30020		
6	Oxygen		%		16.1	16.5	16.4		16.1	16.5	16.4		16.1	16.5	16.4		16.1	16.5	16.4		16.1	16.5	16.4		16.1	16.5	16.4	16		
7																														
8	Thermal Feedrate		MMBtu/hr						28.6	28.9	26.7																		28	
9	Estimated Firing Rate		MMBtu/hr																										45	
0																														
1	<i>Feedrate MTEC Calculations</i>																													
2	Chlorine		ug/dscm																										2216249	
3																														
4																														
5	312C12		Trial burn		Run 1	Run 2	Run 3		Run 1	Run 2	Run 3		Run 1	Run 2	Run 3		Run 1	Run 2	Run 3		Run 1	Run 2	Run 3		Run 1	Run 2	Run 3	Average		
6																														
7	Feedstream Number				F1	F1	F1		F2	F2	F2		F3	F3	F3		F4	F4	F4		F4	F4	F4		F4	F4	F4	F4		
8	Feed Class				Raw Material	Raw Material	Raw Material		Liq HW	Liq HW	Liq HW		Spike	Spike	Spike		Total	Total	Total		Total	Total	Total		Total	Total	Total	Total		
9	Feed Class 2				RM	RM	RM		HW	HW	HW		Spike	Spike	Spike		Total	Total	Total		Total	Total	Total		Total	Total	Total	Total		
0	Feedstream Description				Raw Material	Raw Material	Raw Material		LBM	LBM	LBM		Spike	Spike	Spike		Total	Total	Total		Total	Total	Total		Total	Total	Total	Total		
1	Feed Rate		lb/min						42.52	41.59	42.44																			
2	Density		g/cc						0.94	0.952	0.938																			
3																														
4	Heating Value		Btu/lb						10866	10850	11011																			
5																														
6	Ash		%						4.42	5.05	3.73																			
7	Chlorine		%		0.0095	0.009			2.95	2.89	3.1																			
8																														
9																														
00	Stack Gas Flowrate		dscfm		27311	27719	26369		27311	27719	26369		27311	27719	26369		27311	27719	26369		27311	27719	26369		27311	27719	26369	27133		
01	Oxygen		%		16.0	15.9	11.6		16	15.9	11.6		16	15.9	11.6		16	15.9	11.6		16	15.9	11.6		16	15.9	11.6	15		
02																														
03	Thermal Feedrate		MMBtu/hr						27.7	27.1	28.0																		28	
04	Estimated Firing Rate		MMBtu/hr																										56	

	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	AA	AB	AC	AD
1	Feedstream 2																												
2																													
3																													
4	312C1				R1		R2		R3		R1		R2		R3		R1		R2		R3		R1		R2		R3		Cond Avg
5	Feedstream Number				F1		F1		F1		F2		F2		F2		F3		F3		F3		F4		F4		F4		F4
6	Feed Class				Raw Material		Raw Material		Raw Material		Liq HW		Liq HW		Liq HW		Spike		Spike		Spike		Total		Total		Total		Total
7	Feed Class 2				RM		RM		RM		HW		HW		HW		Spike		Spike		Spike		Total		Total		Total		Total
8	Feedstream Description				Raw material		Raw material		Raw material		Liq waste		Liq waste		Liq waste		Spike		Spike		Spike		Total		Total		Total		Total
9	Feed Rate	lb/hr			31636		28218		28615		3097		3000		2938		18.7		18.8		18.6		18.6		18.6		18.6		18.6
10	Heating Value	Btu/lb									14801		14800		14598														
11	Thermal Feedrate	MMBtu/hr									45.84		44.4		42.89								45.84		44.4		42.89		44.38
12	Chlorine	lb/hr	nd		12.6	nd	11.3	nd	11.1		67.8		71.8		74.4														
13	Antimony	lb/hr	nd		0.0123	nd	0.011	nd	0.0108		0.008		0.010		0.010														
14	Arsenic	lb/hr			0.132		0.147		0.103		0.020		0.004	nd	0.001		0.735		0.968		1.274								
15	Barium	lb/hr			3.14		3.14		3.17		0.254		0.202		0.171														
16	Beryllium	lb/hr			0.0421		0.116		0.042	nd	0.0002	nd	0.0002	nd	0.0002		0.080		0.169		0.187								
17	Cadmium	lb/hr	nd		0.0142	nd	0.0127	nd	0.0125	nd	0.001	nd	0.001	nd	0.001		2.702		2.183		2.305								
18	Chromium	lb/hr			3.36		2.84		2.53		0.029		0.024		0.018		0.724		0.489		0.434								
19	Chromium (Hex)	lb/hr															0.724		0.489		0.434								
20	Lead	lb/hr	nd		0.066	nd	0.0593	nd	0.0584		0.109		0.075		0.055		14.503		14.996		14.433								
21	Mercury	lb/hr	nd		0.0013	nd	0.0011	nd	0.0011		0.001		0.0004		0.0002														
22	Silver	lb/hr	nd		0.022	nd	0.0198	nd	0.0195	nd	0.002	nd	0.002	nd	0.002														
23	Thallium	lb/hr			0.0468		0.0446		0.0415	nd	0.001	nd	0.001	nd	0.001														
24	Stack Gas Flowrate	dscfm			28000		28100		30000		28000		28100		30000		28000		28100		30000								
25	Oxygen	%			16.2		15.8		16.3		16.2		15.8		16.3		16.2		15.8		16.3								
26	<i>Feedrate MTEC Calculations</i>																												
27	Chlorine	ug/dscm	100		175464	100	144739	100	147340		1888848		1839944		1975082		0		0		0	8.5	2064312	7.3	1984683	6.9	2122422	7.6	2057139
28	Antimony	ug/dscm	100		343	100	282	100	287		215		260		258		0		0		0	61	557	52	542	53	544	55	548
29	Arsenic	ug/dscm			3676		3766		2734		553		96	100	9		20477		24799		33835		24706		28661		36578		29982
30	Barium	ug/dscm			87453		80439		84156		7073		5179		4542		0		0		0		94527		85618		88698		89614
31	Beryllium	ug/dscm			1173		2972		1115	100	6	100	6	100	3		2229		4320		4957	0.2	3408	0.1	7298	0	6075	0.1	5593
32	Cadmium	ug/dscm	100		395	100	325	100	332	100	18	100	17	100	18		75266		55934		61202	0.5	75679	0.6	56276	0.6	61551	0.6	64502
33	Chromium	ug/dscm			93581		72754		67166		798		604		486		20152		12521		11514		114531		85879		79166		93192
34	Chromium (Hex)	ug/dscm			0		0		0		0		0		0		20152		12521		11512		20152		12521		11512		14728
35	Lead	ug/dscm	100		1838	100	760	100	775		3039		1909		1457		403928		384158		383159	0.4	408805	0.2	386826	0.2	385392	0.3	393674
36	Mercury	ug/dscm	100		18	100	14	100	15		18		11		6		0		0		0	49	36	56	25	71	20	57	27
37	Silver	ug/dscm	100		613	100	507	100	518	100	61	100	56	100	53		0		0		0	100	674	100	564	100	570	100	603
38	Thallium	ug/dscm			1303		1143		1102	100	37	100	28	100	29		0		0		0	2.7	1340	2.4	1171	2.6	1131	2.6	1214
39	SVM	ug/dscm	100		2234	100	1085	100	1107	0.6	3058	0.9	1926	1.2	1475		479193		440092		444361	0.5	484485	0.2	443102	0.3	446943	0.3	458177
40	LVM	ug/dscm			98430		79491		71015	0.5	1357	0.8	706	2.4	497		42858		41640		50306		142645		121837		121818		128767
41	312C2				R1		R2		R3		R1		R2		R3		R1		R2		R3		R1		R2		R3		Cond Avg
42	Feedstream Number				F1		F1		F1		F2		F2		F2		F3		F3		F3		F4		F4		F4		F4
43	Feed Class				Raw Material		Raw Material		Raw Material		Liq HW		Liq HW		Liq HW		Spike		Spike		Spike		Total		Total		Total		Total
44	Feed Class 2				RM		RM		RM		HW		HW		HW		Spike		Spike		Spike		Total		Total		Total		Total
45	Feedstream Description				Raw material		Raw material		Raw material		Liq waste		Liq waste		Liq waste		Spike		Spike		Spike		Total		Total		Total		Total
46	Feed Rate	lb/hr			?		?		?		?		?		?		?		?		?		?		?		?		?
47	Heating Value	Btu/lb									13500		13400		13400														
48	Chlorine	ppmw	nd		17	nd	16	nd	16		4700		4400		3900														
49	Antimony	ppmw	nd		1	nd	1	nd	1		33.1		32.4		12.1														
50	Arsenic	ppmw			2.65		4.9		3.85	nd	1	nd	1	nd	1		39300												
51	Barium	ppmw			256		334		248		592		561		88.5														
52	Beryllium	ppmw			1.5		1.65		1.45	nd	0.25	nd	0.25	nd	0.25		5250		4860		5070								
53	Cadmium	ppmw	nd		0.4	nd	0.4	nd	0.4		19.4		19.7		10.1		40000		40000		33900								
54	Chromium	ppmw			35		41.1		39.4		184		165		101		135000				155000								
55	Chromium (Hex)	ppmw			0.31	nd	0.1		0.19		86.5		98.3		76.4														

	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	AA	AB	AC	AD	
1	Lead		ppmw		9.2		11.7		10.9		876		817		262		355000		363000		345000									
2	Mercury		ppmw	nd	0.0507	nd	0.0508	nd	0.0507	nd	0.1185	nd	0.1134	nd	0.1032															
3	Nickel		ppmw		28.3		31.4		31.3		62.5		56.3		22.5															
4	Selenium		ppmw	nd	1	nd	1	nd	1		4.35		4.05		1.7															
5	Silver		ppmw	nd	0.4	nd	0.4	nd	0.4		0.505	nd	0.5	nd	0.5															
6	Thallium		ppmw	nd	1	nd	1	nd	1	nd	1	nd	1	nd	1															

	B	C	D	E	F	G	H
1	Process Information 1						
2		Units		R1	R2	R3	Cond Avg
3							
4	312C10	CoC					
5							
6	Max comb chamber temp	°F		2747	3196	2779	2907
7	Max baghouse inlet temperature	°F		436.6	427	423.4	429
8	Min baghouse pressure drop	in. w.c.		6.36	5.21	5.03	5.53
9							
10	312C11	Trial Burn					
11							
12	Combustion zone temperature	°F		1693	1573	1532	1599
13	Min mid kiln temperature	°F		1098	1052	1090	1080
14	Max kiln exit temperature	°F		450.1	447	450.6	449
15	Max baghouse inlet temperature	°F		440	439	440	440
16	Kiln maximum negative pressure	in. w.c.					-4.37
17							
18	312C12	Trial Burn					
19							
20	Comb zone temperature	°F		2047	2156	1889	2031
21	Mid kiln temperature	°F		968	977	1003	983
22	Max kiln exit temperature	°F		388.2	380.5	375.6	381
23	Baghouse inlet temperature	°F		371	370	369	370
24	Kiln negative pressure	in. w.c.					-2.02

	C	D	E	F	G
1	Process Information 2				
2					
3	312C1		1	2	3
4					
5	Combustion Temperature	F	2773	2811	2811
6	FF APCD Temperature	F	426	424	425
7	FF Pressure Drop	in H2O	4.4	3.8	4.8

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:	Solite Corp, Lightweight Aggregate Kiln #4															
4	Condition ID:	312C11 Trial Burn															
5	Condition/Test Date:	Nov 18-19, 1999															
6																	
7		I-TEF	Run 1				Run 2				Run 3						
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	0.360	0.360	0.360	0.360	0.480	0.480	0.480	0.480	0.910	0.910	0.910	0.910			
12	1,2,3,7,8-PCDD	0.5	0.910	0.455	0.910	0.455	1.110	0.555	1.110	0.555	1.140	0.570	1.140	0.570			
13	1,2,3,4,7,8-HxCDD	0.1	0.520	0.052	0.520	0.052	0.530	0.053	0.530	0.053	0.480	0.048	0.480	0.048			
14	1,2,3,6,7,8-HxCDD	0.1	1.720	0.172	1.720	0.172	1.240	0.124	1.240	0.124	1.120	0.112	1.120	0.112			
15	1,2,3,7,8,9-HxCDD	0.1	1.530	0.153	1.530	0.153	1.340	0.134	1.340	0.134	1.130	0.113	1.130	0.113			
16	1,2,3,4,6,7,8-HpCDD	0.01	6.870	0.069	6.870	0.069	4.100	0.041	4.100	0.041	4.380	0.044	4.380	0.044			
17	OCDD	0.001	4.540	0.005	4.540	0.005	2.720	0.003	2.720	0.003	2.330	0.002	2.330	0.002			
18	2,3,7,8-TCDF	0.1	13.120	1.312	13.120	1.312	18.520	1.852	18.520	1.852	26.540	2.654	26.540	2.654			
19	1,2,3,7,8-PCDF	0.05	8.640	0.432	8.640	0.432	12.550	0.628	12.550	0.628	14.040	0.702	14.040	0.702			
20	2,3,4,7,8-PCDF	0.5	13.380	6.690	13.380	6.690	19.370	9.685	19.370	9.685	22.780	11.390	22.780	11.390			
21	1,2,3,4,7,8-HxCDF	0.1	12.710	1.271	12.710	1.271	17.140	1.714	17.140	1.714	12.450	1.245	12.450	1.245			
22	1,2,3,6,7,8-HxCDF	0.1	6.350	0.635	6.350	0.635	9.050	0.905	9.050	0.905	6.330	0.633	6.330	0.633			
23	2,3,4,6,7,8-HxCDF	0.1	0.480	0.048	0.480	0.048	0.560	0.056	0.560	0.056	0.420	0.042	0.420	0.042			
24	1,2,3,7,8,9-HxCDF	0.1	6.590	0.659	6.590	0.659	8.990	0.899	8.990	0.899	6.270	0.627	6.270	0.627			
25	1,2,3,4,6,7,8-HpCDF	0.01	7.480	0.075	7.480	0.075	9.700	0.097	9.700	0.097	5.350	0.054	5.350	0.054			
26	1,2,3,4,7,8,9-HpCDF	0.01	1.300	0.013	1.300	0.013	1.420	0.014	1.420	0.014	0.830	0.008	0.830	0.008			
27	OCDF	0.001	1.060	0.001	1.060	0.001	1.120	0.001	1.120	0.001	0.810	0.001	0.810	0.001			
28	Total TCDD	0	11.900	0.000	11.900	0.000	13.190	0.000	13.190	0.000	25.680	0.000	25.680	0.000			
29	Total PCDD	0	16.120	0.000	16.120	0.000	14.850	0.000	14.850	0.000	19.930	0.000	19.930	0.000			
30	Total HxCDD	0	17.270	0.000	17.270	0.000	13.080	0.000	13.080	0.000	13.810	0.000	13.810	0.000			
31	Total HpCDD	0	12.720	0.000	12.720	0.000	8.030	0.000	8.030	0.000	8.350	0.000	8.350	0.000			
32	Total TCDF	0	351.46	0.000	351.460	0.000	434.96	0.000	434.960	0.000	612.63	0.000	612.630	0.000			
33	Total PCDF	0	139.55	0.000	139.550	0.000	189.94	0.000	189.940	0.000	231.44	0.000	231.440	0.000			
34	Total HxCDF	0	60.00	0.000	60.000	0.000	81.12	0.000	81.120	0.000	58.29	0.000	58.290	0.000			
35	Total HpCDF	0	12.870	0.000	12.870	0.000	15.920	0.000	15.920	0.000	8.950	0.000	8.950	0.000			
36																	
37	Gas sample volume (dscf)			149.46	149.46	149.46		145.80	145.80	145.80			132.59	132.59	132.59		
38	O2 (%)			16.10	16.10	16.10		16.5	16.5	16.5			16.40	16.40	16.40		
39																	
40	PCDD/PCDF (ng in sample)			12.401	627.5	12.401		17.241	774.9	17.241			19.155	982.2	19.155		
41	PCDD/PCDF (ng/dscm @ 7% O2)	0.0		8.38	423.87	8.38	0.0	13.00	584.28	13.00	0.0		15.54	796.66	15.54		
42																	
43	TEQ Cond Avg		12.304														
44	Total Cond Avg		601.61														

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:	Solite Corp, Lightweight Aggregate Kiln #4															
4	Condition ID:	312C12 Trial Burn															
5	Condition/Test Date:	19-May-00															
6																	
7		I-TEF	Run 1				Run 2				Run 3						
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 (pg)																
11	2,3,7,8-TCDD	1	28.6	29	29	29	54.1	54	54	54	105.0	105	105	105			
12	1,2,3,7,8-PCDD	0.5	129.0	65	129	65	93.5	47	94	47	105.0	53	105	53			
13	1,2,3,4,7,8-HxCDD	0.1	180.0	18	180	18	78.2	8	78	8	73.6	7	74	7			
14	1,2,3,6,7,8-HxCDD	0.1	747.0	75	747	75	381.0	38	381	38	325.0	33	325	33			
15	1,2,3,7,8,9-HxCDD	0.1	371.0	37	371	37	178.0	18	178	18	161.0	16	161	16			
16	1,2,3,4,6,7,8-HpCDD	0.01	4240.0	42	4240	42	1630.0	16	1630	16	1400.0	14	1400	14			
17	OCDD	0.001	15700.0	16	15700	16	2280.0	2	2280	2	1860.0	2	1860	2			
18	2,3,7,8-TCDF	0.1	546.0	55	546	55	1410.0	141	1410	141	3100.0	310	3100	310			
19	1,2,3,7,8-PCDF	0.05	385.0	19	385	19	736.0	37	736	37	1600.0	80	1600	80			
20	2,3,4,7,8-PCDF	0.5	509.0	255	509	255	893.0	447	893	447	1900.0	950	1900	950			
21	1,2,3,4,7,8-HxCDF	0.1	634.0	63	634	63	424.0	42	424	42	561.0	56	561	56			
22	1,2,3,6,7,8-HxCDF	0.1	399.0	40	399	40	278.0	28	278	28	427.0	43	427	43			
23	2,3,4,6,7,8-HxCDF	0.1	134.0	13	134	13	76.6	8	77	8	79.4	8	79	8			
24	1,2,3,7,8,9-HxCDF	0.1	369.0	37	369	37	142.0	14	142	14	184.0	18	184	18			
25	1,2,3,4,6,7,8-HpCDF	0.01	2430.0	24	2430	24	527.0	5	527	5	515.0	5	515	5			
26	1,2,3,4,7,8,9-HpCDF	0.01	300.0	3	300	3	104.0	1	104	1	78.7	1	79	1			
27	OCDF	0.001	2750.0	3	2750	3	628.0	1	628	1	565.0	1	565	1			
28	Total TCDD	0	1760	0	1760	0	2480	0	2480	0	3960	0	3960	0			
29	Total PCDD	0	3380	0	3380	0	2170	0	2170	0	2430	0	2430	0			
30	Total HxCDD	0	6750	0	6750	0	3340	0	3340	0	3050	0	3050	0			
31	Total HpCDD	0	7090	0	7090	0	2600	0	2600	0	2270	0	2270	0			
32	Total TCDF	0	30600	0	30600	0	68900	0	68900	0	126000	0	126000	0			
33	Total PCDF	0	8300	0	8300	0	17300	0	17300	0	36800	0	36800	0			
34	Total HxCDF	0	3290	0	3290	0	2420	0	2420	0	3900.0	0	3900	0			
35	Total HpCDF	0	3520	0	3520	0	819	0	819	0	775	0	775	0			
36																	
37	Gas sample volume (dscf)			164.68	164.68	164.68		166.20	166.20	166.20			159.16	159.16	159.16		
38	O2 (%)			16.00	16.00	16.00		15.9	15.9	15.9			11.60	11.60	11.60		
39																	
40	PCDD/PCDF (ng in sample)			0.793	83.1	0.793		0.906	102.9	0.906			1.701	181.6	1.701		
41	PCDD/PCDF (ng/dscm @ 7% O2)	0.0		0.476	49.95	0.476	0.0	0.529	60.08	0.529	0.0		0.562	60.05	0.562		
42																	
43	TEQ Cond Avg	0.523															
44	Total Cond Avg	56.69															