

US EPA ARCHIVE DOCUMENT

	B	C
1	<b>Source Description</b>	
2		
3	Phase I ID No.	314
4	EPA ID No.	VAD042755082
5	Facility Name	Solite Corp
6	Facility Location	
7	City	Arvonnia
8	State	Virginia
9	Unit ID Name/No.	Kiln # 8
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	WQ/FF
18	APCS General Class	WQ, FF
19	APCS Characteristics	Water quench, fabric filter, BHA, 29,000 ft2 bag area, fiberglass bags
20	Hazardous Wastes	Liq
21	Haz Waste Description	The raw material was excavated from the Solite Arvonnia quarry
22	Supplemental Fuel	
23		
24	Stack Characteristics	
25	Diameter (ft)	4.3
26	Height (ft)	80.0
27	Gas Velocity (ft/sec)	13.1
28	Gas Temperature (°F)	337.8
29		
30	Permitting Status	Tier III for As, Be, Cd, Cr, Pb; Tier I for Hg, Sb, Ba, Ag, Tl
31	HWC Burn Status (Date if Terminated)	

	B	C
1	<b>Condition Description</b>	
2		
3	<b>314C10</b>	
4		
5	Report Name/Date	Trial Burn Report, Solite Corporation, A. F. Old Facility, Arvonnia, Virginia, March 2000; Entropy Stationary Sampling Report, Reference No. 1702, Solite Corp Arvonnia, VA, November and December 1999
6	Report Preparation	Solite/Entropy/Blue Ridge
7	Testing Firm	Entropy
8	Testing Dates	December 7-8, 1999
9	Cond Dates	Dec-99
10	Condition Descr	Trial Burn, organics DRE, HCl/Cl2 emissions limits
11	Content	HC/CO, PM, HCl/Cl2, POHC DRE, PCDD/F
12		
13	<b>314C11</b>	
14		
15	Report Name/Date	Recertification of Compliance for Kilns 7 and 8, Solite Corp, Arvonnia, VA, July 27, 1999; Entropy Stationary Sampling Report, Reference No. 17091, Solite Corp Arvonnia, VA, May 1999;
16	Report Preparation	Solite/Entropy/Blue Ridge
17	Testing Firm	Metals, HCl/Cl2, PM, HC/CO
18	Testing Dates	May 5-6, 1999
19	Cond Dates	May-99
20	Condition Descr	CoC, metals and chlorine SRE testing
21	Content	Entropy
22		
23	<b>314C1</b>	
24		
25	Report Name/Date	Emmision Test Results for No. 7 and No. 8 Aggregate Kilns, Solite Corporation, Arvonnia, Virginia, Prepared by IEA, Project # 1381-003, August 8, 1992; COC Forms attached, August 21, 1992
26	Report Prepare	IEA
27	Testing Firm	IEA
28	Cond Descr	MAX HW FEED,MAX RAW MATERIAL
29	Testing Dates	
30	Cond Dates	Aug-92
31		
32	<b>314C2</b>	
33		
34	Report Name/Date	PCDD/PCDF Emissions Testing Kiln 8, Solite Corporation, Arvonnia, Virginia, EPA ID # VAD042755082, January 1997
35	Report Prepare	Solite
36	Testing Firm	
37	Cond Descr	PCDD/PCDF EMISSIONS TESTING
38	Testing Dates	December 10, 1996
39	Cond Dates	Dec-96
40		
41	<b>314C3</b>	
42		
43	Report Name/Date	COC Forms AF Old Kiln No. 8, Solite Corporation, Arvonnia, Virginia, March 18, 1996
44	Report Prepare	Solite
45	Testing Firm	Carnes and Associates
46	Cond Descr	MAX HW FEED,MAX RAW MATERIAL
47	Test Dates	May 4, 1995
48	Cond Date	May-95

	B	C	D	E	F	G	H	I	J	K	L	M
1	<b>Stack Gas Emissions 1</b>											
2												
3												
4	<b>314C10</b>	<b>Trial Burn</b>				R1		R2		R3		Cond Avg
5												
6												
7	PM	E1	gr/dscf	y		0.0677		0.0288		0.0283		0.0416
8	CO (RA)	E1	ppmv	y		33.62		35.23		23.09		30.6
9	CO (MHRA)	E1	ppmv	y		57.85		68.92		35.33		54.0
10	HC (RA)	E1	ppmv	y		0.3		0.3		0.1		0.2
11	HC (MHRA)	E1	ppmv	y		0.8		0.6		0.6		0.7
12	HCl	E1	ppmv	y		957		1015		516		829.3
13	Cl2	E1	ppmv	y		1.33		5.44		3.66		3.48
14	Total Chlorine	E1	ppmv	y		959.7		1025.9		523.3		836.3
15												
16	POHC DRE	Perchloroethylene										
17	POHC Feedrate		lb/hr			31.23		31.23		33.32		31.93
18	Emission Rate	E2	lb/hr			0.000734		0.00061		0.000517		0.000620
19	DRE	E2	%			99.99765		99.99805		99.99845		
20												
21	POHC DRE	1,2,4 Trichlorobenzene										
22	POHC Feedrate		lb/hr			31.2		31.2		49.8		37.40
23	Emission Rate	E2	lb/hr			0.000829		0.000621		0.000637		0.000696
24	DRE	E2	%			99.99734		99.99801		99.99872		
25												
26	Sampling Train	PM, HCl E1										
27	Stack Gas Flowrate		dscfm			27517		23889		24878		25428.0
28	O2		%			16		16		15.2		15.7
29	Moisture		%			10.6		11.4		12.5		11.5
30	Temperature		°F			334		340		344		339.3
31												
32	Sampling Train	PCDD, E2										
33	Stack Gas Flowrate		dscfm			24582		23634		26795		25004
34	O2		%			16		15.3		15.2		15.5
35	Moisture		%			10.8		11.3		10		11
36	Temperature		°F			346		347		356		350
37												
38	<b>314C11</b>	<b>CoC</b>				R1		R2		R3		Cond Avg
39												
40												
41	PM	E1	gr/dscf	y		0.0382		0.00452		0.00874		0.0172
42	CO (RA)	E1	ppmv	y		12.3		2.1		2.5		5.6
43	CO (MHRA)	E1	ppmv	y		34.8		15		3.6		17.8
44												
45	HCl	E1	ppmv	y		1604		883		1010		1165.7
46	Cl2	E1	ppmv	y		0.79		0.444		0.31		0.5
47	Total Chlorine	E1	ppmv	y		1605.6		883.9		1010.6		1166.7
48												
49	Antimony		lb/hr			2.95E-04		4.26E-05		3.93E-05		
50	Arsenic		lb/hr			0.0036		0.00173		0.00185		
51	Barium		lb/hr			3.11E-03		7.19E-04		7.15E-04		
52	Beryllium		lb/hr			2.99E-04		1.85E-04		1.68E-04		
53	Cadmium		lb/hr			1.86E-03		9.36E-04		8.68E-04		
54	Chromium		lb/hr			0.00461		0.00231		0.002		
55	Chromium (Hex)		lb/hr		nd	5.61E-05	nd	6.18E-05	nd	5.64E-05		
56	Cobalt		lb/hr			3.37E-04		1.00E-04		5.73E-05		
57	Copper		lb/hr			1.13E-03		4.64E-04		6.10E-04		
58	Lead		lb/hr			0.0342		0.0155		0.0167		
59	Manganese		lb/hr			2.79E-03		9.52E-04		5.02E-04		
60	Mercury		lb/hr			1.25E-04		5.80E-04		5.21E-04		
61	Nickel		lb/hr			4.18E-04		9.08E-05		1.23E-04		
62	Selenium		lb/hr			1.20E-04		5.95E-05		1.01E-04		
63	Silver		lb/hr			4.05E-05	nd	1.50E-05		2.33E-05		
64	Thallium		lb/hr			5.54E-05	nd	3.75E-05	nd	3.93E-05		
65	Zinc		lb/hr			0.00464		0.00165		0.00172		
66												
67	Sampling Train	PM, HCl E1										
68	Stack Gas Flowrate		dscfm			21520		21448		22017		21662
69	O2		%			14.1		13.8		14.2		14.0
70	Moisture		%			19		19.5		18.9		19.1
71	Temperature		°F			344		345		355		348

	B	C	D	E	F	G	H	I	J	K	L	M
72												
73	Sampling Train	Metals E2										
74	Stack Gas Flowrate	dscfm				21477		21003		22664		21714.7
75	O2	%				14.1		13.8		14.2		14.0
76	Moisture	%				19		19.5		18.4		19.0
77	Temperature	°F				347		349		351		349.0
78												
79	Antimony	E2	ug/dscm	y		7.5		1.1 nd		1.0		3.15
80	Arsenic	E2	ug/dscm	y		90.9		42.8		44.9		59.56
81	Barium	E2	ug/dscm	y		78.6		17.8		17.4		37.91
82	Beryllium	E2	ug/dscm	y		7.6		4.6		4.1		5.40
83	Cadmium	E2	ug/dscm	y		47.0		23.2		21.1		30.41
84	Chromium	E2	ug/dscm	y		116.4		57.2		48.6		74.07
85	Chromium (Hex)	E2	ug/dscm	y		1.4		1.5		1.4		1.44
86	Cobalt	E2	ug/dscm	y		8.5		2.5		1.4		4.13
87	Copper	E2	ug/dscm	y		28.5		11.5		14.8		18.28
88	Lead	E2	ug/dscm	y		863.9		383.7		405.6		551.06
89	Mercury	E2	ug/dscm	y		3.2		14.4		12.7		10.06
90	Nickel	E2	ug/dscm	y		10.6		2.2		3.0		5.26
91	Selenium	E2	ug/dscm	y		3.0		1.5		2.5		2.32
92	Silver	E2	ug/dscm	y		1.0		0.4		0.6		0.65
93	Thallium	E2	ug/dscm	y		1.4		0.9		1.0		1.09
94	Zinc	E2	ug/dscm	y		117.2		40.8		41.8		66.61
95												
96	LVM	E2	ug/dscm	y		214.9		104.6		97.6		139.0
97	SVM	E2	ug/dscm	y		910.9		406.8		426.7		581.5

	B	C	D	E	F	G	H	I	J	K	L	M
1	<b>Stack Gas Emissions 2</b>											
2												
3	<b>314C1</b>						R1		R2		R3	Cond Avg
4												
5	PM	E1	gr/dscf	y		0.01300		0.03000		0.03300		0.02533
6	CO (MHRA)	E1	ppmv	y		4.90		3.60		2.30		3.60
7	CO (RA)	E1	ppmv	y		3.90		3.00		2.20		3.03
8	HC (MHRA)	E1	ppmv	y		4.40		5.80		4.50		4.90
9	HC (RA)	E1	ppmv	y		3.00		5.20		4.10		4.10
10	HCl	E1	ppmv	y		917.00		820.00		812.00		849.67
11	Cl2	E1	ppmv	y		2.07		1.94		1.42		1.81
12	Total Chlorine	E1	ppmv	y		921.14		823.88		814.84		853.29
13												
14	Antimony	E2	ug/dscm	y		301.00		14.30		42.90		119.40
15	Arsenic	E2	ug/dscm	y		2.02		89.40		124.00		71.81
16	Barium	E2	ug/dscm	y		15.80	nd	59.60	nd	62.20		45.87
17	Beryllium	E2	ug/dscm	y		1.23	nd	4.25		3.90		3.13
18	Cadmium	E2	ug/dscm	y		21.80		103.00		62.20		62.33
19	Chromium	E2	ug/dscm	y	nd	12.30	nd	54.20	nd	32.30	100	32.93
20	Chromium (Hex)	E3	ug/dscm	y		1.56		1.17	nd	1.56		1.43
21	Lead	E2	ug/dscm	y		1490.00		1550.00		1770.00		1603.33
22	Mercury	E2	ug/dscm	y		16.00		25.30		25.20		22.17
23	Silver	E2	ug/dscm	y	nd	3.68	nd	3.75	nd	2.86	100	3.43
24	Thallium	E2	ug/dscm	y	nd	2.00	nd	1.25	nd	1.66	100	1.64
25	SVM	E2	ug/dscm	y		1511.80		1653.00		1832.20		1665.67
26	LVM	E2	ug/dscm	y		9.40		120.75		144.05		91.40
27												
28	Sampling Train	Halo		E1								
29	Stack Gas Flowrate		dscfm			22700		24400		22600		
30	O2		%			15.5		15.5		15.1		
31	Moisture		%			9.4		9.2		9.2		
32	Temperature		°F			364		366		358		
33												
34	Sampling Train	Meta		E2								
35	Stack Gas Flowrate		dscfm			23400		24100		22900		
36	O2		%			15.2		15.5		15.2		
37	Moisture		%			9.4		7		11		
38	Temperature		°F			357		357		351		
39												
40	Sampling Train	Cr H		E3								
41	Stack Gas Flowrate		dscfm			22100		23400		21000		
42	O2		%			15.6		15.4		15		
43	Moisture		%			11.3		8.7		9.4		
44	Temperature		°F			366		366		358		
45												
46	<b>314C3</b>						R1		R2		R3	Cond Avg
47												
48	PM	E1	gr/dscf	y		0.00307		0.00314		0.00134		0.00252
49	HCl	E1	ppmv	y		1307.67		1133.19		1234.50		1225.12
50	Cl2	E1	ppmv	y		2.18		0.50		0.12		0.93
51	Total Chlorine	E1	ppmv	y		1312.03		1134.18		1234.74		1226.98
52	Antimony	E1	ug/dscm	y		15.76		4.38		2.31		7.48
53	Arsenic	E1	ug/dscm	y		3.82		3.38		2.63		3.27
54	Barium	E1	ug/dscm	y		3.94		7.51		22.95		11.47
55	Beryllium	E1	ug/dscm	y		0.25		0.19	nd	0.13		0.19
56	Cadmium	E1	ug/dscm	y		5.19		5.82		4.75		5.25
57	Chromium	E1	ug/dscm	y		5.25		8.69		24.14		12.70
58	Chromium (Hex)	E1	ug/dscm	y	nd	3.31	nd	3.06	nd	3.06	100	3.15
59	Lead	E1	ug/dscm	y		31.77		37.72		20.52		30.00
60	Mercury	E1	ug/dscm	y	nd	4.07	nd	4.57		4.50	100	4.38
61	Silver	E1	ug/dscm	y	nd	0.63	nd	0.63		1.25	100	0.83
62	Thallium	E1	ug/dscm	y	nd	1.50	nd	1.50	nd	1.50	100	1.50
63	SVM	E1	ug/dscm	y		36.96		43.53		25.27		35.26
64	LVM	E1	ug/dscm	y		9.32		12.26		26.89		16.16
65												
66	Sampling Train	Halo		E1								
67	Stack Gas Flowrate		dscfm			22507.0		22507.0		22507.0		
68	O2		%			15.1		15.1		15.1		
69	Moisture		%									
70	Temperature		°F									
71	averaged sample train values; do not have in test report copy											

	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	<b>Feedstream 1</b>																													
2																														
3																														
4	<b>314C10</b>	<b>Trial burn</b>			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										HW		HW		HW								Total		Total		Total		Total	
9	Feedstream Description				Raw Matl		Raw Matl		Raw Matl		LBM		LBM		LBM		Spike		Spike		Spike		Total		Total		Total		Total	
10	Feed Rate	lb/min									47.84		45.17		42.45								Total		Total		Total		Total	
11	Heating Value	Btu/lb									10418		10418		10418								Total		Total		Total		Total	
12	Chlorine	%																					Total		Total		Total		Total	
13																														
14	Chlorine	g/hr																												26864
15																														
16	Stack Gas Flowrate	dscfm			27517		23889		24878		27517		23889		24878		27517		23889		24878		27517		23889		24878		25428	
17	Oxygen	%			16.0		16.0		15.2		16		16		15.2		16		16		15.2		16		16		15.2		16	
18																														
19	Thermal Feedrate	MMBtu/hr									29.9		28.2		26.5								29.9		28.2		26.5		28	
20	Estimated Firing Rate	MMBtu/hr																					43.68		37.92		45.81		42	
21																														
22	<i>Feedrate MTEC Calculations</i>																													
23	Chlorine	ug/dscm																												1653914
24																														
25	<b>314C11</b>	<b>CoC</b>			R1		R2		R3		R1		R2		R3		R1		R2		R3		R1		R2		R3		Cond Avg	
26																														
27	Feedstream Number				F1		F1		F1		F2		F2		F2		F3		F3		F3		F4		F4		F4		F4	
28	Feed Class				Raw Material		Raw Material		Raw Material		Liq HW		Liq HW		Liq HW		Spike		Spike		Spike		Total		Total		Total		Total	
29	Feed Class 2				RM		RM		RM		HW		HW		HW		Spike		Spike		Spike		Total		Total		Total		Total	
30	Feedstream Description				Raw Matl		Raw Matl		Raw Matl		LBM		LBM		LBM		Spike		Spike		Spike		Total		Total		Total		Total	
31	Feed Rate	lb/hr			33000		33060		33180		3495.6		3634.8		3377.4								36496		36695		36557		36583	
32	Heating Value	Btu/lb			0		0		0		10760		11139		10750															
33	Chlorine	g/hr	nd	749.10	nd	750.46	nd	753.19		18371		6723		4950		27218.9		16046		20043		46339		23519		25746		31868		
34	Antimony	g/hr	nd	7.49	nd	7.50	nd	7.53		4.04		2.59		2.13								11.5		10.1		9.7				
35	Arsenic	g/hr		171.41		174.5		163.46		2.06	nd	0.83	nd	0.77		704.5		506.3		561.7		878.0		681.6		725.9				
36	Barium	g/hr		263.8		253.5		229.4		124.09		128.6		112.49								388		382		342				
37	Beryllium	g/hr		3.44		3.68		3.34	nd	0.08	nd	0.08	nd	0.08		125.19		92.53		91.92		128.7		96.3		95.3				
38	Cadmium	g/hr	nd	3.00	nd	3.00	nd	3.01		4.25		2.48		2.01		326.37		214.54		217.76		333.6		220.0		222.8				
39	Chromium	g/hr		262.33		284.86		268.43		22.7		34.13		13.06		1514.53		1134.95		1253.8		1800		1454		1535				
40	Cobalt	g/hr		236.72		252.16		216.92		121.72		14.52		23.92								358		267		241				
41	Lead	g/hr		232.52		255.04		418.39		13.47		69.73		66.74		8257.17		6041.39		5244.72		8503		6366		5730				
42	Manganese	g/hr		8794.40		10071.20		14606.00		8.44		48.61		46.09								8803		10120		14652				
43	Mercury	g/hr	nd	0.28	nd	0.30	nd	0.30		0.03		0.15		0.12								0.315		0.450		0.421				
44	Nickel	g/hr		491.87		533.93		496.37		4.45		7.34		5.75								496.3		541.3		502.1				
45	Silver	g/hr	nd	3.00	nd	3.00	nd	3.01		0.5		1.25		1.13								3.50		4.25		4.14				
46	Thallium	g/hr	nd	7.49	nd	7.50	nd	7.53	nd	0.79	nd	0.83	nd	0.77								8.28		8.33		8.30				
47																														
48	Stack Gas Flowrate	dscfm			21477		21003		22664		21477		21003		22664		21477		21003		22664		21477		21003		22664		21715	
49	Oxygen	%			14.1		13.8		14.2		14.1		13.8		14.2		14.1		13.8		14.2		14.1		13.8		14.2		14	
50																														
51	Thermal Feedrate	MMBtu/hr									37.6		40.5		36.3								37.6		40.5		36.3		38	
52	Estimated Firing Rate	MMBtu/hr																					47.04		48.01		48.93		48	
53																														
54	<i>Feedrate MTEC Calculations</i>																													
55	Chlorine	ug/dscm	100	41678	100	40917	100	40295		1022117		366555		264820		1514392		874870		1072279	2	2,578,186	3	1,282,342	3	1,377,393	2	1745974		
56	Antimony	ug/dscm	100	417	100	409	100	403		225		141		114		0		0		0	65	642	74	550	78	517	72	570		
57	Arsenic	ug/dscm		9537		9514		8745		115	100	45	100	41		39197		27605		30050		48848		37164		38836		41616		
58	Barium	ug/dscm		14677		13821		12273		6904		7012		6018		0		0		0		21581		20833		18291		20235		
59	Beryllium	ug/dscm		191		201		179	100	4	100	4	100	4		6965		5045		4918		7161		5250		5100		5837		
60	Cadmium	ug/dscm	100	167	100	164	100	161		236		135		108		18158		11697		11650	1	18562	1	11996	1	11919	1	14159		

	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	Chromium		ug/dscm		14595		15531		14361		1263		1861		699		84265		61880		67077		100123		79273		82136		87177
2	Cobolt		ug/dscm		13170		13748		11605		6772		792		1280		0		0		0		19943		14540		12885		15789
3	Lead		ug/dscm		12937		13905		22383		749		3802		3571		459408		329392		280587		473095		347100		306541		375578
4	Manganese		ug/dscm		489298		549108		781405		470		2650		2466		0		0		0		489768		551758		783871		608466
5	Mercury		ug/dscm	100	16	100	16	100	16	100	2		8		6		0		0		0	90	17.5	67	24.5	72	22.5	75	22
6	Nickel		ug/dscm		27366		29111		26555		248		400		308		0		0		0		27614		29511		26863		27996
7	Silver		ug/dscm	100	167	100	164	100	161		28		68		60		0		0		0	86	195	71	232	73	222	76	216
8	Thallium		ug/dscm	100	417	100	409	100	403	100	44	100	45	100	41		0		0		0	100	461	100	454	100	444	100	453
9																													
0	SVM		ug/dscm	1.3	13104	1.2	14069	0.7	22545		986		3937		3678		477567		341090		292237		491656		359096		318459		389737
1	LVM		ug/dscm		24324		25246		23284		1382		1910		744		130427		94530		102045		156132		121687		126073		134631



	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	<b>Feedstream 2</b>																												
2																													
3																													
4	<b>314C1</b>		R1	R2	R3		R1	R2	R3		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	F4	F4		F4	F4	F4		F4	F4	
7	Feed Class		Spike	Spike	Spike		Raw Material	Raw Material	Raw Material		Liq HW	Liq HW	Liq HW		Total	Total	Total		Total	Total	Total		Total	Total	Total		Total	Total	
8	Feed Class 2		Spike	Spike	Spike		RM	RM	RM		HW	HW	HW		Total	Total	Total		Total	Total	Total		Total	Total	Total		Total	Total	
9	Feedstream Description		Spike	Spike	Spike		Shale	Shale	Shale		Liquid waste	Liquid waste	Liquid waste		Total	Total	Total		Total	Total	Total		Total	Total	Total		Total	Total	
10	Feed Rate	lb/hr	25.5	24.5	26.0		30427	30026	30827		3120	3240	3000																
11	Heating Value	Btu/lb	0	0	0						16099	16296	16540																
12	Thermal Feedrate	MMBtu/hr									50.23	52.8	49.62		50.23	52.8	49.62												
13	Chlorine	lb/hr			nd		11.9 nd	11.6 nd	11.9		57.1	50.5	55.3																
14	Antimony	lb/hr			nd		0.0117 nd	0.0109 nd	0.0114		0.025	0.003	0.032																
15	Arsenic	lb/hr	0.796	0.793	0.951		0.291	0.457	0.497		0.001	0.001	0.002																
16	Barium	lb/hr					0.61	0.468	0.532		0.412	0.046	0.934																
17	Beryllium	lb/hr	0.119	0.084	0.070	nd	0.0021 nd	0.002 nd	0.0021 nd		0.0002 nd	0.0002	0.001																
18	Cadmium	lb/hr	1.231	1.246	1.312	nd	0.0135 nd	0.0126 nd	0.0132		0.021	0.015	0.031																
19	Chromium	lb/hr	0.587	0.690	0.799		1.14	0.906	1.14		0.223	0.126	0.286																
20	Chromium (Hex)	lb/hr	0.587	0.690	0.799																								
21	Lead	lb/hr	22.812	21.738	22.931		0.871	0.577	0.617		0.512	0.187	0.631																
22	Mercury	lb/hr				nd	0.0012	0.0023	0.0021		0.002	0.001	0.004																
23	Silver	lb/hr			nd		0.0012 nd	0.0196 nd	0.0205 nd		0.002 nd	0.002	0.003																
24	Thallium	lb/hr					0.0405	0.032	0.036	nd	0.001 nd	0.001 nd	0.001																
25																													
26	Stack Gas Flowrate	dscfm	23400	24100	22900		23400	24100	22900		23400	24100	22900																
27	Oxygen	%	15.2	15.5	15.2		15.2	15.5	15.2		15.2	15.5	15.2																
28																													
29	<i>Feedrate MTEC Calculations</i>																												
30	Chlorine	ug/dscm	0	0	0	100	328208	100	327585	100	335374	1574149	1427110	1559099	17	1902357	19	1754695	18	1894473	18	1850508							
31	Antimony	ug/dscm	0	0	0	100	323	100	308	100	321	699	93	913	32	1022	77	401	26	1235	36	886							
32	Arsenic	ug/dscm	21956	22400	26791		8026		12906		14007	24	19	62	30007		35325		40860		35397								
33	Barium	ug/dscm	0	0	0		16824		13216		14993	11370	1301	26319		28194		14518		41312		28008							
34	Beryllium	ug/dscm	3271	2366	1970	100	58	100	55	100	58	6	100	31	2	3335	3	2427	3	2058	2	2607							
35	Cadmium	ug/dscm	33959	35176	36975	100	372	100	356	100	372	590	417	864	1	34921	1	35949	1	38210	1	36360							
36	Chromium	ug/dscm	16194	19487	22523		31442		25586		32128	6159	3555	8058		53795		48627		62709		55044							
37	Chromium (Hex)	ug/dscm	16194	19487	22523		0		0		0	0	0	0		16194		19487		22523		19401							
38	Lead	ug/dscm	629169	613897	646262		24023		16295		17389	14125	5273	17771		667317		635464		681421		661401							
39	Mercury	ug/dscm	0	0	0	100	33		64		58	61	25	124	35	94		88		182	9	121							
40	Silver	ug/dscm	0	0	0	100	32	100	554	100	578	61	100	62		75	100	93	100	616	89	652	95	454					
41	Thallium	ug/dscm	0	0	0		1117		909		1003	36	100	37	100	31	3	1153	4	947	3	1034	3	1045					
42	SVM	ug/dscm	663128	649072	683236	2	24395	2	16650	2	17761	14715	5690	18635		702238		671413		719632		697761							
43	LVM	ug/dscm	41422	44253	51283		39525		38547		46193	6190	3580	8152		87137		86380		105628		93048							
44																													
45	<b>314C2</b>		R1	R2	R3		R1	R2	R3		R1	R2	R3		R1	R2	R3		R1	R2	R3		R1	R2	R3		Cond	Avg	
46																													
47	Feedstream Number		F1	F1	F1		F2	F2	F2		F3	F3	F3		F4	F4	F4		F4	F4	F4		F4	F4	F4		F4	F4	
48	Feed Class		Spike	Spike	Spike		Raw Material	Raw Material	Raw Material		Liq HW	Liq HW	Liq HW		Total	Total	Total		Total	Total	Total		Total	Total	Total		Total	Total	
49	Feedstream Description		Spike	Spike	Spike		Shale	Shale	Shale		Liquid waste	Liquid waste	Liquid waste		Total	Total	Total		Total	Total	Total		Total	Total	Total		Total	Total	
50	Feed Rate	lb/hr					27200	27240	27300		3295.8	3120	3128.4																
51	Heating Value	Btu/lb									12200	11000	10900																
52	Thermal Feedrate	MMBtu/hr									40.21	34.32	34.10		40.21	34.32	34.10												
53	Chlorine	lb/hr			nd		2.72 nd	2.724 nd	2.73		47.12994	42.588	41.92056																
54	Antimony	lb/hr			nd		0.069 nd	0.069 nd	0.070 nd		0.040 nd	0.384 nd	0.038																
55	Arsenic	lb/hr					0.190	0.183	0.158	nd	0.007 nd	0.006 nd	0.006																
56	Barium	lb/hr					0.305	0.161	0.098		1.219	1.186	1.158																
57	Beryllium	lb/hr			nd		0.022 nd	0.022 nd	0.022		0.013	0.012	0.013																
58	Cadmium	lb/hr					0.193	0.013	0.131	nd	0.007 nd	0.006 nd	0.006																
59	Chromium	lb/hr					0.337	0.248	0.251		0.260	0.240	0.250																
60	Lead	lb/hr					0.188	0.174	0.956		0.030	0.025	0.025																

	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	
61	Mercury	lb/hr								nd	0.0003	nd	0.0003	nd	0.0003	0.0003	0.0003	0.0002	0.0003											
62	Silver	lb/hr									0.046		0.044		0.044	nd	0.026	nd	0.025											
63	Thallium	lb/hr								nd	0.063	nd	0.063	nd	0.063		0.033		0.031											
64																nd														
65	<b>314C3</b>				R1		R2		R3		R1		R2		R3		R1		R2		R3		R1		R2		R3		Cond Avg	
66																														
67	Feedstream Number				F1		F1		F1		F2		F2		F2		F3		F3		F3		F4		F4		F4		F4	
68	Feed Class				Spike		Spike		Spike		Raw Material		Raw Material		Raw Material		Liq HW		Liq HW		Liq HW		Total		Total		Total		Total	
69	Feed Class 2				Spike		Spike		Spike		RM		RM		RM		HW		HW		HW		Total		Total		Total		Total	
70	Feedstream Description				Spike		Spike		Spike		Shale		Shale		Shale		Liquid waste		Liquid waste		Liquid waste		Total		Total		Total		Total	
71	Feed Rate	lb/hr									29374		29274		29534		3592		3556		3672									
72	Heating Value	Btu/lb																												
73	Chlorine	lb/hr									11.760		17.580		11.824		50.569		54.171		52.650									
74	Antimony	lb/hr									0.021		0.017		0.019		0.048		0.036		0.042									
75	Arsenic	lb/hr									0.338		0.363		0.367		1.003		0.997		1.002									
76	Barium	lb/hr									5.410		5.186		4.641		0.700		0.610		0.677									
77	Beryllium	lb/hr									0.044		0.042		0.038		0.172		0.166		0.159									
78	Cadmium	lb/hr									0.000		0.000		0.000		2.072		1.328		1.959									
79	Chromium	lb/hr									1.476		1.403		1.315		2.401		2.327		2.463									
80	Lead	lb/hr									0.479		0.451		0.476		18.352		18.483		18.396									
81	Mercury	lb/hr									0		0		0		0		0		0									
82	Silver	lb/hr									0		0		0		0		0		0									
83	Thallium	lb/hr									0.014991		0		0		0		0		0									
84																														
85	Stack Gas Flowrate	dscfm			22507		22507		22507		22507		22507		22507		22507		22507		22507									
86	Oxygen	%			15.1		15.1		15.1		15.1		15.1		15.1		15.1		15.1		15.1									
87																														
88	<i>Feedrate MTEC Calculations</i>																													
89	Chlorine	ug/dscm			0		0		0		334142		499513		335965		1436845		1539193		1495983		1770987		2038706		1831949		1880547	
90	Antimony	ug/dscm			0		0		0		595		482		532		1372		1027		1196		1967		1510		1729		1735	
91	Arsenic	ug/dscm			0		0		0		9609		10323		10417		28495		28326		28483		38104		38649		38900		38551	
92	Barium	ug/dscm			0		0		0		153707		147355		131864		19895		17345		19231		173602		164700		151095		163132	
93	Beryllium	ug/dscm			0		0		0		1253		1190		1090		4886		4729		4516		6139		5920		5606		5888	
94	Cadmium	ug/dscm			0		0		0		0		0		0		58876		37747		55662		58876		37747		55662		50762	
95	Chromium	ug/dscm			0		0		0		41938		39877		37378		68209		66111		69976		110147		105987		107353		107829	
96	Lead	ug/dscm			0		0		0		13618		12822		13524		521443		525177		522684		535061		537999		536208		536423	
97	Mercury	ug/dscm			0		0		0		0		0		0		0		0		0		0		0		0		0	
98	Silver	ug/dscm			0		0		0		0		0		0		0		0		0		0		0		0		0	
99	Thallium	ug/dscm			0		0		0		426		0		0		0		0		0		426		0		0		142	
100	SVM	ug/dscm			0		0		0		13618		12822		13524		580319		562924		578346		593937		575746		591870		587185	
101	LVM	ug/dscm			0		0		0		52800		51390		48885		101590		99166		102974		154390		150556		151859		152268	

	B	C	D	E	F	G	H
1	<b>Process Information 1</b>						
2		Units					
3				R1	R2	R3	Cond Avg
4	<b>314C10</b>	Trial burn					
5							
6	Min mid kiln temperature	°F		1080	1090	1092	1087.3
7	Min kiln exit temperature	°F		483	493	499	491.7
8	Max baghouse inlet temperature	°F		443	444	448	445.0
9							
10	<b>314C11</b>	CoC					
11							
12	Max comb zone temperature	°F		2353	2524	2500	2459.0
13	Max baghouse inlet temperature	°F		442.6	441.4	441.4	441.8
14	Min baghouse pressure drop	in. w.c.		4.3	3.67	3.69	3.9

	C	D	E	F	G
1	<b>Process Information 2</b>				
2			1	2	3
3	<b>314C1</b>				
4					
5	Combustion Temperature	F	2318	2259	2217
6	FF Temperature	F	443	440	429
7	FF Pressure Drop	in H2O	5.3	4	3
8					
9	<b>314C2</b>				
10					
11	Combustion Temperature	F	2118.6	2127.1	2092.4
12	FF Temperature	F	415.4	422.9	422.1
13	FF Pressure Drop	in H2O	6.05	7.04	4.74
14					
15	<b>314C3</b>				
16					
17	Combustion Temperature	F	2297	2352	2361
18	FF Temperature	F	426.2	427.3	423.3
19	FF Pressure Drop	in H2O	4.55	3.95	3.74

	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, Arvonja															
4	Condition ID:		314C10 Kiln No. 8															
5	Condition/Test Date:		Trial burn, 12/99															
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	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	1/2 ND
10	Detected in sample volume (ng)																	
11	2,3,7,8-TCDD		1	0.06	0.0600	0.060	0.0600	0.0718	0.0718	0.072	0.0718	0.1244	0.1244	0.124	0.1244			
12	Other TCDD		0	1.64	0.0000	1.640	0.0000	1.4282	0.0000	1.428	0.0000	2.0756	0.0000	2.076	0.0000			
13	1,2,3,7,8-PCDD		0.5	0.12	0.0600	0.120	0.0600	0.2088	0.1044	0.209	0.1044	0.2285	0.1143	0.229	0.1143			
14	Other PCDD		0	2.08	0.0000	2.080	0.0000	2.3912	0.0000	2.391	0.0000	3.271	0.0000	3.271	0.0000			
15	1,2,3,4,7,8-HxCDD		0.1	0.08	0.0080	0.080	0.0080	0.1181	0.0118	0.118	0.0118	0.2095	0.0210	0.210	0.0210			
16	1,2,3,6,7,8-HxCDD		0.1	0.1742	0.0174	0.174	0.0174	0.278	0.0278	0.278	0.0278	0.401	0.0401	0.401	0.0401			
17	1,2,3,7,8,9-HxCDD		0.1	0.1594	0.0159	0.159	0.0159	0.2671	0.0267	0.267	0.0267	0.37	0.0370	0.370	0.0370			
18	Other HxCDD		0	1.6864	0.0000	1.686	0.0000	2.3088	0.0000	2.309	0.0000	2.9195	0.0000	2.920	0.0000			
19	1,2,3,4,6,7,8-HpCDD		0.01	0.492	0.0049	0.492	0.0049	0.8358	0.0084	0.836	0.0084	1.449	0.0145	1.449	0.0145			
20	Other HpCDD		0	0.44	0.0000	0.440	0.0000	0.6556	0.0000	0.656	0.0000	1.3082	0.0000	1.308	0.0000			
21	OCDD		0.001	0.5332	0.0005	0.533	0.0005	0.84	0.0008	0.840	0.0008	1.9892	0.0020	1.989	0.0020			
22	2,3,7,8-TCDF		0.1	0.9716	0.0972	0.972	0.0972	0.8934	0.0893	0.893	0.0893	1.4747	0.1475	1.475	0.1475			
23	Other TCDF		0	29.0284	0.0000	29.028	0.0000	27.807	0.0000	27.807	0.0000	40.2253	0.0000	40.225	0.0000			
24	1,2,3,7,8-PCDF		0.05	0.876	0.0438	0.876	0.0438	1.11	0.0555	1.110	0.0555	1.6607	0.0830	1.661	0.0830			
25	2,3,4,7,8-PCDF		0.5	1.5177	0.7589	1.518	0.7589	1.7919	0.8960	1.792	0.8960	3.0535	1.5268	3.054	1.5268			
26	Other PCDF		0	12.9854	0.0000	12.985	0.0000	13.998	0.0000	13.998	0.0000	21.985	0.0000	21.985	0.0000			
27	1,2,3,4,7,8-HxCDF		0.1	0.8816	0.0882	0.882	0.0882	1.4194	0.1419	1.419	0.1419	2.204	0.2204	2.204	0.2204			
28	1,2,3,6,7,8-HxCDF		0.1	0.4898	0.0490	0.490	0.0490	0.7655	0.0766	0.766	0.0766	1.171	0.1171	1.171	0.1171			
29	2,3,4,6,7,8-HxCDF		0.1	0.4288	0.0429	0.429	0.0429	0.6975	0.0698	0.698	0.0698	1.1855	0.1186	1.186	0.1186			
30	1,2,3,7,8,9-HxCDF		0.1	0.04	0.0040	0.040	0.0040	0.0991	0.0099	0.099	0.0099	0.12	0.0120	0.120	0.0120			
31	Other HxCDF		0	2.5598	0.0000	2.560	0.0000	3.6344	0.0000	3.634	0.0000	5.5195	0.0000	5.520	0.0000			
32	1,2,3,4,6,7,8-HpCDF		0.01	0.4041	0.0040	0.404	0.0040	0.7834	0.0078	0.783	0.0078	1.616	0.0162	1.616	0.0162			
33	1,2,3,4,7,8,9-HpCDF		0.01	0.1281	0.0013	0.128	0.0013	0.2489	0.0025	0.249	0.0025	0.4458	0.0045	0.446	0.0045			
34	Other HpCDF		0	0.2739	0.0000	0.274	0.0000	0.5065	0.0000	0.507	0.0000	0.926	0.0000	0.926	0.0000			
35	OCDF		0.001	0.2427	0.0002	0.243	0.0002	0.39	0.0004	0.390	0.0004	0.9421	0.0009	0.942	0.0009			
36																		
37	Gas sample volume (dscf)				125.44	125.44	125.44		120.08	120.08	120.08		125.51	125.51	125.51			
38	O2 (%)				16.00	16.00	16.00		15.3	15.3	15.3		15.2	15.2	15.2			
39																		
40	PCDD/PCDF (ng in sample)				1.256	58.293	1.256		1.601	63.548	1.601		2.600	96.875	2.600			
41	PCDD/PCDF (ng/dscm @ 7% O2)				0.0	0.991	45.979	0.991	0.0	1.157	45.930	1.157	0.0	1.767	65.832	1.767		
42																		
43	TEQ Cond Avg		1.305															
44	Total Cond Avg		52.581															

	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	314C2	I-TEF			Run 1				Run 2				Run 3	
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	1	1	0.0121	0.006	0.0061		0.0182	0.018	0.0182		0.0179	0.018	0.0179
6	4D Other	0		1.16	1.160	0.0000		1.26	1.260	0.0000		0.765	0.765	0.0000
7	4D Total	0		1.1721	1.172	0.0000		1.2782	1.278	0.0000		0.7829	0.783	0.0000
8	5D 12378	0.5		0.0268	0.027	0.0134		0.0551	0.055	0.0276		0.0478	0.048	0.0239
9	5D Other	0		0.615	0.615	0.0000		1.31	1.310	0.0000		1.07	1.070	0.0000
10	5D Total	0		0.6418	0.642	0.0000		1.3651	1.365	0.0000		1.1178	1.118	0.0000
11	6D 123478	0.1		0.0232	0.023	0.0023		0.0249	0.025	0.0025		0.0437	0.044	0.0044
12	6D 123678	0.1		0.0861	0.086	0.0086		0.0913	0.091	0.0091		0.111	0.111	0.0111
13	6D 123789	0.1		0.0723	0.072	0.0072		0.0497	0.050	0.0050		0.0895	0.090	0.0090
14	6D Other	0		0.688	0.688	0.0000		0.91	0.910	0.0000		1.12	1.120	0.0000
15	6D Total	0		0.8696	0.870	0.0000		1.0759	1.076	0.0000		1.3642	1.364	0.0000
16	7D 1234678	0.01		0.446	0.446	0.0045		0.445	0.445	0.0045		0.525	0.525	0.0053
17	7D Other	0		0.381	0.381	0.0000		0.414	0.414	0.0000		0.538	0.538	0.0000
18	7D Total	0		0.827	0.827	0.0000		0.859	0.859	0.0000		1.063	1.063	0.0000
19	8D	0.001		0.791	0.791	0.0008		0.902	0.902	0.0009		0.827	0.827	0.0008
20	4F 2378	0.1		0.269	0.269	0.0269	1	0.0723	0.036	0.0036		0.323	0.323	0.0323
21	4F Other	0		6.74	6.740	0.0000		10.5	10.500	0.0000		7.06	7.060	0.0000
22	4F Total	0		7.009	7.009	0.0000		10.5723	10.572	0.0000		7.383	7.383	0.0000
23	5F 12378	0.05	1	0.131	0.066	0.0033		0.319	0.319	0.0160		0.252	0.252	0.0126
24	5F 23478	0.5	1	0.137	0.069	0.0343		0.341	0.341	0.1705		0.318	0.318	0.1590
25	5F Other	0		1.67	1.670	0.0000		4	4.000	0.0000		3.3	3.300	0.0000
26	5F Total	0		1.938	1.938	0.0000		4.66	4.660	0.0000		3.87	3.870	0.0000
27	6F 123478	0.1		0.124	0.124	0.0124		0.269	0.269	0.0269		0.33	0.330	0.0330
28	6F 123678	0.1		0.0677	0.068	0.0068		0.117	0.117	0.0117		0.148	0.148	0.0148
29	6F 123789	0.1		0.00816	0.008	0.0008		0.00897	0.009	0.0009		0.0682	0.068	0.0068
30	6F 234678	0.1		0.0536	0.054	0.0054		0.0462	0.046	0.0046		0.0866	0.087	0.0087
31	6F Other	0		0.293	0.293	0.0000		0.652	0.652	0.0000		0.866	0.866	0.0000
32	6F Total	0		0.54646	0.546	0.0000		1.09317	1.093	0.0000		1.4988	1.499	0.0000
33	7F 1234678	0.01		0.175	0.175	0.0018		0.199	0.199	0.0020		0.127	0.127	0.0013
34	7F 1234789	0.01		0.0412	0.041	0.0004		0.0363	0.036	0.0004		0.026	0.026	0.0003
35	7F Other	0		0.0566	0.057	0.0000		0.0585	0.059	0.0000		0.0816	0.082	0.0000
36	7F Total	0		0.2728	0.273	0.0000		0.2938	0.294	0.0000		0.2346	0.235	0.0000
37	8F	0.001		0.0719	0.072	0.0001		0.0878	0.088	0.0001	1	0.112	0.056	0.0001
38	Total PCDD/PCDF			14.13966	14.140			22.18727	22.187			18.2533	18.197	
39	TEQ		48.8	0.1784		0.1349	2.3	0.30793		0.3043	0.0	0.341119		0.3411