

US EPA ARCHIVE DOCUMENT

	B	C
1	<b>Source Description</b>	
2		
3	Phase II ID No.	2005
4	EPA ID No.	LAD092681824
5	Facility Name	Vulcan Materials Co.
6	Facility Location	
7	City	Geismar
8	State	LA
9	Unit ID Name/No.	F-1 Unit
10	Other Sister Facilities	None
11	Number of Sister Facilities	0
12	Combustor Class	HCl Production Furnace
13	Combustor Type	
14	Combustor Characteristics	
15	Capacity (MMBtu/hr)	20
16	Soot Blowing	
17	APCS Detailed Acronym	WHB/QT/WS
18	APCS General Class	WHB, WQ, LEWS
19	APCS Characteristics	Waste heat boiler, quench tower, scrubbing tower
20	Hazardous Wastes	Liq
21	Haz Waste Description	Heavy byproducts of perchloroethylene production
22	Supplemental Fuel	?
23		
24	Stack Characteristics	
25	Diameter (ft)	
26	Height (ft)	
27	Gas Velocity (ft/sec)	
28	Gas Temperature (°F)	
29		
30	Permitting Status	Currently permitted as incinerator; permit renewal planned as BIF HAF
31	HWC Burn Status (Date if Terminated)	

	B	C
1	<b>Cond Description</b>	
2		
3	<b>2005C1</b>	
4		
5	Report Name/Date	Stationary Source Sampling Report Ref No. 6582A, Vulcan Materials Co Chem Div, T-11 Stack, February 19-26, 1990
6	Report Prepar	Entropy
7	Testing Firm	Entropy
8	Testing Dates	February 19-21, 1990
9	Cond Dates	Feb-90
10	Cond Description	Trial burn -- max hex feed to burner No. 1 only
11	Content	PM, HCl/Cl <sub>2</sub> , DRE
12		
13	<b>2005C2</b>	
14		
15	Report Name/Date	Stationary Source Sampling Report Ref No. 6582A, Vulcan Materials Co Chem Div, T-11 Stack, February 19-26, 1990
16	Report Prepar	Entropy
17	Testing Firm	Entropy
18	Testing Dates	February 24-26, 1990
19	Cond Dates	Feb-90
20	Cond Description	Trial burn -- max D-40 groundwater phase feed to burner No. 2 only
21	Content	PM, HCl/Cl <sub>2</sub> , DRE
22		
23	<b>2005C3</b>	
24		
25	Report Name/Date	Stationary Source Sampling Report Ref No. 6582A, Vulcan Materials Co Chem Div, T-11 Stack, February 19-26, 1990
26	Report Prepar	Entropy
27	Testing Firm	Entropy
28	Testing Dates	February 21-22, 1990
29	Cond Dates	Feb-90
30	Cond Description	Trial burn -- similar to cond 1 but at lower feedrate
31	Content	PM, HCl/Cl <sub>2</sub> , DRE
32		
33	<b>2005C4</b>	
34		
35	Report Name/Date	Stationary Source Sampling Report Ref No. 6582A, Vulcan Materials Co Chem Div, T-11 Stack, February 19-26, 1990
36	Report Prepar	Entropy
37	Testing Firm	Entropy
38	Testing Dates	February 23-24, 1990
39	Cond Dates	Feb-90
40	Cond. Description	Trial burn -- operation with both feeds and both burners
41	Content	PM, HCl/Cl <sub>2</sub> , DRE

	B	C	D	E	F	G	H	I	J	K	L	M
1	<b>Stack Gas Emissions</b>											
2												
3		Commen Units		7% O2								
4												
5												
6	<b>2005C1</b>					R1		R2		R3		Cond Avg
7												
8	PM	E1	gr/dscf	y		0.00599		0.00618		0.00532		0.00583
9	HCl		lb/hr			0.0216		0.0186		0.0234		
10	Cl2		lb/hr			0.0564		0.0401		0.0258		
11												
12	Sampling Train	PM, HCl/E1										
13	Stack Gas Flowrate		dscfm			3767		3664		3685		3705.3
14	O2		%			8		7.7		8.3		8.0
15	Moisture		%									
16	Temperature		°F			173		175		172		173.3
17												
18	HCl	E1	ppmv	y		1.1		1.0		1.2		1.1
19	Cl2	E1	ppmv	y		1.5		1.1		0.7		1.1
20	Total Chlorine	E1	ppmv	y		4.1		3.1		2.7		3.3
21												
22												
23	POHC DRE	Hexachlorobenzene										
24	POHC Feedrate		lb/hr			170		234		181		
25	Emissions Rate											
26	DRE	E1	%			99.998		99.9998		99.99993		
27	POHC DRE	Hexachlorobutadiene										
28	POHC Feedrate		lb/hr			260		794		681		
29	Emissions Rate											
30	DRE	E1	%		>	99.999998	>	99.9999994	>	99.9999993		
31												
32	<b>2005C2</b>					R1		R2		R3		Cond Avg
33												
34	PM	E1	gr/dscf	y		0.00133		0.00252		0.00196		0.00194
35	HCl		lb/hr			0.021		0.0369		0.0193		
36	Cl2		lb/hr		nd	0.000654	nd	0.000523	nd	0.000398		
37												
38	Sampling Train	PM, HCl/E1										
39	Stack Gas Flowrate		dscfm			3840		4042		3892		3924.7
40	O2		%			7.6		7.7		7.7		7.7
41	Moisture		%									
42	Temperature		°F			165		165		166		165.3
43												
44	HCl	E1	ppmv	y		1.0		1.7		0.9		1.2
45	Cl2	E1	ppmv	y		0.0		0.0		0.0		0.0
46	Total Chlorine	E1	ppmv	y		1.1		1.7		1.0		1.2
47												
48												
49	POHC DRE	Carbon Tetrachloride										
50	Feedrate		lb/hr			51.5		76.1		91		
51	Emissions Rate											
52	DRE	E1	%			99.9998		99.99994		99.99995		
53	POHC DRE	Hexachlorobenzene										
54	POHC Feedrate		lb/hr			28.4		24.4		26.5		
55	Emissions Rate											
56	DRE		%			99.9998		99.9998		99.9998		
57	POHC DRE	Hexachlorobutadiene										
58	POHC Feedrate		lb/hr			575		513		555		
59	Emissions Rate											
60	DRE	E1	%		>	99.9999993	>	99.999998	>	99.9999993		
61												
62	<b>2005C3</b>					R1		R2		R3		Cond Avg
63												
64	PM	E1	gr/dscf	y		0.00161		0.00259		0.0031		0.00243
65	HCl		lb/hr			0.0121		0.0196		0.0245		
66	Cl2		lb/hr			0.0078		0.0958		0.091		
67												

	B	C	D	E	F	G	H	I	J	K	L	M
68	Sampling Train	PM, HCl/E1										
69	Stack Gas Flowrate		dscfm			3541		3774		3652		3655.7
70	O2		%			7		6.8		6.8		6.9
71	Moisture		%									
72	Temperature		°F			174		174		173		173.7
73												
74	HCl	E1	ppmv	y		0.6		0.9		1.2		0.9
75	Cl2	E1	ppmv	y		0.2		2.3		2.3		1.6
76	Total Chlorine	E1	ppmv	y		1.0		5.5		5.7		4.1
77												
78												
79	POHC DRE		Hexachlorobenzene									
80	POHC Feedrate		lb/hr			182		234		245		
81	Emissions Rate											
82	DRE	E1	%			99.9996		99.9995		99.9996		
83			Hexachlorobutadiene									
84	POHC Feedrate		lb/hr			855		1025		511		
85	Emissions Rate											
86	DRE	E1	%		nd	99.9999994	nd	99.9999996	nd	99.9999993		
87												
88	<b>2005C4</b>					R1		R2		R3		Cond Avg
89												
90	PM	E1	gr/dscf	y		0.00964		0.0049		0.00517		0.00657
91	HCl		lb/hr			0.0713		0.0284		1.13		
92	Cl2		lb/hr			0.0932		0.105		0.518		
93												
94	Sampling Train	PM, HCl/E1										
95	Stack Gas Flowrate		dscfm			3271		3198		3506		3325.0
96	O2		%			5.8		5.9		6.9		6.2
97	Moisture		%									
98	Temperature		°F			173		173		174		173.3
99												
100	HCl	E1	ppmv	y		3.6		1.5		57.1		20.7
101	Cl2	E1	ppmv	y		2.4		2.8		13.5		6.2
102	Total Chlorine	E1	ppmv	y		8.4		7.1		84.1		33.2
103												
104	POHC DRE		Carbon Tetrachloride									
105	Feedrate		lb/hr			61.6		59.7		48.8		
106	Emissions Rate											
107	DRE	E1	%			99.9997		99.9998	>	99.9997		
108	POHC DRE		Hexachlorobenzene									
109	POHC Feedrate		lb/hr			234		269		253		
110	Emissions Rate											
111	DRE	E1	%			99.99993		99.99995		99.99995		
112	POHC DRE		Hexachlorobutadiene									
113	POHC Feedrate		lb/hr			1553		1660		1635		
114	Emissions Rate											
115	DRE	E1	%		>	99.9999997	>	99.9999997	>	99.9999997		

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	<b>Feedstreams</b>																							
2																								
3																								
4		<b>2005C1</b>																						
5																								
6		Feedstream Number																						
7		Feed Class																						
8		Feed Class 2																						
9		Feedstream Description																						
10		Feed Rate	lb/hr																					
11		Heating Value	Btu/lb																					
12		Ash	wt %																					
13		Chlorine	wt %																					
14																								
15		Stack Gas Flowrate	dscfm																					
16		O2	%																					
17																								
18		Thermal Feedrate	MMBtu/hr																					
19		Estimated Firing Rate	MMBtu/hr																					
20																								
21		<i>Feedrate MTEC Calculations</i>																						
22		Ash	mg/dscm																					
23		Chlorine	µg/dscm																					
24																								
25		<b>2005C2</b>																						
26																								
27		Feedstream Number																						
28		Feed Class																						
29		Feed Class 2																						
30		Feedstream Description																						
31		Feed Rate	lb/hr																					
32		Heating Value	Btu/lb																					
33		Ash	wt %																					
34		Chlorine	wt %																					
35																								
36		Stack Gas Flowrate	dscfm																					
37		O2	%																					
38																								
39		Thermal Feedrate	MMBtu/hr																					
40		Estimated Firing Rate	MMBtu/hr																					
41																								
42		<i>Feedrate MTEC Calculations</i>																						
43		Ash	mg/dscm																					
44		Chlorine	µg/dscm																					
45																								
46		<b>2005C3</b>																						
47																								
48		Feedstream Number																						
49		Feed Class																						
50		Feed Class 2																						
51		Feedstream Description																						
52		Feed Rate	lb/hr																					
53		Heating Value	Btu/lb																					
54		Ash	wt %																					
55		Chlorine	wt %																					
56																								
57		Stack Gas Flowrate	dscfm																					
58		O2	%																					

# US EPA ARCHIVE DOCUMENT

	Z	AA	AB
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			

B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
59																							
60	Thermal Feedrate	MMBtu/hr		7.99	7.47	7.78	6.78	7.35	7.99	7.35	7.99	7.99	7.99	7.47	7.47	6.78	6.78	7.35	7.35				
61	Estimated Firing Rate	MMBtu/hr						15.7	15.7	17.0	16.5	16.5	16.5	17.0	17.0	16.5	16.5	16.4	16.4				
62																							
63	<i>Feedrate MTEC Calculations</i>																						
64	Ash	mg/dscm		0.0	78.1	78.1	0.0	81.1	0.0	78.1	0.0	0.0	0.0	78.1	78.1	0.0	0.0	81.1	81.1				
65	Chlorine	µg/dscm		105830703	98173909	98173909	101550553	101429211	105830703	98173909	101550553	101550553	101550553	98173909	98173909	101550553	101550553	101429211	101429211				
66																							
67	<b>2005C4</b>			R1	R2	R3	R1	Cond Avg	R1	R2	R3	R3	R3	R2	R2	R3	R3	Cond Avg	R1	R1	R2	R2	
68																							
69	Feedstream Number			F1	F1	F1	F1	F1	F2	F2	F2	F2	F2	F2	F2	F2	F2	F2	F3	F3	F3	F3	
70	Feed Class			Liq HW	Liq HW	Liq HW	Liq HW	Liq HW	Raw Material	Raw Material	Raw Material	Raw Material	Raw Material	Raw Material	Raw Material	Raw Material	Raw Material	Raw Material	Total	Total	Total	Total	
71	Feed Class 2			HW	HW	HW	HW	HW	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	Total	Total	Total	Total	
72	Feedstream Description			Hex feed	Hex feed	Hex feed	Hex feed	Hex feed	Groundwater feed	Groundwater feed	Groundwater feed	Groundwater feed	Groundwater feed	Groundwater feed	Groundwater feed	Groundwater feed	Groundwater feed	Groundwater feed	Total	Total	Total	Total	
73	Feed Rate	lb/hr		1411	1446	1446	1411	1400	1307	1323	1323	1323	1323	1323	1323	1323	1323	1317.7	1317.7				
74	Heating Value	Btu/lb		4047	4161	4161	4417	4000	4026	3866	3866	4026	4026	4026	4026	4026	4026	4000	4000				
75	Ash	wt %		79.5	0.024	0.024	76.3	0.024	87.5	87.2	87.2	87.5	87.5	87.2	87.2	87.5	87.2	87	87				
76	Chlorine	wt %																					
77																							
78	Stack Gas Flowrate	dscfm		3271	3198	3198	3506	3325	3271.0	3198.0	3198.0	3506.0	3506.0	3198.0	3198.0	3506.0	3506.0	3325.0	3325.0				
79	O2	%		5.8	5.9	5.9	6.9	6.2	5.8	5.9	5.9	6.9	6.9	5.9	5.9	6.9	6.9	6.2	6.2				
80																							
81	Thermal Feedrate	MMBtu/hr		5.71	6.02	6.02	6.23	5.60	5.26	5.11	5.11	5.26	5.26	5.11	5.11	5.33	5.33	5.27	5.27				
82	Estimated Firing Rate	MMBtu/hr																					
83																							
84	<i>Feedrate MTEC Calculations</i>																						
85	Ash	mg/dscm		0.0	26.9	26.9	0.0	25.6	0.0	24.6	24.6	0.0	0.0	24.6	24.6	0.0	0.0	24.1	24.1				
86	Chlorine	µg/dscm		84453220	88437426	88437426	81520480	84803709	86100507	89426684	89426684	86454145	86454145	89426684	89426684	86454145	86454145	87327112	87327112				



	Z	AA	AB
59			
60			
61			
62			
63			
64			
65			
66			
67			
68			
69	R3		Cond Avg
70	F3		F3
71	Total		Total
72	Total		Total
73			
74			
75			
76			
77			
78	3325.0		3325.0
79	6.2		6.2
80			
81	11.56		10.87
82	15.6		15.6
83			
84			
85	0.00		49.61
86	167974625		172130821

	A	B	C	D	E	F
1	<b>Process Information</b>					
2						
3	Cond ID	Units	Run	Run	Run	Avg
4			1	2	3	
5						
6	<b>2005C1</b>					
7						
8	Steam Production	lb/hr	116230	119270	118830	118110
9						
10	<b>2005C2</b>					
11						
12	Steam Production	lb/hr	89700	88320	88110	88710
13						
14	<b>2005C3</b>					
15						
16	Steam Production	lb/hr	170200	177200	170200	172533