Solvay Minerals
Stack Emissions Information

AQD #	Ht (ft)	I Dia (ft)	Temp (F)	% Moist	Velocity	Cal ACFM	DSCFM	Cld DSCF	ACFM	Partic	gn/dscf	Cld Prtic	NOX	SO2	CO	VOC	SOURCE		m202	H2S	Hr/Yr
2a	23	3.48	68	1	52	29688		23253.1	29490	1.6	0.02	3.99	0	0	0	0	BF-1	ore crusher			
2b	38	1.08	68	1	91	5004		3934.65	4990	0.2	0.02	0.67	0	0	0	0	BF-8	ore reclaim			
6a	133	1.75x2.0	96	1	82	17220		12957.2	17304	0.3	0.02	2.22	0	0	0	0	BF-31	top silos			
6b	15.5	2.15x1.78	75	1	33	7577		5859.78	7530	1.4	0.02	1.00	0	0	0	0	BF-33	silo reclaim			
7	82	2.4x1.99	68	1	64	18340		14508.5	18400	1.2	0.02	2.49	0	0	0	0	BF-32	PLO			
8				1		0		0		6.4/1.3	0.02	0.00	0	0	0	0		coal unloading			
9				1		0		0		0.4/1.8	0.02	0.00	0	0	0	0		coal storage			
10	13.3	1.63x1.88	68	1	18	3310		2562.65	3250	0.6	0.02	0.44	0	0	0	0	BF-35	coal crushing			
11	35.3	1.44x1.75	68	1	21	3175		2523.23	3200	0.6	0.02	0.43	0	0	0	0	BF-39	Coal transfer			
14	125	1.42	68	1	57	5418		4257.94	5400	1	0.02	0.73	0	0	0	0	BF-36	boiler coal bunker			
15	180	6	165		49	83160			83100	6.8	0.02	0.00	1.2	0	0	0	WS-4&5	DR 1&2			
16	126	3.5	205		42	24255		15493.5	24500	0.9	0.02	2.66	0	0	0	0	BF-24	product classifier			
17	180.5	12	375		44	298697			300000	22.3	0.02	0.00	20	0	29.6	0.5326ppt	EP-1&2	CA 1&2	13.2		
18	180.5	7.25	125		58	143721			142,800	17	0.02	0.00	245	70	17.5	0.5	EP-3	BO-1			
19	180.5	7.25	120		60	148677			149,000	17	0.02	0.00	245	70	17.5	0.5	EP-4	BO-2			
24	25	1	83		41	1933		1483.11	1915	0.3	0.02	0.25	0	0	0	0	BF-41	boiler fly ash silo			
25	76	3.0x1.5	68		48	12960		10234.7	12850	1	0.02	1.75	0	0	0	0	BF-54	AT crush and screen			
26	67	3.0x1.5	100		58	15660		11715	15600	1.1	0.02	2.01	0.05	0	0.07	0	BF-55	AT Dryer			
27	60	1.3x1.5	68		62	7254		5734.6	7200	0.5	0.02	0.98	0	0	0	0	BF-56	AT Bagging & Loadout			
28	140	4	165		40	30171			30146	2.9	0.02	0.00	0	0	0	0	WS-10	Fluid Bed Dryer			
30	88	0.66	43		59	1212		1003.27	1200	0.2	0.02	0.17	0	0	0	0	BF-507	Lime Bin #1			
31	88	0.66	43		59	1212		1003.27	1200	0.2	0.02	0.17	0	0	0	0	BF-508	Lime Bin #2			
33	100	2	150		35	6600			6508	0	0.02	#VALUE!	1.5	0.4	0	0	WS-454	Sulfur Burner			
35	103	2.29	129		48	11867			11993	1.4	0.02	0.00	0	0	0	0	WS-455	Sulfite Dryer			
36	60	0.49	149		n/a					0.1	0.02	0.00	0	0	0	0	BF-503	Sulfite Bin #1			
37	60	0.49	149			0				0.1	0.02	0.00	0	0	0	0	BF-504	Sulfite Bin #2			
38	60	0.49	149			0				0.1	0.02	0.00	0	0	0	0	BF-505	Sulfite Bin #3			
39	60	0.49	149			0				0.1	0.02	0.00	0	0	0	0	BF-506	Sulfite Bin #4			
40	60	1	149		51	2404		#VALUE!	1825/1500	0.3	0.02	#VALUE!	0	0	0	0	BF-502	Sulfite Bagging			
41	70	1	149		70	3300		1733.25	2510	0.4	0.02		0	0	0	0	BF-501	Sulfite Loadout			
43						0					0.02		0	0	0	0		Sulfur Storage Tank		10	259
44	30	1.51	43		61	6557			5880	0.9	0.02		0	0	0	0	BF-509	Lime Unloading			
45	17.8	0.9	68		29	1107		896.032	1125	0.2	0.02	0.15	0	0	0	0	BF-53	AT Transloading			
46	12.5	2.2	68		46	10496	9520	8362.96	10500	1.2	0.02		0	0	0	0	BF-62	Trona Transfer			
47	125	4.5	68		45	42959	45532	34323.2	43094	5.1	0.02		0	0	0	0	BF-75	Exp Crusher			
48	180	10.5	350		32	166320	54507		165000	9.3	0.02		10	0	6	0.3994ppt	EP-5	CA-3	3.9		
50	180	4.5	200	0	27	25775	21282	16566.6	26000	2.1	0.02		0	0	0	0	BF-84	Dryer Area			
51	180	8	300		33	99566	34953		100000	4.8	0.02		18	0	2.4	0.57	EP-6	DR-5	0.3		
52	141	1.5	68		50	5304	3898	4221.31	5300	0.5	0.02		0	0	0	0	BF-79	Silo Top #2			
53	30	2.8	68		36	13306	10168	10493.5	13175	1.77	0.02	1.74	0	0	0	0	BF-86	Silo Bottom #2			
54	64.2	0.59	68		79	1296		1035.41	1300	0.19	0.02	0.18	0	0	0	0	BF-103	T-200 Silo			
55	64	1.3	68		50	3984		3185.89	4000	0.4	0.02	0.55	0	0	0	0	BF-87	Ore recycle/reclaim			
62	91	0.5	68		85	1002		796.473	1000	0.13	0.02	0.14	0	0	0	0	BF-100	Carbon Silo			
63	58	0.5	68		102	1202		955.767	1200	0.17	0.02	0.16	0	0	0	0	BF-101	Perlite Silo			
64	15	0.5	68		96	1131		900.014	1130	0.15/0.2	0.02	0.15	0	0	0	0	BF-601	Sulfite Blending #2			
65	35	0.75/0.667	68		15			318.589	400	0.2	0.02	0.05	0	0	0	0		Sulfite Blending #1			
66	125	1	68		75	3536		3345.19	4200	0.9	0.02	0.57	0	0	0	0	WS-9	Carbon/Perlite Scrubber			
67	125	1.5	100		33	3500		2590.81	3450	0.3	0.02	0.44	0	0	0	0	BF-40	Bottom Ash			
68	82	1.1667x0.9792	68	1	77	5278	4140	4160.96	5277	0.71	0.02	0.71						Bagging Trona Silo			
70	82	1.6250x0.8438	68	1	49	4031	3155	3170.59	4021	0.54	0.02	0.54						Bagging Sulfite Silo			
71	82	1.6250x0.8438	68	1	49	4031	3155	3170.59	4021	0.54	0.02	0.54						Bagging MBS Silo			
72	60.67	0.6667	200	1.5	53	1111	611	690.383	1100	0.11	0.02	0.10						MBS Soda Ash Feed			
73	95	2	90	3.8	56	10560	7000	7723.36	10500	1.2	0.02	1.20	0.15	0.77				MBS Dryer			
74	105	1.33	60	0.86	60	5002	3989	4008.86	5000	0.34	0.01	0.34						North Headframe			

Solvay Minerals
Stack Emissions Information

AQD #	Ht (ft)	I Dia (ft)	Temp (F)	% Moist	Velocity	Cal ACFM	DSCFM	Cld DSCF	ACFM	Partic	gn/dscf	Cld Prtic	NOX	SO2	CO	VOC	SOURCE		m202	H2S	Hr/Yr
75	25	1.33	60	1.33	60	5002	3970	3989.85	5000	0.34	0.01	0.34						Primary Crushing			
76	25	4.42	60	0.69	59	54027	43154	43369.9	54000	3.7	0.01	3.70						Primary Screening			
77	40	1.08	60	0.86	59	3251	2593	2605.76	3250	0.22	0.01	0.22						Transfer BH 101			
78	70	1.25	60	0.86	54	4001	3191	3207.08	4000	0.27	0.01	0.27						Transfer BH 102			
79	70	1.08	60	0.86	54	3002	2393	2405.31	3000	0.21	0.01	0.21						Transfer Point			
80	180	9.83	338	33	58	264086	92751	93213.9	264000	11.93	0.01	7.95	20		28			Calciner #4 ESP			
81	180	3.58	250	1.77	58	35018	20263	20363.8	35000	1.74	0.01	1.74						Product Dryer Area BH			
82	180	7.08	305	37	58	138056	47555	47792.9	138000	4.08	0.01	4.08	30		14			Dryer #6 ESP			
83	130	1.42	200	0.32	56	5301	3350	3366.24	5300	0.29	0.01	0.29						Silo Top			
84	50	2.00	200	0.81	58	11003	6918	6952.19	11000	0.59	0.01	0.59						Silo Bottom			
MV																					
CTH	15		amb							17.1								Cooling Tower High Flow			
CTL	15		amb							6.27											
FRP	10	0.25	500						225	0.8			8.8	0.4	2	0.8		Fire Pump			500
GND	10	0.17	500						100	0.4			4.8	0.4	1.2	0.4		C/S Generator			500
GNS	15	0.33	500						11400	7.2			104	7.2	22.4	10.4		Steam Plant Generator			500
PB	12	0.83	500						2500	0.4			4	1.2	0.8	0.04					

Solvay Minerals, Inc.
Dispersion Model Information

AQD #	Height	Inside Diameter	Temp	Velocity	Partic	New Part	NOX	SO2	CO	M202 Org	H_2S	Hr/Yr	SOURCE	Name
	Ft	Ft	F	Ft/sec	PPH	PPH	PPH	PPH	PPH	PPH	PPH			
2a	23	3.48	68	52	1.6		0	0	0			8760	BF-1	ore crusher
2b	38	1.08	68	91	0.2	0.00	0	0	0			8760	BF-8	ore reclaim
6a	133	1.75x2.0	96	82	0.3		0	0	0			8760	BF-31	top silos
6b	15.5	2.15x1.78	75	33	1.4	0.51	0	0	0			8760	BF-33	silo reclaim
7	82	2.4x1.99	68	64	1.2		0	0	0			8760	BF-32	PLO
8					6.4		0	0	0			1312		coal unloading
9					0.4		0	0	0			8760		coal storage
10	13.3	1.63x1.88	68	18	0.6		0	0	0			8760	BF-35	coal crushing
11	35.3	1.44x1.75	68	21	0.6	0.21	0	0	0			8760	BF-39	Coal transfer
14	125	1.42	68	57	1.0	0.37	0	0	0			8760	BF-36	boiler coal bunker
15	180	6	165	49	6.8		1.2	0	0			8760	WS-4&5	DR 1&2
16	126	3.5	205	42	0.9		0	0	0			8760	BF-24	product classifier
17	180.5	12	375	44	22.3		20	0	29.6	32.1		8760	EP-1&2	CA 1&2
18	180.5	7.25	125	58	17.0	10.00	245	70	17.5			8760	EP-3	BO-1
19	180.5	7.25	120	60	17.0	10.00	245	70	17.5			8760	EP-4	BO-2
24	25	1	83	41	0.3		0	0	0			8760	BF-41	boiler fly ash silo
25	76	3.0x1.5	68	48	1.0		0	0	0			8760	BF-54	AT crush and screen
26	67	3.0x1.5	100	58	1.1		0.05	0	0.07			8760	BF-55	AT Dryer
27	60	1.3x1.5	68	62	0.5		0	0	0			8760	BF-56	AT Bagging & Loadout
28	140	4	165	40	2.9		0	0	0			8760	WS-10	Fluid Bed Dryer
30	88	0.66	43	59	0.2		0	0	0			8760	BF-507	Lime Bin #1
31	88	0.66	43	59	0.2		0	0	0			8760	BF-508	Lime Bin #2
33	100	2	150	35	0.0		1.5	0.4	0			8760	WS-454	Sulfur Burner
35	103	2.29	129	48	1.4		0	0	0			8760	WS-455	Sulfite Dryer
36	60	0.49	149	n/a	0.1		0	0	0			8760	BF-503	Sulfite Bin #1
37	60	0.49	149	n/a	0.1		0	0	0			8760	BF-504	Sulfite Bin #2
38	60	0.49	149	n/a	0.1		0	0	0			8760	BF-505	Sulfite Bin #3
39	60	0.49	149	n/a	0.1		0	0	0			8760	BF-506	Sulfite Bin #4
40	60	1	149	51	0.3	0.00	0	0	0			8760	BF-502	Sulfite Bagging
41	70	1	149	70	0.4	0.19	0	0	0			8760	BF-501	Sulfite Loadout
43							0	0	0		10	259		Sulfur Storage Tank
44	30	1.51	43	61	0.9		0	0	0			8760	BF-509	Lime Unloading
45	17.8	0.9	68	29	0.2		0	0	0			8760	BF-53	AT Transloading
46	12.5	2.2	68	46	1.2	0.71	0	0	0			8760	BF-62	Trona Transfer
47	125	4.5	68	45	5.1	2.90	0	0	0			8760	BF-75	Exp Crusher
48	180	10.5	350	32	9.3		10	0	6	9.24		8760	EP-5	CA-3
50	180	4.5	200	27	2.1	1.39	0	0	0			8760	BF-84	Dryer Area

Solvay Minerals, Inc.
Dispersion Model Information

AQD #	Height	Inside Diameter	Temp	Velocity	Partic	New Part	NOX	SO2	CO	M202 Org	H_2S	Hr/Yr	SOURCE	Name
	Ft	Ft	F	Ft/sec	PPH	PPH	PPH	PPH	PPH	PPH	PPH			
51	180	8	300	33	4.8		18	0	2.4	0.08		8760	EP-6	DR-5
52	141	1.5	68	50	0.5		0	0	0			8760	BF-79	Silo Top #2
53	30	2.8	68	36	1.8	0.90	0	0	0			8760	BF-86	Silo Bottom #2
54	64.2	0.59	68	79	0.2		0	0	0			8760	BF-103	T-200 Silo
55	64	1.3	68	50	0.4		0	0	0			8760	BF-87	Ore recycle/reclaim
62	91	0.5	68	85	0.1		0	0	0			8760	BF-100	Carbon Silo
63	58	0.5	68	102	0.2		0	0	0			8760	BF-101	Perlite Silo
64	15	0.5	68	96	0.2		0	0	0			8760	BF-601	Sulfite Blending #2
65	35	0.75	68	15	0.2		0	0	0			8760		Sulfite Blending #1
66	125	1	68	75	0.9		0	0	0			8760	WS-9	Carbon/Perlite Scrubber
67	125	1.5	100	33	0.3		0	0	0			8760	BF-40	Bottom Ash
68	82	1.1667x0.9792	68	77	0.7	0.36						8760		Bagging Trona Silo
70	82	1.6250x0.8438	68	49	0.5	0.27						8760		Bagging Sulfite Silo
71	82	1.6250x0.8438	68	49	0.5	0.27						8760		Bagging MBS Silo
72	60.67	0.6667	200	53	0.1							8760		MBS Soda Ash Feed
73	95	2	90	56	1.2		0.15	0.77				8760		MBS Dryer
		New expansion sources												
74	105	1.33	60	60	0.3							8760		North Headframe
75	25	1.33	60	60	0.3							8760		Primary Crushing
76	25	4.42	60	59	3.7							8760		Primary Screening
77	40	1.08	60	59	0.2							8760		Transfer BH 101
78	70	1.25	60	54	0.3							8760		Transfer BH 102
79	70	1.08	60	54	0.2							8760		Transfer Point
80	180	9.83	338	58	11.9		20		28			8760		Calciner #4 ESP
81	180	3.58	250	58	1.7							8760		Product Dryer Area BH
82	180	7.08	305	58	4.1		30		14			8760		Dryer #6 ESP
83	130	1.42	200	56	0.3							8760		Silo Top
84	50	2.00	200	58	0.6							8760		Silo Bottom
		Non-permitted, odd-ball sources												
MV												8760		Mine Vent
CTH	15		68		17.1							8760		Cooling Tower High Flow
CTL	15		68		6.3							8760		Cooling Tower Low Flow
FRP	10	0.25	500		0.8		8.8	0.4	2			500		Fire Pump
GND	10	0.17	500		0.4		4.8	0.4	1.2			500		C/S Generator
GNS	15	0.33	500		7.2		104	7.2	22.4			500		Steam Plant Generator
PB	12	0.83	500		0.4		4	1.2	0.8			500		Pony Boiler

AQD #	**New Partic**	SOURCE	Name
	PPH		
2a		BF-1	ore crusher
2b	**0.00**	BF-8	ore reclaim
6a		BF-31	top silos
6b	**0.51**	BF-33	silo reclaim
7		BF-32	PLO
10		BF-35	coal crushing
11	**0.21**	BF-39	Coal transfer
14	**0.37**	BF-36	boiler coal bunker
15		WS-4&5	DR 1&2
16		BF-24	product classifier
17		EP-1&2	CA 1&2
18	**12.00**	EP-3	BO-1
19	**12.00**	EP-4	BO-2
24		BF-41	boiler fly ash silo
25		BF-54	AT crush and screen
26		BF-55	AT Dryer
27		BF-56	AT Bagging & Loadout
28		WS-10	Fluid Bed Dryer
30		BF-507	Lime Bin #1
31		BF-508	Lime Bin #2
33		WS-454	Sulfur Burner
35		WS-455	Sulfite Dryer
36		BF-503	Sulfite Bin #1
37		BF-504	Sulfite Bin #2
38		BF-505	Sulfite Bin #3
39		BF-506	Sulfite Bin #4
40	**0.00**	BF-502	Sulfite Bagging
41	**0.19**	BF-501	Sulfite Loadout
43			Sulfur Storage Tank
44		BF-509	Lime Unloading
45		BF-53	AT Transloading
46	**0.71**	BF-62	Trona Transfer
47	**2.90**	BF-75	Exp Crusher
48		EP-5	CA-3
50	**1.39**	BF-84	Dryer Area
51		EP-6	DR-5
52		BF-79	Silo Top #2
53	**0.90**	BF-86	Silo Bottom #2
54		BF-103	T-200 Silo
55		BF-87	Ore recycle/reclaim
62		BF-100	Carbon Silo
63		BF-101	Perlite Silo
64		BF-601	Sulfite Blending #2
65			Sulfite Blending #1
66		WS-9	Carbon/Perlite Scrubber
67		BF-40	Bottom Ash
68	**0.36**		Bagging Trona Silo
70	**0.27**		Bagging Sulfite Silo
71	**0.27**		Bagging MBS Silo
72			MBS Soda Ash Feed

AQD #	**New Partic**	SOURCE	Name
73			MBS Dryer
74			North Headframe
75			Primary Crushing
76			Primary Screening
77			Transfer BH 101
78			Transfer BH 102
79			Transfer Point
80			Calciner #4 ESP
81			Product Dryer Area BH
82			Dryer #6 ESP
83			Silo Top
84			Silo Bottom
MV			Mine Vent
CTH			Cooling Tower High Flow
CTL			Cooling Tower Low Flow
FRP			Fire Pump
GND			C/S Generator
GNS			Steam Plant Generator
PB			Pony Boiler

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Table 3-???
PSD Permit History

AQD #			PM10	NOX	SO2
			TPY	TPY	TPY
2a			7.01		
2b			0.88		
6a			1.31		
6b			6.26		
7			5.26		
10			2.63		
11			2.78		
12			2.78		
14			4.52		
15			29.78		
16			3.94		
17			134.53	1314.00	375.10
18			74.39	1073.10	306.60
19			74.39	1073.10	306.60
23			2.19		
24			1.31		
25			4.38		
26			4.82		
27			2.19		
28			12.70		
29			2.19		
30			0.88		
31			0.88		
32			0.00		
33			0.00	6.61	1.43
34			0.00		
35			6.13		
36			0.44		
37			0.44		
38			0.44		
39			0.44		
40			1.39		
41			1.74		
42			0.00		
43			0.00		
44			3.94		
45			0.88		
46			5.26		
47			22.10		
48			40.73	134.18	0.00
49			0.00		
50			9.14		
51			21.02	78.84	0.00
52			2.19		
53			4.82		
55			1.75		
56			78.84	166.44	0.63
57			1.70		
58			2.20		
59			1.70		
60			3.20		
61			4.90		
CT-946	**Emissions at Last PSD Permit**		**597.38**	**3846.27**	**990.36**
MD-229					
12			-2.78		
17			-134.53	-1314.00	-375.10
17			97.67	87.60	
23			-2.19		
29			-2.19		
54			0.83		
56			-78.84	-166.44	
57			-1.70		
58			-2.20		
59			-1.70		
60			-3.20		
61			-4.90		

Table 3-???
PSD Permit History

AQD #			PM10	NOX	SO2
			TPY	TPY	TPY
62			0.57		
63			0.74		
	Total Change MD-229		-134.41	-1392.84	-375.10
	Total		462.97	2453.43	615.26
MD-282					
15				5.26	
48				-134.03	
48				43.80	
64			0.66		
65			0.88		
66			3.94		
67			1.31		
68			1.58		
69			0.00		
70			1.18		
71			1.18		
72			0.48		
73			5.26	0.66	3.37
MD-282	Emission Changes		16.46	-84.32	3.37
	Total		479.43	2369.11	618.63
New Permit					
2b			-0.88		
6b			-6.26		
6b			2.23		
11			-2.78		
11			0.92		
14			-4.52		
14			1.62		
18			-74.39		
18			52.56		
19			-74.39		
19			52.56		
40			-1.39		
41			-1.74		
41			0.83		
46			-5.26		
46			3.11		
47			-22.10		
47			12.70		
50			-9.14		
50			6.09		
53			-4.82		
53			3.94		
74			1.50		
75			1.50		
76			16.20		
77			0.97		
78			1.20		
79			0.92		
80			52.25	87.60	
81			7.62		
82			17.87	131.40	0.00
83			1.27		
84			2.58		
85			2.10	16.64	0.26
New	Emission Changes		34.88	235.64	0.26
	Grand Total		**514.31**	**2604.75**	**618.89**
Change Since Last PSD Permit			**-83.07**	**-1241.52**	**-371.47**