Davy

FAX

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To: Dolly Potter

From: Aileen Castaneda

Attn:

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Subject: Here's preliminary modelling information you requested. Please confirm the particulate outlet grain loadings. The remainder of the information will be mailed with the complete package

Aileen

Table 1: Summary of Emission Calculations

Particulate Emission Point Information											
ID#	AQD#	Source Name	Source Description	Raw Materials	Max Feed Rate	Average Rate	Production @ Full Load	Design Production	Exhaust Volume	Exit Temp	Press
					TPH	TPH	TPY	TPY	ACFM	deg F	psia
1	74	North Headframe Area	North Headframe Reclaim	trona ore					6668	60	11.65
2	75	Primary Crushing	Crushing Area BH Discharge	trona ore					6668	60	11.65
3	76	Primary Screening	Screening Area BH Discharge	trona ore					4334	60	11.65
4	77	Ore Transfer	Transfer BH Discharge	trona ore					4334	60	11.65
5	78	Ore Storage Transfer	R.O.M. Ore Stockpiling	trona ore					5334	60	11.65
6	79	Ore Transfer Point	Transfer Point BH Discharge	trona ore					4001	60	11.65
7	80	Calciner Stack	Calciner ESP Discharge	trona ore	275	234	1,417,059	1,205,788	240,000	375	11.65
8	deleted 12/96	Filler Additive	Carbon/Perlite Scrubber	carbon/perlite					1334	60	11.65
9	81	Product Silo	Silos Top Bin Vent	soda ash					8971	200	11.65
10	82	Product Silo	Silos Bottom Bag Filter	soda ash					18619	200	11.65
11	83	Product Area	Product Area BH Discharge	soda ash					63731	250	11.65
12	84	Dryer Stack	Dryer ESP Discharge	soda ash	161	137	1,410,360	1,200,120	120,000	350	11.65

Basis of Calculations:

Hours of Operation, h/yr =	8760
Plant On-Stream Factor, % =	85
For Baghouses:	
Use Particulate , gr/dscf =	0.016
For Calciner Stack:	
Use BACT State of Wyo allowable	
ESP emission, gr/dscf =	0.015
Moisture Content (from Metsim), %vol. =	33
For Dryer Stack:	
Use BACT State of Wyo allowable	
ESP emission, gr/dscf =	0.01
Moisture Content (from Metsim), %vol. =	37
Minimum Stack Velocity,fpm =	3500
Design Relative Humidity,%RH =	24

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Table 1: Summary of Emission Calculations

Volume (std.) SCFM	T dry basis deg F	Discharge Moisture % vol.	Exhaust Volume (dry basis) DSCF*M	Normal Dust Loading PPH	Emmission Rate Controlled PPH	TPY	Particulate Removal Eff, %	Stack Cross Sec Area Sq. Ft.	Stack Dia Required inches	Specified inches	(ft)	Calc. Exit Velocity fpm	Stack Height (ft)
5000	68	0.86	5320	6840	0.6840	2.9958	99.99	1.91	18.69	19	1.58	3387	100
5000	68	1.33	5294	6807	0.6807	2.9816	99.99	1.91	18.69	19	1.58	3387	25
3250	68	0.69	3464	4453	0.4453	1.9506	99.99	1.24	15.07	15	1.25	3532	25
3250	68	0.86	3458	4446	0.4446	1.9472	99.99	1.24	15.07	15	1.25	3532	40
4000	68	0.86	4256	5472	0.5472	2.3966	99.99	1.52	16.72	17	1.42	3384	60
3000	68	0.86	3192	4104	0.4104	1.7975	99.99	1.14	14.48	15	1.25	3260	40
112072	68	33	80583	103606	10.3606	45.3796	99.99	68.57	112.13	118	9.83	3160	180
1000	68	0.69	1066	0		0.0000	99.99	0.38	8.36	8	0.67	3821	20
5300	68	0.32	5670	7289	0.7289	3.1928	99.99	2.56	21.68	22	1.83	3398	145
11000	68	0.81	11709	15055	1.5055	6.5940	99.99	5.32	31.23	32	2.67	3334	50
35000	68	1.77	36896	47438	4.7438	20.7778	99.99	18.21	57.78	58	4.83	3474	50
57766	68	37	39055	33476	3.3476	14.6625	99.99	34.29	79.29	86	7.17	2975	180
				Totals	23.8986	104.6758							

Standard in terms of 32 deg F, 14.7 psia.
Dry standard basis is at 68 deg F.

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Table 2 Summary of Pollutant Calculations

Pollutant Emission Point Information														
AQD#	Source Name	Source Description	Raw Materials	Max Feed Rate	Average Rate	Production @ Full Load	Design Production	Exhaust Volume	Burner Rating*	Exit Temp	Press	Volume (std.)	NOx	CO
				TPH	TPH	TPY	TPY	ACFM	MMBtu/h	deg F	psia	SCFM	PPH	PPH
80	Calciner Stack	Calciner ESP Discharge	trona ore	275	234	1,417,058	1,205,738	265,000	170	340	11.65	128160	8	12
84	Dryer Stack	Dryer ESP Discharge	soda ash	161	137	1,410,360	1,200,120	140,000	100	305	11.65	71358	15	7
									*from previous project					
Basis of Calculations:														
Plant On-Stream Factor, % =		85												
For Calciner Stack:														
Use BACT State of Wyo allowable														
NOx, lb/MMBtu =		0.05												
CO, lb/MMBtu =		0.07												
For Dryer Stack:														
Use BACT State of Wyo allowable														
NOx, lb/MMBtu =		0.15												
CO, lb/MMBtu =		0.07												

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