12.31-03
12.3.8v.8

ASH GROVE CEMENT - WESTERN REGION
SEATTLE PLANT

12/31/03

	RECEIVED / PRODUCED DAY	MONTH	YEAR	USED / SHIPPED DAY	MONTH	YEAR	INVENTORY
RAW MATERIALS							
LIMESTONE		40,699	671,201	1,183	46,963	663,501	21,639
LIME FINES		481	6,804	481	481	6,804	0
BOTTOM ASH		4,712	76,882	172	4,790	75,302	1,874
CASTLE ROCK CLAY		0	13,468	0	0	14,335	0
ERI (RECYCLED)		1,545	3,645	95	1,520	3,570	75
SUPERIOR SILICA		0	61,500	284	5,692	67,799	0
COMINCO SLAG		293	14,160	31	441	14,362	385
HECKET SLAG		0	0	0	0	0	0
KLEEN BLAST SLAG		0	782	0	0	782	0
HYDRATED LIME		318	2,229	0	274	2,172	56
RAW MATERIAL SALES							
3/4" LIMESTONE SALES		23,824	235,213	0	23,195	236,495	6,617
SILICA (STEILACOOM)		0	0	0	0	6,069	0
KILN FEED							
TYPE I/II	2,167	58,055	818,925	3,084	54,533	816,762	9,410
FUELS (TONS)							
GAS (Tons)				0	68	1,866	
COAL (Tons)	0	0	61,728	242	4,776	61,382	4,790
TDF (Tons)				51	970	10,654	0
TDF Weight Percent				17.4%	16.7%	14.4%	
FUELS (NET HEAT VALS)	Fuel Usage Rate			Fuel Usage (MMBTU)			
GAS (MMBTU Net)	0.4%	2.3%	4.8%	27	2,975	81,752	
COAL (MMBTU Net)	79.0%	78.0%	78.4%	5,230	103,255	1,327,061	
TDF (MMBTU Net)	20.6%	19.7%	16.7%	1,366	26,078	283,259	
TOTAL (MMBTU Net)				6,623	132,308	1,692,071	
MMBTU/Ton				3.25	3.17	3.10	
CLINKER							
PRODUCTION	2,029	41,791	545,952	1,985	36,545	556,004	28,119
SALES / RECEIVALS	0	0	0	0	0	0	
CEMENT ADDITIVES							
GYPSUM	0	5,757	28,424	93	1,736	30,133	6,001
GRINDING AID (Lbs)	0	0	272,500	1,278	25,427	314,657	3,577
CEMENT							
TYPE I	36	34,074	532,147	435	19,364	284,124	73,042
TYPE II	0	0	0	0	3,506	125,969	0
TYPE I-II	0	0	0	228	11,856	118,955	0
TYPE III	9	4,208	33,224	69	2,484	32,685	4,066
TYPE CG	0	0	20,766	0	0	22,441	2,387
TOTAL PRODUCED	45	38,282	586,137	733	37,210	584,172	
TOTAL RECEIVED	0	0	0	0	0	0	
GRAND TOTAL	45	38,282	586,137	733	37,210	584,172	79,496

CHEMICAL ANALYSIS

31-Dec	Raw Mix	Clinker
TYPE	I	I
SiO2	14.37	21.38
Al2O3	3.09	4.92
Fe2O3	1.60	3.02
CaO	42.55	65.59
MgO	1.85	2.74
SO3	0.35	0.58
LOI	35.45	0.41
Na2O	0.28	0.46
K2O	0.15	0.18
TOTAL	99.69	99.27
FREE CaO		1.71
TOTAL ALK.	0.59	0.57
C3S	61.81	65.43
C2S	17.29	12.01
C3A	8.49	7.93
C4AF	7.54	9.17

CEMENT 31-Dec	Mill #1	Mill #2
TYPE	I	I
SiO2	19.87	20.09
Al2O3	4.58	4.64
Fe2O3	2.87	2.84
CaO	64.28	64.22
MgO	2.50	2.42
SO3	2.75	2.74
LOI	1.19	1.26
Na2O	0.38	0.37
K2O	0.18	0.17
TOTAL	98.69	96.76
INSOL	0.15	#DIV/0!
FREE CaO	1.40	1.44
TOTAL ALK.	0.50	0.48
C3S	67.17	65.84
C2S	6.63	8.15
C3A	7.29	7.47
C4AF	8.72	8.64
NC	25.1	25.4
VICAT - I	84	78
VICAT - F	190	176
BLAINE	400	400
45 uM	95.31	94.83
30 uM	90.01	90.85
FALSE SET	79	68
PACK SET	5	5
REFLECT	80.4	81.8

DAYS SINCE LAST L.I. I **300**

EQUIPMENT DATA	RUN TIME DAY	MONTH	YEAR	PRODUCTION RATE DAY	MONTH	YEAR	REASON FOR DOWNTIME
RAW MILL (TPH)	14.3	382.5	4665.6	31.1	151.8	175.5	Out of Silica
KILN (TPD)	24.0	451.3	5778.5	2028.7	2222.5	2267.5	
% RUN TIME	100.0%	60.7%	66.0%				
#1 FINISH MILL (TPH)	21.6	300.8	5831.0	50.3	57.5	54.4	Cement Silo Inventory
% RUN TIME	89.9%	40.4%	66.6%				
#2 FINISH MILL (TPH)	23.9	468.6	5577.2	41.5	44.8	48.2	Silo Change
% RUN TIME	99.6%	63.0%	63.7%				

ENVIRONMENTAL DATA	TONS DAY	MONTH	YEAR	LBS/TON OF CLINKER DAY	MONTH	YEAR	YEAR LIMIT TONS	% OF LIMIT	CLINK PROD % OF BUDG.	% OF YEAR PASSED
SO2	1.20	15.99	137.2	1.18	0.77	0.50	176.0	77.97%	87.70%	100.00%
NOX	2.48	58.92	969.4	2.44	2.82	3.55	1,846.0	52.51%		
CO	4.52	91.45	1,124.2	4.45	4.38	4.12	2,353.0	47.78%		

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