Note: This is a reference cited in *AP 42, Compilation of Air Pollutant Emission Factors, Volume I Stationary Point and Area Sources.* AP42 is located on the EPA web site at www.epa.gov/ttn/chief/ap42/

The file name refers to the reference number, the AP42 chapter and section. The file name "ref02_c01s02.pdf" would mean the reference is from AP42 chapter 1 section 2. The reference may be from a previous version of the section and no longer cited. The primary source should always be checked.

#'s 1+2 Colton - CalMat
coal Long Dry
I am familiar w/ this study.
It is excellent
fvc

Rec...

AP-42 Section 11.6
Reference 38
Report Sect. 4
Reference 35

CalMat Co

9300 FLAIR DRIVE / P. O. BOX 5210 / EL MONTE, CALIFORNIA 91734-1210 / (818) 307-8933 (213) 258-2777

CalMat

June 2, 1987

Mr. Frank Noonan
Monitoring and Data Analysis Division
U. S. Environmental Protection Agency
Mail Drop 14
Research Triangle Park, NC 27711

Re: AP-42 Factors for Gaseous Emissions from Portland Cement Kilns

Dear Mr. Noonan:

In response to the May 1, 1987 request by Mr. Robert Crolius, Portland Cement Association, we wish to provide NO_X emissions data for our two Colton, California cement plant kilns. We do not monitor SO_X emissions at this plant.

Relevant information requested in Mr. Crolius' letter is:

Type of fuel - low sulfur Utah coal, 100%.

Type of Process- long, dry kilns.

Analytical emissions method - certified CERMS, as set forth on attached South Coast AQMD Certification.

Time of Measurement - continuous, CERMS alternates between the two kilns.

The attached emissions rate data, for the months of February, March, and April, 1987, have been submitted to the South Coast AQMD and are public information. While most of the column headings are self-explanatory, please feel free to contact me if there are any questions.

Sincerely,

David S. Cahn
Vice President-Regulatory Matters

Attachments

cc: R. W. Crolius, PCA
M. S. May

South Coast
AIR QUALITY MANAGEMENT DISTRICT
9150 FLAIR DRIVE, EL MONTE, CA 91731 (818) 572-6200

May 30, 1987

Mr. David S. Cahn
Vice President-Regulatory Matters
Cal Mat Co.
9300 Flair Drive
P.O. Box 5210
El Monte, California 91734-1210

Certification
(Certification # C-91001)

Dear Mr. Cahn:

Reference is made to the Continuous Emission Monitoring System (CEMS) serving the cement manufacturing Kilns No. 1 and No. 2 at the baghouse vents, for which you have applied for certification, located in the Cal Mat Colton plant.

The CEMS consists of the following:

1. TECO Model 10AR NO_x Analyzer (S/N 18005-174)
2. Thermox III O_2 Analyzer (S/N C020377-2)
3. Calibration, Sample Transport, and Conditioning Systems
4. Data Acquisition, Reduction, and Control System - HP Computer Model HP100 and Accessaries

The pertinent data for the above described CEMS has been reviewed and the installation inspected by District Engineers. The system is granted certification as having met the current requirement of Rule 218.

CONDITION

The form of the Montly Stack Emission Report which you have submitted currently should include the following parameters:

1. Maximum 15 minute average NO_x concentration
2. 24 hour average NO_x concentration
3. 24 hour average flue gas flow rate

Sincerely,

John Higuchi

John Higuchi,
Source Testing & Monitoring Manager

YF:kb

cc: A. Stein
R. Hilovsky
Y. Fushimi

ROTARY KILN NOX EMISSIONS REPORT

FEB 1987

TaiMatCo - Cement Division
595 S. Rancho Avenue, P.O. Box 947
Colton, CA 92324-0514

	KILN 1								KILN 2								
DAY	KILN STAT	SPAN DEV +- %	LBS NOX	TONS CLINKR	ENERGY RECOVRD MBTU/HR	HEAT INPUT MBTU/HR	EMITTED NOX LBS/TON	ALLOWED NOX * LBS/TON	KILN STAT	SPAN DEV +- %	LBS NOX	TONS CLINKR	ENERGY RECOVRD MBTU/HR	HEAT INPUT MBTU/HR	EMITTED NOX LBS/TON	ALLOWED NOX * LBS/TON	TOTAL NOX ** LBS
01	UP	1.88	6634	1165	40.8	207.9	5.7	13.9	UP	.95	9098	1105	38.1	207.9	8.2	13.7	15732
02	UP	2.05	7006	1123	39.2	204.0	6.2	13.8	UP	1.09	8060	1163	38.9	215.6	6.9	13.7	15066
03	UP	2.32	8447	1212	39.8	208.8	7.0	13.8	UP	1.45	7275	1168	40.4	218.6	6.2	13.7	15722
04	UP	4.74	8430	1205	39.6	205.0	7.0	13.8	UP	4.28	9376	1144	39.9	215.6	8.2	13.7	17806
05	UP	4.61	7895	1147	36.6	192.5	6.9	13.8	UP	3.87	7173	1207	40.9	219.5	5.9	13.8	15068
06	UP	.06	5862	1178	38.3	212.7	5.0	13.7	UP	-.17	9942	1245	42.7	224.4	8.0	13.8	15804
07	UP	1.09	8426	1149	35.4	209.8	7.3	13.6	UP	-.22	7777	1215	41.6	214.7	6.4	13.8	16203
08	UP	.16	8107	1100	37.4	212.7	7.4	13.6	UP	-.48	6786	1200	42.9	230.2	5.7	13.8	14893
09	UP	.86	4313	622	30.2	155.9	6.9	13.8	UP	.32	5731	698	35.4	161.3	8.2	14.1	10044
10	UP	2.36	9044	1106	41.1	214.7	8.2	13.8	UP	2.02	7921	1072	45.5	223.4	7.4	14.0	16965
11	UP	2.89	7507	1164	37.2	208.4	6.4	13.7	UP	2.03	7861	1201	40.9	224.0	6.5	13.7	15368
12	UP	3.81	7058	1154	33.7	207.4	6.1	13.5	UP	3.09	6078	1187	41.6	225.0	5.1	13.7	13136
13	UP	.68	7272	1135	36.4	219.1	6.4	13.5	UP	.15	8218	1141	41.0	223.0	7.2	13.7	15491
14	UP	.60	7124	1119	38.0	217.9	6.4	13.6	UP	-.34	6421	1162	40.0	220.1	5.5	13.7	13545
15	UP	.45	8040	1175	37.7	213.3	6.8	13.7	UP	-.68	9013	1160	41.3	225.0	7.8	13.7	17053
16	UP	1.76	6634	1080	39.3	214.2	6.1	13.7	UP	2.99	8703	1114	41.8	218.1	7.8	13.8	15337
17	UP	5.44	7017	1117	40.0	220.1	6.3	13.7	UP	4.21	8925	1184	41.6	219.1	7.5	13.8	15942
18	UP	6.67	6957	1193	37.7	222.1	5.8	13.6	UP	6.75	9364	1074	37.3	215.2	8.7	13.6	16322
19	UP	6.45	6238	1088	39.3	221.1	5.7	13.7	UP	5.56	9143	1137	41.8	215.2	8.0	13.9	15381
20	UP	3.11	8078	1234	39.3	229.9	6.5	13.6	UP	.72	6500	1105	42.1	216.1	5.9	13.9	14578
21	UP	0.00	5647	1190	37.5	227.9	4.7	13.5	UP	0.00	9761	1110	38.2	221.0	8.8	13.6	15408
22	UP	-1.2	7130	1015	40.8	201.4	7.0	14.0	UP	-3.2	8365	1173	41.8	230.8	7.1	13.7	15495
23	UP	-2.2	8039	1058	38.5	223.6	7.6	13.6	UP	-.84	7074	984	41.5	250.0	7.2	13.5	15113
24	UP	1.74	8391	1100	36.8	236.6	7.6	13.4	UP	.80	5508	960	38.6	211.6	5.7	13.7	13899
25	UP	3.45	7297	1145	31.1	212.1	6.4	13.3	UP	.09	4308	959	35.8	223.9	4.4	13.5	11505
26	UP	-1.4	7959	1079	31.5	207.2	7.4	13.4	UP	-.41	3995	1084	34.8	228.6	3.7	13.4	11954
27	UP	-39.	7744	1161	29.8	211.7	6.7	13.2	UP	-81.	4344	1206	36.1	236.5	3.6	13.4	12088
28	UP	2.26	7196	947	26.9	195.2	7.6	13.2	UP	.86	4172	959	34.6	187.5	4.6	13.7	11568
				31161		211.2						31118		218.6			
***			205493	30671	36.8	211.2	6.7	7.5			206993	30629	39.9	218.6	6.8	7.6	

6.7 58

* Allowed emission rate per Rule 1112(b)(3)
** Permit limit 18.456 lbs NOX
*** Final inventory of clinker and fuel for "UP" days only
Kiln status UP=normal operation DN=down SU=start up SD=shut down BD=break down MF=monitor failure

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1. Report must be submitted monthly, within 30 days at end of month [Rule 218 (e)(1)]
2. Any excess emission must be reported within 96 hours [Rule 218 (e)(2)]

ROTARY KILN NOX EMISSIONS REPORT

MAR 1987

C. MatCo - Cement Division
655 S. Rancho Avenue, P.O. Box 947
Colton, CA 92324-0514

	KILN 1								KILN 2								
DAY	KILN STAT	SPAN DEV -- %	LBS NOX	TONS CLINKR	ENERGY RECOVRD MBTU/HR	HEAT INPUT MBTU/HR	EMITTED NOX LBS/TON	ALLOWED NOX * LBS/TON	KILN STAT	SPAN DEV +- %	LBS NOX	TONS CLINKR	ENERGY RECOVRD MBTU/HR	HEAT INPUT MBTU/HR	EMITTED NOX LBS/TON	ALLOWED NOX * LBS/TON	TOTAL NOX ** LBS
01	UP	1.22	7095	1042	31.8	208.7	6.8	13.4	UP	.74	7409	1100	38.0	198.6	6.7	13.8	14504
02	UP	-67.	6439	1112	28.3	207.6	5.8	13.2	UP	-59.	6868	1207	34.2	213.5	5.7	13.5	13307
03	UP	.89	4526	1109	32.3	208.6	4.1	13.4	UP	-.13	7779	1156	40.1	216.5	6.7	13.7	12304
04	UP	.32	7623	1160	32.8	210.6	6.6	13.4	UP	-.78	5776	1189	41.5	217.5	4.9	13.8	13399
05	UP	-.32	8246	1172	30.6	210.6	7.0	13.3	UP	-1.4	7442	1194	40.2	218.4	6.2	13.7	15689
06	UP	-100	7570	1073	30.9	212.6	7.1	13.3	BD	-100	4602	635	22.5	141.6	7.2	13.4	12172
07	UP	-100	6919	1113	32.1	214.6	6.2	13.3	UP	-100	8526	1189	44.1	232.4	7.2	13.8	15445
08	UP	-.90	7109	1157	31.6	218.6	6.1	13.3	UP	-7.2	10096	1168	41.8	223.5	8.6	13.8	17205
09	BD	-30.	3453	906	34.6	183.9	3.8	13.8	UP	-97.	9128	1150	38.8	210.7	7.9	13.7	12581
10	BD	-100	271	73	2.2	30.9	3.7	12.4	BD	-100	6719	938	36.4	184.6	7.2	13.9	6990
11	UP	8.64	5918	1013	45.2	207.9	5.8	14.1	BD	7.12	282	123	5.5	38.6	2.3	13.3	6200
12	UP	6.77	7272	1125	46.5	217.6	6.5	14.1	UP	5.13	10452	1110	42.4	216.7	9.4	13.9	17724
13	UP	1.31	5877	1235	46.9	223.3	4.8	14.0	UP	-16.	7805	1166	40.6	223.3	6.7	13.7	13682
14	UP	-.01	6354	1239	46.8	220.3	5.1	14.1	UP	-1.6	7981	1194	38.8	222.3	6.7	13.6	14335
15	UP	1.23	8144	1249	47.2	224.3	6.5	14.0	UP	.22	8308	1136	39.3	222.3	7.3	13.7	16453
16	UP	.61	6817	1214	48.9	223.3	5.6	14.1	UP	-.63	8799	1221	40.0	225.3	7.2	13.7	15615
17	UP	.56	7129	1155	48.0	217.3	6.2	14.2	UP	-.27	8055	1190	38.1	223.3	6.8	13.6	15184
18	UP	-.22	7216	1134	48.4	218.3	6.4	14.2	UP	-1.8	8777	1255	39.3	228.3	7.0	13.6	15993
19	UP	-.60	8405	1175	47.9	218.3	7.2	14.1	UP	-1.7	6154	1181	39.0	223.3	5.2	13.6	14558
20	UP	-100	9280	1107	45.4	212.3	8.4	14.1	UP	-100	6973	1096	40.2	223.3	6.4	13.7	16253
21	UP	-.41	6280	1122	45.6	215.3	5.6	14.1	UP	-1.6	5778	1157	37.8	224.3	5.0	13.6	12058
22	UP	-.52	8168	1134	46.3	225.3	7.2	14.0	UP	-2.0	7038	1089	38.5	223.3	6.5	13.6	15206
23	UP	-53.	8129	1181	46.0	205.3	6.9	14.2	UP	-62.	5923	1160	36.2	226.3	5.1	13.5	14051
24	UP	1.59	8530	1113	49.6	212.3	7.7	14.3	BD	-.39	1853	351	15.2	75.0	5.3	14.0	10383
25	UP	2.48	7056	1153	23.3	205.2	6.1	12.9	SU	.90	8014	980	17.5	227.8	8.2	12.5	15070
26	UP	1.62	6690	1085	20.8	202.4	6.2	12.8	UP	.62	8239	1187	8.7	252.5	6.9	12.0	14929
27	UP	.38	7245	1100	41.8	205.2	6.6	14.0	UP	-.52	8762	1210	11.9	222.0	7.2	12.2	16007
28	UP	-.40	5934	1110	41.5	208.1	5.3	13.9	UP	-1.7	8387	1210	11.9	219.0	6.9	12.2	14321
29	UP	-.84	6671	1070	37.1	200.3	6.2	13.7	UP	-2.0	7922	1140	38.8	220.0	6.9	13.6	14593
30	UP	-1.3	7048	1054	35.5	201.2	6.7	13.6	UP	-2.2	8167	1119	38.2	223.9	7.3	13.6	15215
31	UP	-2.3	7563	1003	34.2	201.2	7.5	13.6	UP	-2.8	7087	1104	38.9	221.0	6.4	13.6	14650
				32709		212.3					203630	30278		222.0			
***			207254	33715	39.4	212.3	6.1	7.6			203630	31210	36.0	222.0	6.5	7.4	

* Allowed emission rate per Rule 1112(b)(3)
** Permit limit 18,456 lbs NOX
*** Final inventory of clinker and fuel for "UP" days only
Kiln status UP=normal operation DN=down SU=start up SD=shut down BD=break down MF=monitor failure

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1. Report must be submitted monthly, within 30 days at end of month [Rule 218 (e)(1)]
2. Any excess emission must be reported within 96 hours [Rule 218 (e)(2)]

ROTARY KILN NOX EMISSIONS REPORT

APR 1987

CalMatCo - Cement Division
695 S. Rancho Avenue, P.O. Box 947
Colton, CA 92324-0514

	KILN 1								KILN 2								
DAY	KILN STAT	SPAN DEV +- %	LBS NOX	TONS CLINKR	ENERGY RECOVRD MBTU/HR	HEAT INPUT MBTU/HR	EMITTED NOX LBS/TON	ALLOWED NOX * LBS/TON	KILN STAT	SPAN DEV +- %	LBS NOX	TONS CLINKR	ENERGY RECOVRD MBTU/HR	HEAT INPUT MBTU/HR	EMITTED NOX LBS/TON	ALLOWED NOX * LBS/TON	TOTAL NOX ** LBS
01	UP	-11.	6684	1081	34.4	214.2	6.2	13.5	UP	-14.	6777	1159	38.0	224.1	5.8	13.6	13461
03	UP	-22.	5185	1073	44.7	207.8	4.8	14.1	UP	-23.	9532	1089	36.0	215.2	8.8	13.5	14717
02	UP	-22.	3021	900	36.1	153.8	3.4	14.3	UP	-23.	10655	1140	37.5	215.2	9.3	13.6	13676
04	UP	-21.	5633	1078	45.7	197.9	5.2	14.3	UP	-22.	9430	1105	35.8	206.3	8.5	13.6	15063
05	UP	-23.	6389	1123	45.4	194.3	5.7	14.3	UP	-24.	9688	1208	35.9	219.2	8.0	13.5	16077
06	UP	-100	7849	1133	45.5	215.2	6.9	14.1	UP	-100	8091	1243	37.4	225.1	6.5	13.5	15940
07	UP	-22.	7877	1158	45.2	222.7	6.8	14.0	UP	-24.	7223	1128	39.5	225.6	6.4	13.6	15100
08	UP	2.15	7939	1064	45.4	221.7	7.5	14.0	UP	2.25	8593	1170	38.1	218.7	7.3	13.6	16532
09	UP	3.46	9092	1117	46.9	216.7	8.1	14.1	UP	3.71	8814	1174	37.0	216.7	7.5	13.6	17905
10	UP	3.30	9169	1084	46.2	217.2	8.5	14.1	BD	2.93	9718	1076	39.3	216.2	9.0	13.7	18887
11	UP	2.90	6212	1133	47.1	223.2	5.5	14.0	UP	1.51	7590	1110	39.9	224.1	6.8	13.7	13803
12	UP	-.86	6080	853	37.5	202.4	7.1	13.7	UP	-2.6	9519	1090	13.2	219.2	8.7	12.3	15599
13	UP	-2.8	9146	1025	45.5	221.2	8.9	14.0	UP	-3.8	8901	1152	0.0	219.2	7.7	11.6	18047
14	UP	-70.	7183	1075	43.6	224.1	6.7	13.9	UP	-77.	6005	1011	12.4	211.2	5.9	12.3	13188
15	SD	-.06	5908	643	44.5	164.4	9.2	14.7	SD	-1.2	2030	600	31.4	137.8	3.4	14.2	7938
16	DN	.83	58	0	0.0	0.0	****	****	SU	-1.9	8746	959	40.9	214.2	9.1	13.8	8803
17	DN	.66	51	0	0.0	0.0	****	****	UP	-.38	7946	1088	41.8	227.1	7.3	13.7	7997
18	DN	-3.0	65	0	0.0	0.0	****	****	UP	-3.3	7708	1124	42.5	231.1	6.9	13.7	7773
19	DN	.35	65	0	0.0	0.0	****	****	UP	-1.3	7168	1165	44.7	232.1	6.2	13.8	7233
20	DN	3.14	47	0	0.0	0.0	****	****	UP	1.45	8340	1155	43.5	231.1	7.2	13.8	8387
21	SU	4.95	1735	254	6.7	99.7	6.8	12.4	UP	3.72	7242	1178	41.2	229.1	6.1	13.7	8977
22	UP	8.39	8198	999	43.9	222.2	8.2	13.9	UP	4.89	5982	1199	42.0	233.1	5.0	13.7	14179
23	UP	4.87	9686	1123	43.4	228.1	8.6	13.8	UP	5.84	7383	1195	43.5	234.1	6.2	13.8	17069
24	UP	3.65	8591	1122	44.5	223.6	7.7	13.9	UP	1.72	7026	1186	43.7	230.4	5.9	13.8	15617
25	UP	-.57	10204	1099	46.3	221.7	9.3	14.0	UP	-1.9	6736	1140	43.5	228.5	5.9	13.8	16940
26	UP	-1.4	7308	1015	47.0	216.8	7.2	14.1	UP	-2.3	7885	1120	42.5	229.5	7.0	13.7	15193
27	UP	-86.	6167	1045	45.0	216.8	5.9	14.0	SD	-86.	1979	624	27.2	131.3	3.2	14.0	8146
28	UP	-38.	9157	1061	44.7	216.8	8.6	14.0	DN	-1.4	16	0	0.0	0.0	****	****	9173
29	SD	6.21	6664	717	41.7	187.0	9.3	14.2	DN	4.41	6	0	0.0	0.0	****	****	6671
30	UP	6.98	10072	1000	44.9	196.4	10.1	14.3	DN	-1.0	63	0	0.0	0.0	****	****	10135
				23361		212.5						26329		223.7			
***			166842	23655	44.0	212.5	7.1	7.7			184234	26660	36.1	223.7	6.9	7.4	

* Allowed emission rate per Rule 1112(b)(3)
** Permit limit 18,456 lbs NOX
*** Final inventory of clinker and fuel for "UP" days only
Kiln status UP=normal operation DN=down SU=start up SD=shut down BD=break down MF=monitor failure

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1. Report must be submitted monthly, within 30 days at end of month [Rule 218 (e)(1)]
2. Any excess emission must be reported within 96 hours [Rule 218 (e)(2)]