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.

see NEDS data

no NEDS data

AP-42 Section 11.17
Reference 7
Report Sect. 4
Reference 3

kilns — after settling chamber, dust chi B-3/A-is, and baghouses

~ 1 lb part / ton lime product

TEST CONDUCTED AT

Marblehead Lime Company

PLEASANT GAP PLANT

BELLEFONTE, PENNSYLVANIA

PM info. only. Ref. 3
This data was rated D and was not averaged in.

July 17 and 18, 1975

Report on the

Particulate Emissions From

A Lime Kiln Baghouse

TEST PERSONNEL

David Crowell	Supervisor
Robert W. McKee	Technician
Lawrence Dyke	Lab Analyst

Marblehead Lime Company

300 W. Washington Street

Chicago, Illinois 60606

C.L.N.
4/28/76

SUPPLEMENT TO
COMPLIANCE
STACK TEST

PLEASANT GAP PLANT

July 17 and 18, 1975

	July 17, 1975		July 18, 1975	
	Baghouse A Section 1	Baghouse B Section 1	Baghouse A Section 4	Baghouse B Section 4
Thimble and Filter	.0206	.0290	.0251	.0513
Probe	.0393	.0326	.0217	.0243
	.0599	.0616	.0468	.0756
Impinger	.0267	.0170	.0166	.0190
Total Grams	.0866	.0786	.0634	.0946
% Impinger	30.83	21.63	26.18	20.08
Total Catch #/Hr.	2.8	2.5	2.0	3.0
Probe & Filter #/Hr.	1.94	1.96	1.48	2.40
	0.86	0.54	0.52	0.6
Totals	3.9		3.88	
Total Baghouses (x6)	23.4		23.3	

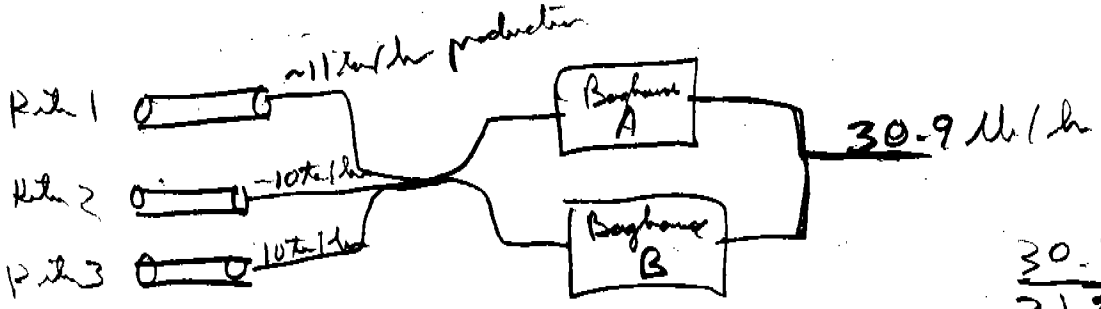
I. INTRODUCTION:

This report presents the results of two sets of Particulate Emission Tests conducted on July 17 and 18, 1975 at Marblehead Lime Company, Pleasant Gap, Pennsylvania.

The tests were requested by the Commonwealth of Pennsylvania Department of Environmental Resources.

The tests included four two-hour runs designed to measure average emission rates from two baghouses used to control the combined emissions from three separate rotary lime kilns. The lime kilns are used for the production of lime from limestone. All three kilns ran continuously at normal production rates throughout the testing period.

Witnessing the tests were Messers. David Bish, Robert Fisher, and George Mentzer of the Commonwealth of Pennsylvania Department of Environmental Resources, and Frank M. Werderitsch of Marblehead Lime Company.



$\frac{30.9 \text{ lb/hr}}{31 \text{ ton product/hr}} = 1 \frac{\text{lb}}{\text{ton product}}$

II. SUMMARY RESULTS

The two baghouse stacks tested are both divided into six sections. At the request of the Commonwealth of Pennsylvania Department of Environmental Resources corresponding sections (section 1) from Baghouse "A" and "B" were tested on the first day. On the next day a second set of tests were conducted in a similar manner on different sections (section 4).

Results of the four runs are reported below according to Pennsylvania Sampling - Testing Rules in pounds per hour and are compared with allowable mass emission rates for all three process kilns.

	Mass Rate of Emissions Pounds per Hour	Allowable Emissio Pounds per Ho
Baghouse "A" Section 1	2.8	
Baghouse "B" Section 1	2.5	
Subtotal	5.3	
Total Emission from both Baghouses (Subtotal x 6 identical compartments)	31.8	56.8
Baghouse "A" Section 4	2.0	
Baghouse "B" Section 4	3.0	
Subtotal	5.0	
Total Emissions from both Baghouses (Subtotal x 6 identical compartments)	30.0	58.9

avg = 30.9

Average Emission Rate Both Baghouses — 30.9 Pounds/Hour — from both baghouse

Average Allowable Emission Rate — 57.9 Pounds/Hour

30.9 lb/hr

III. SUMMARY OF DATA

SAMPLING DATA:	Baghouse A Section 1	Baghouse B Section 1	Baghouse A Section 4	Ba Se
Date of test	7/17/75	7/17/75	7/18/75	7/
Time of test	11:30 A.M.	4:30 P.M.	3:30 P.M.	10
Duration of test, min.	120	120	120	12
Total sampled volume, SCFD	50.031	43.310	60.451	49
Total number of sampling points	12	12	12	12
Probe nozzle diameter, inches	.5	.5	.5	.5
PARTICULATE DATA:				
Total Particulate Caught, grams (Thimble, backup filter, probe, condensers, & train washings)	.0866	.0786	.0634	.
STACK GAS DATA:				
Gas volume flow, ACFM	16,639	15,544	22,855	1
Gas volume flow, SCFM DG	11,962	10,417	14,415	1
Avg. Stack gas temp. °F	305.9	270.4	318.8	2
% Moisture	4.97	5.30	4.51	4

IV. PRODUCTION SUMMARY:

7/17

		PRODUCTION IN TONS PER HOUR		
		Kiln #1	Kiln #2	Kiln #3
Baghouse A Section 1	11:00 AM	9.8	10.3	11.2
	12:00 PM	12.3	12.4	8.3
	1:00 PM	12.2	11.1	8.1
Baghouse B Section 1	4:00 PM	10.5	8.2	13.0
	5:00 PM	11.3	9.5	9.1
	6:00 PM	12.4	7.6	12.5
	Total	68.5	59.1	62.2
	Average	11.4	9.9	10.4

Allowable Emission = .76 (200#/ton x ton/hr. Produ

Kiln #1 = .76 (200 x 11.4)$^{.42}$ = 19.55
Kiln #2 = .76 (200 x 9.9)$^{.42}$ = 18.43
Kiln #3 = .76 (200 x 10.4)$^{.42}$ = 18.81

Total Allowable 3 Sources = 56.79

7/18

Baghouse B Section 4	10:00 AM	12.2	11.7	12.2
	11:00 AM	12.3	11.1	12.2
	12:00 PM	12.3	11.2	12.2
Baghouse A Section 4	3:00 PM	12.3	10.7	13.0
	4:00 PM	12.0	8.0	12.5
	5:00 PM	12.2	7.5	12.5
	Total	73.3	60.2	74.6
	Average	12.2	10.0	12.4

Allowable Emission Rate = .76 (200#/ton x ton/hour P

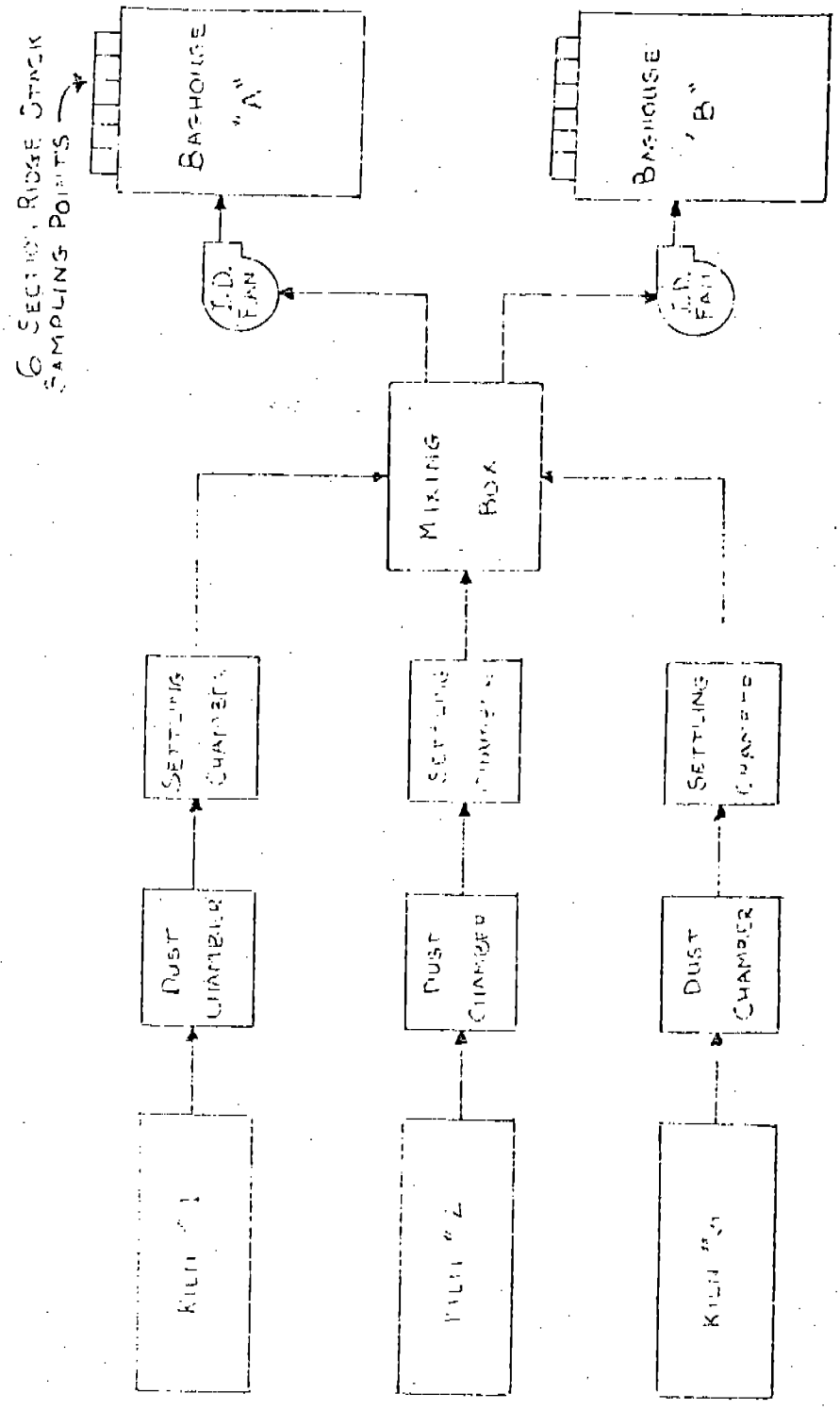
Kiln #1 = .76 (200 x 12.2)$^{.42}$ = 20.11
Kiln #2 = .76 (200 x 10.0)$^{.42}$ = 18.50
Kiln #3 = .76 (200 x 12.4)$^{.42}$ = 20.25

Total allowable 3 Sources = 58.86

PRODUCTION

7-17 AVG: 10.54 ton/hr

7-18 11.56 ton/hr



REVISIONS	MARBLEHEAD LIME COMPANY
DESTROY ALL PREVIOUS PRINTS	CHICAGO, ILLINOIS
1	PLEASANT GAP
2	CONTROL EQUIPMENT FLOW DIAGRAM
3	

MARBLEHEAD LIME COMPANY

PLEASANT GAP PRODUCTION DATA

Date: 7-17-75

Time	Kiln #1 Stone Feed	Kiln #1 Coal Feed	Kiln #2 Stone Feed	Kiln #2 Coal Feed	Kiln #3 Stone Feed	Kiln #3 Coal Feed
7:00	24.1	716 LBS/ Ton of Lime	20.0	690 LBS/ Ton	24.1	676 LBS/ Ton
8:00	24.5	716	23.9	690	24.4	676
9:00	24.0	716	21.9	690	24.1	676
10:00	19.3	716	22.0	690	24.5	676
11:00	19.6	716	20.5	690	22.3	676
12:00	24.5	716	24.7	690	16.6	676
1:00	24.3	716	22.2	690	16.2	676
2:00	24.5	716	23.4	690	18.3	676
3:00	22.0	716	18.0	690	25.0	676
4:00	21.0	716	16.3	690	26.0	676
5:00	22.5	716	18.9	690	18.2	676
6:00	24.7	716	15.1	690	25.0	676
7:00	25.0	716	23.0	690	18.1	676
8:00						

MARBLEHEAD LIME COMPANY

PLEASANT GAP PRODUCTION DATA

Date: 7-18-75

Time	Kiln #1 Stone Feed	Kiln #1 Coal Feed	Kiln #2 Stone Feed	Kiln #2 Coal Feed	Kiln #3 Stone Feed	Kiln #3 Coal Feed
7:00	23.7	716	19.3	690	23.0	676
8:00	24.3	716	24.2	690	23.9	676
9:00	24.1	716	24.3	690	24.4	676
10:00	24.4	716	23.3	690	24.4	676
11:00	24.5	716	22.2	690	24.3	676
12:00	24.6	716	22.4	690	24.4	676
1:00	24.6	716	22.2	690	24.6	676
2:00	24.2	716	24.8	690	24.6	676
3:00	24.6	716	21.4	690	25.0	676
4:00	24.0	716	16.0	690	25.0	676
5:00	24.5	716	15.0	690	25.0	676