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.

Background Report Reference

AP-42 Section Number: 11.6

Background Chapter: 4

Reference Number: 70

Title: Visible EmissionTesting at Four Portland Cement Plants

US EPA

August 1974

SET 1456 01 0874

70022

Visible Emission Testing at Four Portland Cement Plants

Prepared For:

Environmental Protection Agency
Research Triangle Park
North Carolina 27711

Contract No: 68-02-1400

EPA Report No: 75-CEM-1

August 1974

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Not Reviewed

SCOTT ENVIRONMENTAL TECHNOLOGY, IN
Plumsteadville, Pennsylvania 18949

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1.0 INTRODUCTION

A study was conducted to determine smoke opacity from the baghouse of four cement companies in Lehigh and Northampton Counties, Pennsylvania during the week of July 29 through August 2, 1974. Of major concern was the observation of the emissions during both the early and late hours of each day to determine if the sun had any effect on the smoke readings. The positions of the observers therefore followed a path such that the sun was always to their backs. In addition, the stacks were also observed from varying heights and distances allowing the evaluation of various observation angles to the stack. Still another factor was the effect of different backgrounds on the observations. The field data can be found in the Appendices of this report. EPA Method 9 was followed for all readings during this project. Both smoke readers were qualified the previous month using methods outlined by EPA. The qualifications were fulfilled at the contractor's facilities.

2.0 SUMMARY OF TEST RESULTS

2.1 PENN-DIXIE CEMENT, NAZARETH, PA.

The bag house stacks of the Penn-Dixie Cement plant were observed on Tuesday, July 31, 1974 to determine the opacity of visible emissions. The observers were standing on a platform approximately 90' from the ground and 15' in front of the first two of 16 90'-stacks (see Figure 1). The stacks were arranged in two rows of eight which were observed together against a green background of trees on a hillside.

The opacity readings were done on an overcast day with light and variable winds (Tables 1 and 2). Three kilns were operating all day with a fourth running from 1300 to 1515. The fuel was 2.23% sulfur coal and the production rate was 8.6 tons per hour per kiln (Table 2). The baghouse was made by Draco and contained 1248 glass fiber 1' x 30' bags. The inlet temperature was 500°F and the flow rate was 208,000 CFM. The outlet consisted of 16 9'-high x 5.5' x 5' stacks approximately 90' above the ground. The emissions from these stacks were observed to average around 10% opacity with surges to 15% and occasional readings at 20% (Appendix A).

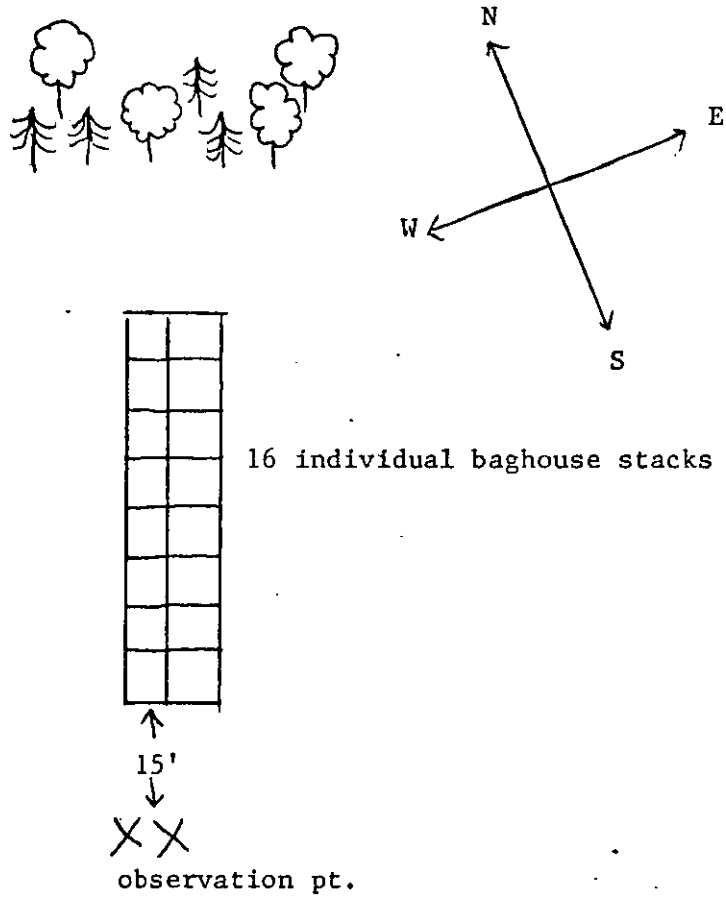
The opacity values for these stacks could have been affected by smoke from a nearby stack which interferred when it blew behind the reading area. There were also intense heat waves emitted from all 16 stacks which due to the closeness of the observation point made the exact determination of smoke opacity more difficult.

SET 1456 01 0874

FIGURE 1

PENN-DIXIE INDUSTRIES INC.

Nazareth, Pa.



observation pt. - S 25° W 9:15 a.m. - 5:15 p.m.

Note: The direction recorded on the data sheets (N 25° E) refers to the observers' line of vision.

RECORD OF VISUAL DETERMINATION OF OPACITY

COMPANY Penn-Dixie

LOCATION Nazareth, Pa.

TEST NUMBER 1

DATE 7/30/74

TYPE FACILITY Cement plant

CONTROL DEVICE baghouse

HOURS OF OBSERVATION 9:20-5:15

OBSERVER Susan Steckel

OBSERVER CERTIFICATION DATE 7/18/74

OBSERVER AFFILIATION Scott Environmental Tech.

Point of Emissions 16 individual Stacks

Height of Discharge Point 90' from ground

NOTE: Record the following information prior to and upon completion of observations at each source; if observations are made over an extended period of time, additional recordings should be made as applicable.

	Initial		Final
CLOCK TIME	9:20	12:28	5:15
OBSERVER LOCATION:			
Distance To Discharge	15'	15'	15'
Direction From Discharge	N 25° E →		N 25° E
Height of Observation Point	90' →		90'
BACKGROUND DESCRIPTION:	green hillside →		
WEATHER CONDITIONS:			
Wind Direction	not recorded		
Wind Speed	1-2 mph →		1-5 mph
Ambient Temperature	~85° F →		
SKY CONDITIONS: (clear, overcast, % cloud)	overcast →		80% cloudy
PLUME DESCRIPTION:			
Color	white →		white
Distance Visible	10'		10'
OTHER DATA:	N.A.		
Minutes of Noncompliance	N.A.		

TABLE 1a

Figure 9-1

RECORD OF VISUAL DETERMINATION OF OPACITY

COMPANY Penn Dixie

LOCATION Nazareth, Pa.

TEST NUMBER 1

DATE 7/30/74

TYPE FACILITY cement plant

CONTROL DEVICE baghouse

HOURS OF OBSERVATION 9:15 - 5:15

OBSERVER Phyllis Becker

OBSERVER CERTIFICATION DATE

OBSERVER AFFILIATION Scott Environmental Technology

Point of Emissions 16 individual stacks

Height of Discharge Point 9', 90' from ground

NOTE: Record the following information prior to and upon completion of observations at each source; if observations are made over an extended period of time, additional recordings should be made as applicable.

	Initial	Final
CLOCK TIME	9:15	5:15
OBSERVER LOCATION:		
Distance To Discharge	15'	15'
Direction From Discharge	N 25° E →	
Height of Observation Point	90'	90'
BACKGROUND DESCRIPTION:	green tree background →	
WEATHER CONDITIONS:		
Wind Direction	not recorded →	
Wind Speed	1-2 mph	1-2 mph
Ambient Temperature	≈85°F →	
SKY CONDITIONS: (clear, overcast, % cloud)	50% cloud	70% cloud
PLUME DESCRIPTION:		
Color	white	white
Distance Visible	10'	10'
OTHER DATA:	—	
Minutes of Noncompliance	N.A	

TABLE 1b

SET 1456 01 0874

TABLE 2

PLANT DATA

Plant: Penn-Dixie Plant #4

Personnel (position): Mr. McGraf, Plant Manager

Date: Tuesday, July 30,1974

Stack

Height: 9ft. (90ft. from ground)

Diameter: 16 stacks 5.5 x 5ft.

Temperature: -

Gas flow rate 208,000 ACFM

Process

kilns, capacity /kiln (design, tons clinker/hr.): 4 @ 9 ton/hr.

Ave. operating rate (tons clinker/hr.): 8.6 ton clinker/hr./kiln

Slurry, % moisture (if applicable): N.A.

Fuel, ave. sulfur comp., rate: 2.23% average coal

Raw material fed/ton clinker: 3440 lb./ton clinker

Control

Type: Draco B.H.

bags: 78 x 16 = 1248

Cleaning procedure: reversed air

Bag material, permeability: glass 11 inch diameter x 30ft.

Air/cloth ratio: -

Operating temperature (inlet): 500°

Other inlets other than kiln ? No

Dilution air ? Tempering dampers (automatic)

Last Maintanance: Daily

Rated efficiency: 99 +

Other Data:

Past emission test data ? None Known of

Part. collected: 36 tons/24 hour

SET 1456 01 0874

2.2 COPLAY CEMENT MANUFACTURING CO., EGYPT, PA.

The seven baghouse stacks at the Coplay Cement plant were observed for emission opacity on Wednesday, July 31, 1974. In the morning the observers sat at ground level at point #1 (E 20°S. - Figure 2) about 100' from the stacks. The emissions were observed against a clear sky in the morning which grew steadily cloudier in the late afternoon (Table 3)

From 1415 to 1815 the observers viewed from the roof of a 70' building, point #2 (W 20°S) about 80' from the stacks. The background from this position for the observation of stacks 1-5 were dark trees, and for stacks 6 and 7 there was blue sky. Sporatic emissions from stacks 1-5 of about 5% opacity were detected during this period, while still nothing was seen from stack 6 and 7. Towards the end of the afternoon, one observer (Susan Steckel) moved down to the ground directly outside the same building, and the other observer (Phyllis Becker) stayed on the roof. From the ground position partly cloudy sky formed the background behind all of the stacks, and once again, no visible emissions could be detected, while concurrently the occasional 5% opacity was still being noted from the roof position. Appendix B contains complete field data.

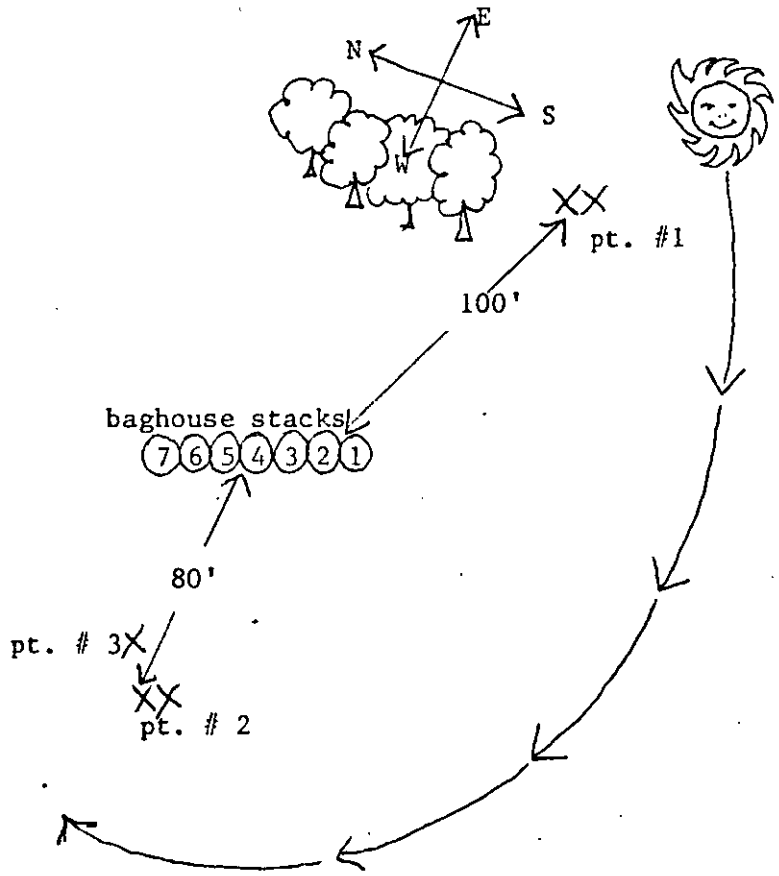
The Coplay Cement Company operated seven kilns at approximately 5 tons per hour each on an intermittent schedule given in Table 4. The fuel was 2.5-3.0% sulfur coal. A Wheelabrator Frye baghouse controlled the emissions with 1428 1' x 30' fiberglass bags operating at 550°F and 125,000 SCFM flow. The outlet consisted of 7 4'10" diameter stacks 12' high, 88' above the ground (Table 5).

SET 1456 01 0874

FIGURE 2

COPLAY CEMENT MANUFACTURING CO.

Egypt, Pa.



observation pt. # 1 - E 20° S	11:00 a.m. - 1:00 p.m.
observation pt. # 2 - W 20° S	2:15 p.m. - 6:15 p.m. (building roof)
observation pt. # 3 - W 20° S (ground)	5:45 p.m. - 6:15 p.m. (Steckel only)

RECORD OF VISUAL DETERMINATION OF OPACITY

COMPANY Coplay

LOCATION Egypt, Pa.

TEST NUMBER 2

DATE 7/31/74

TYPE FACILITY Cement Plant

CONTROL DEVICE Baghouse

HOURS OF OBSERVATION 11:00 - 6:15

OBSERVER Susan Steckel

OBSERVER CERTIFICATION DATE 7/18/74

OBSERVER AFFILIATION Scott Environmental Tech

Point of Emissions 7 Stacks

Height of Discharge Point 88'

NOTE: Record the following information prior to and upon completion of observations at each source; if observations are made over an extended period of time, additional recordings should be made as applicable.

CLOCK TIME	Initial 11:00	2:15	5:20	Final 6:15
OBSERVER LOCATION:				
Distance To Discharge	100'	80'	50'	50'
Direction From Discharge	E 30° S	W 20° S	W 20° S	W 20° S
Height of Observation Point	0'	70'	0'	0'
BACKGROUND DESCRIPTION:	Blue sky	green hillside	blue sky	blue sky
WEATHER CONDITIONS:				
Wind Direction	not recorded →			
Wind Speed	2 mph	2 mph	5 mph	5 mph
Ambient Temperature	~85-90° F →			
SKY CONDITIONS: (clear, overcast, % cloud)	partly cloudy			Clear
PLUME DESCRIPTION:				
Color	white	white	white	white
Distance Visible	5'	5'	0'	0'
OTHER DATA:	N.A.			
Minutes of Noncompliance	N.A.			

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TABLE 3a

Figure 9-1

RECORD OF VISUAL DETERMINATION OF OPACITY

Page ___ of ___

COMPANY Coplay

LOCATION Egypt, Pa.

TEST NUMBER 2

DATE 7/31/74

TYPE FACILITY cement plant

CONTROL DEVICE baghouse

HOURS OF OBSERVATION 11:00 - 6:15

OBSERVER Phyllis Becker

OBSERVER CERTIFICATION DATE

OBSERVER AFFILIATION Scott Environmental Technology

Point of Emissions 7 stacks

Height of Discharge Point 80'

NOTE: Record the following information prior to and upon completion of observations at each source; if observations are made over an extended period of time, additional recordings should be made as applicable.

	Initial		Final
CLOCK TIME	11:00	2:15	6:15
OBSERVER LOCATION:			
Distance To Discharge	100'	80'	80'
Direction From Discharge	E 20°S	W 20°S	W 20°S
Height of Observation Point	0	70'	70'
BACKGROUND DESCRIPTION:	sky background	partial tree background	
WEATHER CONDITIONS:			
Wind Direction	not recorded →		
Wind Speed	2 mph	2 mph	2 mph
Ambient Temperature	≈85° F →		
SKY CONDITIONS: (clear, overcast, % cloud)	30% cloud		10% cloud
PLUME DESCRIPTION:			
Color	white	white	white
Distance Visible	5'	5'	5'
OTHER DATA:	N.A.		
Minutes of Noncompliance			

TABLE 3b

SET 1456 01 0874

TABLE 4

OPERATING SCHEDULE

Coplay Cement

Egypt, Pa.

Wednesday, 7/31/74

KILN #	NORMAL OPERATION*	DOWN TIME
1	All Day	-
2	All Day	-
3	All Day	-
4	235-615	1035-235
5	-	All Day
6	1045-1200; 1240-615	1200-1240
7	-	All Day

* Normal operation average 10,000 #/hr./kiln clinker

** Water sprays off on #2 kiln @ 5:00 p.m.

*** When #6 kiln was down, temperature dropped to 450 °F @ B.H. inlet

**** When #2 kiln water sprays went off; temperature of baghouse inlet gases rose to 550° F @ 5:30 p.m.

Approximate B.H. inlet temperature 525° F

TABLE 5

PLANT DATA

Plant: Coplay, Egypt Plant

Personnel (position): Mr. Charles Skrapits, op. manager
Mr. Richard Rosiek, op. engineer

Date: July 31, 1974

Stack

Height: 88ft. from ground, stack circa 12ft.

Diameter: 7@ 4' 10"

Temperature: 420°F

Gas flow rate (scfm): 125,000

Process

kilns, capacity, kiln (design, tons clinker/hr.): 7 @ 6.3 ton/hr.

Ave. operating rate (tons clinker/hr.): 5 ton/hr./kiln

Slurry, % moisture (if applicable): N.A.

Fuel, ave. sulfur comp., rate: coal; 2.5-3.0% S

Raw material fed/ton clinker: 3058 lb./ton

Kiln operation record : attached

Control

Type: Wheelabrater frye

bags: 1428 11½" diameter x 30' 9"

Cleaning procedure: Reverse Air

Bag material, permeability: Fiberglass

Air/cloth ratio: 1.96

Operating temperature (inlet): 550

Other inlets other than kiln ? No

Dilution air ? None

Last Maintanance: (new Sept. 16, 1973) regular daily

Rated efficiency: N.A.

Other Data:

Past emission test data ? Yes W.F. Dec. 19, 1973 Not yet received results

Part. collected: Not Monitored

SET 1456 01 0874

2.3 WHITEHALL CEMENT MANUFACTURING CO., CEMENTON, PA.

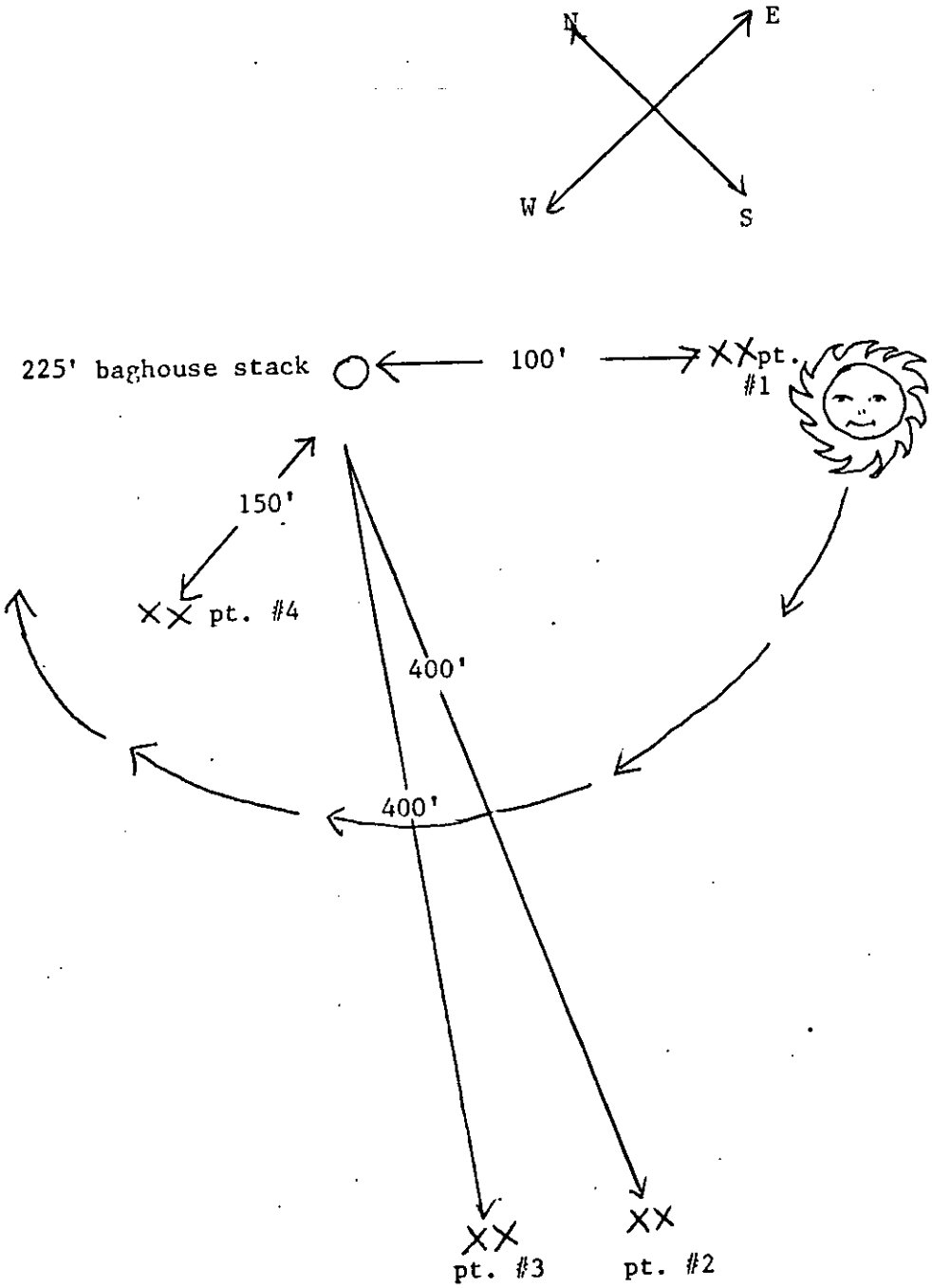
The 225' baghouse stack at Whitehall Cement Co. was observed for emissions opacity on Thursday, August 1, 1974. In the morning the observers sat at point #1 (E 40°S - Figure 3), about 150' off the ground and 100' from the stack. The background was clear sky in the morning but increasing cloudiness during the afternoon (Table 6) No emissions were noted at point #1. After lunch, the observers moved to point #2 (S 15°W) at ground level and about 400' away from the stack. The readings were taken again against a blue sky background and no emissions were noted. At 3:30 the observers moved 15° west to point #3 in order to keep the sun to their backs. The background had begun to get cloudy by this time. As the sun began to set, the observers moved to point #4 (W 20°N) about 150' from the stack at ground level. No visible emissions were detected at this point. Complete field data is included in Appendix C.

The Whitehall Cement Company was operating one kiln (#1) during this test at an average production rate of 24 tons per hour (Table 7) It was fueled with 592 gallons per hour of #6 oil containing 2.5% sulfur. The second kiln at the plant (#2) was down for major repairs and its baghouse was completely damped off from the stack. Number 1 kiln emissions were controlled by a Western Precipitator baghouse containing 432 siliconized Dacron bags operating at 500°F and 33000 SCFM flow. The outlet stack was 225' high and 15' in diameter.

SET 1456 01 0874

FIGURE 3
WHITEHALL CEMENT MANUFACTURING CO.

Cementon, Pa.



observation pt. #1 - E 40° S	10:20 a.m. - 1:00 p.m.
observation pt. #2 - S 15°W	2:15 p.m. - 3:30 p.m.
observation pt. #3 - S 30° W	3:30 p.m. - 5:40 p.m.
observation pt. #4 - W 20° N	5:40 p.m. - 6:20 p.m.

RD VIS DE INA N O ACI

COMPANY Whitehall

LOCATION Cementon, Pa.

TEST NUMBER 3

DATE 8/1/74

TYPE FACILITY Cement Plant

CONTROL DEVICE baghouse

HOURS OF OBSERVATION 10:20 - 6:20

OBSERVER Susan Steckel

OBSERVER CERTIFICATION DATE 7/18/74

OBSERVER AFFILIATION Scott Environmental Tech.

Point of Emissions one baghouse stack

Height of Discharge Point 250 feet

NOTE: Record the following information prior to and upon completion of observations at each source; if observations are made over an extended period of time, additional recordings should be made as applicable.

CLOCK TIME	Initial 10:20	2:15	3:30	5:40	Final 6:20
OBSERVER LOCATION:					
Distance To Discharge	100'	400'	375'	150'	150'
Direction From Discharge	40° South of East	S 15° West	S 40° W	W 20° N	W 20° N
Height of Observation Point	200'	0'	0'	0'	0'
BACKGROUND DESCRIPTION:	Blue sky - hazy				Overcast
WEATHER CONDITIONS:					
Wind Direction	not recorded				
Wind Speed	varying 1 - 5 mph →				
Ambient Temperature	85-90° F →				
SKY CONDITIONS: (clear, overcast, % cloud)	clear	partly cloudy			cloudy
PLUME DESCRIPTION:					
Color	white				
Distance Visible	0 →				
OTHER DATA:	N.A. →				
Minutes of Noncompliance	NA →				

TABLE 6a

Figure 9-1

RECORD OF VISUAL DETERMINATION OF OPACITY

COMPANY Whitehall

LOCATION Cementon, Pa.

TEST NUMBER 3

DATE 8/1/74

TYPE FACILITY cement plant

CONTROL DEVICE baghouse

HOURS OF OBSERVATION 10:20 - 6:20

OBSERVER Phyllis Becker

OBSERVER CERTIFICATION DATE

OBSERVER AFFILIATION Scott Environmental Technology

Point of Emissions one baghouse stack

Height of Discharge Point 250'

NOTE: Record the following information prior to and upon completion of observations at each source; if observations are made over an extended period of time, additional recordings should be made as applicable.

	Initial				Final
CLOCK TIME	10:20	2:15	3:30	5:40	6:20
OBSERVER LOCATION:					
Distance To Discharge	100'	400'	400'	150'	150'
Direction From Discharge	E 40°S	S 15°W	S 30° W	W 20°S	W 20°S
Height of Observation Point	200'	0'	0'	0'	0'
BACKGROUND DESCRIPTION:	sky (hazy) →				
WEATHER CONDITIONS:					
Wind Direction	not recorded →				
Wind Speed	1-2 mph	3mph	3mph	2mph	2mph
Ambient Temperature	≈85°F →				
SKY CONDITIONS: (clear, overcast, % cloud)	clear	30% cloud	hazy	40% cloud	hazy
PLUME DESCRIPTION:					
Color	white →				
Distance Visible	0' →				
OTHER DATA:	N.A.				
Minutes of Noncompliance	N.A.				

TABLE 6b

SET 1456 01 0874

TABLE 7

PLANT DATA

Plant: Whitehall Cement

Personnel (position): Mr. Richard Foster, President
Mr. Fred Storch, Plant manager

Date: August 1, 1974

Stack

Height: 225'

Diameter: 15'

Temperature: 400°F

Gas flow rate (scfm): 99,000 Total 33,000 #1; 66,000 #2

Process

kilns, capacity, kiln (design, tons clinker/hr.): #1 25 TPH; #2 50 TPH

Ave. operating rate (tons clinker/hr.): 24 TPH; 48 TPH

Slurry, % moisture (if applicable): N.A.

Fuel, ave. sulfur comp., rate: #6 Oil, 2.5%

Raw material fed/ton clinker: 1.6 ton/ton

Kiln operation record : attached

Control

	#1	#2
Type:	Western Precipitator B.H.	Allen Sherman Hoff B.H.
# bags:	432	448
Cleaning procedure:	Reverse Air	Reverse Air
Bag material, permeability:	Siliconized Dacron	
Air/cloth ratio:	1.47	2.25
Operating temperature (inlet):	500	500
Other inlets other than kiln ?	No	No
Dilution air ?	Emergency only	
Last Maintanance:	Regular	
Rated efficiency:	99.6%	

Other Data:

Past emission test data ? Yes By W.P. 50 method; .0077 gr/Acf @ 278°F

Part. collected: Not Monitored

2.4 HERCULES CEMENT CO., STOCKERTOWN, PA.

The 95' baghouse stack and 12 6' substacks at Hercules Cement Co. were observed for emissions opacity on Friday, August 2, 1974. In the morning, the observers sat at point #1 (E 20° N - Figure 4) about 100' from the stacks at ground level. The weather was hazy and the readings were made against a blue-white haze background (Table 8). At 1030 hours, the observers moved to point #2 (E 40° S) in order to keep the sun at their backs. This was about 70' away from the high stack at ground level. At 1107 hours, Becker moved to observe the four substacks and the 95' stack while Steckel remained at point #2 observing only the 95' stack. Becker's position (point #3) was N 30° E about 100' away. The backgrounds remained the same during these moves. At 1210 hours Steckel moved south with the sun (point #4) while Becker remained at point #3. Throughout these positional changes no visible emissions were recorded. Increasing cloud cover forced early termination of the observations. The complete field data is included in Appendix D.

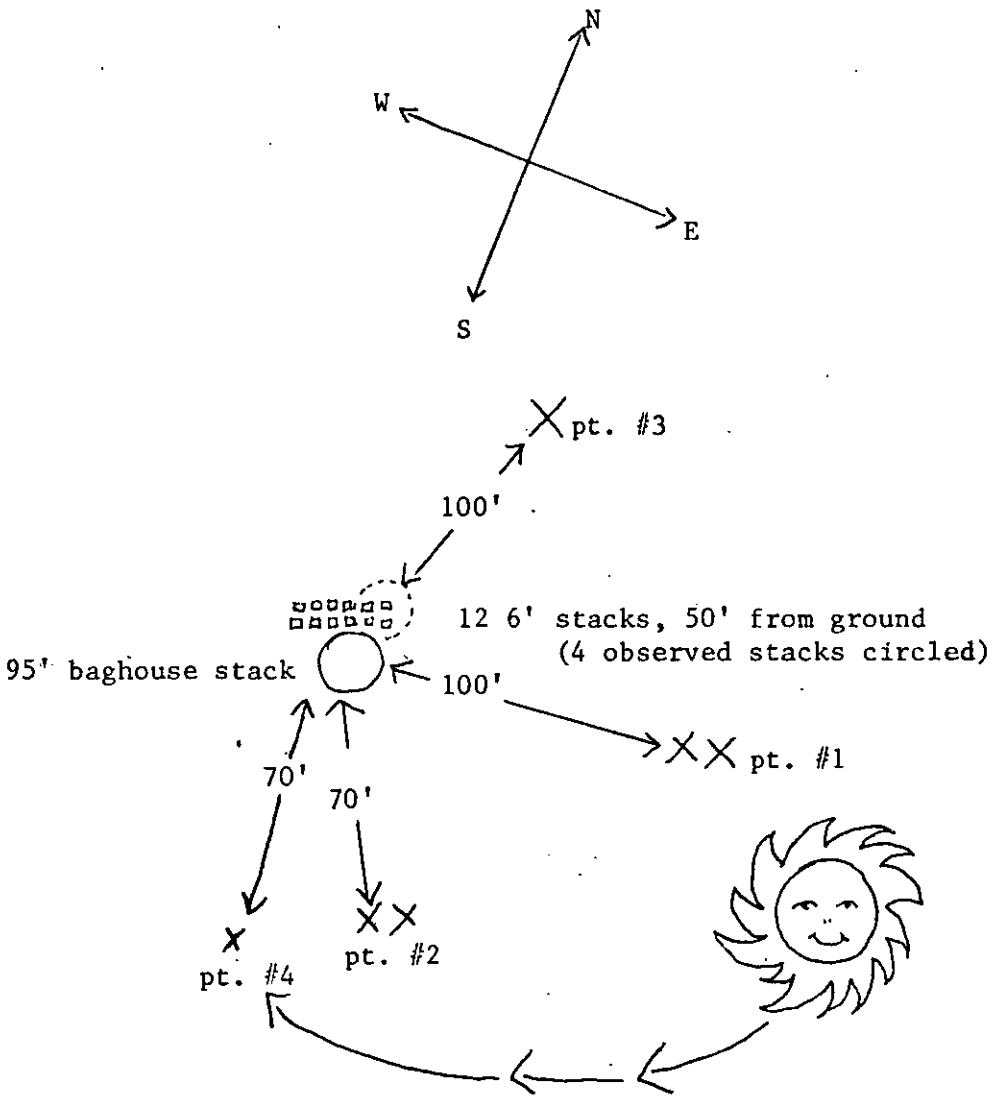
The Hercules Cement Company was operating two of their three kilns (#'s 1 & 3) during this test at a rate of 25 tons product per hour per kiln. The fuel was 2-2.6% sulfur coal. The operating schedule is shown in Table 9. The emissions were controlled by a J.H. Hoad baghouse containing 1968 bags operating at 475-550° F and approximately 325,800 SCFM flow (Table 10). The emissions were split, one half going to a 95' high, 13' diameter stack and the remainder going to 12 substacks.

SET 1456 01 0874

FIGURE 4

HERCULES CEMENT Company

Stockertown, Pa.



observation pt. #1 - E 30° N	8:30 a.m. - 10:27 a.m.	
observation pt. #2 - E 40° S	10:27 a.m. - 1:15 p.m.	
observation pt. #3 - N 30° E	11:07 a.m. - 1:15 p.m.	(Becker only)
observation pt. #4 - E 60° S	12:10 a.m. - 1:15 p.m.	(Steckel only)

[redacted]CORE[redacted] VI[redacted] D[redacted]MIN[redacted]ON [redacted]PAC[redacted]

COMPANY Hercules

LOCATION Stockertown, Pa

TEST NUMBER 4

DATE 8/2/74

TYPE FACILITY Cement

CONTROL DEVICE Baghouse

HOURS OF OBSERVATION 8:30 - 1:15

OBSERVER Susan Steckel

OBSERVER CERTIFICATION DATE 7/18/74

OBSERVER AFFILIATION Scott Environmental Tech.

Point of Emissions 1 tall stack 12 substacks 4 of which were observed

Height of Discharge Point 1 95' stack 12, 6' high 50' from ground

NOTE: Record the following information prior to and upon completion of observations at each source; if observations are made over an extended period of time, additional recordings should be made as applicable.

	Initial			Final
CLOCK TIME	8:30	10:22	12:10	1:15
OBSERVER LOCATION:				
Distance To Discharge	100'	70'	70'	70'
Direction From Discharge	E. 30° N.	E 40° S	E 60° S	E 60° S
Height of Observation Point	0'	0'	0'	0'
BACKGROUND DESCRIPTION:	Hazy-blue	hazy-blue	hazy-blue	clouds
WEATHER CONDITIONS:				
Wind Direction	not recorded →			
Wind Speed	calm - 3mph →			
Ambient Temperature	~ 85-95° F			
SKY CONDITIONS: (clear, overcast, % cloud)	overcast	hazy-cloudy		cloudy
PLUME DESCRIPTION:				
Color	0'			
Distance Visible	0' →			
OTHER DATA:	N.A. →			
Minutes of Noncompliance	N.A. →			

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TABLE 8a

TABLE 8b

RECORD OF VISUAL DETERMINATION OF OPACITY

COMPANY Hercules

LOCATION Stockerton, Pa.

TEST NUMBER 4

DATE 8/2/74

TYPE FACILITY cement plant

CONTROL DEVICE baghouse

HOURS OF OBSERVATION 8:30 - 1:15

OBSERVER Phyllis Becker

OBSERVER CERTIFICATION DATE

OBSERVER AFFILIATION Scott Environmental Technology

Point of Emissions 1 large stack & 12 stubstack 4 of which were observed

Height of Discharge Point 1 95' stack, 12 6' high 50' from ground

NOTE: Record the following information prior to and upon completion of observations at each source; if observations are made over an extended period of time, additional recordings should be made as applicable.

	Initial			Final
CLOCK TIME	8:30	10:27	11:07	1:15
OBSERVER LOCATION:				
Distance To Discharge	100'	70'	100'	100'
Direction From Discharge	E 30° N	E 40° S	N 30° E	N 30° E
Height of Observation Point	0'	0'	0'	0'
BACKGROUND DESCRIPTION:	hazy blue sky →			
WEATHER CONDITIONS:				
Wind Direction	not recorded →			
Wind Speed	2 mph →			
Ambient Temperature	≈85°F			
SKY CONDITIONS: (clear, overcast, % cloud)	hazy blue →			
PLUME DESCRIPTION:				
Color	0 →			
Distance Visible	0' →			
OTHER DATA:	N.A.			
Minutes of Noncompliance				

SET 1456 01 0874

TABLE 9

OPERATING SCHEDULE

Hercules Cement
Stockertown, Pa.
Friday, 8/2/74

KILN #	NORMAL OPERATION*	DOWN TIME
1	All Day	-
2	-	All Day ***
3	All Day	-

* Normal operation averages 25 tons clinker/hr./kiln

** Average B.H. inlet temperature 550°F

*** Slight draft being pulled through #2 kiln circa 10% of normal air flow

\- Total draft 465,300; SCFM
circa 155,800/B.H. or circa 325,800 SCFM during test

SET 1456 01 0874

TABLE 10

PLANT DATA

Plant: Hercules Cement

Personnel (position): L. J. Parsons, Plant manager; T. Retherford, Plant engineer

Date: August 2, 1974

Stack

Height: 95ft./only ½ B.H. compartments vented here; 12 compartments vented through stub stacks 1/comp

Diameter: 13ft.

Temperature: 350-400°F

Gas flow rate (scfm): 465,300 (all three B.H. operating)

Process

kilns, capacity, kiln (design, tons clinker/hr.): 3; @ 25 tons/hr.

Ave. operating rate (tons clinker/hr.): 25 Tons/hr./kiln

Slurry, % moisture (if applicable): N.A.

Fuel, ave. sulfur comp., rate: coal, 2-2.6% S

Raw material fed/ton clinker: 1.6 Ton feed /ton clinker

Kiln operation record : attached

Control

Type: J. H. Hoad

bags: 1968 3 kiln x 8 comp. x 82 bags comp.

Cleaning procedure: Reversed Air

Bag material, permeability: -

Air/cloth ratio: 1.95:1

Operating temperature (inlet): 475-550

Other inlets other than kiln ? No

Dilution air ? Tempering Dampers (automatic)

Last Maintanance: May or July 3, 1974; Daily routine

Rated efficiency: ≈ 99.6%

Other Data:

Past emission test data ? No

Part. collected: circa 20lb/barrel clinker (barrel=364 lb.)

SET 1456 01 0874

APPENDIX A

FIELD DATA

Penn-Dixie Cement Co.

July 30, 1974

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION 25° North
TEST NUMBER 1
SKY CONDITION Partly Sunny
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE July 30
WIND SPEED 1-2 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							
	19							
9:20	20	10	15	15	10			heat waves
	21	15	15	10	10			causing
	22	10	10	10	15			visibility problem
	23	10	10	15	10			in an exact
	24	10	10	10	15			determination
	25	10	10	15	15			of smoke opacity
	26	10	10	15	20			&
	27	15	15	15	10			
	28	10	10	5	5			
	29	5	5	5	5			

OBSERVATION RECORD

COMPANY Penn-Dixie
LOCATION 25° North
TEST NUMBER 1
SKY CONDITION Partly Sunny
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE July 30
WIND SPEED 2 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
9:30	30	10	10	10	10			
	31	15	15	15	15			
	32	10	15	15	15			
	33	10	10	10	15			
	34	15	15	15	10			
	35	10	15	15	15			
	36	10	10	15	15			
	37	10	15	—	—			Bee in area
	38	10	10	15	15			
	39	15	10	10	10			
	40	10	10	10	10			Fugitive stack
	41	10	10	10	10			emissions are
	42	10	10	10	10			drifting into
	43	10	10	10	15			reading area
	44	15	15	10	10			making visibility
	45	15	10	10	10			difficult
	46	10	10	10	10			
	47	10	10	10	10			Visibility
	48	10	10	15	10			remaining
	49	10	10	10	10			difficult
	50	10	15	15	10			
	51	15	15	15	15			
	52	15	15	15	10			
	53	10	10	10	10			visibility clear
	54	10	10	10	10			as wind direction
	55	10	10	10	10			has changed
	56	10	15	10	10			
	57	10	10	10	5			
	58	10	10	10	10			
	59	10	10	10	16			

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION 25° North
TEST NUMBER 1
SKY CONDITION Partly Sunny
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE July 30
WIND SPEED 2 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
10:00	0	10	10	10	10			
	1	10	10	15	15			
	2	15	15	10	15			
	3	10	15	15	15			
	4	10	10	15	15			
	5	15	15	15	15			
	6	10	10	15	10			
	7	15	15	10	10			
	8	10	10	15	15			
	9	15	10	10	10			
	10	15	10	15	10			
	11	10	15	10	10			
	12	10	10	10	10			
	13	10	15	10	15			
	14	15	15	15	10			
	15	10	10	10	15			
	16	10	10	10	10			
	17	10	15	10	10			
	18	15	10	15	15			
	19	15	15	15	15			
	20	15	15	15	10			
	21	10	10	10	10			
	22	15	10	10	10			
	23	10	10	15	10			
	24	10	10	10	10			
	25	10	10	10	10			
	26	10	10	10	10			
	27	15	15	15	15			
	28	15	15	10	10			
	29	10	10	10	10			

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION 25° North
TEST NUMBER 1
SKY CONDITION Partly Sunny
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE July 30
WIND SPEED 3-4 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
10:30	30	10	10	10	10			
	31	10	10	10	15			
	32	15	15	10	15			
	33	10	10	10	10			
	34	10	10	15	15			
	35	15	15	10	15			
	36	15	15	15	10			
	37	10	15	10	10			
	38	10	10	10	15			
	39	15	10	10	15			
	40	15	15	15	15			
	41	10	10	10	15			
	42	15	15	15	15			
	43	15	15	15	15			
	44	15	15	15	15			
	45	15	15	15	15			
	46	15	15	15	15			
	47	15	10	15	15			
	48	15	15	10	10			
	49	10	10	10	10			
	50	10	10	10	10			
	51							Break
	52							
	53							
	54							
	55							
	56							
	57							
	58							
	59							

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION 25° North
TEST NUMBER 1
SKY CONDITION Partly Sunny
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE July 30
WIND SPEED 3 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
11:00	0	10	10	10	10			
	1	10	10	15	15			
	2	15	15	15	10			
	3	5	10	10	15			
	4	10	10	10	10			
	5	10	10	10	10			
	6	10	10	10	10			
	7	10	15	15	10			
	8	15	15	15	10			
	9	15	10	10	10			
	10	10	10	15	10			
	11	10	10	10	10			
	12	10	10	10	10			
	13	10	10	10	10			
	14	10	10	20	15			
	15	15	15	15	15			
	16	15	15	10	10			
	17	10	10	10	10			
	18	10	10	10	10			
	19	10	10	10	10			
	20	10	10	10	10			
	21	10	10	10	10			
	22	10	10	10	10			
	23	10	10	10	10			
	24	10	10	10	10			
	25	10	10	10	10			
	26	10	10	10	10			
	27	10	10	10	10			
	28	10	10	10	10			
	29	10	10	5	5			

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION 25° North
TEST NUMBER 1
SKY CONDITION Partly Sunny
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE July 30
WIND SPEED 3 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
11:30	30	5	5	5	5			
	31	10	10	10	10			
	32	10	10	5	5			Visibility
	33	5	5	5	5			decreasing
	34	5	10	10	10			somewhat
	35	5	5	10	10			due to fugitive
	36	10	10	10	10			smoke being
	37	10	10	10	10			blown our
	38	10	10	5	5			way
	39	5	10	10	10			
	40	10	10	15	10			
	41	10	10	10	10			
	42	10	10	10	10			
	43	10	10	10	10			
	44	15	15	10	10			
	45	10	10	10	10			
	46	10	10	10	10			
	47	10	10	10	10			
	48	15	15	10	10			
	49	10	10	10	10			
	50	10	10	10	10			
	51							Lunch
	52							
	53							
	54							
	55							
	56							
	57							
	58							
	59							

OBSERVATION RECORD

COMPANY Penn Dixie
TYPE FACILITY Cement
LOCATION 25° North
POINT OF EMISSIONS Baghouse
TEST NUMBER 1
DATE July 30
SKY CONDITION Partly Sunny
WIND SPEED 4 mph
OBSERVER Susan Steckel

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
12:00	0							Lunch
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							
	19							
	20							
	21							
	22							
	23							
	24							
	25							
	26							
	27							
	28							
	29	10	10	5	5			

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION 25° North
TEST NUMBER 1
SKY CONDITION Partly Sunny
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE July 30
WIND SPEED 4 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
12:30	30	10	10	5	10			
	31	10	10	10	15			
	32	15	10	10	15			
	33	15	10	10	10			
	34	10	10	10	10			
	35	10	5	10	10			
	36	10	10	10	10			
	37	10	10	10	10			
	38	10	10	10	10			
	39	10	10	10	10			
	40	10	10	10	10			
	41	10	10	10	10			
	42	10	10	10	10			
	43	10	10	10	10			
	44	10	10	10	10			
	45	10	10	10	10			
	46	10	10	10	10			
	47	10	10	10	10			
	48	10	5	10	10			
	49	5	5	5	10			
	50	10	10	10	10			
	51	10	10	10	10			
	52	10	10	10	10			
	53	10	10	10	10			Smoky
	54	10	10	10	10			Background
	55	10	10	10	10			again
	56	10	10	15	10			
	57	10	10	10	15			
	58	10	10	10	15			
	59	15	15	10	10			

OBSERVATION RECORD

COMPANY Penn-Dixie
LOCATION 25° North
TEST NUMBER 1
SKY CONDITION Partly Sunny
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE July 30
WIND SPEED 5 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
1:00	0	15	15	10	10			
	1	15	15	15	15			
	2	10	10	10	10			
	3	10	10	10	15			
	4	15	15	15	15			
	5	15	15	15	15			
	6	15	15	15	15			
	7	15	15	15	15			
	8	15	15	15	15			
	9	10	10	10	10			
	10	10	10	10	10			
	11	10	10	10	10			
	12	10	5	10	10			
	13	10	10	10	10			
	14	10	10	10	10			
	15	10	10	10	10			
	16	10	10	10	10			
	17	10	10	10	10			
	18	10	10	10	15			
	19	10	15	10	10			
	20	10	10	10	10			
	21	10	10	10	10			
	22	10	10	10	10			
	23	10	10	10	10			
	24	10	15	15	10			
	25	10	10	10	10			
	26	10	10	10	10			
	27	10	10	10	15			
	28	10	10	10	15			
	29	15	10	10	10			

OBSERVATION RECORD

COMPANY Penn Dixie
TYPE FACILITY Cement
LOCATION 25° North
POINT OF EMISSIONS Baghouse
TEST NUMBER 1
DATE July 30
SKY CONDITION Sunny (Overcasting)
WIND SPEED 3 mph
OBSERVER Susan Steckel

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
1:30	30	10	10	10	10			
	31	10	10	10	10			
	32	10	10	10	10			
	33	10	10	10	10			
	34	10	10	10	10			
	35	10	10	10	10			
	36	10	10	10	10			
	37	10	15	15	15			
	38	15	10	10	10			
	39	10	15	10	10			
	40	10	15	10	10			
	41	10	10	10	10			
	42	10	5	10	10			
	43	10	10	10	10			
	44	15	15	15	10			
	45	10	10	10	10			
	46	10	10	10	10			
	47	10	10	10	15			
	48	15	10	10	10			
	49	10	15	10	10			
	50	15	15	10	15			
	51	15	15	15	15			
	52	15	10	10	10			
	53	10	10	10	10			
	54	10	15	10	10			
	55	15	15	15	15			
	56	15	15	15	15			
	57	15	15	15	15			
	58	15	15	15	15			
	59	15	15	15	15			

OBSERVATION RECORD

COMPANY Penn Dixie
TYPE FACILITY Cement
LOCATION 25° North
POINT OF EMISSIONS Baghouse
TEST NUMBER 1
DATE July 30
SKY CONDITION Sunny (overcast)
WIND SPEED 3 mph
OBSERVER Susan Steckel

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
2:00	0	15	15	15	15			
	1	15	15	15	15			
	2	10	10	15	15			
	3	15	15	15	10			
	4	10	10	10	10			
	5	10	15	15	15			
	6	15	15	15	15			
	7	15	15	10	15			
	8	15	15	15	15			
	9	15	10	15	15			
	10	15	15	15	10			
	11	15	15	15	15			
	12	15	15	10	10			
	13	15	15	10	10			
	14	10	10	10	10			
	15	10	15	15	15			
	16	15	15	15	15			
	17	15	15	15	15			
	18	15	15	15	15			
	19	15	15	15	15			
	20	15	10	10	10			
	21	10	10	10	15			
	22	15	15	15	15			
	23	15	15	15	15			
	24	15	15	15	15			
	25	15	15	–	15			
	26	10	10	15	15			
	27	15	15	15	15			
	28	15	15	15	15			
	29	15	15	15	15			

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION 25° North
TEST NUMBER 1
SKY CONDITION Sunny & Cloudy
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE July 30
WIND SPEED 3 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
2130	30	10	15	15	15			
	31	15	15	15	15			
	32	15	15	15	15			
	33	15	15	15	15			
	34	15	15	15	20			
	35	15	15	15	10			
	36	15	15	15	15			
	37	15	10	10	10			
	38	15	15	15	15			
	39	10	10	15	10			
	40	15	15	15	15			
	41	15	15	15	15			
	42	15	15	15	10			
	43	10	10	15	15			
	44	15	15	15	15			
	45	10	15	15	15			
	46	15	15	15	15			
	47	15	15	15	15			
	48	15	15	15	15			
	49	15	15	15	15			
	50	15	15	15	15			
	51	15	15	15	15			
	52	15	15	15	15			
	53	15	15	15	15			
	54	15	15	15	15			
	55	15	15	15	15			
	56	15	15	15	15			
	57	15	15	15	15			
	58	15	15	15	15			
	59	15	15	15	10			

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION 25° North
TEST NUMBER 1
SKY CONDITION Overcast
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE July 30
WIND SPEED 3 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
3:00	0	15	15	15	10			heat waves
	1	10	10	15	15			from stack
	2	15	15	15	15			in wave
	3	15	—	—	10			form
	4	15	15	15	15			
	5	15	15	15	15			
	6	15	15	15	15			4th + 5th stack
	7	15	15	10	15			emitting most
	8	10	10	15	15			of smoke
	9	15	15	15	15			
	10	15	15	15	15			
	11	15	15	10	10			
	12	15	15	15	15			
	13	15	15	15	15			
	14	15	15	15	15			
	15	15	15	15	15			
	16	15	15	10	10			
	17	10	10	10	15			
	18	15	15	15	15			
	19	15	15	15	15			
	20	15	15	15	15			
	21							
	22							
	23							Break
	24							
	25							
	26							
	27							
	28							
	29							

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION 25° North
TEST NUMBER 1
SKY CONDITION Cloudy
OBSERVER Susan Stickel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE July 30
WIND SPEED 3 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
3:30	30	10	10	10	15			
	31	15	15	15	10			
	32	10	10	10	10			
	33	10	10	15	10			
	34	15	15	15	15			
	35	15	15	15	15			
	36	15	15	15	10			
	37	10	10	10	10			
	38	10	15	15	15			
	39	15	15	15	15			
	40	10	10	10	10			
	41	15	15	15	15			
	42	10	10	10	15			
	43	15	10	10	10			
	44	10	10	10	10			
	45	10	10	10	10			
	46	15	15	10	10			
	47	10	10	10	10			
	48	15	10	15	15			
	49	10	15	10	10			
	50	15	10	10	15			
	51	10	15	15	15			
	52	15	10	10	10			
	53	10	10	10	10			
	54	10	15	15	10			
	55	10	10	15	10			
	56	10	10	10	10			
	57	10	15	15	15			
	58	15	10	15	15			
	59	10	10	10	10			

OBSERVATION RECORD

COMPANY Penn-Dixie
LOCATION 25° North
TEST NUMBER 1
SKY CONDITION Cloudy
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE July 30
WIND SPEED 3 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
4:00	0	10	10	10	10			
	1	10	10	10	15			
	2	15	15	15	15			
	3	15	15	15	15			
	4	15	15	15	15			
	5	15	15	15	15			
	6	15	15	15	15			
	7	15	15	15	15			
	8	15	10	10	15			
	9	15	15	15	15			
	10	15	15	15	15			
	11	15	15	15	15			
	12	15	15	15	15			
	13	15	15	10	10			
	14	10	15	15	15			
	15	15	15	10	10			
	16	10	15	15	15			
	17	15	15	15	15			
	18	15	15	15	15			
	19	15	15	15	15			
	20	15	15	15	15			
	21	10	15	15	15			
	22	15	15	10	15			
	23	15	15	15	15			
	24	15	15	15	15			
	25	15	10	10	15			
	26	15	15	15	15			
	27	15	15	10	10			
	28	15	15	15	15			
	29	15	15	15	15			

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION 25° North
TEST NUMBER 1
SKY CONDITION Overcast
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE July 30
WIND SPEED 3 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
4:30	30							Break
	31							
	32							
	33							
	34							
	35							
	36							
	37							
	38							
	39							
4:40	40	15	15	15	15			
	41	15	15	15	15			
	42	15	15	15	15			
	43	15	15	15	15			
	44	15	15	15	15			
	45	15	15	15	15			
	46	15	15	15	15			
	47	15	15	15	15			
	48	15	15	15	15			
	49	15	15	15	15			
	50	15	15	15	15			
	51	15	10	15	15			
	52	15	15	15	15			
	53	15	15	15	15			
	54	15	15	15	15			
	55	15	15	15	15			
	56	15	15	15	15			
	57	15	15	15	15			
	58	15	15	15	15			
	59	15	15	10	10			

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION 25° North
TEST NUMBER 1
SKY CONDITION Cloudy
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE July 30
WIND SPEED 5 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
5:00	0	10	10	10	15			
	1	15	15	15	15			
	2	15	15	15	15			
	3	15	15	15	15			
	4	15	15	15	15			
	5	15	15	15	15			
	6	15	15	15	15			
	7	15	15	15	15			
	8	15	15	15	15			
	9	10	10	10	15			
	10	15	15	15	15			
	11	15	15	15	10			
	12	15	15	15	15			
	13	15	15	15	15			
	14	15	15	10	15			
	15	10	15					
	16							
	17							
	18							
	19							
	20							
	21							
	22							
	23							
	24							
	25							
	26							
	27							
	28							
	29							

OBSERVATION RECORD

COMPANY Penn Dixie

LOCATION N 25° E of stack

TEST NUMBER

SKY CONDITION overcast

OBSERVER Phyllis Becker

TYPE FACILITY cement plant

POINT OF EMISSIONS 16 baghouse stacks

DATE 7/30/74

WIND SPEED ≈2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							
	19							
9	20	10	5	5	5			most emissions from
	21	10	10	10	10			3rd or 4th right stack
	22	10	10	10	10			
	23	10	10	10	10			
	24	10	10	15	15			
	25	10	15	10	10			
	26	15	15	15	15			
	27	10	10	10	10			
	28	10	10	15	15			
	29	10	10	10	10			

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION N 25° E of stack
TEST NUMBER
SKY CONDITION Cloudy
OBSERVER Phyllis Becka

TYPE FACILITY Cement plant
POINT OF EMISSIONS 16 baghouse stacks
DATE 7/30/74
WIND SPEED ≈3

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
9	30	15	10	10	15			
	31	15	15	15	10			
	32	10	15	15	10			
	33	10	10	15	15			
	34	15	10	10	10			
	35	10	10	15	10			
	36	5	—	—	—			
	37	—	—	—	—			
	38	10	10	10	10			smokey background
	39	15	10	10	10			
	40	10	10	10	10			
	41	15	10	10	10			
	42	10	10	15	10			
	43	10	10	10	10			
	44	10	10	10	15			
	45	10	15	15	15			
	46	15	15	15	10			
	47	10	10	10	15			
	48	10	10	15	15			
	49	10	10	15	15			
	50	15	15	10	10			
	51	15	10	10	15			
	52	15	10	15	15			
	53	15	15	10	10			
	54	15	10	15	10			
	55	10	10	10	10			
	56	10	15	10	10			
	57	15	10	10	10			
	58	10	10	15	15			
	59	15	10	10	15			

OBSERVATION RECORD

COMPANY Penn Dixie

LOCATION

TEST NUMBER

SKY CONDITION Cloudy

OBSERVER Phyllis Becker

TYPE FACILITY Cement plant

POINT OF EMISSIONS 16 baghouse stacks

DATE 7/30/94

WIND SPEED ≈2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
10	0	10	10	10	15			
	1	15	15	15	10			smoky background
	2	15	15	15	15			
	3	10	10	15	10			
	4	15	15	15	15			
	5	15	10	10	10			
	6	10	10	15	15			
	7	15	15	10	10			
	8	10	10	15	15			
	9	16	10	10	10			
	10	15	10	15	10			
	11	10	15	10	10			
	12	10	10	10	10			
	13	10	15	10	15			
	14	10	10	15	10			
	15	10	10	10	15			
	16	10	15	10	15			
	17	15	10	10	10			
	18	10	10	10	15			
	19	10	15	10	10			
	20	10	10	10	5			
	21	10	10	10	10			
	22	15	15	10	10			
	23	15	10	10	10			
	24	10	10	10	10			
	25	10	10	15	10			
	26	10	10	10	10			
	27	10	10	10	10			
	28	15	15	10	10			
	29	10	10	15	10			

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION N 25° E
TEST NUMBER
SKY CONDITION cloudy
OBSERVER Phyllis Becker

TYPE FACILITY cement plant
POINT OF EMISSIONS 16 baghouse stacks
DATE 7/30/74
WIND SPEED 2-2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
10	30	10	15	10	10			
	31	10	10	10	10			
	32	10	10	10	10			
	33	10	10	10	10			
	34	10	10	10	15			
	35	15	15	15	15			
	36	10	15	10	10			
	37	10	15	10	10			
	38	15	10	10	10			
	39	10	10	10	15			sun coming out
	40	15	10	10	10			
	41	10	10	10	15			
	42	15	15	10	10			
	43	15	10	15	15			
	44	15	15	15	15			
	45	15	15	15	15			
	46	15	15	10	10			
	47	15	15	10	10			
	48	15	15	10	10			
	49	15	10	10	10			
	50	10	10	10	10			
	51	10	10	10	10			smokey background
	52	15	10	10	10			
	53	15	10	10	10			
	54	10	10	15	10			
	55	10	15	10	15			
	56	10	15	15	10			
	57	10	10	15	15			
	58	10	10	10	10			
	59	10	10	15	15			

OBSERVATION RECORD

COMPANY Penn Dixie

LOCATION N 25° E

TEST NUMBER

SKY CONDITION Cloudy

OBSERVER Phyllis Becker

TYPE FACILITY Cement plant

POINT OF EMISSIONS 16 baghouse stacks

DATE 7/30/74

WIND SPEED ≈ 2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
11	0	10	10	10	10			
	1	10	10	10	15			
	2	15	15	10	10			
	3	5	10	10	15			
	4	10	10	10	10			
	5	10	10	15	15			
	6	10	10	15	10			
	7	15	15	15	15			
	8	10	10	10	10			
	9	10	10	15	10			
	10	10	10	10	10			
	11	10	10	15	15			
	12	10	10	10	10			
	13	10	10	10	15			
	14	10	10	25	15			
	15	15	15	15	15			
	16							
	17							
	18							
	19							
	20							
	21							
	22							
	23							break
	24							
	25							
	26							
	27							
	28							
	29							

OBSERVATION RECORD

COMPANY Lehn Dixie

LOCATION N 25° E

TEST NUMBER

SKY CONDITION cloudy

OBSERVER Phyllis Becker

TYPE FACILITY cement plant

POINT OF EMISSIONS 16 baghouse stacks

DATE 7/30/74

WIND SPEED ≈3

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
	30							
	31							
	32							
11	33	10	5	5	5			
	34	10	5	10	10			
	35	5	5	5	10			
	36	5	5	5	10			
	37	10	5	10	10			background smokey
	38	10	5	5	10			
	39	5	10	10	10			
	40	5	5	5	5			
	41	10	10	5	10			
	42	10	10	10	5			
	43	10	10	10	10			
	44	10	10	10	10			
	45	10	10	10	5			
	46	5	10	5	5			
	47	10	10	10	10			
	48	10	10	10	10			
	49	10	10	10	10			
	50	10	10	10	15			
	51	10	10	10	10			
	52	10	10	10	10			
	53	10	5	10	10			
	54	10	10	5	10			
	55	10	10	10	10			
	56	10	10	10	10			
	57	15	10	15	10			
	58	10	10	15	10			
	59	10	10	10	10			

OBSERVATION RECORD

COMPANY Lone Dixie
LOCATION N 25°E
TEST NUMBER
SKY CONDITION cloudy
OBSERVER Phyllis Becker

TYPE FACILITY Cement plant
POINT OF EMISSIONS 16 baghouse stacks
DATE 7/30/74
WIND SPEED ≈ 2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
12	0	10	10	10	10			
	1	10	10	15	15			
	2	15	15	15	20			
	3	15	10	10	10			
	4	10	10	10	10			
	5	15	10	10	10			
	6	10	15	10	15			
	7	10	15	15	15			
	8	10	10	10	15			
	9	10	10	15	10			
	10	10	10	20	15			
	11	15	15	15	10			
	12	10	10	10	10			
	13	10	15	15	10			
	14	10	10	10	10			
	15	5	10	10	10			
	16	10	5	10	15			
	17	10	15	20	10			
	18	10	10	15	20*			*one unit responsible
	19	20*	15	10	10			
	20	10	10	10	10			
	21	10	10	10	10			
	22	10	15	10	15			
	23	10	10	15	10			
	24	15	15	15	15			
	25	10	10	10	10			
	26	10	15	15	15			
	27	10	15	15	15			
	28	15	15	10	10			background smokey
	29	10	15	10	15			

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION N 25° E
TEST NUMBER
SKY CONDITION cloudy
OBSERVER Phyllis Becker

TYPE FACILITY cement plant
POINT OF EMISSIONS 16 baghouse stacks
DATE 7/30/74
WIND SPEED ≈2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
12	30	15	10	10	10			
	31	15	15	15	10			
	32	15	15	15	15			
	33	15	10	15	10			
	34	10	10	10	10			
	35	10	10	10	15			
	36	10	10	10	10			
	37	15	10	10	10			
	38	10	10	10	10			
	39	10	10	10	15			
	40	10	10	10	10			
	41	10	10	10	10			
	42	10	10	10	10			
	43	10	10	10	10			
	44	10	10	10	10			
	45							
	46							
	47							
	48							break
	49							
	50							
	51							
	52							
	53	15	10	10	10			
	54	10	10	10	10			
	55	10	10	10	10			
	56	10	10	10	10			
	57	10	10	10	15			
	58	10	10	10	15			
	59	10	10	10	10			

OBSERVATION RECORD

COMPANY Lehn Dixie
LOCATION N 25° E
TEST NUMBER
SKY CONDITION Partly Cloudy
OBSERVER Phyllis Becker

TYPE FACILITY cement plant
POINT OF EMISSIONS 16 baghouse stacks
DATE 7/30/74
WIND SPEED ≈2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
13	0	10	10	10	10			
	1	10	15	10	15			
	2	10	10	10	10			
	3	10	10	15	15			
	4	10	10	15	15			
	5	15	15	15	15			
	6	15	15	15	15			
	7	15	15	15	15			
	8	15	15	10	10			
	9	10	15	10	10			
	10	10	10	10	10			
	11	10	10	10	10			
	12	10	10	10	10			
	13	10	10	10	10			
	14	10	10	10	10			
	15	10	10	10	10			
	16	10	10	10	10			
	17	5	10	10	10			
	18	10	10	10	10			
	19	10	10	10	10			
	20	10	10	10	10			
	21	10	10	10	10			
	22	10	10	10	10			
	23	10	10	10	10			
	24	10	10	10	10			
	25	5	5	10	10			
	26	10	10	10	10			
	27	10	10	15	10			
	28	10	15	10	10			
	29	10	10	10	10			

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION U 25° E
TEST NUMBER
SKY CONDITION Cloudy
OBSERVER Phyllis Becker

TYPE FACILITY Cement plant
POINT OF EMISSIONS 16 baghouse stacks
DATE 7/30/74
WIND SPEED ≈2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
13	30	10	10	10	10			
	31	10	10	10	10			
	32	10	15	10	15			
	33	10	10	10	10			
	34	10	10	10	10			
	35	10	10	10	10			
	36	10	10	10	10			
	37	15	15	15	15			
	38	15	15	10	15			
	39	15	10	15	15			
	40	10	10	10	15			
	41	10	15	10	10			
	42	10	15	15	10			
	43	10	10	15	15			
	44	15	15	15	15			
	45	10	10	10	10			
	46	15	10	10	10			
	47	10	10	10	10			
	48	10	10	10	10			
	49	10	10	10	10			
	50	10	10	15	15			
	51	10	10	15	15			
	52	15	15	15	15			
	53	15	15	10	10			
	54	10	10	15	15			
	55	15	10	15	15			
	56	15	15	15	15			
	57	15	15	15	15			
	58	15	15	15	15			
	59	15	15	15	15			

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION N 25° E
TEST NUMBER
SKY CONDITION overcast
OBSERVER Phyllis Becker

TYPE FACILITY cement plant
POINT OF EMISSIONS
DATE 7/30/74
WIND SPEED ≈2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
14	0	15	15	15	15			
	1	15	15	15	15			
	2	10	10	15	15			
	3	10	10	15	10			
	4	10	10	15	15			
	5	15	15	15	15			
	6	15	15	15	15			
	7	15	10	15	15			
	8	15	15	15	15			
	9	15	15	10	10			
	10	15	15	15	10			
	11	10	10	10	10			
	12	15	15	15	10			
	13	15	15	15	15			
	14	15	15	15	15			
	15	15	15	15	15			
	16	10	15	15	15			
	17	15	15	15	15			
	18	15	15	15	10			
	19	15	15	15	15			
	20	15	10	15	10			
	21	10	15	15	15			
	22	15	20*	15	15			* smoke from 1 stack especially
	23	10	15	15	15			
	24	15	15	15	15			
	25	15	15	10	15			
	26	15	15	15	10			
	27	15	15	15	15			
	28	15	15	15	15			
	29	15	15	15	15			

OBSERVATION RECORD

COMPANY Lehn Dixie

LOCATION N 25° E

TEST NUMBER

SKY CONDITION Overcast

OBSERVER Phyllis Becker

TYPE FACILITY cement plant

POINT OF EMISSIONS 16 baghouse stacks

DATE 7/30/74

WIND SPEED 32

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
14	30	15	15	15	15			
	31	10	10	10	10			
	32	10	15	10	15			
	33	15	10	10	15			
	34	15	10	10	10			
	35	15	15	15	15			
	36	15	15	15	15			
	37	15	10	10	10			smokey background
	38	10	15	15	15			
	39	15	15	10	15			
	40	15	15	15	15			
	41	15	15	15	15			
	42	15	15	15	10			
	43	10	10	10	15			
	44	15	15	15	15			
	45	10	15	15	15			
	46	15	15	10	15			
	47	15	15	15	10			
	48	15	15	10	10			
	49	10	15	15	15			
	50	15	15	15	15			
	51	15	15	15	10			
	52	10	10	10	15			
	53	10	15	15	15			
	54	15	10	15	15			
	55	10	10	10	10			
	56	15	15	15	15			
	57	15	15	10	15			
	58	15	15	10	15			
	59	15	15	15	10			

OBSERVATION RECORD

COMPANY Lehn Dixie

LOCATION N 25° E

TEST NUMBER

SKY CONDITION overcast

OBSERVER Phyllis Dicker

TYPE FACILITY cement plant

POINT OF EMISSIONS 16 baghouse stacks

DATE 7/30/74

WIND SPEED ≈ 2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
15	0	10	10	10	10			
	1	10	15	15	10			
	2	10	15	15	15			
	3	15	15	15	10			
	4	15	15	15	10			
	5	10	10	15	15			
	6	15	15	15	15			
	7	10	10	10	10			
	8	15	10	10	10			
	9	15	15*	15	15			*most emissions coming
	10	15	15	15	10			from stack 4 or 5
	11	15	10	10	10			on left side
	12	15	10	15	15			
	13	15	15	15	20			
	14	15	15	10	15			
	15	15	15	15	15			
	16	15	10	10	10			
	17	15	15	15	15			
	18	15	15	15	15			
	19	10	15	15	15			
	20	15	15	20	15			
	21	15	15	15	10			
	22	15	15	15	10			
	23	10	15	15	15			
	24	15	10	15	15			
	25	15	15	10	15			
	26	10	10	15	15			
	27	15	15	15	15			
	28	15	10	15	15			
	29	15	15	15	10			

OBSERVATION RECORD

COMPANY Lehn Dixie

LOCATION N 25° E

TEST NUMBER

SKY CONDITION Overcast

OBSERVER Phyllis Becker

TYPE FACILITY cement plant

POINT OF EMISSIONS 16 baghouse stacks

DATE 7/30/74

WIND SPEED ≈2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
15	30	15	15	15	15			
	31	15	—	—	—			
	32	10	10	15	10			
	33	10	10	10	10			
	34	15	15	15	15			
	35	15	15	10	15			
	36	15	15	15	15			
	37	15	10	15	15			
	38	15	15	15	15			
	39	15	15	15	10			
	40	15	15	15	15			
	41	10	15	15	15			
	42	10	10	15	15			
	43	15	10	15	15			
	44	10	10	15	15			
	45							
	46							
	47							
	48							
	49							
	50							
	51							
	52							
	53							
	54							
	55							
	56							
	57							
	58							
	59							

OBSERVATION RECORD

COMPANY Penn Dixie
LOCATION N 25° E
TEST NUMBER
SKY CONDITION overcast
OBSERVER Phyllis Becker

TYPE FACILITY cement plant
POINT OF EMISSIONS 16 baghouse stacks
DATE 7/30/74
WIND SPEED ≈ 2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
16	0	10	15	15	15			
	1	20*	15	15	15			
	2	15	15	15	15			* emissions from
	3	15	10	15	15			4th or 5th stack only
	4	15	15*	15	15			
	5	15	10	15	15			
	6	15	15	15	15			
	7	10	15	10	15			
	8	15	10	15	15			
	9	15	15	10	15			
	10	10	10	10	15			
	11	15	15	15	15			
	12	10	15	15	15			
	13	15	15	10	10			
	14	10	15	15	15			
	15	10	10	15	15			
	16	15	15	15	15			
	17	15	10	15	15			
	18	15	15	10	15			
	19	15	15	15*	15			
	20	15	10	15	15			
	21	10	15	15	15			
	22	15	15	15	15			
	23	15	10	15	15			
	24	10	15*	15	15			
	25	15	15	15	10			
	26	10	10	15	15			
	27	10	15	10	15			
	28	15	10	10	10			
	29	15*	15	10	15			

OBSERVATION RECORD

COMPANY Lehn Dixie

LOCATION N 25° E

TEST NUMBER

SKY CONDITION Overcast

OBSERVER Phyllis Becker

TYPE FACILITY cement plant

POINT OF EMISSIONS 16 baghouse stacks

DATE 7/30/74

WIND SPEED 4 2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
16	30	15	10	15	15			
	31	15	15	15	15			
	32	15	15	15	15			
	33	15	15	15	15			
	34	10	15	10	10			
	35	15	10	15	15			
	36	15	15	10	15			
	37	15	10	10	10			
	38	10	15	15	10			
	39	15	15	15	15			
	40	15	15	15	15			
	41	15	10	10	15			
	42	15	15	15	15			
	43	10	15	15	15			
	44	10	15	10	15			
	45	15	15	15	10			
	46	15	15	15	15			
	47	15	15	15	15			
	48	15	10	15	15			
	49	15	15	10	15			
	50	15	15	15	15			
	51	10	15	15	15			
	52	15	10	10	15			
	53	15	15	15	15			
	54	15	15	15	15			
	55	15	15	15	10			
	56	10	15	15	10			
	57	10	10	10	15			
	58	15	15	15	10			
	59	10	10	10	10			

OBSERVATION RECORD

COMPANY Lone Star
LOCATION N 25° E
TEST NUMBER 1
SKY CONDITION overcast
OBSERVER Phyllis Becker

TYPE FACILITY cement plant
POINT OF EMISSIONS 16 baghouse stacks
DATE 7/30/74
WIND SPEED ≈2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
17	0	10	10	10	10			
	1	10	10	10	10			
	2	15	10	10	10			
	3	15	15	15	10			
	4	10	10	10	15			fugitive emissions
	5	10	15	10	10			screening up background
	6	15	10	10	15			
	7	10	10	10	10			
	8	15	10	10	10			
	9	10	15	15	15			
	10	15	10	15	10			
	11	15	15	15	15			
	12	15	15	15	10			
	13	15	10	15	15			
	14	10	15	15	15			
	15	15						
	16							
	17							
	18							
	19							
	20							
	21							
	22							
	23							
	24							
	25							
	26							
	27							
	28							
	29							

SET 1456 01 0874

APPENDIX B

FIELD DATA

Coplay Cement Manufacturing Co.

July 31, 1974

OBSERVATION RECORD

COMPANY Coplay
LOCATION E 3rd St
TEST NUMBER 2
SKY CONDITION Sunny
OBSERVER Susan Stickel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse 80 ft.
DATE July 31
WIND SPEED 3 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
4:00	0	0	0	0	0			
	1	0	0	0	0			
	2	0	0	0	0			
	3	0	0	0	0			
	4	0	0	0	0			
	5	0	0	0	0			
	6	0	0	0	0			
	7	0	0	0	0			
	8	0	0	0	0			
	9	0	0	0	0			
	10	0	0	0	0			
	11	0	0	0	0			
	12	0	0	0	0			
	13	0	0	0	0			
	14	0	0	0	0			
	15	0	0	0	0			
	16	0	0	0	0			
	17	0	0	0	0			
	18	0	0	0	0			
	19	0	0	0	0			heat emitted
	20	0	0	0	0			
	21	0	0	0	0			
	22	0	0	0	0			
	23	0	0	0	0			
	24	0	0	0	0			
	25	0	0	0	0			
	26	0	0	0	0			
	27	0	0	0	0			
	28	0	0	0	0			
	29	0	0	0	0			

OBSERVATION RECORD

COMPANY Copley at Egypt
LOCATION E 30° South
TEST NUMBER 2
SKY CONDITION Sunny
OBSERVER Susan Steckel

TYPE FACILITY Cement Co.
POINT OF EMISSIONS Baghouse
DATE July 31
WIND SPEED 3mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
11	30	0	0	0	0			
	31	0	0	0	0			
	32	0	0	0	0			
	33	0	0	0	0			
	34	0	0	0	0			
	35	0	0	0	0			
	36	0	0	0	0			
	37	0	0	0	0			
	38	0	0	0	0			
	39	0	0	0	0			
	40	0	0	0	0			
	41	0	0	0	0			
	42	0	0	0	0			
	43	0	0	0	0			
	44	0	0	0	0			
	45	0	0	0	0			
	46	0	0	0	0			
	47	0	0	0	0			
	48	0	0	0	0			
	49	0	0	0	0			
	50	0	0	0	0			
	51	0	0	0	0			
	52	0	0	0	0			
	53	0	0	0	0			
	54	0	0	0	0			
	55	0	0	0	0			
	56	0	0	0	0			
	57	0	0	0	0			
	58	0	0	0	0			
	59	0	0	0	0			

OBSERVATION RECORD

COMPANY Coplay at Egypt
LOCATION E 30° South
TEST NUMBER 2
SKY CONDITION Sunny
OBSERVER Susan Steckel

TYPE FACILITY Cement Co
POINT OF EMISSIONS Baghouse 80 ft
DATE July 31
WIND SPEED 2 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
12:00	0	○	○	○	○			
	1	○	○	○	○			
	2	○	○	○	○			
	3	○	○	○	○			
	4	○	○	○	○			
	5	○	○	○	○			
	6	○	○	○	○			
	7	○	○	○	○			
	8	○	○	○	○			
	9	○	○	○	○			
	10	○	○	○	○			
	11	○	○	○	○			
	12	○	○	○	○			
	13	○	○	○	○			
	14	○	○	○	○			
	15	○	○	○	○			
	16	○	—	—	○			
	17	○	○	○	○			
	18	○	○	○	○			
	19	○	○	○	○			
	20	○	○	○	○			
	21	○	○	○	○			
	22	○	○	○	○			
	23	○	○	○	○			
	24	○	○	○	○			
	25	○	○	○	○			
	26	○	○	○	○			
	27	○	○	○	○			
	28	○	○	○	○			
	29	○	○	○	○			

OBSERVATION RECORD

COMPANY Coplay at Egypt
LOCATION E. 30° South on ground
TEST NUMBER 2
SKY CONDITION Sunny
OBSERVER [illegible] Steckel

TYPE FACILITY Cement Co.
POINT OF EMISSIONS Baghouse 80 ft
DATE July 31
WIND SPEED 3 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
12:30	30	O	O	O	O			
	31	O	O	O	O			
	32	O	O	O	O			
	33	O	O	O	O			
	34	O	O	O	O			
	35	O	O	O	O			
	36	O	O	O	O			
	37	O	O	O	O			
	38	O	O	O	O			
	39	O	O	O	O			
	40	O	O	O	O			
	41	O	O	O	O			
	42	O	O	O	O			
	43	O	O	O	O			
	44	O	O	O	O			
	45	O	O	O	O			
	46	O	O	O	O			
	47	O	O	O	O			
	48	O	O	O	O			
	49	O	O	O	O			
	50	O	O	O	O			
	51	O	O	O	O			
	52	O	O	O	O			
	53	O	O	O	O			
	54	O	O	O	O			
	55	O	O	O	O			
	56	O	O	O	O			
	57	O	O	O	O			
	58	O	O	O	O			
	59	O	O	O	O			

OBSERVATION RECORD

COMPANY Coplay at Egypt TYPE FACILITY Cement Co

LOCATION W 20° South 80 ft high POINT OF EMISSIONS Baghouse 88 ft

TEST NUMBER 2 DATE July 31

SKY CONDITION Partly Sunny WIND SPEED 5 mph

OBSERVER Susan Steckel

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
2:15	15	0	0	0	0			
	16	0	0	0	5 #			#3
	17	0	0	0	0			
	18	0	0	0	0			
	19	0	0	0	0			
	20	0	0	0	0			
	21	5*	0	0	5*			#3 #1
	22	0	0	5#	0			#1
	23	5*	5*	5*	0			#1, #1, #2,
	24	0	0	5	0			#2
	25	5*	5	0	0			
	26	0	5	5	0			#3
	27	0	0	0	5			#1
	28	5	0	0	5			#1
	29	5	5	5	0			

OBSERVATION RECORD

COMPANY Coplay
LOCATION W 20° South
TEST NUMBER 2
SKY CONDITION Sunny
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse 88A
DATE July 31
WIND SPEED 5 mph
Green Tree Background

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
2:30	30	5	5	0	5			#1 stack
	31	5	0	5	0			
	32	0	0	0	0			
	33	5	5	5	5			#1 Stack #3
	34	0	0	5	0			#3
	35	0	5	5	5			#1 #2
	36	5	0	0	0			#3
	37	0	0	0	0			
	38	0	0	0	5			#2
	39	5	5	0	0			#1 #3
	40	0	0	5	5			#1
	41	5	5	5	0			#1 #3
	42	5	5	5	5			#1 #3
	43	5	5	5	5			#1 #3
	44	5	5	5	0			#2 #1
	45	5	0	0	0			#1
	46	5	0	0	0			
	47	0	5	0	0			#3
	48	5	5	5	5			#1
	49	5	0	0	0			
	50	0	0	0	0			
	51	0	0	0	5			#1 #3
	52	0	0	0	0			
	53	0	5	0	0			#2
	54	0	0	5	0			#1
	55	0	0	0	0			
	56	5	5	0	0			#3 #1
	57	0	0	5	5			#1
	58	0	5	5	0			#1
3:00	59	5	0	0	5			

OBSERVATION RECORD

COMPANY Caplay

LOCATION W 26° South

TEST NUMBER 2

SKY CONDITION Partly Cloudy

OBSERVER Susan Stockel

TYPE FACILITY Cement

POINT OF EMISSIONS Baghouse EE-11

DATE July 31

WIND SPEED 4 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
3.0	0	5	5	5	5			#1
	1	5	5	5	0			#2 #3
	2	5	5	0	0			#1
	3	5	5	0	5			
	4	0	0	5	5			
	5	0	0	0	5			
	6	5	0	0	0			
	7	5	0	0	0			
	8	0	0	0	0			
	9	0	0	0	0			
	10	5	5	0	5			
	11	0	0	0	0			
	12	0	0	5	5			
	13	0	0	5	5			
	14	5	0	5	0			
	15	0	0	0	5			
	16	0	5	5	0			
	17	0	0	0	0			
	18	0	5	0	0			
	19	5	0	0	0			
	20	0	0	0	0			
	21	0	0	0	5			
	22	0	0	0	0			
	23	0	5	5	5			
	24	0	0	5	5			
	25	5	0	5	0			
	26	0	5	5	5			
	27	5	5	5	0			
	28	0	5	0	0			
	29	0	0	0	0			

OBSERVATION RECORD

COMPANY Coplay Egypt
LOCATION W. 20th South
TEST NUMBER 2
SKY CONDITION Partly Cloudy
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE July 30
WIND SPEED 5 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
3:30	30	0	5	5	5			
	31	0	0	0	0			
	32	5	0	0	5			
	33	0	0	0	0			
	34	0	0	0	0			
	35	0	0	0	0			
	36	0	0	5	0			
	37	5	5	0	0			
	38	0	0	0	0			
	39	0	0	0	0			
	40	0	0	0	0			
	41	0	0	0	0			
	42	0	0	0	0			
	43	5	0	0	0			
	44	0	0	0	0			
	45	0	0	0	0			
	46	5	0	0	0			
	47	0	0	0	0			
	48	5	0	0	5			
	49	5	0	0	0			
	50	5	0	0	0			
	51	5	5	0	5			
	52	0	0	5	0			
	53	5	5	0	0			
	54	0	0	0	5			
	55	0	0	0	0			
	56	0	5	0	5			
	57	5	0	5	5			
	58	5	0	5	5			
	59	5	5	5	5			

OBSERVATION RECORD

COMPANY Coplay
LOCATION 11 Bo° South
TEST NUMBER 2
SKY CONDITION Partly Cloudy
OBSERVER Susan Stecko

TYPE FACILITY Cement Co
POINT OF EMISSIONS Baghouse 88 ft
DATE July 31
WIND SPEED 5 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
9:00	0	0	5	5	5			
	1	5	5	5	0			
	2	5	5	0	5			
	3	5	5	0	5			
	4	0	0	5	0			
	5	0	0	0	0			
	6	0	5	5	5			
	7	0	0	0	5			
	8	0	5	5	5			
	9	5	5	0	0			
	10	0	0	0	5			
	11	0	0	0	5			
	12	0	0	0	5			
	13	0	0	0	0			
	14	5	5	5	5			Cleaning
	15	0	0	0	0			
	16	5	5	0	0			
	17	5	0	5	5			
	18	5	0	0	5			
	19	0	0	5	5			
	20	5	0	0	0			
	21	0	0	0	0			
	22	0	5	0	0			
	23	0	0	5	0			
	24	5	0	0	0			
	25	0	5	5	5			
	26	0	5	0	0			
	27	0	0	0	0			
	28	0	0	0	0			
	29	0	0	5	0			

OBSERVATION RECORD

COMPANY Coplay
LOCATION W 20° South
TEST NUMBER 2
SKY CONDITION Partly
OBSERVER Susan Stockel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE July 31
WIND SPEED 5 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
4:30	30	0	0	5	0			
	31	0	0	5	5			
	32	0	0	0	0			
	33	0	5	5	5			
	34	0	5	0	0			
	35	0	0	0	0			
	36	0	0	0	0			
	37	0	0	0	0			
	38	0	0	0	0			
	39	0	0	0	0			
	40	0	0	0	0			
	41	0	0	0	0			
	42	0	0	0	5			
	43	0	0	5	0			
	44	0	0	0	5			
	45	0	5	5	0			
	46	5	0	0	0			
	47	0	5	0	0			
	48	0	0	0	0			
	49	0	0	0	0			
	50	0	0	0	0			
	51	0	0	0	0			
	52	0	0	0	0			
	53	5	0	5	0			
	54	5	5	0	0			
	55	0	~~0~~ 5	0	0			
	56	0	0	0	0			
	57	0	5	5	0			
	58	0	0	0	5			
	59	5	0	0	0			

OBSERVATION RECORD

COMPANY Coplay
LOCATION W' 20° South
TEST NUMBER 2
SKY CONDITION Partly
OBSERVER Susan [illegible]

TYPE FACILITY Cement Co
POINT OF EMISSIONS Baghouse
DATE July 31
WIND SPEED 5 mph

Blue background at 20
Sun setting

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
5:00	0	0	5	5	0			
	1	0	0	5	0			wind blowing
	2	5	5	0	5			up background
	3	0	0	0	0			dust
	4	0	0	0	0			
	5	0	0	0	0			
	6	0	0	0	0			
	7	0	0	0	0			
	8	0	0	0	0			
	9	0	0	0	0			
	10	5	0	0	0			
	11	5	0	0	0			
	12	0	0	0	0			
	13	0	0	0	0			
	14	0	0	0	0			
	15							Move from
	16							Roof
	17							
	18							
	19							
	20	0	0	0	0			START
	21	0	0	0	0			New area
	22	0	0	0	0			on ground
	23	0	0	0	0			near transformer
	24	0	0	0	0			W 20° South
	25	0	0	0	0			stack
	26	0	0	0	0			
	27	0	0	0	0			
	28	0	0	0	0			
	29	0	0	0	0			

OBSERVATION RECORD

COMPANY Copley
TYPE FACILITY Cement
LOCATION 11 20° South
POINT OF EMISSIONS Baghouse 88 ft
TEST NUMBER 2
DATE July 31
SKY CONDITION Sunny blue sky
WIND SPEED 5 mph
OBSERVER Susan Stickel
on ground

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
5:30	30	0	0	0	0			
	31	0	0	0	0			
	32	0	0	0	0			
	33	0	0	0	0			
	34	0	0	0	0			
	35	0	0	0	0			
	36	0	0	0	0			
	37	0	0	0	0			
	38	0	0	0	0			
	39	0	0	0	0			
	40	0	0	0	0			
	41	0	0	0	0			
	42	0	0	0	0			heat plume
	43	0	0	0	0			only visible
	44	0	0	0	0			emission
	45	0	0	0	0			from stack
	46	0	0	0	0			
	47	0	0	0	0			
	48	0	0	0	0			
	49	0	0	0	0			
	50	0	0	0	0			
	51	0	0	0	0			
	52	0	0	0	0			
	53	0	0	0	0			
	54	0	0	0	0			
	55	0	0	0	0			
	56	0	0	0	0			
	57	0	0	0	0			
	58	0	0	0	0			
	59	0	0	0	0			

OBSERVATION RECORD

COMPANY Coplay
LOCATION W 20° South
TEST NUMBER 2
SKY CONDITION Sunny
OBSERVER Susan Steckel

TYPE FACILITY Cement Co
POINT OF EMISSIONS Baghouse 88-4
DATE July 31
WIND SPEED 5 mph
ground

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
1:00	0	0	0	0	0			
	1	--	0	0	0			
	2	0	0	0	0			
	3	0	0	0	0			
	4	0	0	0	0			
	5	0	0	0	0			
	6	0	0	0	0			
	7	0	0	0	0			
	8	0	0	0	0			
	9	0	0	0	0			
	10	0	0	0	0			
	11	0	0	0	0			
	12	0	0	0	0			
	13	0	0	0	0			
	14	0	0	0	0			
	15							
	16							
	17							
	18							
	19							
	20							
	21							
	22							
	23							
	24							
	25							
	26							
	27							
	28							
	29							

OBSERVATION RECORD

COMPANY Coplay Cement

TYPE FACILITY Cement plant

LOCATION E 20°S of stacks

POINT OF EMISSIONS 7 50' stacks

TEST NUMBER

DATE 7/31/74

SKY CONDITION partly cloudy - sunny

WIND SPEED ≈ 2

OBSERVER Phyllis Becker

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
11	0	O	O	O	O			
	1	O	O	O	O			
	2	O	O	O	O			
	3	O	O	O	O			
	4	O	O	O	O			
	5	O	O	O	O			
	6	O	O	O	O			
	7	O	O	O	O			
	8	O	O	O	O			
	9	O	O	O	O			
	10	O	O	O	O			
	11	O	O	O	O			
	12	O	O	O	O			
	13	O	O	O	O			
	14	O	O	O	O			
	15	O	O	O	O			
	16	O	O	O	O			
	17	O	O	O	O			
	18	O	O	O	O			
	19	O	O	O	O			
	20	O	O	O	O			
	21	O	O	O	O			
	22	O	O	O	O			
	23	O	O	O	O			
	24	O	O	O	O			
	25	O	O	O	O			
	26	O	O	O	O			
	27	O	O	O	O			
	28	O	O	O	O			
	29	O	O	O	O			

OBSERVATION RECORD

COMPANY Copley Cement

TYPE FACILITY Cement plant

LOCATION

POINT OF EMISSIONS

TEST NUMBER

DATE 7/31/74

SKY CONDITION Partly Cloudy - sunny

WIND SPEED

OBSERVER Phyllis Becker

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
11	30	O	O	O	O			
	31	O	O	O	O			
	32	O	O	O	O			
	33	O	O	O	O			
	34	O	O	O	O			
	35	O	O	O	O			
	36	O	O	O	O			
	37	O	O	O	O			
	38	O	O	O	O			
	39	O	O	O	O			
	40	O	O	O	O			
	41	O	O	O	O			
	42	O	O	O	O			
	43	O	O	O	O			
	44	O	O	O	O			
	45	O	O	O	O			
	46	O	O	O	O			
	47	O	O	O	O			
	48	O	O	O	O			
	49	O	O	O	O			
	50	O	O	O	O			
	51	O	O	O	O			
	52	O	O	O	O			
	53	O	O	O	O			
	54	O	O	O	O			
	55	O	O	O	O			
	56	O	O	O	O			
	57	O	O	O	O			
	58	O	O	O	O			
	59	O	O	O	O			

OBSERVATION RECORD

COMPANY Copley Cement

TYPE FACILITY Cement plant

LOCATION

POINT OF EMISSIONS

TEST NUMBER

DATE 7/31/74

SKY CONDITION Partly Cloudy - Sunny

WIND SPEED = 2

OBSERVER Phillip Becker

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
12	0	○	○	○	○			
	1	○	○	○	○			
	2	○	○	○	○			
	3	○	○	○	○			
	4	○	○	○	○			
	5	○	○	○	○			
	6	○	○	○	○			
	7	○	○	○	○			
	8	○	○	○	○			
	9	○	○	○	○			
	10	○	○	○	○			
	11	○	○	○	○			
	12	○	○	○	○			
	13	○	○	○	○			
	14	○	○	○	○			
	15	○	○	○	○			
	16	○	○	○	○			
	17	○	○	○	○			
	18	○	○	○	○			
	19	○	○	○	○			
	20	○	○	○	○			
	21	○	○	○	○			
	22	○	○	○	○			
	23	○	○	○	○			
	24	○	○	○	○			
	25	○	○	○	○			
	26	○	○	○	○			
	27	○	○	○	○			
	28	○	○	○	○			
	29	○	○	○	○			

OBSERVATION RECORD

COMPANY Splay Cement

LOCATION

TEST NUMBER

SKY CONDITION Partly cloudy - sunny

OBSERVER Phyllis Becker

TYPE FACILITY Cement plant

POINT OF EMISSIONS 7 80' stacks

DATE 7/31/74

WIND SPEED 52

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
12	30	○	○	○	○			
	31	○	○	○	○			
	32	○	○	○	○			
	33	○	○	○	○			
	34	○	○	○	○			
	35	○	○	○	○			
	36	○	○	○	○			
	37	○	○	○	○			
	38	○	○	○	○			
	39	○	○	○	○			
	40	○	○	○	○			
	41	○	○	○	○			
	42	○	○	○	○			
	43	○	○	○	○			
	44	○	○	○	○			
	45	○	○	○	○			
	46	○	○	○	○			
	47	○	○	○	○			
	48	○	○	○	○			
	49	○	○	○	○			
	50	○	○	○	○			
	51	○	○	○	○			
	52	○	○	○	○			
	53	○	○	○	○			
	54	○	○	○	○			
	55	○	○	○	○			
	56	○	○	○	○			
	57	○	○	○	○			
	58	○	○	○	○			
	59	○	○	○	○			

OBSERVATION RECORD

COMPANY Ceplay Cement
TYPE FACILITY Cement Plant
LOCATION W 20°S of Stack 80'
POINT OF EMISSIONS 7 80' stacks
TEST NUMBER
DATE 7/31
SKY CONDITION Partly Cloudy
WIND SPEED ~3
OBSERVER Phyllis Becker

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
14	0	0						green trees-back grove
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
14	15	0	0	0	0			
	16	0	0	0	5*			* stack 1 only
	17	0	0	0	0			
	18	5**	0	0	0			** stack 5 only
	19	5*	0	5**	0			
	20	0	0	0	0			+ stack 13
	21	5+	0	0	5*			
	22	0	5*	5*	5*			
	23	5*	5*	0	0			
	24	0	5+	0	0			
	25	5+	0	5**	5*			
	26	0	0	0	0			
	27	0	0	5**	5*			
	28	5*	0	0	0			
	29	5+	5*	5+	0			

OBSERVATION RECORD

COMPANY Coplay Cement - Egypt

LOCATION

TEST NUMBER

SKY CONDITION

OBSERVER [illegible]

TYPE FACILITY Cement Plant

POINT OF EMISSIONS

DATE 7/31/74

WIND SPEED ~ 3

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
14	30	5*	5*	0	5*			* stack 1
	31	5+	5+	5*	0			+ stack 3
	32	5*	0	0	5*			o stack 2
	33	5*	5*	0	5*			
	34	0	0	+5*	0			
	35	5*	5*	+5*	+5			
	36	5+	0	0	0			
	37	5*	0	0	0			
	38	0	0	5*	5*			
	39	5*	5*	+5*	0			
	40	0	0	5*	5*			
	41	5*	5*	+5*	0			
	42	+5*	5*	5*	o 5*			
	43	5*	5*	5*	5*			
	44	5*	5*	+5*	0			
	45	5*	0	0	5*			
	46	5*	0	0	0			
	47	0	5*	0	0			
	48	5*	0	5+	5*			
	49	5*	0	0	0			
	50	0	0	0	0			sun behind a cloud
	51	0	5*	0	0			
	52	0	0	0	0			
	53	0	0	0	0			
	54	0	5*	0	0			
	55	0	0	0	0			
	56	5+	5+	5*	5+			
	57	5+	0	5+	5+			
	58	0	0	5*	5*			
	59	5*	0	0	5*			

OBSERVATION RECORD

COMPANY Coplay Cement - Egypt TYPE FACILITY Cement Plant

LOCATION POINT OF EMISSIONS

TEST NUMBER DATE 7/31/74

SKY CONDITION Partly cloudy - sunny WIND SPEED 5-15

OBSERVER Phyllis Dicker

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
15	0	5*	5+	5*	5*			* stack 1
	1	0	5*	5*	0			+ stack 3
	2	5*	5+	0	0			
	3	5+	5*	0	5+			
	4	0	5+	5*	0			
	5	0	0	0	5*			
	6	0	5+	0	0			
	7	5*	0	0	0			
	8	0	0	0	0			
	9	0	0	5*	0			
	10	5+	0	0	5*			
	11	5+	0	0	0			
	12	0	0	5*	0			
	13	0	0	5+	5+			
	14	0	0	0	5+			
	15	5+	5+	0	5+			
	16	5*	5*	0	5+			
	17	0	0	0	0			
	18	0	5+	0	0			
	19	0	0	0	0			
	20	0	0	0	0			
	21	0	0	0	0			
	22	0	0	0	0			
	23	0	0	0	0			
	24	0	+5*	5+	5*			
	25	5+	0	5*	0			
	26	0	5+	0	5+			
	27	0	5+	0	0			
	28	0	5+	0	0			
	29	0	0	0	0			

OBSERVATION RECORD

COMPANY Cooley Cement - Egypt

TYPE FACILITY Cement Plant

LOCATION

POINT OF EMISSIONS

TEST NUMBER

DATE 7/31/74

SKY CONDITION Partly cloudy - sunny

WIND SPEED

OBSERVER Phyllis Becker

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
15	30	0	0	0	0			* Stack 1
	31	0	0	0	5*			□ stacks 5
	32	0	0	0	0			+ stack 15
	33	0	0	0	5□			
	34	0	5□	0	0			
	35	0	0	0	0			
	36	0	5*	5+	0			
	37	5*	5*	0	5*			
	38	5+	0	0	0			
	39	0	0	0	0			
	40	5+	0	5*	0			
	41	0	0	0	0			
	42	0	0	0	0			
	43	5*	0	0	0			
	44	0	0	0	0			
	45	0	0	0	0			
	46	5+	0	0	5*			
	47	0	5*	0	0			
	48	0	0	0	0			
	49	5+	0	0	0			
	50	5*	0	0	0			
	51	5+	0	0	0			
	52	5+	0	0	0			
	53	5*	0	0	5+			
	54	0	0	0	0			
	55	0	0	5*	0			
	56	0	0	5*	0			
	57	0	0	5+	0			
	58	0	5+	5+	0			
	59	0	0	0	5*			

OBSERVATION RECORD

COMPANY Coplay Cement - Egypt

LOCATION

TEST NUMBER

SKY CONDITION

OBSERVER Phyllis Becker

TYPE FACILITY Cement plant

POINT OF EMISSIONS

DATE 7/31/74

WIND SPEED 2 2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
16	30	0	5	0	0			
	31	0	0	5	0			+ stack 3
	32	0	0	0	0			* stack 1
	33	0	0	5	0			
	34	0	0	0	0			
	35	0	0	5+	0			
	36	0	0	0	0			
	37	0	0	0	0			
	38	0	0	0	0			
	39	0	0	0	0			
	40	0	0	0	0			
	41	0	0	0	0			
	42	0	0	0	0			
	43	0	0	0	0			
	44	0	0	0	0			
	45	0	0	0	0			
	46	0	0	0	0			
	47	0	0	0	0			
	48	0	0	0	0			
	49	0	0	0	0			
	50	0	0	0	0			
	51	0	0	0	0			
	52	0	0	0	0			
	53	5+	0	0	0			
	54	0	0	0	0			
	55	0	0	0	0			
	56	0	0	0	0			
	57	5*	5*	0	0			
	58	0	5	0	0			
	59	0	0	0	0			

OBSERVATION RECORD

COMPANY Coplay Cement - Egypt

LOCATION

TEST NUMBER

SKY CONDITION Partly cloudy - Sunny

OBSERVER Chyllis Becker

TYPE FACILITY Cement Plant

POINT OF EMISSIONS 7 88' stacks

DATE 7/3

WIND SPEED ~2

Dec - NW

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
16	0	0	0	0	5+			+ stack 3
	1	0	5+	0	0			* stack 1
	2	5*	5°	5+	0			° stack 2
	3	5*	0	5+	5+			
	4	0	0	5+	0			
	5	0	0	0	0			
	6	0	0	5+	0			
	7	0	0	5+	5+			
	8	5	0	5+	5+			
	9	5*	0	5*	0			
	10	5+	5+	5+	5+			dusty background
	11	0	0	0	5+			
	12	0	0	5+	5			
	13	5	5	0	0			
	14	5	5	0	5*			
	15	0	5+	0	0			
	16	5*	0	0	5*			
	17	5	0	+5*	5			
	18	0	0	0	5+			
	19	5+	0	5+	5			
	20	0	5	0	0			
	21	0	0	5*	5*			
	22	0	5+	0	0			
	23	0	5+	5+	0			
	24	5	5	0	5			
	25	5*	0	0	0			
	26	5	5	0	0			
	27	0	0	0	0			
	28	0	0	0	0			
	29	0	0	5°	0			

OBSERVATION RECORD

COMPANY Ceplay Cement - Egypt

TYPE FACILITY Cement Plant

LOCATION

POINT OF EMISSIONS

TEST NUMBER

DATE 7/3/74

SKY CONDITION Partly cloudy

WIND SPEED ≈ 2

OBSERVER Myrtle Becker

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
17	0	0	0	0	0			° Stack 2
	1	0	0	0	5°			+ Stack 3
	2	0	0	0	0			* Stack 7
	3	0	0	0	0			△ Stack 4
	4	0	0	0	0			
	5	0	0	0	0			
	6	0	0	0	0			
	7	0	0	0	5+			Smoky background
	8	0	0	0	0			
	9	0	0	5+	0			
	10	0	0	5+	0			
	11	0	5+	0	0			
	12	0	0	5+	0			
	13	0	0	0	0			
	14	0	0	5+	0			
	15	0	0	0	5△			
	16	0	0	0	0			
	17	0	0	0	0			
	18	0	0	5°	0			
	19	0	5+	0	0			
	20	0	0	0	5+			
	21	5+	0	0	5+			
	22	0	0	0	0			
	23	5△	0	0	0			
	24	5+	0	0	0			
	25	0	0	0	0			
	26	0	0	0	0			
	27	0	0	0	0			
	28	0	0	0	0			
	29	5+	0	0	0			

OBSERVATION RECORD

COMPANY Coplay Cement - Egypt

TYPE FACILITY Cement Plant

LOCATION

POINT OF EMISSIONS

TEST NUMBER

DATE 7/31/74

SKY CONDITION

WIND SPEED ~2

OBSERVER Phyllis Becker

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
17	30	0	0	0	0			* stack 1
	31	0	0	5+	0			° stack 2
	32	0	0	0	0			+ stack 5
	33	0	0	0	5°			
	34	0	0	0	0			
	35	0	0	0	0			
	36	0	0	0	0			
	37	0	0	0	0			
	38	0	0	0	0			
	39	5+	0	0	0			
	40	0	0	0	0			
	41	0	0	0	0			
	42	0	0	0	0			
	43	0	0	0	0			
	44	0	0	0	0			
	45	0	0	0	0			
	46	0	0	0	0			
	47	0	0	0	0			
	48	0	0	0	0			
	49	0	0	0	0			
	50	0	0	0	0			
	51	0	0	0	0			
	52	0	0	0	0			
	53	0	0	0	0			
	54	0	0	0	0			
	55	0	0	0	0			
	56	0	0	0	0			
	57	0	0	0	0			
	58	0	0	0	0			
	59	0	0	0	0			

OBSERVATION RECORD

COMPANY Copley Cement Equip

TYPE FACILITY Cement Plant

LOCATION W 20° N of Lake

POINT OF EMISSIONS

TEST NUMBER

DATE 7/31/74

SKY CONDITION

WIND SPEED

OBSERVER [illegible]

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
18	0	0	0	0	0			* stack 1
	1	0	5*	0	0			
	2	0	0	0	0			
	3	0	0	0	0			
	4	0	0	0	0			
	5	0	0	0	0			
	6	0	0	0	0			
	7	0	0	0	0			
	8	0	0	0	0			
	9	0	0	0	0			
	10	0	0	0	0			
	11	0	0	0	0			
	12	0	0	0	0			
	13	0	0	0	0			
	14	0	0	0	0			
	15	0						
	16							
	17							
	18							
	19							
	20							
	21							
	22							
	23							
	24							
	25							
	26							
	27							
	28							
	29							

SET 1456 01 0874

APPENDIX C

FIELD DATA

Whitehall Cement Manufacturing Co.

August 1, 1974

OBSERVATION RECORD

COMPANY Whitehall

LOCATION 40° South of East

TEST NUMBER 3

SKY CONDITION Clear Sunny

OBSERVER Susan Stecko

TYPE FACILITY Cement

POINT OF EMISSIONS Baghouse

DATE August 1

WIND SPEED 3 mph

Blue sky

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							
	19							
10:30	20							
	21							
	22							
	23							
	24							
	25							
	26							
	27							
	28							
	29							

OBSERVATION RECORD

COMPANY Whitehall
LOCATION 40° South of East
TEST NUMBER 3
SKY CONDITION Clear Sunny
OBSERVER Susan Steckel

TYPE FACILITY Cement Co.
POINT OF EMISSIONS Baghouse
DATE August 1
WIND SPEED 2mph
Blue sky

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
10:35	30	0	0	0	0			
	31	0	0	0	0			
	32	0	0	0	0			
	33	0	0	0	0			
	34	0	0	0	0			
	35	0	0	0	0			
	36	0	0	0	0			
	37	0	0	0	0			
	38	0	0	0	0			
	39	0	0	0	0			
	40	0	0	0	0			
	41	0	0	0	0			
	42	0	0	0	0			
	43	0	0	0	0			
	44	0	0	0	0			
	45	0	0	0	0			
	46	0	0	0	0			
	47	0	0	0	0			
	48	0	0	0	0			
	49	0	0	0	0			
	50	0	0	0	0			
	51	0	0	0	0			
	52	5	0	0	0			
	53	0	0	0	0			
	54	0	0	0	0			
	55	0	0	0	0			
	56	0	0	0	0			
	57	0	0	0	0			
	58	0	0	0	0			
	59	0	0	0	0			

OBSERVATION RECORD

COMPANY Whitehall

TYPE FACILITY

LOCATION 40° EAST of South

POINT OF EMISSIONS Baghouse

TEST NUMBER 3

DATE August 1

SKY CONDITION Clear Sunny

WIND SPEED 3mph

OBSERVER Susan Steckel

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
11:00	0	0	5	0	0			
	1	0	0	0	0			
	2	0	0	0	0			
	3	0	0	0	0			
	4	0	0	0	0			
	5	0	0	0	0			
	6	0	0	0	0			
	7	0	0	0	0			
	8	0	0	0	0			
	9	0	0	0	0			
	10	0	0	0	0			
	11	0	0	0	0			
	12	0	0	0	0			
	13	0	0	0	0			
	14	0	0	0	0			
	15	0	0	0	0			
	16	0	0	0	0			
	17	0	0	0	0			
	18	0	0	0	0			
	19	0	0	0	0			
	20	0	0	0	0			
	21	0	0	0	0			
	22	0	0	0	0			
	23	0	0	0	0			
	24	0	0	0	0			
	25	0	0	0	0			
	26	0	0	0	0			
	27	0	0	0	0			
	28	0	0	0	0			
	29	0	0	0	0			

OBSERVATION RECORD

COMPANY Whitehall
TYPE FACILITY Cement Co.
LOCATION 90° East of South
POINT OF EMISSIONS Baghouse
TEST NUMBER 3
DATE August 1
SKY CONDITION Clear Sunny
WIND SPEED 5 mph
OBSERVER Susan Steckel
Blue Sky background

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
11:3	30	0	0	0	0			
	31	0	0	0	0			
	32	0	0	0	0			
	33	0	0	0	0			
	34	0	0	0	0			
	35	0	0	0	0			
	36	0	0	0	0			
	37	0	0	0	0			
	38	0	0	0	0			
	39	0	0	0	0			
	40	0	0	0	0			
	41	0	0	0	0			
	42	0	0	0	0			
	43	0	0	0	0			
	44	0	0	0	0			
	45	0	0	0	0			
	46	0	0	0	0			
	47	0	0	0	0			
	48	0	0	0	0			
	49	0	0	0	0			
	50	0	0	0	0			
	51	0	0	0	0			
	52	0	0	0	0			
	53	0	0	0	0			
	54	0	0	0	0			
	55	0	0	0	0			
	56	0	0	0	0			
	57	0	0	0	0			
	58	0	0	0	0			
	59	0	0	0	0			

OBSERVATION RECORD

COMPANY Whitehall

TYPE FACILITY Cement Co.

LOCATION 40° EAST of South

POINT OF EMISSIONS Baghouse

TEST NUMBER 3

DATE August 1

SKY CONDITION Clear Sunny

WIND SPEED 5 mph

OBSERVER Susan Steckel

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
12:00	0	0	0	0	0			Blue sky background
	1	0	0	0	0			Small plume
	2	0	0	0	0			only running
	3	0	0	0	0			
	4	0	0	0	0			
	5	0	0	0	0			
	6	0	0	0	0			
	7	0	0	0	0			
	8	0	0	0	0			
	9	0	0	0	0			
	10	0	0	0	0			
	11	0	0	0	0			
	12	0	0	0	0			
	13	0	0	0	0			
	14	0	0	0	0			
	15	0	0	0	0			
	16	0	0	0	0			
	17	0	0	0	0			
	18	0	0	0	0			
	19	0	0	0	0			
	20	0	0	0	0			
	21	0	0	0	0			
	22	0	0	0	0			
	23	0	0	0	0			
	24	0	0	0	0			
	25	0	0	0	0			
	26	0	0	0	0			
	27	0	0	0	0			
	28	0	0	0	0			
	29	0	0	0	0			

OBSERVATION RECORD

COMPANY Whitehall
LOCATION 40° East of South
TEST NUMBER 3
SKY CONDITION Clear Sunny
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE August 1
WIND SPEED 5 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
2:30	30	O	O	O	O			Blue sky background
	31	O	O	O	O			small plume
	32	O	O	O	O			only running
	33	O	O	O	O			
	34	O	O	O	O			
	35	O	O	O	O			
	36	O	O	O	O			
	37	O	O	O	O			
	38	O	O	O	O			
	39	O	O	O	O			
	40	O	O	O	O			
	41	O	O	O	O			
	42	O	O	O	O			
	43	O	O	O	O			
	44	O	O	O	O			
	45	O	O	O	O			
	46	O	O	O	O			
	47	O	O	O	O			
	48	O	O	O	O			
	49	O	O	O	O			
	50	O	O	O	O			
	51	O	O	O	O			
	52	O	O	O	O			
	53	O	O	O	O			
	54	O	O	O	O			
	55	O	O	O	O			
	56	O	O	O	O			
	57	O	O	O	O			
	58	O	O	O	O			
	59	O	O	O	O			

OBSERVATION RECORD

COMPANY Whitehall

LOCATION South 15° West

TEST NUMBER 3

SKY CONDITION Partly Cloudy

OBSERVER Susan Sheets

TYPE FACILITY Cement

POINT OF EMISSIONS Baghouse

DATE August 1

WIND SPEED 2 mph

400 ft. away

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
2:10	10							
	11							
	12							
	13							
	14							
2:15	15	0	0	0	0			Cloudy background but sun shining
	16	0	0	0	0			
	17	0	0	0	0			
	18	0	0	0	0			
	19	0	0	0	0			
	20	0	0	0	0			
	21	0	0	0	0			
	22	0	0	0	0			
	23	0	0	0	0			
	24	0	0	0	0			
	25	0	0	0	0			
	26	0	0	0	0			
	27	0	0	0	0			
	28	0	0	0	0			
	29	0	0	0	0			

OBSERVATION RECORD

COMPANY Whitehall

LOCATION 15° August South

TEST NUMBER 3

SKY CONDITION Partly Cloudy

OBSERVER Susan Hechel

TYPE FACILITY Cement

POINT OF EMISSIONS Baghouse 250

DATE August 1

WIND SPEED 3 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
2132	30	0	0	0	0			
	31	0	0	0	0			
	32	0	0	0	0			
	33	0	0	0	0			
	34	0	0	0	0			
	35	0	0	0	0			
	36	0	0	0	0			
	37	0	0	0	0			
	38	0	0	0	0			
	39	0	0	0	0			
	40	0	0	0	0			
	41	0	0	0	0			
	42	0	0	0	0			
	43	0	0	0	0			
	44	0	0	0	0			
	45	0	0	0	0			
	46	0	0	0	0			
	47	0	0	0	0			
	48	0	0	0	0			
	49	0	0	0	0			
	50	0	0	0	0			
	51	0	0	0	0			
	52	0	0	0	0			
	53	0	0	0	0			
	54	0	0	0	0			
	55	0	0	0	0			
	56	0	0	0	0			
	57	0	0	0	0			
	58	0	0	0	0			
	59	0	0	0	0			

OBSERVATION RECORD

COMPANY Whitehall
LOCATION 15° West of South
TEST NUMBER 3
SKY CONDITION Partly Cloudy
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE August 9
WIND SPEED 2 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
3:00	0	0	0	0	0			Cloudy background
	1	0	0	0	0			
	2	0	0	0	0			
	3	0	0	0	0			
	4	0	0	0	0			
	5	0	0	0	0			
	6	0	0	0	0			
	7	0	0	0	0			
	8	0	0	0	0			
	9	0	0	0	0			
	10	0	0	0	0			
	11	0	0	0	0			
	12	0	0	0	0			
	13	0	0	0	0			
	14	0	0	0	0			
	15	0	0	0	0			
	16	0	0	0	0			
	17	0	0	0	0			
	18	0	0	0	0			
	19	0	0	0	0			
	20	0	0	0	0			
	21	0	0	0	0			
	22	0	0	0	0			Hazy Blue
	23	—	—	—	—			
	24	0	0	0	0			
	25	0	0	0	0			
	26	0	0	0	0			
	27	0	0	0	0			
	28	0	0	0				
	29	0	0	0	0			

OBSERVATION RECORD

COMPANY Whitehall
LOCATION 5° West of South
TEST NUMBER 3
SKY CONDITION Partly Cloudy
OBSERVER Susan Steckel

TYPE FACILITY Cement Co.
POINT OF EMISSIONS Baghouse
DATE August 1
WIND SPEED 3 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
8:30	30	0	—	0	0			Blue Hazy
	31	0	0	0	0			Background
	32	0	0	0	0			Sun in and
	33	0	0	0	0			out of the
	34	0	0	0	0			Clouds
	35	0	0	0	0			changed position
	36	0	0	—	—			by moving close
	37	—	—	—	—			about 25 ft.
	38	0	0	0	0			Moved again 50 ft
	39	0	0	0	0			and direction
	40	0	0	0	0			changed
	41	0	0	0	0			
	42	0	0	0	0			
	43	0	0	0	0			
	44	0	0	0	0			
	45	0	0	0	0			
	46	0	0	0	0			
	47	0	0	0	0			
	48	0	0	0	0			
	49	0	0	0	0			
	50	0	0	0	0			
	51	0	0	0	0			
	52	0	0	0	0			
	53	0	0	0	0			Cloudy again
	54	0	0	0	0			
	55	0	0	0	0			
	56	0	0	0	0			
	57	0	0	0	0			
	58	0	0	0	0			
	59	0	0	0	0			

OBSERVATION RECORD

COMPANY Whitehall

LOCATION South 90° West

TEST NUMBER 3

SKY CONDITION Partly Cloudy

OBSERVER Susan Steckel

TYPE FACILITY Cement

POINT OF EMISSIONS Baghouse 250

DATE August 1

WIND SPEED 3mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
4:00	0	0	0	0	0			Blue haze
	1	0	0	0	0			and semi-
	2							cloudy background
	3							
	4							
	5							
	6							
	7							Break
	8							
	9							
	10							
	11							
	12							
	13							
	14							
4:15	15	0	0	0	0			
	16	0	0	0	0			
	17	0	0	0	0			
	18	0	0	0	0			
	19	0	0	0	0			
	20	0	0	0	0			
	21	0	0	0	0			
	22	0	0	0	0			
	23	0	0	0	0			
	24	0	0	0	0			
	25	0	0	0	0			
	26	0	0	0	0			
	27	0	0	0	0			
	28	0	0	0	0			
	29	0	0	0	0			

OBSERVATION RECORD

COMPANY Whitehall
TYPE FACILITY Cement
LOCATION South 90° West
POINT OF EMISSIONS Baghouse
TEST NUMBER 3
DATE August 1
SKY CONDITION Partly Cloudy
WIND SPEED 2mph
OBSERVER Susan Steckel

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
4:30	30	O	O	O	O			Cloudy blue base back-ground sun in and out
	31	O	O	O	O			
	32	O	O	O	O			
	33	O	O	O	O			
	34	O	O	O	O			
	35	O	O	O	O			
	36	O	O	O	O			
	37	O	O	O	O			
	38	O	O	O	O			
	39	O	O	O	O			
	40	O	O	O	O			
	41	O	O	O	O			
	42	O	O	O	O			
	43	O	O	O	O			
	44	O	O	O	O			
	45	O	O	O	O			
	46	O	O	O	O			Blue Haze
	47	O	O	O	O			
	48	O	O	O	O			
	49	O	O	O	O			
	50	O	O	O	O			
	51	O	O	O	O			
	52	O	O	O	O			
	53	O	O	O	O			
	54	O	O	O	O			
	55	O	O	O	O			
	56	O	O	O	O			
	57	O	O	O	O			Hazy
	58	O	O	O	O			
	59	O	O	O	O			

OBSERVATION RECORD

COMPANY Whitehall
LOCATION S. 40° West
TEST NUMBER 3
SKY CONDITION Partly Cloudy
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE August 1
WIND SPEED 5 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
5:00	0	O	O	O	O			Hazy white
	1	O	O	O	O			
	2	O	O	O	O			
	3	O	O	O	O			
	4	O	O	O	O			
	5	O	O	O	O			
	6	O	O	O	O			
	7	O	O	O	O			
	8	O	O	O	O			
	9	O	O	O	O			
	10	O	O	O	O			blue sky
	11	O	O	O	O			
	12	O	O	O	O			
	13	O	O	O	O			
	14	O	O	O	O			
	15	O	O	O	O			
	16	O	O	O	O			
	17	O	O	O	O			
	18	O	O	O	O			
	19	O	O	O	O			haze blue-white
	20	O	O	O	O			
	21	O	O	O	O			
	22	O	O	O	O			
	23	O	O	O	O			
	24	O	O	O	O			
	25	O	O	O	O			
	26	O	O	O	O			
	27	O	O	O	O			
	28	O	O	O	O			
	29	O	O	O	O			

OBSERVATION RECORD

COMPANY Whitehall
LOCATION 40 West
TEST NUMBER 3
SKY CONDITION Partly Cloudy
OBSERVER Susan Steckel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE August 1
WIND SPEED 2 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
5:30	30	0	0	0	0			
	31	0	0	0	0			
	32	0	0	0	0			
	33	0	0	0	0			
	34	0	0	0	0			
	35	0	0	0	0			
	36	0	0	0	0			
	37	0	0	0	0			
	38	0	0	0	0			
	39	0	0	0	0			
	40	0	0	0	0			
	41	0	0	0	0			
	42	0	0	0	0			
	43	0	0	0	0			
	44	0	0	0	0			
	45	0	0	0	0			
	46	0	0	0	0			
	47	0	0	0	0			
	48	0	0	0	0			
	49	0	0	0	0			
	50	0	0	0	0			
	51	0	0	0	0			
	52	0	0	0	0			
	53	0	0	0	0			
	54	0	0	0	0			
	55							
	56							
	57							
	58							
	59							

OBSERVATION RECORD

COMPANY Whitehall

LOCATION W 20° North

TEST NUMBER 3

SKY CONDITION Partly Cloudy

OBSERVER Susan Steckel

TYPE FACILITY Cement

POINT OF EMISSIONS Baghouse 225

DATE August 1

WIND SPEED 1 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
4:00	0	O	O	O	O			Blue Sky
	1	O	O	O	O			Changed location
	2	O	O	O	O			now W 90° N
	3	O	O	O	O			
	4	O	O	O	O			
	5	O	O	O	O			
	6	O	O	O	O			
	7	O	O	O	O			
	8	O	O	O	O			
	9	O	O	O	O			
	10	O	O	O	O			
	11	O	O	O	O			
	12	O	O	O	O			
	13	O	O	O	O			
	14	O	O	O	O			
	15	O	O	O	O			
	16	O	O	O	O			
	17	O	O	O	O			
	18	O	O	O	O			
	19	O	O	O	O			
	20	O	O	O	O			
	21	O	O	O	O			
	22	O	O					
	23							
	24							
	25							
	26							
	27							
	28							
	29							

OBSERVATION RECORD

COMPANY Whitehall Cement

TYPE FACILITY Cement Plant

LOCATION E 40° S of Stack

POINT OF EMISSIONS

TEST NUMBER

DATE 8/1/74

SKY CONDITION Sunny

WIND SPEED

OBSERVER Phyllis Becker

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
	0	Ø						
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							
	19							
10	20	0	0	0	0			blue sky background
	21	0	0	0	0			
	22	0	0	0	0			
	23	5	0	0	5			
	24	0	0	0	0			
	25	0	0	0	0			
	26	0	0	0	0			
	27	0	0	0	0			
	28	0	0	0	0			
	29	0	0	0	0			

OBSERVATION RECORD

COMPANY Mitchell Cement

LOCATION E 40° S of Stack

TEST NUMBER

SKY CONDITION Sunny

OBSERVER Phyllis Becker

TYPE FACILITY Cement Plant

POINT OF EMISSIONS

DATE 8/1/74

WIND SPEED 2-2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
10	30	0	0	0	0			Blue sky background
	31	0	0	0	0			
	32	5	0	0	0			
	33	0	0	0	0			
	34	0	0	0	0			
	35	0	0	0	0			
	36	0	0	0	0			
	37	0	0	0	0			
	38	0	0	0	0			
	39	0	0	0	0			
	40	0	0	0	0			
	41	0	0	0	0			
	42	0	0	0	0			
	43	0	0	0	0			
	44	0	0	5	0			
	45	0	0	0	0			
	46	0	0	0	0			
	47	0	0	0	0			
	48	0	0	0	0			
	49	0	0	0	0			
	50	0	0	0	0			
	51	0	0	0	0			
	52	0	0	0	0			
	53	0	0	0	0			
	54	0	0	0	0			
	55	0	0	0	0			
	56	0	0	0	0			
	57	0	0	0	0			
	58	0	0	0	0			
	59	0	0	0	0			

OBSERVATION RECORD

COMPANY Whitehall Cement

TYPE FACILITY Cement Plant

LOCATION E 40°S of stack

POINT OF EMISSIONS

TEST NUMBER

DATE 8/1/74

SKY CONDITION

WIND SPEED

OBSERVER Phyllis Becker

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
11	0	○	○	○	○			Blue sky background
	1	○	○	○	○			
	2	○	○	○	○			
	3	○	○	○	○			
	4	○	○	○	○			
	5	○	○	○	○			
	6	○	○	○	○			
	7	○	○	○	○			
	8	○	○	○	○			
	9	○	○	○	○			
	10	○	○	○	○			
	11	○	○	○	○			
	12	○	○	○	○			
	13	○	○	○	○			
	14	○	○	○	○			
	15	○	○	○	○			
	16	○	○	○	○			
	17	○	○	○	○			
	18	○	○	○	○			
	19	○	○	○	○			
	20	○	○	○	○			
	21	○	○	○	○			
	22	○	○	○	○			
	23	○	○	○	○			
	24	○	○	○	○			
	25	○	○	○	○			
	26	○	○	○	○			
	27	○	○	○	○			
	28	○	○	○	○			
	29	○	○	○	○			

OBSERVATION RECORD

COMPANY Mitchell

LOCATION E 40°S of stack

TEST NUMBER

SKY CONDITION Sunny

OBSERVER [illegible]

TYPE FACILITY Cement Plant

POINT OF EMISSIONS Baghouse stack

DATE 8/1/74

WIND SPEED 2-3

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
11	30	O	O	O	O			blue sky background
	31	O	O	O	O			
	32	O	O	O	O			
	33	O	O	O	O			
	34	O	O	O	O			
	35	O	O	O	O			
	36	O	O	O	O			
	37	O	O	O	O			
	38	O	O	O	O			
	39	O	O	O	O			
	40	O	O	O	O			
	41	O	O	O	O			
	42	O	O	O	O			
	43	O	O	O	O			
	44	O	O	O	O			
	45	O	O	O	O			
	46	O	O	O	O			
	47	O	O	O	O			
	48	O	O	O	O			
	49	O	O	O	O			
	50	O	O	O	O			
	51	O	O	O	O			
	52	O	O	O	O			
	53	O	O	O	O			
	54	O	O	O	O			
	55	O	O	O	O			
	56	O	O	O	O			
	57	O	O	O	O			
	58	O	O	O	O			
	59	O	O	O	O			

OBSERVATION RECORD

COMPANY Whitehall

LOCATION E 70° S 100'

TEST NUMBER

SKY CONDITION Cloudy

OBSERVER [illegible]

TYPE FACILITY Cement Company

POINT OF EMISSIONS Baghouse stack

DATE 9/1/74

WIND SPEED 23

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
12	0	○	○	○	○			Blue sky background
	1	○	○	○	○			
	2	○	○	○	○			
	3	○	○	○	○			
	4	○	○	○	○			
	5	○	○	○	○			
	6	○	○	○	○			
	7	○	○	○	○			
	8	○	○	○	○			
	9	○	○	○	○			
	10	○	○	○	○			
	11	○	○	○	○			
	12	○	○	○	○			
	13	○	○	○	○			
	14	○	○	○	○			
	15	○	○	○	○			
	16	○	○	○	○			
	17	○	○	○	○			
	18	○	○	○	○			
	19	○	○	○	○			
	20	○	○	○	○			
	21	○	○	○	○			
	22	○	○	○	○			
	23	○	○	○	○			
	24	○	○	○	○			
	25	○	○	○	○			
	26	○	○	○	○			
	27	○	○	○	○			
	28	○	○	○	○			
	29	○	○	○	○			

OBSERVATION RECORD

COMPANY Mitchell

TYPE FACILITY [illegible]

LOCATION

POINT OF EMISSIONS

TEST NUMBER

DATE

SKY CONDITION

WIND SPEED

OBSERVER [illegible]

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
12	30	○	○	○	○			
	31	○	○	○	○			
	32	○	○	○	○			
	33	○	○	○	○			
	34	○	○	○	○			
	35	○	○	○	○			
	36	○	○	○	○			
	37	○	○	○	○			
	38	○	○	○	○			
	39	○	○	○	○			
	40	○	○	○	○			
	41	○	○	○	○			
	42	○	○	○	○			
	43	○	○	○	○			
	44	○	○	○	○			
	45	○	○	○	○			
	46	○	○	○	○			
	47	○	○	○	○			
	48	○	○	○	○			
	49	○	○	○	○			
	50	○	○	○	○			
	51	○	○	○	○			
	52	○	○	○	○			
	53	○	○	○	○			
	54	○	○	○	○			
	55	○	○	○	○			
	56	○	○	○	○			Cloudy background
	57	○	○	○	○			
	58	○	○	○	○			
	59	○	○	○	○			

OBSERVATION RECORD

COMPANY Mitchell

LOCATION S 15° W of stack

TEST NUMBER

SKY CONDITION Partly Cloudy

OBSERVER [illegible]

TYPE FACILITY Cement plant

POINT OF EMISSIONS 250' Baghouse stack

DATE 8/1/74

WIND SPEED ≈ 2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
14	15	0	0	0	0			Already [illegible]
	16	0	0	0	0			
	17	0	0	0	0			
	18	0	0	0	0			
	19	0	0	0	0			
	20	0	0	0	0			
	21	0	0	0	0			
	22	0	0	0	0			
	23	0	0	0	0			
	24	0	0	0	0			
	25	0	0	0	0			
	26	0	0	0	0			
	27	0	0	0	0			
	28	0	0	0	0			
	29	0	0	0	0			

OBSERVATION RECORD

COMPANY Whitehall

LOCATION

TEST NUMBER

SKY CONDITION Partly cloudy

OBSERVER Phyllis [illegible]

TYPE FACILITY Cement Plant

POINT OF EMISSIONS 750' [illegible] stack

DATE 8/1/74

WIND SPEED

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
1[illegible]4	30	O	O	O	O			
	31	O	O	O	O			
	32	O	O	O	O			
	33	O	O	O	O			
	34	O	O	O	O			
	35	O	O	O	O			
	36	O	O	O	O			
	37	O	O	O	O			
	38	O	O	O	O			
	39	O	O	O	O			
	40	O	O	O	O			
	41	O	O	O	O			
	42	O	O	O	O			
	43	O	O	O	O			
	44	O	O	O	O			
	45	O	O	O	O			
	46	O	O	O	O			
	47	O	O	O	O			
	48	O	O	O	O			
	49	O	O	O	O			
	50	O	O	O	O			
	51	O	O	O	O			
	52	O	O	O	O			
	53	O	O	O	O			
	54	O	O	O	O			
	55	O	O	O	O			
	56	O	O	O	O			
	57	O	O	O	O			
	58	O	O	O	O			
	59	O	O	O	O			

OBSERVATION RECORD

COMPANY Whitehall

LOCATION S 15° W

TEST NUMBER

SKY CONDITION Cloudy

OBSERVER [illegible]

TYPE FACILITY Cement Plant

POINT OF EMISSIONS 250' [illegible]

DATE 8/1/74

WIND SPEED 2 2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
15	0	○	○	○	○			Cloudy background
	1	○	○	○	○			
	2	○	○	○	○			
	3	○	○	○	○			
	4	○	○	○	○			
	5	○	○	○	○			
	6	○	○	○	○			
	7	○	○	○	○			
	8	○	○	○	○			
	9	○	○	○	○			
	10	○	○	○	○			
	11	○	○	○	○			
	12	○	○	○	○			
	13	○	○	○	○			
	14	○	○	○	○			
	15	○	○	○	○			
	16	○	○	○	○			
	17	○	○	○	○			
	18	○	○	○	○			
	19	○	○	○	○			
	20	○	○	○	○			
	21	○	○	○	○			
	22	○	○	○	○			
	23	○	○	○	○			
	24	○	○	○	○			[illegible]
	25	○	○	○	○			[illegible]
	26	○	○	○	○			
	27	○	○	○	○			
	28	○	○	○	○			
	29	○	○	○	○			

OBSERVATION RECORD

COMPANY [illegible] TYPE FACILITY Cement plant

LOCATION S 15 W [illegible] POINT OF EMISSIONS

TEST NUMBER DATE 8/1/74

SKY CONDITION Cloudy-Hazy WIND SPEED ≈2

OBSERVER [illegible]

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
	30	○	○	○	○			Blue haze factor
	31	○	○	○	○			
	32	○	○	○	○			
	33	○	○	○	○			
	34	○	○	○	○			
	35	○	○	○	○			
	36	○	○	—	—			
	37	—	—	—	—			
	38	○	○	○	○			changed position
	39	○	○	○	○			to S 40° W
	40	○	○	○	○			
	41	○	○	○	○			
	42	○	○	○	○			
	43	○	○	○	○			
	44	○	○	○	○			
	45	○	○	○	○			
	46	○	○	○	○			
	47	○	○	○	○			
	48	○	○	○	○			
	49	○	○	○	○			
	50	○	○	○	○			
	51	○	○	○	○			
	52	○	○	○	○			
	53	○	○	○	○			
	54	○	○	○	○			
	55	○	○	○	○			
	56	○	○	○	○			
	57	○	○	○	○			
	58	○	○	○	○			
	59	○	○	○	○			

OBSERVATION RECORD

COMPANY Whitehall

LOCATION

TEST NUMBER

SKY CONDITION Cloudy

OBSERVER Phyllis Bicker

TYPE FACILITY Rendering Plant

POINT OF EMISSIONS

DATE 5/1/74

WIND SPEED 7-2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
10	0	O	O	O	O			Hazy blue sky - no background
	1	O	O	O	O		O	
	2	O						
	3							
	4							
	5							
	6							
	7							
	8							break
	9							
	10							
	11							
	12							
	13							
	14							
	15	O	O	O	O			
	16	O	O	O	O			
	17	O	O	O	O			
	18	O	O	O	O			
	19	O	O	O	O			
	20	O	O	O	O			
	21	O	O	O	O			
	22	O	O	O	O			
	23	O	O	O	O			
	24	O	O	O	O			
	25	O	O	O	O			
	26	O	O	O	O			
	27	O	O	O	O			
	28	O	O	O	O			
	29	O	O	O	O			

OBSERVATION RECORD

COMPANY Whitehall

LOCATION S 40° Way Stack

TEST NUMBER

SKY CONDITION Cloudy

OBSERVER [illegible] Booker

TYPE FACILITY Cement [illegible]

POINT OF EMISSIONS 250' [illegible] Stack

DATE 9/1/74

WIND SPEED ≈2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
	30	○	○	○	○			hazy blue sky
	31	○	○	○	○			background
	32	○	○	○	○			
	33	○	○	○	○			
	34	○	○	○	○			
	35	○	○	○	○			
	36	○	○	○	○			
	37	○	○	○	○			
	38	○	○	○	○			
	39	○	○	○	○			
	40	○	○	○	○			
	41	○	○	○	○			
	42	○	○	○	○			
	43	○	○	○	○			
	44	○	○	○	○			
	45	○	○	○	○			
	46	○	○	○	○			
	47	○	○	○	○			
	48	○	○	○	○			more blue sky
	49	○	○	○	○			background
	50	○	○	○	○			
	51	○	○	○	○			
	52	○	○	○	○			
	53	○	○	○	○			
	54	○	○	○	○			
	55	○	○	○	○			
	56	○	○	○	○			
	57	○	○	○	○			
	58	○	○	○	○			
	59	○	○	○	○			

OBSERVATION RECORD

COMPANY Whitehall

TYPE FACILITY Cement Plant

LOCATION S 40° W 400' from stack

POINT OF EMISSIONS

TEST NUMBER

DATE 8/1/74

SKY CONDITION Partly Cloudy

WIND SPEED ≈ 2

OBSERVER Phyllis Becker

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
17	0	○	○	○	○			hazy white
	1	○	○	○	○			background
	2	○	○	○	○			
	3	○	○	○	○			
	4	○	○	○	○			
	5	○	○	○	○			
	6	○	○	○	○			
	7	○	○	○	○			
	8	○	○	○	○			
	9	○	○	○	○			
	10	○	○	○	○			
	11	○	○	○	○			
	12	○	○	○	○			
	13	○	○	○	○			
	14	○	○	○	○			
	15	○	○	○	○			
	16	○	○	○	○			
	17	○	○	○	○			
	18	○	○	○	○			
	19	○	○	○	○			
	20	○	○	○	○			
	21	○	○	○	○			
	22	○	○	○	○			
	23	○	○	○	○			
	24	○	○	○	○			
	25	○	○	○	○			
	26	○	○	○	○			
	27	○	○	○	○			
	28	○	○	○	○			
	29	○	○	○	○			

OBSERVATION RECORD

COMPANY Whitehall

TYPE FACILITY cement plant

LOCATION

POINT OF EMISSIONS

TEST NUMBER

DATE 8/1/74

SKY CONDITION partly cloudy

WIND SPEED

OBSERVER [illegible]

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
17	30	O	O	O	O			Heavy blue back ground
	31	O	O	O	O			
	32	O	O	O	O			
	33	O	O	O	O			
	34	O	O	O	O			
	35	O	O	O	O			
	36	O	O	O	O			
	37	O	O	O	O			
	38	O	O	O	O			
	39	O	O	O	O			
	40	O	O	O	O			
	41	O	O	O	O			
	42	O	O	O	O			
	43	O	O	O	O			
	44	O	O	O	O			
	45	O	O	O	O			
	46	O	O	O	O			
	47	O	O	O	O			
	48	O	O	O	O			
	49	O	O	O	O			
	50	O	O	O	O			
	51	O	O	O	O			
	52	O	O	O	O			
	53	O	O	O	O			
	54	O	O	O	O			
	55							
	56							
	57							
	58							
	59							

OBSERVATION RECORD

COMPANY Whitehall

LOCATION W 20° N of Stack

TEST NUMBER

SKY CONDITION cloudy

OBSERVER Phyllis Becker

TYPE FACILITY Cement Plant

POINT OF EMISSIONS (2251) ~~Stack~~

DATE 8/1/74

WIND SPEED ≈ 2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
18	0	0	0	0	0			Blue background
	1	0	0	0	0			
	2	0	0	0	0			
	3	0	0	0	0			
	4	0	0	0	0			
	5	0	0	0	0			
	6	0	0	0	0			
	7	0	0	0	0			
	8	0	0	0	0			
	9	0	0	0	0			
	10	0	0	0	0			
	11	0	0	0	0			
	12	0	0	0	0			
	13	0	0	0	0			
	14	0	0	0	0			
	15	0	0	0	0			
	16	0	0	0	0			
	17	0	0	0	0			
	18	0	0	0	0			
	19	0	0	0	0			
	20	0	0	0	0			
	21	0	0	0	0			
	22	0						
	23							
	24							
	25							
	26							
	27							
	28							
	29							

SET 1456 01 0874

APPENDIX D

FIELD DATA

Hercules Cement Co.

August 2, 1974

OBSERVATION RECORD

COMPANY Hercules
LOCATION East 30° North
TEST NUMBER 4
SKY CONDITION Hazy Blue
OBSERVER Susan Stecko

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse
DATE August 2
WIND SPEED Calm
100 ft.

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
9:30	30	O	O	O	O			Hazy background
	31	O	O	O	O			
	32	O	O	O	O			
	33	O	O	O	O			
	34	O	O	O	O			
	35	O	O	O	O			
	36	O	O	O	O			
	37	O	O	O	O			
	38	O	O	O	O			
	39	O	O	O	O			
	40	O	O	O	O			
	41	O	O	O	O			
	42	O	O	O	O			
	43	O	O	O	O			
	44	O	O	O	O			
	45	O	O	O	O			
	46	O	O	O	O			
	47	O	O	O	O			
	48	O	O	O	O			
	49	O	O	O	O			
	50	O	O	O	O			
	51	O	O	O	O			
	52	O	O	O	O			
	53	O	O	O	O			
	54	O	O	O	O			
	55	O	O	O	O			
	56	O	O	O	O			
	57	O	O	O	O			
	58	O	O	O	O			
	59	O	O	O	O			

OBSERVATION RECORD

COMPANY Hercules
TYPE FACILITY Cement Co
LOCATION 30° East of North
POINT OF EMISSIONS Baghouse 1004
TEST NUMBER 4
DATE August 2
SKY CONDITION Blue Hazy
WIND SPEED Calm
OBSERVER Susan Steckel

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
9:00	0	O	O	O	O			White-blue Hazy
	1	O	O	O	O			background
	2	O	O	O	O			sun shining
	3	O	O	O	O			100ft away
	4	O	O	O	O			from stack
	5	O	O	O	O			2 kilns running
	6	O	O	O	O			
	7	O	O	O	O			
	8	O	O	O	O			
	9	O	O	O	O			
	10	O	O	O	O			
	11	O	O	O	O			
	12	O	O	O	O			
	13	O	O	O	O			
	14	O	O	O	O			
	15	O	O	O	O			
	16	O	O	O	O			
	17	O	O	O	O			
	18	O	O	O	O			
	19	O	O	O	O			
	20	O	O	O	O			
	21	O	O	O	O			
	22	O	O	O	O			
	23	O	O	O	O			
	24	O	O	O	O			
	25	O	O	O	O			
	26	O	O	O	O			
	27	O	O	O	O			
	28	O	O	O	O			
	29	O	O	O	O			

OBSERVATION RECORD

COMPANY Hercules

LOCATION 30° East of Smith

TEST NUMBER 4

SKY CONDITION Blue Haze

OBSERVER Susan Steckel

TYPE FACILITY Cement

POINT OF EMISSIONS Baghouse 95 ft

DATE August 2

WIND SPEED Calm

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
9:30	30	○	○	○	○			White blue haze background
	31	○	○	○	○			
	32	○	○	○	○			
	33	○	○	○	○			
	34	○	○	○	○			
	35	○	○	○	○			
	36	○	○	○	○			
	37	○	○	○	○			
	38	○	○	○	○			
	39	○	○	○	○			
	40	○	○	○	○			
	41	○	○	○	○			
	42	○	○	○	○			
	43	○	○	○	○			
	44	○	○	○	○			
	45	○	○	○	○			
	46	○	○	○	○			
	47	○	○	○	○			
	48	○	○	○	○			
	49	○	○	○	○			
	50	○	○	○	○			
	51	○	○	○	○			
	52	○	○	○	○			
	53	○	○	○	○			
	54	○	○	○	○			
	55	○	○	○	○			
	56	○	○	○	○			
	57	○	○	○	○			
	58	○	○	○	○			
	59	○	○	○	○			

OBSERVATION RECORD

COMPANY Hercules

TYPE FACILITY Cement

LOCATION 30° North of East

POINT OF EMISSIONS Baghouse

TEST NUMBER 4

DATE August 1

SKY CONDITION Blue Haze

WIND SPEED Calm

OBSERVER Susan Stecko

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
10a	0	O	O	O	O			Blue-white Sky
	1	O	O	O	O			
	2	O	O	O	O			
	3	O	O	O	O			
	4	O	O	O	O			
	5	O	O	O	O			
	6	O	O	O	O			
	7	O	O	O	O			
	8	O	O	O	O			
	9	O	O	O	O			
	10	O	O	O	O			
	11	O	O	O	O			
	12	O	O	O	O			
	13	O	O	O	O			
	14	O	O	O	O			
	15	O	O	O	O			
	16	O	O	O	O			
	17	O	O	O	O			
	18	O	O	O	O			
	19	O	O	O	O			
	20	O	O	O	O			
	21	O	O	O	O			
	22	O	O	O	O			
	23	O	O	O	O			
	24	NEG						
	25							Move Direction
	26							40° South of East
	27	O	O	O	O			
	28	O	O	O	O			
	29	O	O	O	O			

OBSERVATION RECORD

COMPANY Hercules

LOCATION 40° South of East

TEST NUMBER 4

SKY CONDITION Blue-white

OBSERVER Susan Steckel

TYPE FACILITY Cement

POINT OF EMISSIONS Baghouse 95 ft

DATE August

WIND SPEED Calm

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
[illegible]	30	○	○	○	○			Close to stack
	31	○	○	○	○			70 ft away
	32	○	○	○	○			
	33	○	○	○	○			
	34	○	○	○	○			
	35	○	○	○	○			
	36	○	○	○	○			
	37	○	○	○	○			
	38	○	○	○	○			
	39	○	○	○	○			
	40	○	○	○	○			
	41	○	○	○	○			
	42	○	○	○	○			
	43	○	○	○	○			
	44	○	○	○	○			
	45	○	○	○	○			
	46	○	○	○	○			
	47	○	○	○	○			
	48	○	○	○	○			
	49	○	○	○	○			
	50	○	○	○	○			
	51	○	○	○	○			
	52	○	○	○	○			
	53	○	○	○	○			
	54	○	○	○	○			
	55	○	○	○	○			
	56	○	○	○	○			
	57	○	○	○	○			
	58	○	○	○	○			
	59	○	○	○	○			

OBSERVATION RECORD

COMPANY Hercules

TYPE FACILITY Cement

LOCATION 90° South of East

POINT OF EMISSIONS Baghouse

TEST NUMBER 4

DATE August 2

SKY CONDITION Blue-white

WIND SPEED 2 mph

OBSERVER Susan Hadel

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
11:00	0	O	O	O	O			
	1	O	O	O	O			
	2	O	O	O	O			
	3	O	O	O	O			
	4	O	O	O	O			
	5	O	O	O	O			
	6	O	O	O	O			
	7	O	O	O	O			
	8	O	O	O	O			
	9	O	O	O	O			
	10	O	O	O	O			
	11	O	O	O	O			
	12	O	O	O	O			
	13	O	O	O	O			
	14	O	O	O	O			
	15	O	O	O	O			
	16	O	O	O	O			
	17	O	O	O	O			
	18	O	O	O	O			
	19	O	O	O	O			
	20	O	O	O	O			
	21	O	O	O	O			
	22	O	O	O	O			
	23	O	O	O	O			
	24	O	O	O	O			
	25	O	O	O	O			
	26	O	O	O	O			
	27	O	O	O	O			
	28	O	O	O	O			
	29	O	O	O	O			

OBSERVATION RECORD

COMPANY Hercules
TYPE FACILITY Cement
LOCATION 40° South of East
POINT OF EMISSIONS Baghouse 9-4
TEST NUMBER 4
DATE August 2
SKY CONDITION Blue-white haze
WIND SPEED Calm
OBSERVER Susan Steckel

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
11:32	30	○	○	○	○			Blue white haze background remaining
	31	○	○	○	○			
	32	○	○	○	○			
	33	○	○	○	○			
	34	○	○	○	○			
	35	○	○	○	○			
	36	○	○	○	○			
	37	○	○	○	○			
	38	○	○	○	○			
	39	○	○	○	○			
	40	○	○	○	○			
	41	○	○	○	○			
	42	○	○	○	○			
	43	○	○	○	○			
	44	○	○	○	○			
	45	○	○	○	○			
	46	○	○	○	○			
	47	○	○	○	○			
	48	○	○	○	○			
	49	○	○	○	○			
	50	○	○	○	○			
	51	○	○	○	○			
	52	○	○	○	○			
	53	○	○	○	○			
	54	○	○	○	○			
	55	○	○	○	○			
	56	○	○	○	○			
	57	○	○	○	○			
	58	○	○	○	○			
	59	○	○	○	○			

OBSERVATION RECORD

COMPANY Hercules
LOCATION 40° South of E.
TEST NUMBER 4
SKY CONDITION Blue Clear
OBSERVER Susan Stechel

TYPE FACILITY Cement
POINT OF EMISSIONS Baghouse 954
DATE August 2
WIND SPEED 3mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
10/6	0	O	O	O	O			
	1	O	O	O	O			
	2	O	O	O	O			
	3	O	O	O	O			
	4	O	O	O	O			
	5	—	—	—	—			Break
	6	—	—	—	—			
	7	—	—	—	—			↓
	8	—	—	—	—			
	9	—	—	—	—			
	10	O	O	O	O			MOVED TOWARD
	11	O	O	O	O			South
	12	O	O	O	O			
	13	O	O	O	O			
	14	O	O	O	O			
	15	O	O	O	O			
	16	O	O	O	O			
	17	O	O	O	O			
	18	O	O	O	O			
	19	O	O	O	O			
	20	O	O	O	O			
	21	O	O	O	O			
	22	O	O	O	O			Blue Sky
	23	O	O	O	O			Becoming Cloudy
	24	O	O	O	O			
	25	O	O	O	O			
	26	O	O	O	O			
	27	O	O	O	O			
	28	O	O	O	O			
	29	O	O	O	O			

OBSERVATION RECORD

COMPANY Hercules
LOCATION
TEST NUMBER 4
SKY CONDITION Partly Cloudy
OBSERVER Susan Steck

TYPE FACILITY Cement Co.
POINT OF EMISSIONS Baghouse
DATE August 2
WIND SPEED 3 mph

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
1230	30	○	○	○	○			Blue sky
	31	○	○	○	○			with inter-
	32	○	○	○	○			mittent clouds
	33	○	○	○	○			in the background
	34	○	○	○	○			
	35	○	○	○	○			location reading
	36	○	○	○	○			
	37	○	○	○	○			
	38	○	○	○	○			
	39	○	○	○	○			
	40	○	○	○	○			
	41	○	○	○	○			
	42	○	○	○	○			
	43	○	○	○	○			
	44	○	○	○	○			
	45	○	○	○	○			
	46	○	○	○	○			
	47	○	○	○	○			
	48	○	○	○	○			
	49	○	○	○	○			
	50	○	○	○	○			
	51	○	○	○	○			
	52	○	○	○	○			
	53	○	○	○	○			
	54	○	○	○	○			
	55	○	○	○	○			
	56	○	○	○	○			
	57	○	○	○	○			
	58	○	○	○	○			
	59	○	○	○	○			

OBSERVATION RECORD

COMPANY Hercules
TYPE FACILITY Cement
LOCATION 60° South of East
POINT OF EMISSIONS Baghouse
TEST NUMBER 4
DATE August 2
SKY CONDITION Partly Cloudy
WIND SPEED 3mph
OBSERVER Susan Steele

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
1:00	0	O	O	O	O			Clouds
	1	O	O	O	O			moving in
	2	O	O	O	O			but sun still
	3	O	O	O	O			shining
	4	O	O	O	O			
	5	O	O	O	O			
	6	O	O	O	O			
	7	O	O	O	O			
	8	O	O	O	O			
	9	O	O	O	O			
	10	O	O	O	O			
	11	O	O	O	O			sun in
	12	—	—	—	—			compass reading
	13	O	O	O	O			Very cloudy
	14	O	O	O	O			rain
1:15	15	O	O	O	O			approaching
	16							
	17							
	18							
	19							
	20							
	21							
	22							
	23							
	24							
	25							
	26							
	27							
	28							
	29							

OBSERVATION RECORD

COMPANY Hercules
LOCATION E 30° N of Stack
TEST NUMBER
SKY CONDITION hazy blue
OBSERVER Phillig Becker

TYPE FACILITY Cement Plant
POINT OF EMISSIONS 95' baghouse stack
DATE 9/2/74
WIND SPEED calm

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
08	30	O	O	O	O			
	31	O	O	O	O			
	32	O	O	O	O			
	33	O	O	O	O			
	34	O	O	O	O			
	35	O	O	O	O			
	36	O	O	O	O			
	37	O	O	O	O			
	38	O	O	O	O			
	39	O	O	O	O			
	40	O	O	O	O			
	41	O	O	O	O			
	42	O	O	O	O			
	43	O	O	O	O			
	44	O	O	O	O			trace of smoke visible
	45	O	O	O	O			about 15' above top
	46	O	O	O	O			of stack
	47	O	O	O	O			
	48	O	O	O	O			
	49	O	O	O	O			
	50	O	O	O	O			
	51	O	O	O	O			
	52	O	O	O	O			
	53	O	O	O	O			
	54	O	O	O	O			
	55	O	O	O	O			
	56	O	O	O	O			
	57	O	O	O	O			
	58	O	O	O	O			
	59	O	O	O	O			

OBSERVATION RECORD

COMPANY Hercules

TYPE FACILITY Cement Plant

LOCATION E 30' N of stack - 100'

POINT OF EMISSIONS 95' baghouse stack

TEST NUMBER

DATE 3/2/74

SKY CONDITION

WIND SPEED ≈2

OBSERVER Phyllis Becker

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
09	0	○	○	○	○			hazy blue background
	1	○	○	○	○			
	2	○	○	○	○			
	3	○	○	○	○			
	4	○	○	○	○			
	5	○	○	○	○			
	6	○	○	○	○			
	7	○	○	○	○			
	8	○	○	○	○			
	9	○	○	○	○			
	10	○	○	○	○			
	11	○	○	○	○			
	12	○	○	○	○			
	13	○	○	○	○			
	14	○	○	○	○			
	15	○	○	○	○			
	16	○	○	○	○			
	17	○	○	○	○			
	18	○	○	○	○			
	19	○	○	○	○			
	20	○	○	○	○			
	21	○	○	○	○			
	22	○	○	○	○			
	23	○	○	○	○			
	24	○	○	○	○			
	25	○	○	○	○			
	26	○	○	○	○			
	27	○	○	○	○			
	28	○	○	○	○			
	29	○	○	○	○			

OBSERVATION RECORD

COMPANY Hercules

LOCATION E 30° N of stack

TEST NUMBER

SKY CONDITION

OBSERVER Phyllis Becker

TYPE FACILITY cement plant

POINT OF EMISSIONS 95' baghouse stack

DATE 8/2/74

WIND SPEED ≈ 2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
09	30	O	O	O	O			hazy blue background
	31	O	O	O	O			
	32	O	O	O	O			
	33	O	O	O	O			
	34	O	O	O	O			
	35	O	O	O	O			
	36	O	O	O	O			
	37	O	O	O	O			
	38	O	O	O	O			
	39	O	O	O	O			
	40	O	O	O	O			
	41	O	O	O	O			
	42	O	O	O	O			
	43	O	O	O	O			
	44	O	O	O	O			
	45	O	O	O	O			
	46	O	O	O	O			
	47	O	O	O	O			
	48	O	O	O	O			
	49	O	O	O	O			
	50	O	O	O	O			
	51	O	O	O	O			
	52	O	O	O	O			
	53	O	O	O	O			
	54	O	O	O	O			
	55	O	O	O	O			
	56	O	O	O	O			
	57	O	O	O	O			
	58	O	O	O	O			
	59	O	O	O	O			

OBSERVATION RECORD

COMPANY Hercules

LOCATION E 30° N

TEST NUMBER

SKY CONDITION

OBSERVER Phyllis Becker

TYPE FACILITY Cement Plant

POINT OF EMISSIONS 95' baghouse stack

DATE 8/2/74

WIND SPEED ≈ 2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
10	0	O	O	O	O			
	1	O	O	O	O			
	2	O	O	O	O			
	3	O	O	O	O			
	4	O	O	O	O			
	5	O	O	O	O			
	6	O	O	O	O			
	7	O	O	O	O			
	8	O	O	O	O			
	9	O	O	O	O			
	10	O	O	O	O			
	11	O	O	O	O			
	12	O	O	O	O			
	13	O	O	O	O			
	14	O	O	O	O			
	15	O	O	O	O			
	16	O	O	O	O			
	17	O	O	O	O			
	18	O	O	O	O			
	19	O	O	O	O			
	20	O	O	O	O			
	21	O	O	O	O			
	22	O	O	O	O			
	23	O	O	O	O			
	24							
	25							
	26							
	27	O	O	O	O			changed location
	28	O	O	O	O			to E 40° S
	29	O	O	O	O			

OBSERVATION RECORD

COMPANY Hercules TYPE FACILITY Cement plant

LOCATION E 40° S 100' from stack POINT OF EMISSIONS

TEST NUMBER DATE 3/2/74

SKY CONDITION hazy blue WIND SPEED Calm

OBSERVER Phyllis Becker

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
10	30	○	○	○	○			Hazy Blue background
	31	○	○	○	○			
	32	○	○	○	○			
	33	○	○	○	○			
	34	○	○	○	○			
	35	○	○	○	○			
	36	○	○	○	○			
	37	○	○	○	○			
	38	○	○	○	○			
	39	○	○	○	○			
	40	○	○	○	○			
	41	○	○	○	○			
	42	○	○	○	○			
	43	○	○	○	○			
	44	○	○	○	○			
	45	○	○	○	○			
	46	○	○	○	○			
	47	○	○	○	○			
	48	○	○	○	○			
	49	○	○	○	○			
	50	○	○	○	○			
	51	○	○	○	○			
	52	○	○	○	○			
	53	○	○	○	○			
	54	○	○	○	○			
	55	○	○	○	○			
	56	○	○	○	○			
	57	○	○	○	○			
	58	○	○	○	○			
	59	○	○	○	○			

OBSERVATION RECORD

COMPANY Hercules ~~[illegible]~~

LOCATION N 30° E

TEST NUMBER

SKY CONDITION hazy blue

OBSERVER Phyllis Becker

TYPE FACILITY Cement plant

POINT OF EMISSIONS 4 baghouse stacks - 6' h 50' from ground

DATE 8/2/74

WIND SPEED

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
11	0							changed location
	1							to N 30° E to observe
	2							4 smaller stacks to
	3							NW of stack
	4							hazy blue backgr
	5							
	6							
	7	0	0	0	0			
	8	0	0	0	0			
	9	0	0	0	0			
	10	0	0	0	0			
	11	0	0	0	0			
	12	0	0	0	0			
	13	0	0	0	0			
	14	0	0	0	0			
	15	0	0	0	0			
	16	0	0	0	0			
	17	0	0	0	0			
	18	0	0	0	0			
	19	0	0	0	0			
	20	0	0	0	0			
	21	0	0	0	0			
	22	0	0	0	0			
	23	0	0	0	0			
	24	0	0	0	0			
	25	0	0	0	0			
	26	0	0	0	0			
	27	0	0	0	0			
	28	0	0	0	0			
	29	0	0	0	0			

OBSERVATION RECORD

COMPANY Hercules
LOCATION N 30° E
TEST NUMBER
SKY CONDITION hazy blue
OBSERVER Phillip Becker

TYPE FACILITY cement plant
POINT OF EMISSIONS 4 baghouse stacks 6' tall - 50' from ground
DATE 8/2/74
WIND SPEED 5.2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
11	30	0	0	0	0			
	31	0	0	0	0			hazy blue back ground
	32	0	0	0	0			
	33	0	0	0	0			
	34	0	0	0	0			
	35	0	0	0	0			
	36	0	0	0	0			
	37	0	0	0	0			
	38	0	0	0	0			
	39	0	0	0	0			
	40	0	0	0	0			
	41	0	0	0	0			
	42	0	0	0	0			
	43	0	0	0	0			
	44	0	0	0	0			
	45	0	0	0	0			
	46	0	0	0	0			
	47	0	0	0	0			
	48	0	0	0	0			
	49	0	0	0	0			
	50	0	0	0	0			
	51	0	0	0	0			
	52	0	0	0	0			
	53	0	0	0	0			
	54	0	0	0	0			
	55	0	0	0	0			
	56	0	0	0	0			
	57	0	0	0	0			
	58	0	0	0	0			
	59	0	0	0	0			

OBSERVATION RECORD

COMPANY Hercules

LOCATION N 30° E

TEST NUMBER

SKY CONDITION hazy blue

OBSERVER Phyllis Becker

TYPE FACILITY Cement Plant

POINT OF EMISSIONS 4, 6' inchange stacks 50' from ground

DATE 8/2/74

WIND SPEED ≈ 2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
12	30	0	0	0	0			hazy blue background
	31	0	0	0	0			
	32	0	0	0	0			
	33	0	0	0	0			
	34	0	0	0	0			
	35	0	0	0	0			
	36	0	0	0	0			
	37	0	0	0	0			
	38	0	0	0	0			
	39	0	0	0	0			
	40	0	0	0	0			
	41	0	0	0	0			
	42	0	0	0	0			
	43	0	0	0	0			
	44	0	0	0	0			
	45	0	0	0	0			
	46	0	0	0	0			
	47	0	0	0	0			
	48	0	0	0	0			
	49	0	0	0	0			
	50	0	0	0	0			
	51	0	0	0	0			
	52	0	0	0	0			
	53	0	0	0	0			
	54	0	0	0	0			
	55	0	0	0	0			
	56	0	0	0	0			
	57	0	0	0	0			
	58	0	0	0	0			
	59	0	0	0	0			

OBSERVATION RECORD

COMPANY Hercules

LOCATION N 30° E

TEST NUMBER

SKY CONDITION hazy blue

OBSERVER Phyllis Becker

TYPE FACILITY Cement plant

POINT OF EMISSIONS 4 6' baghouse stack 50' from ground

DATE 8/2/74

WIND SPEED ≈ 2

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
12	0	○	○	○	○			hazy blue back-
	1	○	○	○	○			ground
	2	○	○	○	○			
	3	○	○	○	○			
	4	○	○	○	○			
	5	○	○	○	○			
	6	○	○	○	○			
	7	○	○	○	○			
	8	○	○	○	○			
	9	○	○	○	○			
	10	○	○	○	○			
	11	○	○	○	○			
	12	○	○	○	○			
	13	○	○	○	○			
	14	○	○	○	○			10 back ground smoke
	15	○	○	○	○			from one of the other
	16	○	○	○	○			small baghouse stack
	17	○	○	○	○			
	18	○	○	○	○			
	19	○	○	○	○			
	20	○	○	○	○			
	21	○	○	○	○			
	22	○	○	○	○			
	23	○	○	○	○			
	24	○	○	○	○			
	25	○	○	○	○			
	26	○	○	○	○			
	27	○	○	○	○			
	28	○	○	○	○			
	29	○	○	○	○			

OBSERVATION RECORD

COMPANY Hercules

LOCATION N 30° E

TEST NUMBER

SKY CONDITION hazy blue

OBSERVER Phyllis Becker

TYPE FACILITY Cement plant

POINT OF EMISSIONS 4 lighthouse stacks 50' from ground

DATE 8/2/74

WIND SPEED ≈ 3

Check if Applicable

Hr	Sec. / Min.	0	15	30	45	STEAM PLUME Attached	STEAM PLUME Detached	COMMENTS
13	0	O	O	O	O			
	1	O	O	O	O			
	2	O	O	O	O			
	3	O	O	O	O			
	4	O	O	O	O			
	5	O	O	O	O			
	6	O	O	O	O			
	7	O	O	O	O			
	8	O	O	O	O			
	9	O	O	O	O			
	10	O	O	O	O			
	11	O	O	O	O			
	12	O	O	O	O			
	13	O	O	O	O			
	14	O	O	O	O			
	15							
	16							
	17							
	18							
	19							
	20							
	21							
	22							
	23							
	24							
	25							
	26							
	27							
	28							
	29							

SET 1456 01 0874

APPENDIX E

SMOKE SCHOOL DATA

APPENDIX E

EXPLANATION OF THE SMOKE SCHOOL FACILITIES AT SCOTT ENVIRONMENTAL TECHNOLOGY, INC., PLUMSTEADVILLE, PA.

SMOKE GENERATING EQUIPMENT

The system used by Scott to train and test their employees in visible emission observation is actually 2 separate systems. Both the white and black smoke generating systems lead into the same 20' tall, 9" diameter galvanized smoke stack. A U.S. Public Health Smoke Meter (described in Federal Register, Volume 33, Number 108, "Control of Air Pollution from New Motor Vehicles and New Motor Vehicle Engines.") is mounted on the stack, 2' from the top. The zero and voltage controls and opacity indicator gauge along with the recorder are located on a table on the ground. Descriptive drawings of the equipment are included in this appendix.

WHITE SMOKE

A 2½ horse power Briggs and Stratton gasoline engine was used to produce the white smoke. Diesel fuel from a one gallon container located above the engine was let down into the exhaust pipe of the engine where it vaporized, thus producing white smoke. The amount of diesel fuel flowing into the exhaust pipe of the engine and therefore the amount of smoke being generated was regulated by a needle valve on the tubing. The smoke was blown from the exhaust pipe up into the stack through a small port in the stack. The opacity range of the white smoke was 0% to 100%. Dilution air was provided with a high volume fan mounted at the base of the stack.

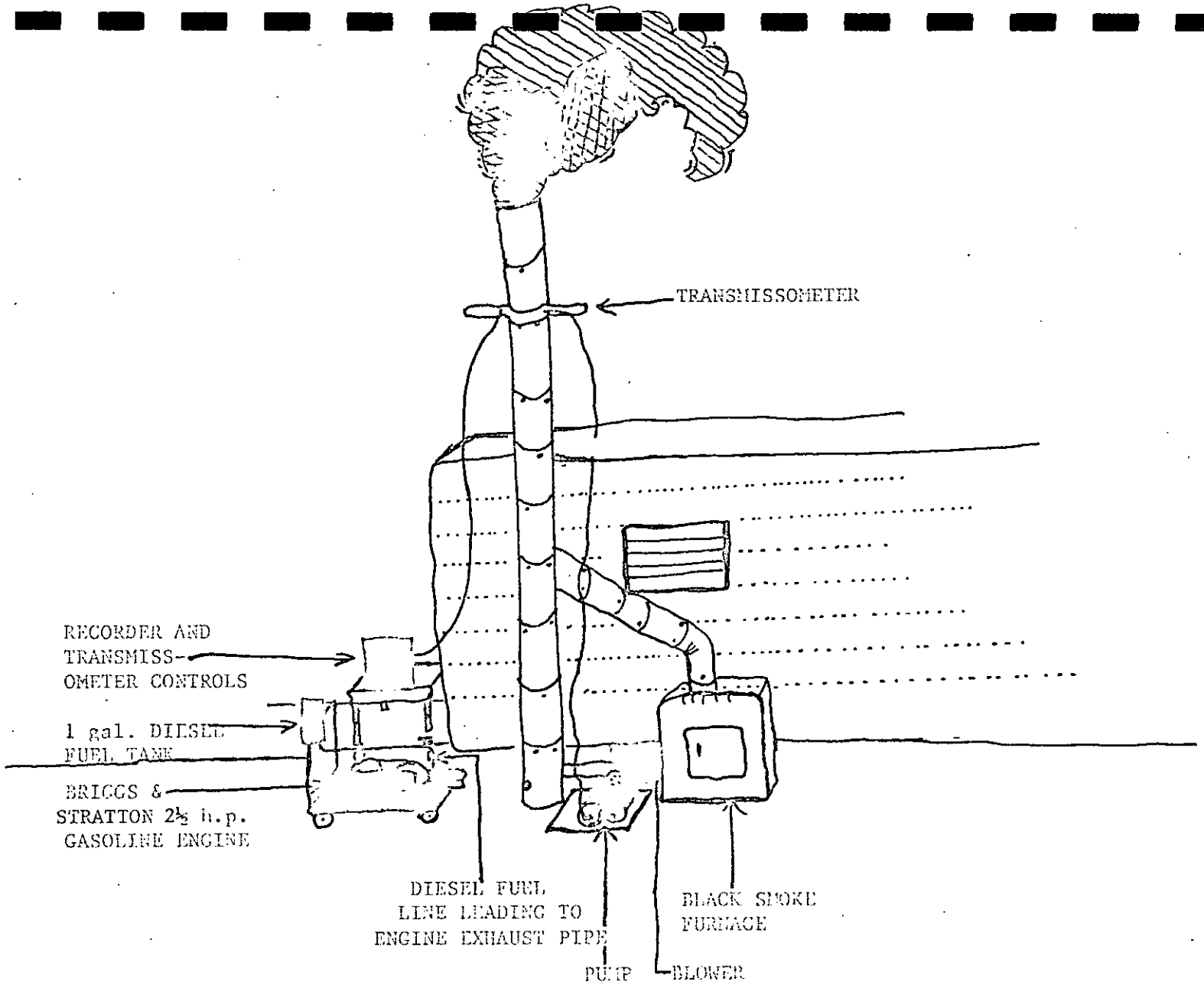
BLACK SMOKE

The system used to generate black smoke involved a kerosene heater and sawed up pieces of automobile tires. The tire pieces were burnt in the kerosine heater and the resulting black smoke was piped into the stack through 6" diameter galvanized pipe. A blower at the bottom of the stack pushed the smoke up through the stack regulating the amount of air diluting the smoke. In this way, the opacity can be adjusted from 0% to 100%.

VISIBLE EMISSIONS OBSERVATION TRAINING PROCEDURE

The visible emissions observation training began by familiarizing the trainees with the visual properties belonging to plumes of different opacities. To do this, the test supervisor adjusted the plume and checked the transmissometer reading, gave the trainees a signal to observe the plume and then informed them as to the opacity. This was done for many opacities from 0% to 100%.

When the trainees had completed this initial familiarization, the test supervisor gave a few trial tests to give them an idea of how their observations matched the actual opacity. After this procedure, the trainees took the test, without assistance from one another, or the test supervisor, and passed becoming certified visible emissions observers. The tests which qualified the observers involved in this project are included in this appendix.



SMOKE SCHOOL FACILITIES AT SCOTT ENVIRONMENTAL TECHNOLOGY, INC., PLUMSTEADVILLE, PA.

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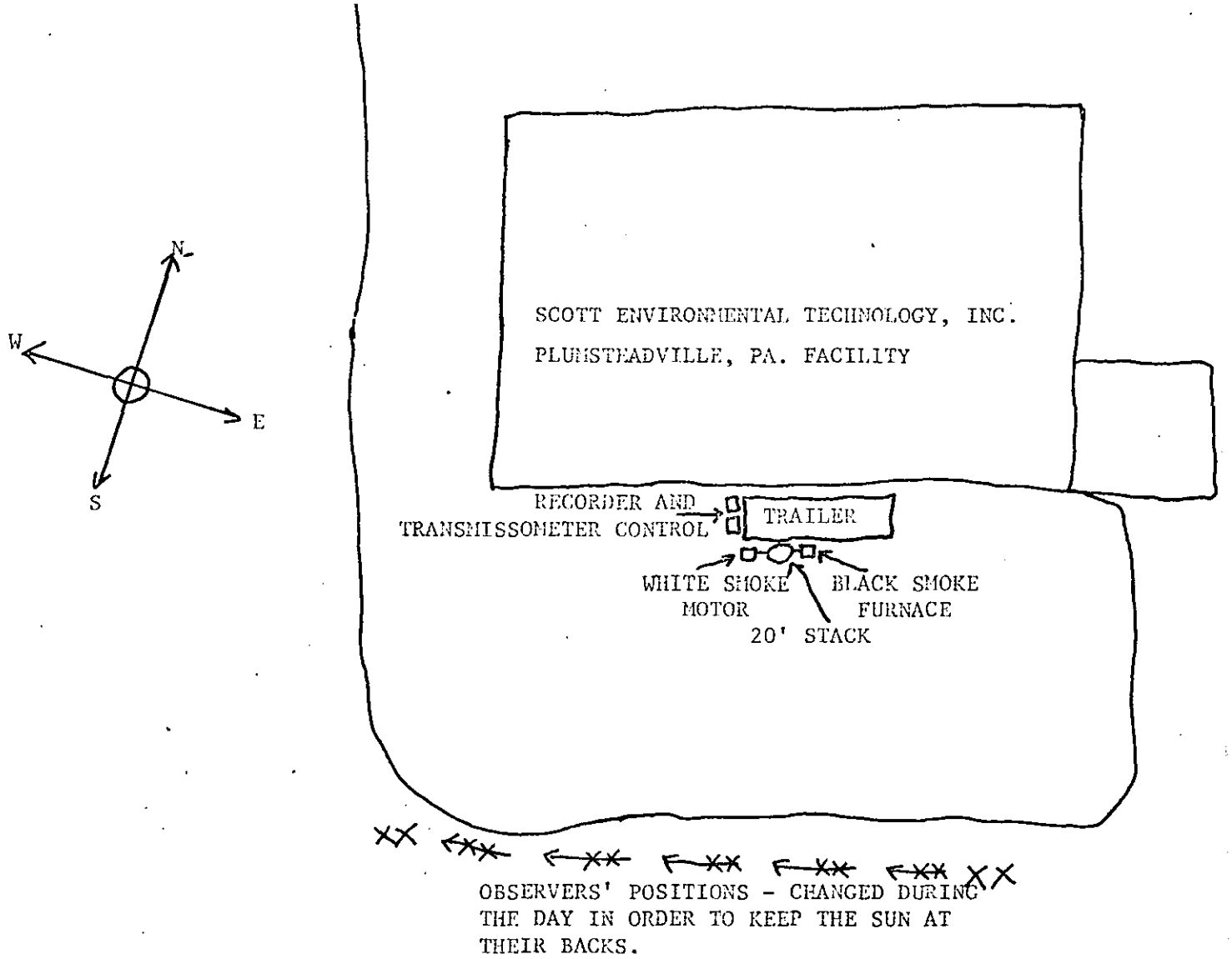

GENERAL POSITIONS OF SMOKE SCHOOL
EQUIPMENT AND SMOKE SCHOOL TRAINEES

SET 1456 01 0874

SMOKE SCHOOL TRAINING FORM

1. Name of Observer Phyllis Becker
2. Affiliation Scott Environmental Tech
3. Date 7/17 Time PM
4. Wind Speed 5 Direction SW Sky Condition Sunny
5. Observers Position West of Stack
6. Corrected By [illegible]

Record Black and/or White Smoke in Percent Opacity (for example: 5 percent smallest division)

RUN NO. 3 White

Reading No.	Observer Reading	Transmissometer Reading	+ Deviation	− Deviation	Reading No.	Observer Reading	Transmissometer Reading	+ Deviation	− Deviation
1	0	5		5	13	10	7	3	
2	95	95	—		14	[illegible]	65	5	
3	[illegible]	95		10	15	[illegible]	20	5	
4	70	75		5	16	[illegible]	92		12
5	[illegible]	95		5	17	[illegible]	60	5	
6	[illegible]	0	—		18	[illegible]	30	5	
7	35	20	15		19	[illegible]	10		5
8	[illegible]	90		5	20	[illegible]	55	—	
9	[illegible]	50	10		21	[illegible]	90		5
10	[illegible]	90		10	22	[illegible]	40		10
11	[illegible]	5		5	23	[illegible]	8		3
12	[illegible]	32	13		24	[illegible]	52		2
					25	[illegible]	70		5

RUN NO. 4 Black

Reading No.	Observer Reading	Transmissometer Reading	+ Deviation	− Deviation	Reading No.	Observer Reading	Transmissometer Reading	+ Deviation	− Deviation
1	40	45		5	13	10	15		5
2	[illegible]	50		10	14	70	60	10	
3	[illegible]	60	—		15	[illegible]	20	5	
4	[illegible]	90	5		16	[illegible]	85		5
5	[illegible]	30	—		17	[illegible]	60	5	
6	25	25	—		18	[illegible]	40		5
7	[illegible]	20		5	19	[illegible]	10		5
8	[illegible]	40		5	20	[illegible]	55	—	
9	20	25		5	21	[illegible]	90		5
10	25	20	5		22	[illegible]	35		5
11	[illegible]	50	10		23	[illegible]	5	—	
12	[illegible]	80	—		24	[illegible]	50	—	
					25	[illegible]	58	10	

7. Run Number
8. Number Correct
9. Number of Plus Deviations
10. Number of Minus Deviations
11. Average Plus Deviations = $\frac{\text{Sum of Plus Deviations}}{\text{No. of Plus Deviations}}$
12. Average Minus Deviations = $\frac{\text{Sum of Minus Deviations}}{\text{No. of Minus Deviations}}$
13. Average Deviation = $\frac{(\text{Sum of Plus Deviations}) + (\text{Sum of Minus Deviations})}{\text{Total No. of Readings}}$
14. Number of Readings 20% Deviation and Over

3	4
3	7
8	11
14	7
7.6	9.4
6.6	5.5
6.0	4.4
0	0

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SET 1456 01 0874

SMOKE SCHOOL TRAINING FORM

1. Name of Observer Susan Steckel
2. Affiliation Scott Environmental Technology
3. Date July 16, 1979 Time 10:00 am
4. Wind Speed 4 mph Direction Northwest Sky Condition Sunny
5. Observers Position East of the stack
6. Corrected By Up Stakes

Record Black and/or White Smoke in Percent Opacity (for example: 5 percent smallest division)

RUN NO. 1 (White)

Reading No.	Observer Reading	Transmissometer Reading	+ Deviation	− Deviation	Reading No.	Observer Reading	Transmissometer Reading	+ Deviation	− Deviation
1	75	81		6	13	80	68	12	
2	55	58		3	14	[illegible]	74	11	
3	10	23		13	15	90	85	5	
4	20	29		9	16	100	94	6	
5	70	66	4		17	70	72		2
6	20	28	2		18	20	30		
7	60	62		2	19	10	12		2
8	5	13		8	20	5	9		4
9	20	24		4	21	40	26	14	
10	50	51		1	22	70	64	6	
11	30	26	4		23	80	74	6	
12	60	53	7		24	95	91	4	
					25	35	42		7

RUN NO. 2 (Black)

Reading No.	Observer Reading	Transmissometer Reading	+ Deviation	− Deviation	Reading No.	Observer Reading	Transmissometer Reading	+ Deviation	− Deviation
1	75	75	—		13	15	20		5
2	90	80	10		14	10	20		10
3	80	70	10		15	25	25	—	
4	60	60	—		16	5	15		10
5	55	55	—		17	55	40	15	
6	50	45	5		18	95	95	—	
7	40	40	—		19	95	90		5
8	55	55	—		20	85	75	10	
9	65	60	5		21	75	75	—	
10	70	55	15		22	90	80	—	
11	10	20		10	23	95	95	—	
12	35	30	5		24	65	70		5
					25	100	95	5	

7. Run Number	1 / 2
8. Number Correct	1 / 10
9. Number of Plus Deviations	12 / 9
10. Number of Minus Deviations	12 / 6
11. Average Plus Deviations = Sum of Plus Deviations / No. of Plus Deviations	6.75 / 8.8
12. Average Minus Deviations = Sum of Minus Deviations / No. of Minus Deviations	5.08 / 7.5
13. Average Deviation = (Sum of Plus Deviations) + (Sum of Minus Deviations) / Total No. of Readings	5.7 / 5
14. Number of Readings 20% Deviation and Over	0 / 0

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