Background Report Reference

AP-42 Section Number: 11.6

Background Chapter: 4

Reference Number: 32

Title: Stack Sampling at Trinity Division of General Portland, Fort Worth, TX

Texas Air Control Board

Texas Air Control Board

July 1976

STACK SAMPLING

AT

TRINITY DIVISION

OF GENERAL PORTLAND

FORT WORTH, TEXAS

ON

JUNE 14-16 AND 24-25, 1976

ACCOUNT NUMBER 113-967-3

JULY 16, 1976

PREPARED BY THE STAFF OF THE

TEXAS AIR CONTROL BOARD

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Introduction

Stack samples were taken from the No. 3 Clinker Cooler stack during June 14-16, 1976 and the No. 1 & 2 Kiln stack during June 24-25, 1976, at Trinity Division of General Portland, Inc., Fort Worth, Texas. These samples were taken to determine compliance with Texas Air Control Board Rule 105.1, which concerns particulate emissions. Sulfur dioxide was also detected in the kiln stack, however no sulfur dioxide pollutant mass rate was determined due to difficulties encountered in the field.

This sampling was performed by the staff of the Texas Air Control Board, Byron Bailey, Jr., P. E., was in charge of these stack sampling operations. He was assisted by Billy T. Chafin, P. E., and David L. Thompson.

Conclusion

Both of these stacks were in violation of Rule 105.1. The clinker cooler stack average particulate pollutant mass rate was 17.1 pounds per hour while the average allowable emission rate was 12.6 pounds per hour. The kiln stack average particulate pollutant mass rate was 184.5 pounds per hour while the average allowable emission rate was 170.9 pounds per hour.

Special Equipment Used

A "Dwyer Microtetor" was used in place of the standard inclined manometer for sampling the clinker cooler stack due to low stack velocities which could not be determined with the standard inclined manometer.

Multiple Sources

A flow rate split of 50% each for the No. 1 & 2 kilns has been used to calculate the combined average allowable emission rate shown above, and those for each sample shown on the Summary of Results page for this stack.

Plant Operational Status

Plant Operational Status forms are pages 20 and 21 of this report. During all of the samples taken, both sources were reported to be operating at 100% of maximum capacity which was reported to be 100% of normal capacity.

Clinker Cooler No. 3

SUMMARY OF RESULTS

Particulate

Average Percent Water 2.2 %

Average Velocity 4.8 ft/sec

Account Number 113-967-3 Emission Point Number 4

	Sample One*	Sample Four	Sample Five	Sample Six	Average Value
Time Date	1522-1702 14 June 76	1520-1740 15 June 76	0955-1200 16 June 76	1430-1635 16 June 76	96 min
Total Gas Emission Rate (ACFM)	10,300	7,820	7,830	6,170	8,040
Effective Stack Height (ft.)	106	105	105	104	105
Standard Effective Stack Height (ft.)	26.7	24.2	24.2	22.3	24.3
Particulate Allowable Emission Rate (lb/hr) Rule 105.1	14.8	12.4	12.5	10.7	12.6
Particulate Pollutant Mass Rate (lb/hr)	28.8	19.3	8.8	11.4	17.1
Percent Isokinetic	99.0	102.7	103.7	101.4	101.7 .0714

* Sample No. 2 was voided due to pump failure, and sample No. 3 was voided due to unacceptable isokinetic percentage.

No. 1 & 2 Kiln

SUMMARY OF RESULTS

Particulate

Average Percent Water 25.7 %

Average Velocity 61.4 ft/sec

Account Number 113-967-3 Emission Point Number 1

	Sample One	Sample Two	Sample Three	Sample Four	Average Value
Time Date		0930-1233 25 June 76	1422-1717 25 June 76		
Total Gas Emission Rate (ACFM)		366,000	333,400		350,000
Effective Stack Height (ft.)	VOIDED DUE TO UNACCEPTABLE ISOKINETIC PERCENTAGE	359	334		347
Standard Effective Stack Height (ft.)		93.0	90.0		91.5
Particulate * Allowable Emission Rate (lb/hr) Rule 105.1		175.9	165.9		170.9
Particulate Pollutant Mass Rate (lb/hr)		215.5	153.6		184.5
Percent Isokinetic		102.8	97.6		100.2

* Allowable emission rate has been based on two sources with equal flow rates.

INPUT DATA

TRINITY PORTLAND DIV. GENERAL PORTLAND FORT WORTH (08-0014)

CLINKER COOLER NO.3 (BAILEY)

SAMPLE NO ONE DATE JUNE 14 76 TIME 1522 TO 1702

NOZ.AREA: .0010830 SQFT PITOT CALIB. FACTOR: .8390

TRAV. DURATION 96.0 MIN. VOL. DRY GAS METER: 33.95 CUFT

STACK: DIA.EXIT 6.00 FT. PORT 5.94 FT. HEIGHT 100.0 FT.

ORSAT ANALYSIS: CO2 .000, O2 .186, CO .000, N2 .814. DGMCF= .9879

TEMP IN DEG F: DRY GAS METER AVER. 84.50. STACK AVER. 154.20

MASS IN GRAMS: TOTAL IMP. GAIN 10.20 TOTAL PARTICULATE .8138

PARTICULATE IN IMP. .0000. SO2 .0000. H2S .0000.

H2SO4 .0000. FLUORIDE IONS .0000. SO3 .0000.CL2 .0000

PRESS: ATMOS 29.20 IN.HG, STACK -.130 IN.H2O. AV.DELTA H .372 IN.H2O

PITOT TUBE DELTA P'S IN IN.H2O:

.006	.008	.008	.011	.010	.018	.010	.012
.010	.008	.009	.009	.008	.008	.005	.006
.007	.011	.011	.014	.015	.015	.020	.014

RULE 107 PROCESS WEIGHT RATE .0 POUNDS PER HOUR

RULE 105.3 & 201.5 HEAT INPUT .0 MILLION BTU PER HOUR

RULES SELECTED 105.1

EXCESS AIR FLAG OFF PARTICAL SIZE FLAG MIXED

CALCULATION RESULTS

TRINITY PORTLAND DIV. GENERAL PORTLAND FORT WORTH (08-0014)

CLINKER COOLER NO.3 (BAILEY)

SAMPLE NO ONE DATE JUNE 14 76 TIME 1522 TO 1702

1.49 % H2O BW2 .000 NOZ.VOL. 38.453 CUFT EACF 1.000

AV.VEL.PORT 6.224 FT PER SEC M.WT. 28.58 EF.STK.HT. 106.1 FT

ACFM 10348.6 SCFM 8712.2 (NO EXCESS AIR CORRECTION)

RULE 105.1
194.7 % OF ALLOWABLE %ISO. 99.0 STD.EF.STK.HT. 26.7 FT
EMISS.RATES.LBS/HR: ALLOWABLE 14.8. POLL.MASS 28.8
THIS STACK WAS IN VIOLAION OF RULE 105.1

INPUT DATA

TRINITY PORTLAND DIV. GENERAL PORTLAND FORT WORTH (08-0014)

CLINKER COOLER NO.3 (BAILEY)

SAMPLE NOFOUR DATEJUNE 15 76 TIME 1520 TO 1740

NOZ.AREA: .0010830 SQFT PITOT CALIB. FACTOR: .8390

TRAV. DURATION 120.0 MIN. VOL. DRY GAS METER: 30.52 CUFT

STACK: DIA,EXIT 6.00 FT, PORT 5.94 FT. HEIGHT 100.0 FT

ORSAT ANALYSIS: CO2 .000, O2 .208. CO .000, N2 .792. DGMCF= 1.0355

TEMP IN DEG F: DRY GAS METER AVER. 80.75. STACK AVER. 165.90

MASS IN GRAMS: TOTAL IMP. GAIN 18.50 TOTAL PARTICULATE .6927

PARTICULATE IN IMP. .0000, SO2 .0000, H2S .0000,

H2SO4 .0000, FLUORIDE IONS .0000, SO3 .0000.CL2 .0000

PRESS: ATMOS 29.20 IN.HG, STACK .060 IN.H2O. AV.DELTA H .176 IN.H2O

PITOT TUBE DELTA P'S IN IN.H2O:

.010	.010	.010	.008	.008	.010	.008	.006
.004	.004	.002	.002	.004	.006	.006	.006
.006	.004	.002	.004	.006	.006	.006	.006

RULE 107 PROCESS WEIGHT RATE .0 POUNDS PER HOUR

RULE 105.3 & 201.5 HEAT INPUT .0 MILLION BTU PER HOUR

RULES SELECTED 105.1

EXCESS AIR FLAG OFF PARTICAL SIZE FLAG MIXED

CALCULATION RESULTS

TRINITY PORTLAND DIV. GENERAL PORTLAND FORT WORTH (08-0014)

CLINKER COOLER NO.3 (BAILEY)

SAMPLE NOFOUR DATEJUNE 15 76 TIME 1520 TO 1740

2.81 % H2O BW2 .000 NOZ.VOL. 37.649 CUFT EACF 1.000

AV.VEL.PORT 4.703 FT PER SEC M.WT. 28.53 EF.STK.HT. 104.8 FT

ACFM 7820.0 SCFM 6463.5 (NO EXCESS AIR CORRECTION)

RULE 105.1

155.0 % OF ALLOWABLE %ISO. 102.7 STD.EF.STK.HT. 24.2 FT

EMISS.RATES,LBS/HR: ALLOWABLE 12.4. POLL.MASS 19.3

THIS STACK WAS IN VIOLAION OF RULE 105.1

INPUT DATA

TRINITY PORTLAND DIV. GENERAL PORTLAND FORT WORTH (08-0014)

CLINKER COOLER NO.3 (BAILEY)

SAMPLE NOFIVE DATE JUNE 16 76 TIME 0955 TO 1200

NOZ.AREA: .0010830 SQFT PITOT CALIB. FACTOR: .8390

TRAV. DURATION 120.0 MIN. VOL. DRY GAS METER: 31.10 CUFT

STACK: DIA.EXIT 6.00 FT, PORT 5.94 FT. HEIGHT 100.0 FT

ORSAT ANALYSIS: CO2 .000, O2 .210, CO .000, N2 .790, DGMCF= 1.0355

TEMP IN DEG F: DRY GAS METER AVER. 71.90, STACK AVER. 155.10

MASS IN GRAMS: TOTAL IMP. GAIN 14.30 TOTAL PARTICULATE .3173

PARTICULATE IN IMP. .0000, SO2 .0000, H2S .0000,

H2SO4 .0000, FLUORIDE IONS .0000, SO3 .0000,CL2 .0000

PRESS: ATMOS 29.20 IN.HG, STACK .060 IN.H2O, AV.DELTA H .187 IN.H2O

PITOT TUBE DELTA P'S IN IN.H2O:

.002	.004	.002	.004	.005	.005	.006	.006
.004	.004	.004	.002	.006	.008	.012	.011
.011	.012	.012	.012	.008	.006	.004	.002

RULE 107 PROCESS WEIGHT RATE .0 POUNDS PER HOUR

RULE 105.3 & 201.5 HEAT INPUT .0 MILLION BTU PER HOUR

RULES SELECTED 105.1

EXCESS AIR FLAG OFF PARTICAL SIZE FLAG MIXED

CALCULATION RESULTS

TRINITY PORTLAND DIV. GENERAL PORTLAND FORT WORTH (08-0014)

CLINKER COOLER NO.3 (BAILEY)

SAMPLE NOFIVE DATE JUNE 16 76 TIME 0955 TO 1200

2.11 % H2O BW2 .000 NOZ.VOL. 38.057 CUFT EACF 1.000

AV.VEL.PORT 4.708 FT PER SEC M.WT. 28.61 EF.STK.HT. 104.6 FT

ACFM 7828.7 SCFM 6584.2 (NO EXCESS AIR CORRECTION)

RULE 105.1

70.6 % OF ALLOWABLE %ISO. 103.7 STD.EF.STK.HT. 24.2 FT

EMISS.RATES,LBS/HR: ALLOWABLE 12.5. POLL.MASS 8.8

INPUT DATA

TRINITY PORTLAND DIV. GENERAL PORTLAND FORT WORTH (08-0014)

CLINKER COOLER NO.3 (BAILEY)

SAMPLE NO SIX DATE JUNE 16 76 TIME 1430 TO 1635

NOZ.AREA: .0010830 SQFT PITOT CALIB. FACTOR: .8390

TRAV. DURATION 120.0 MIN. VOL. DRY GAS METER: 24.68 CUFT

STACK: DIA.EXIT 6.00 FT, PORT 5.94 FT, HEIGHT 100.0 FT

ORSAT ANALYSIS: CO2 .000, O2 .194, CO .000, N2 .806, DGMCF= 1.0355

TEMP IN DEG F: DRY GAS METER AVER. 84.60, STACK AVER. 151.20

MASS IN GRAMS: TOTAL IMP. GAIN 11.80 TOTAL PARTICULATE .4057

PARTICULATE IN IMP. .0000, SO2 .0000, H2S .0000,

H2SO4 .0000, FLUORIDE IONS .0000, SO3 .0000,CL2 .0000

PRESS: ATMOS 29.20 IN.HG, STACK .070 IN.H2O, AV.DELTA H .115 IN.H2O

PITOT TUBE DELTA P'S IN IN.H2O:

.002	.002	.002	.002	.002	.004	.004	.002
.002	.002	.002	.002	.006	.006	.006	.006
.008	.008	.008	.004	.004	.004	.004	.002

RULE 107 PROCESS WEIGHT RATE .0 POUNDS PER HOUR

RULE 105.3 & 201.5 HEAT INPUT .0 MILLION BTU PER HOUR

RULES SELECTED 105.1

EXCESS AIR FLAG OFF PARTICAL SIZE FLAG MIXED

CALCULATION RESULTS

TRINITY PORTLAND DIV. GENERAL PORTLAND FORT WORTH (08-0014)

CLINKER COOLER NO.3 (BAILEY)

SAMPLE NO SIX DATE JUNE 16 76 TIME 1430 TO 1635

2.25 % H2O BW2 .000 NOZ.VOL. 29.344 CUFT EACF 1.000

AV.VEL.PORT 3.710 FT PER SEC M.WT. 28.53 EF.STK.HT. 103.6 FT

ACFM 6168.1 SCFM 5220.9 (NO EXCESS AIR CORRECTION)

RULE 105.1
105.8 % OF ALLOWABLE %ISO. 101.4 STD.EF.STK.HT. 22.3 FT
EMISS.RATES.LBS/HR: ALLOWABLE 10.7, POLL.MASS 11.4
THIS STACK WAS IN VIOLAION OF RULE 105.1

AVERAGE RESULTS

TRINITY PORTLAND DIV. GENERAL PORTLAND FORT WORTH (08-0014)

CLINKER COOLER NO.3 (BAILEY)

2.16 % H2O BW2 .000 NOZ.VOL. 35.876 CUFT EACF 1.000

AV.VEL.PORT 4.836 FT PER SEC M.WT. 28.56 EF.STK.HT. 104.8 FT

ACFM 8041.3 SCFM 6745.2 (NO EXCESS AIR CORRECTION)

RULE 105.1
131.5 % OF ALLOWABLE %ISO. 101.7 STD.EF.STK.HT. 24.3 FT
EMISS.RATES.LBS/HR: ALLOWABLE 12.6, POLL.MASS 17.1
PERCENT OF ALLOWABLE FROM AVERAGE RESULTS: 135.3
THIS STACK WAS IN VIOLAION OF RULE 105.1

INPUT DATA

TRINITY PORTLAND DIV. GENERAL PORTLAND FORT WORTH (08-0015)

NO. 1 AND NO. 2 KILN (BAILEY)

SAMPLE NO TWO DATE JUNE 25 76 TIME 0930 TO 1233

NOZ.AREA: .0001432 SQFT PITOT CALIB. FACTOR: .8390

TRAV. DURATION 144.0 MIN. VOL. DRY GAS METER: 36.74 CUFT

STACK: DIA,EXIT 11.00 FT, PORT 11.00 FT. HEIGHT 74.0 FT

ORSAT ANALYSIS: CO2 .140, O2 .108, CO .000, N2 .752, DGMCF= .9816

TEMP IN DEG F: DRY GAS METER AVER. 74.70, STACK AVER. 416.90

MASS IN GRAMS: TOTAL IMP. GAIN 286.50 TOTAL PARTICULATE .3583

PARTICULATE IN IMP. .0000, SO2 2.7575, H2S .0000,

H2SO4 .0000, FLUORIDE IONS .0000, SO3 .0114,CL2 .0000

PRESS: ATMOS 29.30 IN.HG, STACK .780 IN.H2O, AV.DELTA H .211 IN.H2O

PITOT TUBE DELTA P'S IN IN.H2O:

.650	1.100	1.100	1.500	1.500	1.500	1.400	1.200
1.100	.850	.730	.550	.550	.750	.830	.830
.850	.850	.750	.700	.650	.600	.510	.420
.230	.370	.450	.470	.470	.450	.460	.420
.400	.370	.350	.330	.670	1.000	1.200	1.200
1.200	1.100	1.000	.850	.760	.630	.550	.450

RULE 107 PROCESS WEIGHT RATE .0 POUNDS PER HOUR

RULE 105.3 & 201.5 HEAT INPUT .0 MILLION BTU PER HOUR

RULES SELECTED 105.1

EXCESS AIR FLAG OFF PARTICAL SIZE FLAG MIXED

ACFM (UNCORRECTED FOR EXCESS AIR) WAS GREATER THAN (OR EQUAL TO) 100.000 CFM; SEE RULE 103.6

CALCULATION RESULTS

TRINITY PORTLAND DIV. GENERAL PORTLAND FORT WORTH (08-0015)

NO. 1 AND NO. 2 KILN (BAILEY)

SAMPLE NO TWO DATE JUNE 25 76 TIME 0930 TO 1233

27.67 % H2O BW2 .000 NOZ.VOL. 81.741 CUFT EACF 1.000

AV.VEL.PORT 64.270 FT PER SEC M.WT. 27.18 EF.STK.HT. 359.3 FT

ACFM 366469.3 SCFM 217329.6 (NO EXCESS AIR CORRECTION)

RULE 105.1
159.4 % OF ALLOWABLE %ISO. 102.8 STD.EF.STK.HT. 93.0 FT
EMISS.RATES,LBS/HR: ALLOWABLE 135.2, POLL.MASS 215.5
THIS STACK WAS IN VIOLAION OF RULE 105.1

INPUT DATA

TRINITY PORTLAND DIV. GENERAL PORTLAND FORT WORTH (08-0015)

NO. 1 AND NO. 2 KILN (BAILEY)

SAMPLE NO THREE DATE JUNE 25 76 TIME 1422 TO 1717

NOZ.AREA: .0001432 SQFT PITOT CALIB. FACTOR: .8390

TRAV. DURATION 144.0 MIN. VOL. DRY GAS METER: 34.07 CUFT

STACK: DIA,EXIT 11.00 FT, PORT 11.00 FT. HEIGHT 74.0 FT

ORSAT ANALYSIS: CO2 .148, O2 .098, CO .000, N2 .754, DGMCF= .9816

TEMP IN DEG F: DRY GAS METER AVER. 85.20, STACK AVER. 419.21

MASS IN GRAMS: TOTAL IMP. GAIN 211.10 TOTAL PARTICULATE .2489

PARTICULATE IN IMP. .0000, SO2 .0943, H2S .0000,

H2SO4 .0000, FLUORIDE IONS .0000, SO3 1.7854,CL2 .0000

PRESS: ATMOS 29.30 IN.HG, STACK .780 IN.H2O, AV.DELTA H .181 IN.H2O

PITOT TUBE DELTA P'S IN IN.H2O:

.630	1.100	1.200	1.300	1.200	1.100	.950	.850
.770	.700	.600	.500	.220	.350	.470	.450
.470	.470	.440	.150	.200	.200	.250	.320
.270	.420	.520	.550	.550	.550	.520	.450
.400	.400	.350	.320	.500	.850	1.000	1.000
1.100	1.000	.940	1.100	1.100	.930	.950	.870

RULE 107 PROCESS WEIGHT RATE .0 POUNDS PER HOUR

RULE 105.3 & 201.5 HEAT INPUT .0 MILLION BTU PER HOUR

RULES SELECTED 105.1

EXCESS AIR FLAG OFF PARTICAL SIZE FLAG MIXED

ACFM (UNCORRECTED FOR EXCESS AIR) WAS GREATER THAN (OR EQUAL TO) 100,000 CFM: SEE RULE 103.6

CALCULATION RESULTS

TRINITY PORTLAND DIV. GENERAL PORTLAND FORT WORTH (08-0015)

NO. 1 AND NO. 2 KILN (BAILEY)

SAMPLE NO THREE DATE JUNE 25 76 TIME 1422 TO 1717

23.68 % H2O BW2 .000 NOZ.VOL. 70.608 CUFT EACF 1.000

AV.VEL.PORT 58.465 FT PER SEC M.WT. 27.74 EF.STK.HT. 334.3 FT

ACFM 333366.0 SCFM 197178.7 (NO EXCESS AIR CORRECTION)

RULE 105.1
120.5 % OF ALLOWABLE %ISO. 97.6 STD.EF.STK.HT. 90.0 FT
EMISS.RATES,LBS/HR: ALLOWABLE 127.5, POLL.MASS 153.6
THIS STACK WAS IN VIOLAION OF RULE 105.1

AVERAGE RESULTS

TRINITY PORTLAND DIV. GENERAL PORTLAND FORT WORTH (08-0015)

NO. 1 AND NO. 2 KILN (BAILEY)

25.68 % H2O BW2 .000 NOZ.VOL. 76.175 CUFT EACF 1.000

AV.VEL.PORT 61.368 FT PER SEC M.WT. 27.46 EF.STK.HT. 346.8 FT

ACFM 349917.6 SCFM 207254.2 (NO EXCESS AIR CORRECTION)

RULE 105.1
139.9 % OF ALLOWABLE %ISO. 100.2 STD.EF.STK.HT. 91.5 FT
EMISS.RATES.LBS/HR: ALLOWABLE 131.3, POLL.MASS 184.5
PERCENT OF ALLOWABLE FROM AVERAGE RESULTS: 140.5
THIS STACK WAS IN VIOLAION OF RULE 105.1

TEXAS AIR CONTROL BOARD
REGION VIII LABORATORY
3915-A Highway 377 South
Fort Worth, Texas 76116

Analysis for: Particulates, SO_2, SO_3 MSSL # 113-967-3

Company: Trinity Division, Lab Log # 80124

General Portland, Fort Worth, Texas Delivered by: Byron Bailey

Sample Description: No. 3 Clinker Date Sampled: June 16, 1976

Cooler Stack Date Received: June 16, 1976

LABORATORY ANALYSIS

Run No	Particulates Filter, gm.	Particulates Probe Wash, gm.	SO_3	SO_2
1	0.0638	0.750	N.D.	N.D.
2	Samples Aborted			
3	0.0517	0.418	N.D.	N.D.
4	0.0937	0.599	N.D.	N.D.
5	0.0543	0.263	N.D.	N.D.
6	0.0737	0.332	N.D.	N.D.

James Nahm

Analysis Performed by
James Nahm

June 18, 1976
Date Reported

TEXAS AIR CONTROL BOARD
REGION VIII LABORATORY
3915-A Highway 377 South
Fort Worth, Texas 76116

Analysis for: Particulates/SO_3/SO_2 MSSL # 113-967-3

Company: Trinity Division, Lab Log # 80125

General Portland, Fort Worth, Texas Delivered by: Byron Bailey

Sample Description: No. 1 and No. 2 Date Sampled: June 24-25, 1976

Kiln Stack Date Received: June 28, 1976

LABORATORY ANALYSIS

Run No.	Filter Part. gm.	Probe Wash Part. gm.	Impinger No. 1 SO_3, gm.	Impinger No. 2 SO_2, gm.	Impinger No. 3 SO_2, gm.
1	0.0736	0.1344	0.8332 (1.0207)*	2.1523	0.0129
2	0.0795	0.2788	0.0114 (0.0140)*	2.7508	0.0067
3	0.0856	0.1633	1.7854 (2.1871)*	0.0920	0.0023

Note: *Calculated as gm. H_2SO_4

Analysis Performed by
JAMES NAHM

June 29, 1976
Date Reported

Region VIII Office
Texas Air Control Board
3915-A Highway 377 South
Fort Worth, Texas 76116

PLANT OPERATIONAL STATUS FORM

Sampling Periods

Date 6-16-76 Account Number 113-967-3

Plant Name TRINITY DIV.-GEN. PORT. Location FT. WORTH

Stack Name #3 CLINKER COOLER

Proportional or Isokinetic Sampling ISOKINETIC

Sample Number	Duration of Sample (Show Start time and Stop time)		Date of Sample
1.	From 3:22 PM	To 5:02 PM	6-14-76
3.	From 11:28 AM	To 12:46 PM	6-15-76
4.	From 3:20 PM	To 5:40 PM	6-15-76
5.	From 9:55 AM	To 12:00 NOON	6-16-76
6.	From 2:30 PM	To 4:35 PM	6-16-76

Special Conditions

Signature Byron C. Bailey Jr. P.E.

Title ENGR II

The above portion is to be completed by the Air Control Board representative. The following portion is to be completed by the plant representative.

Plant Status During Sampling Periods Shown Above

Type of Process Rotary Cement Kiln

Abatement Controls Paraclone Dust Collector

Stack Height 100 ft Stack Exit Diameter 6'-0"

Emission Point Number 4 (JW)

Sample Number	Percent of Maximum Capacity	Percent of Normal Operating Capacity	Special Conditions
1.	100%	100%	None
3.	100%	100%	"
4.	100%	100%	"
5.	100%	100%	"
6.	100%	100%	"

Additional Information

I certify that the above statements are true to the best of my knowledge and belief:

Signature John L Wittmayer

Title Plant Engineer

Region [illegible]
Texas Air Control Board
3915-A Highway 377 South
Fort Worth, Texas 76116

RECEIVED
AUG 4 1976
REGION 8
AIR POLLUTION CONTROL

PLANT OPERATIONAL STATUS FORM

Sampling Periods

Date 6-25-76 Account Number 113-967-3

Plant Name TRINITY DIV. GEN. PORTLAND Location FT. WORTH

Stack Name #1 & #2 KILN STACK

Proportional or Isokinetic Sampling ISOKINETIC

Sample Number	Duration of Sample (Show Start time and Stop time)	Date of Sample
1.	From 2:50 PM To 6:21 PM	6-29-76
2.	From 9:30 AM To 12:33 PM	6-25-76
3.	From 2:22 PM To 5:17 PM	6-25-76
4.	From _____ To _____	_____

Special Conditions _____

Signature Brian C. Bailey Jr.

Title Sr. Eng.

The above portion is to be completed by the Air Control Board representative. The following portion is to be completed by the plant representative.

Plant Status During Sampling Periods Shown Above

Type of Process Rotary Cement Kiln

Abatement Controls Electrostatic Precipitator

Stack Height 74 ft Stack Exit Diameter 11'-0" ft

Emission Point Number 1

Sample Number	Percent of Maximum Capacity	Percent of Normal Operating Capacity	Special Conditions
1.	100%	100%	None (2 KILNS - 50% EA
2.	100%	100%	None (2 KILNS - 50% EAC
3.	100%	100%	None (2 KILNS - 50% EAC
4.	_____	_____	_____

Additional Information _____

I certify that the above statements are true to the best of my knowledge and belief:

Signature John Wittmayer

Title PH. Engr.