ASH GROVE CEMENT WEST, INC.

330 CEMENT PLANT ROAD
P.O. BOX 5
DURKEE, OREGON 97905
(503) 877-2411

May 13, 1987

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

Dear Mr. Noonan:

Mr. Robert Crolius, Director of Public Affairs for the Portland Cement Association has requested that member plants send data to you on the NOX emission as measured in the stacks from their Portland Cement kilns.

I am sending you a report on a test performed September 15, 1985 by Mr. David R. Rossman, P.E., Horizon Engineering on our kiln.

In addition I am sending you copies of our daily plant reports for the month of April 1987. Plant report #6 shows the hourly NOX. At the bottom of the page the maximum, minimum and mean of the values are noted for the 24 hour calendar day. To calculate the ppm NOX, the % NOXST reading is multiplied times 2500, i.e. a 50% reading would equal 1250 ppm.

In addition to the coal burned we are using 3.5 to 4 gallons per minute of used motor oil in our four stage preheater kiln. This oil is not included on the plant reports.

Attached is a reprint from the July 1980 Pit & Quarry magazine that describes this plant.

I will be happy to supply further information if you need it.

Very truly yours,

ASH GROVE CEMENT WEST, INC.

R E Cooke

Richard E. Cooke
Plant Manager

REC:mm

Enclosures

Horizon Engineering
505 N.E. Thompson Mill Road
Corbett, Oregon 97019
503/695-2151

NOX EMISSION TEST REPORT

ASHGROVE CEMENT WEST, INC.

DURKEE, OREGON CEMENT PLANT

September 15, 1985

Prepared For

Ashgrove Cement West, Inc.
111 S.E. Madison Street
Portland, Oregon 97214

by

David R. Rossman, P.E.

ASHGROVE CEMENT WEST, DURKEE, OREGON

Introduction and Summary of Results

Ashgrove Cement West, Inc. is planning on constructing a plant in the Seattle, Washington area and needed information to predict the amount of NOx that will be emitted from that plant. Since the plant to be constructed is similar to a plant already in operation near Durkee, Oregon, it was decided to obtain data from that plant. Although that plant has a continuous NOx monitor, it samples the kiln exhaust very near the kiln. Since the exhaust gases are used to preheat the kiln raw material and there is a considerable amount of ductwork and therefore residence time associated with this preheating, it was considered possible that the concentration measured at the exit of the kiln is not representative of the exhaust discharge to the atmosphere. It was decided to take samples near the stack discharge to more accurately determine the impact on the atmosphere.

The results of the testing are in the table below. The five results are with the plant running at steady state on type II cement, using EPA Method 7 sampling and analytical methods.

Time, 24 hr-	10:27	11:02	11:32	12:33	13:01
Concentration,	6	7	8	2	3
NOx lb/scfd-	4.8 *10-5	5.3 *10-5	4.0 *10-5	6.9 *10-5	7.5 *10-5
NOx ppm-	410	445	340	572	634

	Average Values
Concentration, NOx lb/scfd-	5.7*10-5
NOx ppm-	480
Production, tph clinker-	60.8
tph feed-	100.1
Stack Flow, scfm- (based on 11/84 stack test @ 105 tph feed)	89,700
lb NOx/hr-	307.
lb NOx/ton product-	5.06

ASH GROVE CEMENT WEST, DURKEE, OREGON

Sampling and Analytical Methods

Sampling and analytical methods conformed to EPA Method 7. This method uses evacuated two liter flasks loaded with an absorbing solution for collecting the sample, and after several pretreatment steps the samples are analyzed with a spectrophotometer. Complete laboratory analysis of the collected samples was done by Antech, but spectrophotometer readings were confirmed on another machine at Aqua Tech. Although the results from both labs were close, the readings from Aqua Tech were used for calculation purposes because the standard curve generated on their machine was straighter and all sample absorbtion data was within the standard curve range.

Sampling was done through the south port normally used for particulate testing. Samples were drawn from a single point about 2 feet into the stack and about a foot upstream (down) from the sampling port. The sampling probe was a piece of 1/4 in o.d. stainless steel tubing feeding into a heated manifold before the flask. Heating was controlled to eliminate condensation in the glass valve at the top of the flask as the system was being purged.

Details of the sampling and lab procedures are in the complete copy of the EPA method included in the appendix.

Plant Description and Operation

The plant tested is a coal fired, refractory lined rotary kiln, and was running a type II cement on the test date. Exhaust from the kiln is used to preheat incoming raw material and is then cleaned in an electrostatic precipitator system. Fans on the outlet of the precipitator discharge into an insulated stack several hundred feet tall. Sampling ports are about 50 feet below the stack discharge.

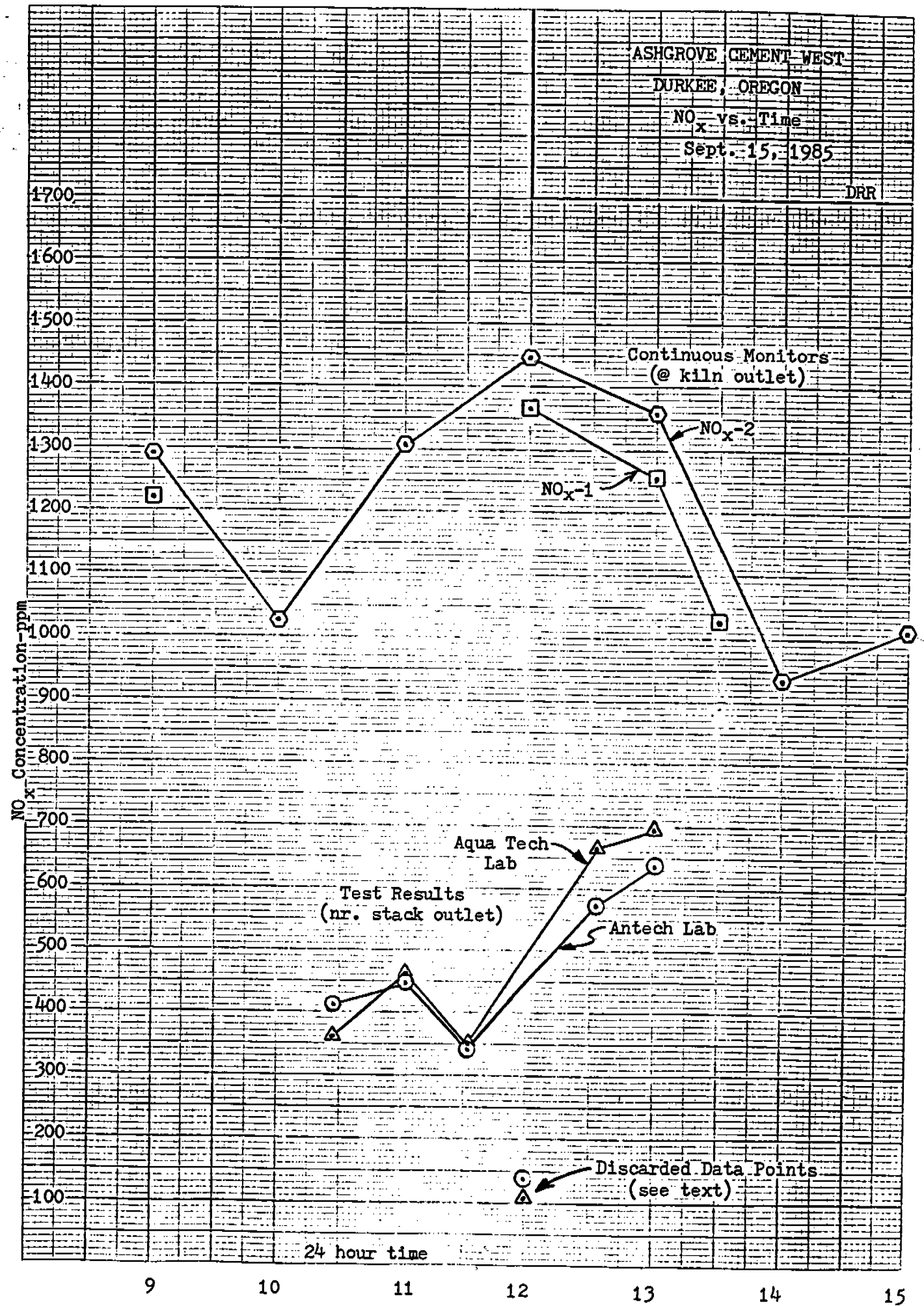
Plant operation is continuously monitored with a computer system, and printouts of most of the data is included in the appendix. One of the two kiln exhaust NOx monitors was disconnected during part of the testing to allow checking some bag samples taken from the test location. Data from the other monitor was only available on an hourly basis.

ASHGROVE CEMENT WEST, DURKEE, OREGON

Discussion

The figure on the next page shows the sampling data and the data from the continuous monitors at the kiln outlet. The difference in concentration between the two locations is substantial.

The results of one of the test flasks was not included in the average calculations. When compared with the other data points, it appeared out of line, and examinations of the sampling data, lab procedure, and plant operation did not give any clues on why. One statistical technique to test dubious data points is called Chauvenet's Criterion. This test, referenced and detailed in the appendix, permitted that data point to be excluded from the averages.



ASHGROVE CEMENT WEST, DURKEE, OREGON

APPENDICES

- -field data and calculations
- -laboratory results
- -statistical analysis
- -EPA Method 7
- -plant operation records

DETERMINATION OF NITROGEN OXIDE EMISSIONS - EPA METHOD 7

SOURCE ASH GROVE CEMENT
DATE SEPT 15 1985
OPERATOR ROSSMAN
OPERATING CONDITIONS OF SOURCE
TYPE 2 CEMENT

AQUA TECH LAB

								Blanks	
	Flask number	5	6	7	8	1	2	3	4
V_f	Volume of flask and valve, ml.	2080	2050	2060	2070	2050	2100	2090	205
	Date of initial readings 9/15/85, time,	10:27	11:02	11:32	12:00	12:33	13:01	10:15	10:
T_{if}	Initial temperature of flask, °F	62	62	62	63	64	70	70	70
T_{ir}	Initial absolute temperature of flask, °R	522	522	522	523	524	530	530	53C
Pbi	Initial barometric pressure, in. Hg. (taken at the sampling elevation)	27.12	27.12	27.12	27.09	27.09	27.09	27.12	27.1
Pmi	Initial manometer readings, in. Hg.	-26.45	-26.45	-26.60	-26.30	-26.25	-26.25	Not Evacuated 0.0	0.0
P_i	Initial absolute pressure of flask, $P_i = P_{bi} + P_{mi}$, in. Hg	.67	.67	.52	.79	.84	.84	27.12	27.1
	Date of final readings 9/16/85, time,	0600	0605	0610	0615	0620	0625	0630	063
P_{bf}	Final barometric pressure, in. Hg.	28.81							
P_{mf}	Final manometer reading, in. Hg.	-10.30	-2.25	-2.60	-2.10	-2.45	-3.60	-1.85	-1.7
P_f	Final absolute pressure of flask $P_f = Pbf + Pmf$, in. Hg.	18.51	26.56	26.21	26.71	26.36	25.21	26.96	27.0
TfF	Final temperature of flask, °F	60	60	60	60	60	60	60	60
T_{fr}	Final absolute temperature of flask, °R	520	520	520	520	520	520	520	52
V_a	Volume of absorbing solution, ml	25	25	25	25	25	25	25	25
V_{sc}	$17.64\,(V_f - V_a)\left(\frac{P_f}{T_{fr}} - \frac{P_i}{T_{ir}}\right)$, ml	1243.8	1778.7	1773.6	1798.5	1753.5	1716.5	—	—
M	Mass of NO_2 in gas sample, µg AQUATECH	971.4	1509.0	1147.5	471.6	1911.4	2074.8	—	—
C	$6.243 \times 10^{-5}\left(\frac{M}{V}\right)_{sc}$, lb/scf	4.876 x10⁻⁵	5.296 x10⁻⁵	4.039 x10⁻⁵	1.637 x10⁻⁵	6.805 x10⁻⁵	7.546 x10⁻⁵	—	—
	$(lb/scf \times 10^{-6})_{sc} \times 8.406 =$ ppm	409.9	445.2	339.5	137.6	572	634.3	—	—
	Average C NO_2, lb/scf	5.71 x10⁻⁵*							
	ppm	480*							

* excluding #8

ASHGROVE CEMENT

AQUA-TECH SPECTROPHOTOMETER

$$K_c = 100 \cdot \frac{A_1 + 2A_2 + 3A_3 + 4A_4}{A_1^2 + A_2^2 + A_3^2 + A_4^2}$$

Std. Curve Data:	ug	Absorbance	A_x
	100	.100	1
	200	.254	2
	300	.400	3
	400	.500	4

$$K_c = 100\left[\frac{.100 + 2(.254) + 3(.400) + 4(.500)}{(.100)^2 + (.254)^2 + (.400)^2 + (.500)^2}\right]$$

3.808 / .4845

$$= 785.939$$

$m = 2 K_c A F$ where m = mass of NO_x (as NO_2) - ug

K_c = as above

A = Absorbance

F = dilution factor

Sample #	Dilution	Absorb	mass
25902	4X	.304	1911.4
25903	4X	.330	2074.8
25906	2X	.309	971.4
25907	2X	.480	1509.0
25908	2X	.365	1147.5
25909	2X	.150	471.6

ASHGROVE CEMENT

AQUA TECH LAB RESULTS (CONT.)

Sample #	Conc. lb/scf		Conc. ppm
25902	6.805	x10^{-5}	572.0
3	7.546	"	634.3
6	4.876	"	409.9
7	5.296	"	445.2
8	4.039	"	339.5
9	1.637	"	137.6

Production Basis

$$\frac{\text{lb NO}_x}{\text{ton clinker}} = \frac{\text{lb NO}_x}{\text{scfd}} \times \frac{\text{scfd}}{\text{min}} \times \frac{60\ \text{min}}{\text{hr}} \times \frac{\text{hr}}{\text{tons clinker}}$$

$$= 5.056\ \text{lb NO}_x / \text{ton clinker}$$

$$5.03\times10^{-5} \times X \times \frac{60 \times}{60.8} = 5.056$$

NO_x - lb/scfd $\Rightarrow$ ppm conversion

$$\frac{16\ NO_2}{Ft^3\ air} \times \frac{386\ Ft^3}{16\text{-}mole} \times \frac{16\text{-}mole}{46\ 16\text{-}NO_2}$$

$$\frac{16\ NO_2}{Ft^3\ air} \times 8.406\ Ft^3/16\ NO_2 = \text{dimensionless}$$

$\therefore$ 6.013×10^{-5} lb/scfd

$= 60.13 \times 10^{-6}$ lb/scfd

$\times 8.406 = 505.5 \times 10^{-6}$

$= 505.5$ ppm

Ashgrove Cement - Data Check

"Experimental Methods for Engineers", P53, J.P. Holman, 196

Chauvenet's Criterion: "A reading may be rejected if the probability of obtaining the particular deviation from the mean is less than $1/2n$

Data	Value-ppm	Deviation
5	409.9	-13.18
C	445.2	22.12
7	339.5	-83.58
8	137.6	-285.48
1	572.0	+148.92
2	634.3	+211.22

$x_m = 423.08$

Standard Deviation

$$\sigma = \left[\frac{1}{n}\sum_{i=1}^{n}(x_i - x_m)^2\right]^{1/2}$$

where $n = 6$

and $x_i - x_m$ are from the table above

$\sigma = 161.2$

From table 3-4 for $n = 6$, the ratio of maximum acceptable deviation to standard deviation $\left(\frac{d_{max}}{\sigma}\right)$ is 1.73

$$\frac{d_{max}}{\sigma} = 1.73$$

$$\therefore d_{max} = 1.73(\sigma)$$

$$= 278.9$$

∴ data point no. 8 can be rejected

According to the method, a new mean value and standard deviation may be computed with the dubious data point eliminated from the calculation.

Data	Value	Deviation
5	409.9	-70.3
6	445.2	-35.0
7	339.5	-140.7
1	572.0	+91.8
2	634.3	154.1

$X_m = 480.18$

Std. Dev. = σ = 107.8

3.3.5 Sulfuric Acid Standard, 0.0100 N. Purchase or standardize to ±0.0002 N against 0.0100 N NaOH which has previously been standardized against potassium acid phthalate (primary standard grade).

4. *Procedure.*

4.1 Sampling.

4.1.1 Preparation of collection train. Measure 15 ml of 80 percent isopropanol into the midget bubbler and 15 ml of 3 percent hydrogen peroxide into each of the first two midget impingers. Leave the final midget impinger dry. Assemble the train as shown in Figure 6-1. Adjust probe heater to a temperature sufficient to prevent water condensation. Place crushed ice and water around the impingers.

4.1.2 Leak-check procedure. A leak check prior to the sampling run is optional; however, a leak check after the sampling run is mandatory. The leak-check procedure is as follows:

Temporarily attach a suitable (e.g., 0-40 cc/min) rotameter to the outlet of the dry gas meter and place a vacuum gauge at or near the probe inlet. Plug the probe inlet, pull a vacuum of at least 250 mm Hg (10 in. Hg), and note the flow rate as indicated by the rotameter. A leakage rate not in excess of 2 percent of the average sampling rate is acceptable.

NOTE: Carefully release the probe inlet plug before turning off the pump.

It is suggested (not mandatory) that the pump be leak-checked separately, either prior to or after the sampling run. If done prior to the sampling run, the pump leak-check shall precede the leak check of the sampling train described immediately above; if done after the sampling run, the pump leak-check shall follow the train leak-check. To leak check the pump, proceed as follows: Disconnect the drying tube from the probe-impinger assembly. Place a vacuum gauge at the inlet to either the drying tube or the pump, pull a vacuum of 250 mm (10 in.) Hg, plug or pinch off the outlet of the flow meter and then turn off the pump. The vacuum should remain stable for at least 30 seconds.

Other leak-check procedures may be used, subject to the approval of the Administrator, U.S. Environmental Protection Agency.

4.1.3 Sample collection. Record the initial dry gas meter reading and barometric pressure. To begin sampling, position the tip of the probe at the sampling point, connect the probe to the bubbler, and start the pump. Adjust the sample flow to a constant rate of approximately 1.0 liter/min as indicated by the rotameter. Maintain this constant rate (±10 percent) during the entire sampling run. Take readings (dry gas meter, temperatures at dry gas meter and at impinger outlet and rate meter) at least every 5 minutes. Add more ice during the run to keep the temperature of the gases leaving the last impinger at 20° C (68° F) or less. At the conclusion of each run, turn off the pump, remove probe from the stack, and record the final readings. Conduct a leak check as in Section 4.1.2. (This leak check is mandatory.)

If a leak is found, void the test run, or use procedures acceptable to the Administrator to adjust the sample volume for the leakage. Drain the ice bath, and purge the remaining part of the train by drawing clean ambient air through the system for 15 minutes at the sampling rate.

Clean ambient air can be provided by passing air through a charcoal filter or through an extra midget impinger with 15 ml of 3 percent H_2O_2. The tester may opt to simply use ambient air, without purification.

4.2 Sample Recovery. Disconnect the impingers after purging. Discard the contents of the midget bubbler. Pour the contents of the midget impingers into a leak-free polyethylene bottle for shipment. Rinse the three midget impingers and the connecting tubes with deionized, distilled water, and add the washings to the same storage container. Mark the fluid level. Seal and identify the sample container.

4.3 Sample Analysis. Note level of liquid in container, and confirm whether any sample was lost during shipment; note this on analytical data sheet. If a noticeable amount of leakage has occurred, either void the sample or use methods, subject to the approval of the Administrator, to correct the final results.

Transfer the contents of the storage container to a 100-ml volumetric flask and dilute to exactly 100 ml with deionized, distilled water. Pipette a 20-ml aliquot of this solution into a 250-ml Erlenmeyer flask, add 80 ml of 100 percent isopropanol and two to four drops of thorin indicator, and titrate to a pink endpoint using 0.0100 N barium perchlorate. Repeat and average the titration volumes. Run a blank with each series of samples. Replicate titrations must agree within 1 percent or 0.2 ml, whichever is larger.

(NOTE.—Protect the 0.0100 N barium perchlorate solution from evaporation at all times.)

5. *Calibration*

5.1 Metering System.

5.1.1 Initial Calibration. Before its initial use in the field, first leak check the metering system (drying tube, needle valve, pump, rotameter, and dry gas meter) as follows: place a vacuum gauge at the inlet to the drying tube and pull a vacuum of 250 mm (10 in.) Hg; plug or pinch off the outlet of the flow meter, and then turn off the pump. The vacuum shall remain stable for at least 30 seconds. Carefully release the vacuum gauge before releasing the flow meter end.

Next, calibrate the metering system (at the sampling flow rate specified by the method) as follows: connect an appropriately sized wet test meter (e.g., 1 liter per revolution) to the inlet of the drying tube. Make three independent calibration runs, using at least five revolutions of the dry gas meter per run. Calculate the calibration factor, Y (wet test meter calibration volume divided by the dry gas meter volume, both volumes adjusted to the same reference temperature and pressure), for each run, and average the results. If any Y value deviates by more than 2 percent from the average, the metering system is unacceptable for use. Otherwise, use the average as the calibration factor for subsequent test runs.

5.1.2 Post-Test Calibration Check. After each field test series, conduct a calibration check as in Section 5.1.1 above, except for the following variations: (a) the leak check is not to be conducted, (b) three, or more revolutions of the dry gas meter may be used, and (c) only two independent runs need be made. If the calibration factor does not deviate by more than 5 percent from the initial calibration factor (determined in Section 5.1.1), then the dry gas meter volumes obtained during the test series are acceptable. If the calibration factor deviates by more than 5 percent, recalibrate the metering system as in Section 5.1.1, and for the calculations, use the calibration factor (initial or recalibration) that yields the lower gas volume for each test run.

5.2 Thermometers. Calibrate against mercury-in-glass thermometers.

5.3 Rotameter. The rotameter need not be calibrated but should be cleaned and maintained according to the manufacturer's instruction.

5.4 Barometer. Calibrate against a mercury barometer.

5.5 Barium Perchlorate Solution. Standardize the barium perchlorate solution against 25 ml of standard sulfuric acid to which 100 ml of 100 percent isopropanol has been added.

6. *Calculations*

Carry out calculations, retaining at least one extra decimal figure beyond that of the acquired data. Round off figures after final calculation.

6.1 Nomenclature.

C_{SO_2} = Concentration of sulfur dioxide, dry basis corrected to standard conditions, mg/dscm (lb/dscf).

N = Normality of barium perchlorate titrant, milliequivalents/ml.

P_{bar} = Barometric pressure at the exit orifice of the dry gas meter, mm Hg (in. Hg).

P_{std} = Standard absolute pressure, 760 mm Hg (29.92 in. Hg).

T_m = Average dry gas meter absolute temperature, °K (°R).

T_{std} = Standard absolute temperature, 293° K (528° R).

V_a = Volume of sample aliquot titrated, ml.

V_m = Dry gas volume as measured by the dry gas meter, dcm (dcf).

$V_{m(std)}$ = Dry gas volume measured by the dry gas meter, corrected to standard conditions, dscm (dscf).

V_{soln} = Total volume of solution in which the sulfur dioxide sample is contained, 100 ml.

V_t = Volume of barium perchlorate titrant used for the sample, ml (average of replicate titrations).

V_{tb} = Volume of barium perchlorate titrant used for the blank, ml.

Y = Dry gas meter calibration factor.

32.03 = Equivalent weight of sulfur dioxide.

6.2 Dry sample gas volume, corrected to standard conditions.

$$V_{m(std)} = V_m Y \left(\frac{T_{std}}{T_m}\right)\left(\frac{P_{bar}}{P_{std}}\right) = K_1 Y \frac{V_m P_{bar}}{T_m}$$

Equation 6-1

where:

K_1 = 0.3858 °K/mm Hg for metric units.
= 17.64 °R/in. Hg for English units.

6.3 Sulfur dioxide concentration.

$$C_{SO_2} = K_2 \frac{(V_t - V_{tb})\, N \left(\frac{V_{soln}}{V_a}\right)}{V_{m(std)}}$$

Equation 6-2

where:

K_2 = 32.03 mg/meq. for metric units.
= 7.061 × 10⁻⁴ lb/meq. for English units.

7. *Bibliography*

1. Atmospheric Emissions from Sulfuric Acid Manufacturing Processes. U.S. DHEW, PHS, Division of Air Pollution. Public Health Service Publication No. 999-AP-13. Cincinnati, Ohio. 1965.

2. Corbett, P. F. The Determination of SO_2 and SO_3 in Flue Gases. Journal of the Institute of Fuel. 34: 237-243, 1961.

3. Matty, R. E. and E. K. Diehl. Measuring Flue-Gas SO_2 and SO_3. Power. 101: 94-97. November 1957.

4. Patton, W. F. and J. A. Brink, Jr. New Equipment and Techniques for Sampling Chemical Process Gases. J. Air Pollution Control Association. 13: 162. 1963.

5. Rom, J. J. Maintenance, Calibration, and Operation of Isokinetic Source-Sampling Equipment. Office of Air Programs, Environmental Protection Agency. Research Triangle Park, N.C. APTD-0576. March 1972.

6. Hamil, H. F. and D. E. Camann. Collaborative Study of Method for the Determination of Sulfur Dioxide Emissions from Stationary Sources (Fossil-Fuel Fired Steam Generators). Environmental Protection Agency, Research Triangle Park, N.C. EPA-650/4-74-024. December 1973.

7. Annual Book of ASTM Standards. Part 31; Water, Atmospheric Analysis. American Society for Testing and Materials. Philadelphia, Pa. 1974. pp. 40-42.

8. Knoll, J. E. and M. R. Midgett. The Application of EPA Method 6 to High Sulfur Dioxide Concentrations. Environmental Protection Agency. Research Triangle Park, N.C. EPA-600/4-76-038. July 1976.

METHOD 7—DETERMINATION OF NITROGEN OXIDE EMISSIONS FROM STATIONARY SOURCES

1. *Principle and Applicability*

1.1 Principle. A grab sample is collected in an evacuated flask containing a dilute sulfuric acid-hydrogen peroxide absorbing solution, and the nitrogen oxides, except nitrous oxide, are measured colorimetrically using the phenoldisulfonic acid (PDS) procedure.

1.2 Applicability. This method is applicable to the measurement of nitrogen oxides emitted from stationary sources. The range of the method has been determined to be 2 to 400 milligrams NO_x (as NO_2) per dry standard cubic meter, without having to dilute the sample.

2. *Apparatus*

2.1 Sampling (see Figure 7-1). Other grab sampling systems or equipment, capable of measuring sample volume to within ±2.0 percent and collecting a sufficient sample volume to allow analytical reproducibility to within ±5 percent, will be considered acceptable alternatives, subject to approval of the Administrator, U.S. Environmental Protection Agency. The following equipment is used in sampling:

2.1.1 Probe. Borosilicate glass tubing, sufficiently heated to prevent water condensation and equipped with an in-stack or out-stack filter to remove particulate matter (a plug of glass wool is satisfactory for this purpose). Stainless steel or Teflon[1] tubing may also be used for the probe. Heating is not necessary if the probe remains dry during the purging period.

[1] Mention of trade names or specific products does not constitute endorsement by the Environmental Protection Agency.

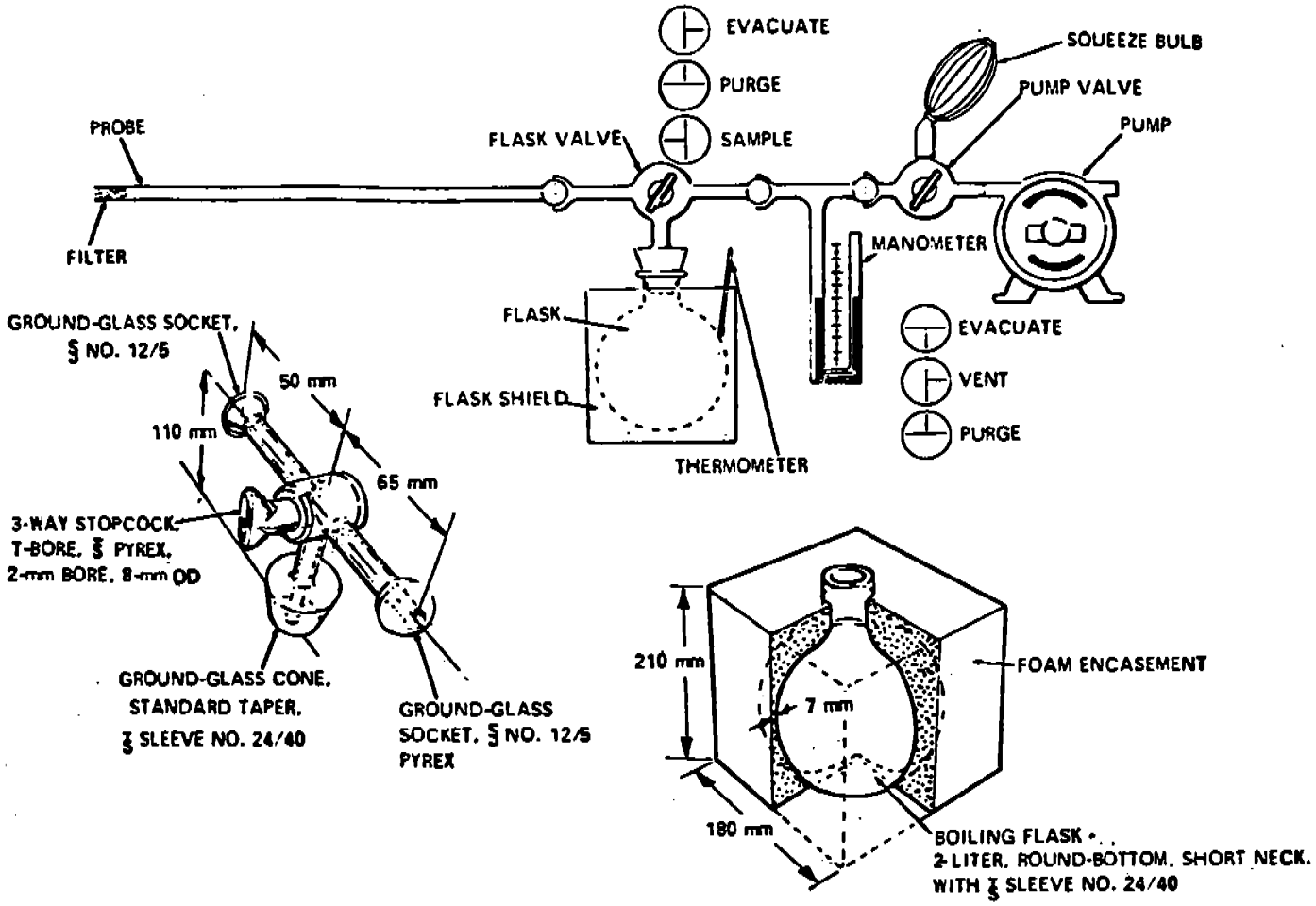


Figure 7-1. Sampling train, flask valve, and flask.

2.1.2 Collection Flask. Two-liter borosilicate, round bottom flask, with short neck and 24/40 standard taper opening, protected against implosion or breakage.

2.1.3 Flask Valve. T-bore stopcock connected to a 24/40 standard taper joint.

2.1.4 Temperature Gauge. Dial-type thermometer, or other temperature gauge, capable of measuring 1° C (2° F) intervals from −5 to 50° C (25 to 125° F).

2.1.5 Vacuum Line. Tubing capable of withstanding a vacuum of 75 mm Hg (3 in. Hg) absolute pressure, with "T" connection and T-bore stopcock.

2.1.6 Vacuum Gauge. U-tube manometer, 1 meter (36 in.), with 1-mm (0.1-in.) divisions, or other gauge capable of measuring pressure to within ±2.5 mm Hg (0.10 in. Hg).

2.1.7 Pump. Capable of evacuating the collection flask to a pressure equal to or less than 75 mm Hg (3 in. Hg) absolute.

2.1.8 Squeeze Bulb. One-way.

2.1.9 Volumetric Pipette. 25 ml.

2.1.10 Stopcock and Ground Joint Grease. A high-vacuum, high-temperature chlorofluorocarbon grease is required. Halocarbon 25-5S has been found to be effective.

2.1.11 Barometer. Mercury, aneroid, or other barometer capable of measuring atmospheric pressure to within 2.5 mm Hg (0.1 in. Hg). In many cases, the barometric reading may be obtained from a nearby national weather service station, in which case the station value (which is the absolute barometric pressure) shall be requested and an adjustment for elevation differences between the weather station and sampling point shall be applied at a rate of minus 2.5 mm Hg (0.1 in. Hg) per 30 m (100 ft) elevation increase, or vice versa for elevation decrease.

2.2 Sample Recovery. The following equipment is required for sample recovery:

2.2.1 Graduated Cylinder. 50 ml with 1-ml divisions.

2.2.2 Storage Containers. Leak-free polyethylene bottles.

2.2.3 Wash Bottle. Polyethylene or glass.

2.2.4 Glass Stirring Rod.

2.2.5 Test Paper for Indicating pH. To cover the pH range of 7 to 14.

2.3 Analysis. For the analysis, the following equipment is needed:

2.3.1 Volumetric Pipettes. Two 1 ml, two 2 ml, one 3 ml, one 4 ml, two 10 ml, and one 25 ml for each sample and standard.

2.3.2 Porcelain Evaporating Dishes. 175- to 250-ml capacity with lip for pouring, one for each sample and each standard. The Coors No. 45006 (shallow-form, 195 ml) has been found to be satisfactory. Alternatively, polymethyl pentene beakers (Nalge No. 1203, 150 ml), or glass beakers (150 ml) may be used. When glass beakers are used, etching of the beakers may cause solid matter to be present in the analytical step, the solids should be removed by filtration (see Section 4.3).

2.3.3 Steam Bath. Low-temperature ovens or thermostatically controlled hot plates kept below 70° C (160° F) are acceptable alternatives.

2.3.4 Dropping Pipette or Dropper. Three required.

2.3.5 Polyethylene Policeman. One for each sample and each standard.

2.3.6 Graduated Cylinder. 100 ml with 1-ml divisions.

2.3.7 Volumetric Flasks. 50 ml (one for each sample and each standard), 100 ml (one for each sample and each standard, and one for the working standard KNO_3 solution), and 1000 ml (one).

2.3.8 Spectrophotometer. To measure absorbance at 410 nm.

2.3.9 Graduated Pipette. 10 ml with 0.1-ml divisions.

2.3.10 Test Paper for Indicating pH. To cover the pH range of 7 to 14.

2.3.11 Analytical Balance. To measure to within 0.1 mg.

3. *Reagents*

Unless otherwise indicated, it is intended that all reagents conform to the specifications established by the Committee on Analytical Reagents of the American Chemical Society, where such specifications are available; otherwise, use the best available grade.

3.1 Sampling. To prepare the absorbing solution, cautiously add 2.8 ml concentrated H_2SO_4 to 1 liter of deionized, distilled water. Mix well and add 6 ml of 3 percent hydrogen peroxide, freshly prepared from 30 percent hydrogen peroxide solution. The absorbing solution should be used within 1 week of its preparation. Do not expose to extreme heat or direct sunlight.

3.2 Sample Recovery. Two reagents are required for sample recovery:

3.2.1 Sodium Hydroxide (1N). Dissolve 40 g NaOH in deionized, distilled water and dilute to 1 liter.

3.2.2 Water. Deionized, distilled to conform to ASTM specification D1193-74, Type 3. At the option of the analyst, the $KMnO_4$ test for oxidizable organic matter may be omitted when high concentrations of organic matter are not expected to be present.

3.3 Analysis. For the analysis, the following reagents are required:

3.3.1 Fuming Sulfuric Acid. 15 to 18 percent by weight free sulfur trioxide. HANDLE WITH CAUTION.

3.3.2 Phenol. White solid.

3.3.3 Sulfuric Acid. Concentrated, 95 percent minimum assay. HANDLE WITH CAUTION.

3.3.4 Potassium Nitrate. Dried at 105 to 110° C (220 to 230° F) for a minimum of 2 hours just prior to preparation of standard solution.

3.3.5 Standard KNO_3 Solution. Dissolve exactly 2.195 g of dried potassium nitrate (KNO_3) in deionized, distilled water and dilute to 1 liter with deionized, distilled water in a 1,000-ml volumetric flask.

3.3.6 Working Standard KNO_3 Solution. Dilute 10 ml of the standard solution to 100 ml with deionized distilled water. One milliliter of the working standard solution is equivalent to 100 µg nitrogen dioxide (NO_2).

3.3.7 Water. Deionized, distilled as in Section 3.2.2.

3.3.8 Phenoldisulfonic Acid Solution. Dissolve 25 g of pure white phenol in 150 ml concentrated sulfuric acid on a steam bath. Cool, add 75 ml fuming sulfuric acid, and heat at 100° C (212° F) for 2 hours. Store in a dark, stoppered bottle.

4. *Procedures*

4.1 Sampling.

4.1.1 Pipette 25 ml of absorbing solution into a sample flask, retaining a sufficient quantity for use in preparing the calibration standards. Insert the flask valve stopper into the flask with the valve in the "purge" position. Assemble the sampling train as shown in Figure 7-1 and place the probe at the sampling point. Make sure that all fittings are tight and leak-free, and that all ground glass joints have been properly greased with a high-vacuum, high-temperature chlorofluorocarbon-based stopcock grease. Turn the flask valve and the pump valve to their "evacuate" positions. Evacuate the flask to 75 mm Hg (3 in. Hg) absolute pressure, or less. Evacuation to a pressure approaching the vapor pressure of water at the existing temperature is desirable. Turn the pump valve to its "vent" position and turn off the pump. Check for leakage by observing the manometer for any pressure fluctuation. (Any variation

greater than 10 mm Hg (0.4 in. Hg) over a period of 1 minute is not acceptable, and the flask is not to be used until the leakage problem is corrected. Pressure in the flask is not to exceed 75 mm Hg (3 in. Hg) absolute at the time sampling is commenced. Record the volume of the flask and valve (V_f), the flask temperature (T_f), and the barometric pressure. Turn the flask valve counterclockwise to its "purge" position and do the same with the pump valve. Purge the probe and the vacuum tube using the squeeze bulb. If condensation occurs in the probe and the flask valve area, heat the probe and purge until the condensation disappears. Next, turn the pump valve to its "vent" position. Turn the flask valve clockwise to its "evacuate" position and record the difference in the mercury levels in the manometer. The absolute internal pressure in the flask (P_i) is equal to the barometric pressure less the manometer reading. Immediately turn the flask valve to the "sample" position and permit the gas to enter the flask until pressures in the flask and sample line (i.e., duct, stack) are equal. This will usually require about 15 seconds; a longer period indicates a "plug" in the probe, which must be corrected before sampling is continued. After collecting the sample, turn the flask valve to its "purge" position and disconnect the flask from the sampling train. Shake the flask for at least 5 minutes.

4.1.2 If the gas being sampled contains insufficient oxygen for the conversion of NO to NO_2 (e.g., an applicable subpart of the standard may require taking a sample of a calibration gas mixture of NO in N_2), then oxygen shall be introduced into the flask to permit this conversion. Oxygen may be introduced into the flask by one of three methods: (1) Before evacuating the sampling flask, flush with pure cylinder oxygen, then evacuate flask to 75 mm Hg (3 in. Hg) absolute pressure or less; or (2) inject oxygen into the flask after sampling; or (3) terminate sampling with a minimum of 50 mm Hg (2 in. Hg) vacuum remaining in the flask, record this final pressure, and then vent the flask to the atmosphere until the flask pressure is almost equal to atmospheric pressure.

4.2 Sample Recovery. Let the flask set for a minimum of 16 hours and then shake the contents for 2 minutes. Connect the flask to a mercury filled U-tube manometer. Open the valve from the flask to the manometer and record the flask temperature (T_f), the barometric pressure, and the difference between the mercury levels in the manometer. The absolute internal pressure in the flask (P_f) is the barometric pressure less the manometer reading. Transfer the contents of the flask to a leak-free polyethylene bottle. Rinse the flask twice with 5-ml portions of deionized, distilled water and add the rinse water to the bottle. Adjust the pH to between 9 and 12 by adding sodium hydroxide (1 N), dropwise (about 25 to 35 drops). Check the pH by dipping a stirring rod into the solution and then touching the rod to the pH test paper. Remove as little material as possible during this step. Mark the height of the liquid level so that the container can be checked for leakage after transport. Label the container to clearly identify its contents. Seal the container for shipping.

4.3 Analysis. Note the level of the liquid in container and confirm whether or not any sample was lost during shipment; note this on the analytical data sheet. If a noticeable amount of leakage has occurred, either void the sample or use methods, subject to the approval of the Administrator, to correct the final results. Immediately prior to analysis, transfer the contents of the shipping container to a 50-ml volumetric flask, and rinse the container twice with 5-ml portions of deionized, distilled water. Add the rinse water to the flask and dilute to the mark with deionized, distilled water; mix thoroughly. Pipette a 25-ml aliquot into the porcelain evaporating dish. Return any unused portion of the sample to the polyethylene storage bottle. Evaporate the 25-ml aliquot to dryness on a steam bath and allow to cool. Add 2 ml phenoldisulfonic acid solution to the dried residue and triturate thoroughly with a polyethylene policeman. Make sure the solution contacts all the residue. Add 1 ml deionized, distilled water and four drops of concentrated sulfuric acid. Heat the solution on a steam bath for 3 minutes with occasional stirring. Allow the solution to cool, add 20 ml deionized, distilled water, mix well by stirring, and add concentrated ammonium hydroxide, dropwise, with constant stirring, until the pH is 10 (as determined by pH paper). If the sample contains solids, these must be removed by filtration (centrifugation is an acceptable alternative, subject to the approval of the Administrator), as follows: filter through Whatman No. 41 filter paper into a 100-ml volumetric flask; rinse the evaporating dish with three 5-ml portions of deionized, distilled water; filter these three rinses. Wash the filter with at least three 15-ml portions of deionized, distilled water. Add the filter washings to the contents of the volumetric flask and dilute to the mark with deionized, distilled water. If solids are absent, the solution can be transferred directly to the 100-ml volumetric flask and diluted to the mark with deionized, distilled water. Mix the contents of the flask thoroughly, and measure the absorbance at the optimum wavelength used for the standards (Section 5.2.1), using the blank solution as a zero reference. Dilute the sample and the blank with equal volumes of deionized, distilled water if the absorbance exceeds A_4, the absorbance of the 400 μg NO_2 standard (see Section 5.2.2).

5. *Calibration*

5.1 Flask Volume. The volume of the collection flask-flask valve combination must be known prior to sampling. Assemble the flask and flask valve and fill with water, to the stopcock. Measure the volume of water to ±10 ml. Record this volume on the flask.

5.2 Spectrophotometer Calibration.

5.2.1 Optimum Wavelength Determination. Calibrate the wavelength scale of the spectrophotometer every 6 months. The calibration may be accomplished by using an energy source with an intense line emission such as a mercury lamp, or by using a series of glass filters spanning the measuring range of the spectrophotometer. Calibration materials are available commercially and from the National Bureau of Standards. Specific details on the use of such materials should be supplied by the vendor; general information about calibration techniques can be obtained from general reference books on analytical chemistry. The wavelength scale of the spectrophotometer must read correctly within ± 5 nm at all calibration points; otherwise, the spectrophotometer shall be repaired and recalibrated. Once the wavelength scale of the spectrophotometer is in proper calibration, use 410 nm as the optimum wavelength for the measurement of the absorbance of the standards and samples.

Alternatively, a scanning procedure may be employed to determine the proper measuring wavelength. If the instrument is a double-beam spectrophotometer, scan the spectrum between 400 and 415 nm using a 200 μg NO_2 standard solution in the sample cell and a blank solution in the reference cell. If a peak does not occur, the spectrophotometer is probably malfunctioning and should be repaired. When a peak is obtained within the 400 to 415 nm range, the wavelength at which this peak occurs shall be the optimum wavelength for the measurement of absorbance of both the standards and the samples. For a single-beam spectrophotometer, follow the scanning procedure described above, except that the blank and standard solutions shall be scanned separately. The optimum wavelength shall be the wavelength at which the maximum difference in absorbance between the standard and the blank occurs.

5.2.2 Determination of Spectrophotometer Calibration Factor K_c.

Determination of Spectrophotometer Calibration Factor K_c. Add 0.0 ml, 2 ml, 4 ml, 6 ml, and 8 ml of the KNO_3 working standard solution (1 ml = 100 μg NO_2) to a series of five 50-ml volumetric flasks. To each flask, add 25 ml of absorbing solution, 10 ml deionized, distilled water, and sodium hydroxide (1 N) dropwise until the pH is between 9 and 12 (about 25 to 35 drops each). Dilute to the mark with deionized, distilled water. Mix thoroughly and pipette a 25-ml aliquot of each solution into a separate porcelain evaporating dish.

Beginning with the evaporation step, follow the analysis procedure of Section 4.3, until the solution has been transferred to the 100 ml volumetric flask and diluted to the mark. Measure the absorbance of each solution, at the optimum wavelength, as determined in Section 5.2.1. This calibration procedure must be repeated on each day that samples are analyzed. Calculate the spectrophotometer calibration factor as follows:

$$K_c = 100\,\frac{A_1 + 2A_2 + 3A_3 + 4A_4}{A_1^2 + A_2^2 + A_3^2 + A_4^2}$$

Equation 7-1

where:
K_c = Calibration factor
A_1 = Absorbance of the 100-μg NO_2 standard
A_2 = Absorbance of the 200-μg NO_2 standard
A_3 = Absorbance of the 300-μg NO_2 standard
A_4 = Absorbance of the 400-μg NO_2 standard

5.3 Barometer. Calibrate against a mercury barometer.

5.4 Temperature Gauge. Calibrate dial thermometers against mercury-in-glass thermometers.

5.5 Vacuum Gauge. Calibrate mechanical gauges, if used, against a mercury manometer such as that specified in 2.1.6.

5.6 Analytical Balance. Calibrate against standard weights.

6. *Calculations*

Carry out the calculations, retaining at least one extra decimal figure beyond that of the acquired data. Round off figures after final calculations.

6.1 Nomenclature.

A = Absorbance of sample.
C = Concentration of NO_2 as NO_2, dry basis, corrected to standard conditions, mg/dscm (lb/dscf).
F = Dilution factor (i.e., 25/5, 25/10, etc., required only if sample dilution was needed to reduce the absorbance into the range of calibration).
K_c = Spectrophotometer calibration factor.
m = Mass of NO_2 as NO_2 in gas sample, μg.
P_f = Final absolute pressure of flask, mm Hg (in. Hg).
P_i = Initial absolute pressure of flask, mm Hg (in. Hg).
P_{std} = Standard absolute pressure, 760 mm Hg (29.92 in. Hg).
T_f = Final absolute temperature of flask, °K (°R).
T_i = Initial absolute temperature of flask, °K (°R).
T_{std} = Standard absolute temperature, 293° K (528° R).
V_{sc} = Sample volume at standard conditions (dry basis), ml.
V_f = Volume of flask and valve, ml.
V_a = Volume of absorbing solution, 25 ml.
2 = 50/25, the aliquot factor. (If other than a 25-ml aliquot was used for analysis, the corresponding factor must be substituted).

6.2 Sample volume, dry basis, corrected to standard conditions.

$$V_{sc} = \frac{T_{std}}{P_{std}}\,(V_f - V_a)\left[\frac{P_f}{T_f} - \frac{P_i}{T_i}\right]$$

$$= K_1(V_f - 25\text{ ml})\left[\frac{P_f}{T_f} - \frac{P_i}{T_i}\right]$$

Equation 7-2

where:

$$K_1 = 0.3858\,\frac{°K}{\text{mm Hg}} \text{ for metric units}$$

$$= 17.64\,\frac{°R}{\text{in. Hg}} \text{ for English units}$$

6.3 Total μg NO_2 per sample.

$$m = 2\,K_c\,A\,F$$

Equation 7-3

NOTE.—If other than a 25-ml aliquot is used for analysis, the factor 2 must be replaced by a corresponding factor.

[Appendix A, Method 7]

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6.4 Sample concentration, dry basis, corrected to standard conditions.

$$C = K_3 \frac{m}{V_{sc}}$$

Equation 7–4

where:

$$K_3 = 10^3 \frac{\text{mg/m}^3}{\mu\text{g/ml}} \text{ for metric units}$$

$$= 6.243 \times 10^{-8} \frac{\text{lb/scf}}{\mu\text{g/ml}} \text{ for English units}$$

7. *Bibliography*

1. Standard Methods of Chemical Analysis. 6th ed. New York, D. Van Nostrand Co., Inc. 1962. Vol. 1, p. 329–330.

2. Standard Method of Test for Oxides of Nitrogen in Gaseous Combustion Products (Phenoldisulfonic Acid Procedure). In: 1968 Book of ASTM Standards, Part 26. Philadelphia, Pa. 1968. ASTM Designation D–1608–60, p. 725–729.

3. Jacob, M. B. The Chemical Analysis of Air Pollutants. New York. Interscience Publishers, Inc. 1960. Vol. 10, p. 351–356.

4. Beatty, R. L., L. B. Berger, and H. H. Schrenk. Determination of Oxides of Nitrogen by the Phenoldisulfonic Acid Method. Bureau of Mines, U.S. Dept. of Interior. R. I. 3687, February 1943.

5. Hamil, H. F. and D. E. Camann. Collaborative Study of Method for the Determination of Nitrogen Oxide Emissions from Stationary Sources (Fossil Fuel-Fired Steam Generators). Southwest Research Institute report for Environmental Protection Agency. Research Triangle Park, N.C. October 5, 1973.

6. Hamil, H. F. and R. E. Thomas. Collaborative Study of Method for the Determination of Nitrogen Oxide Emissions from Stationary Sources (Nitric Acid Plants). Southwest Research Institute report for Environmental Protection Agency. Research Triangle Park, N.C. May 8, 1974.

METHOD 8—DETERMINATION OF SULFURIC ACID MIST AND SULFUR DIOXIDE EMISSIONS FROM STATIONARY SOURCES

1. *Principle and Applicability*

1.1 Principle. A gas sample is extracted isokinetically from the stack. The sulfuric acid mist (including sulfur trioxide) and the sulfur dioxide are separated, and both fractions are measured separately by the barium-thorin titration method.

1.2 Applicability. This method is applicable for the determination of sulfuric acid mist (including sulfur trioxide, and in the absence of other particulate matter) and sulfur dioxide emissions from stationary sources. Collaborative tests have shown that the minimum detectable limits of the method are 0.05 milligrams/cubic meter (0.03×10^{-7} pounds/cubic foot) for sulfur trioxide and 1.2 mg/m³ (0.74×10^{-7} lb/ft³) for sulfur dioxide. No upper limits have been established. Based on theoretical calculations for 200 milliliters of 3 percent hydrogen peroxide solution, the upper concentration limit for sulfur dioxide in a 1.0 m³ (35.3 ft³) gas sample is about 12,500 mg/m³ (7.7×10^{-4} lb/ft³). The upper limit can be extended by increasing the quantity of peroxide solution in the impingers.

Possible interfering agents of this method are fluorides, free ammonia, and dimethyl aniline. If any of these interfering agents are present (this can be determined by knowledge of the process), alternative methods, subject to the approval of the Administrator, may be required. Filterable particulate matter may be determined along with SO_3 and SO_2, subject to the approval of the Administrator) by inserting a heated glass fiber filter between the probe and isopropanol impinger (see Section 2.1 of Method 6). If this option is chosen, particulate analysis is gravimetric only; H_2SO_4 acid mist is not determined separately.

2. *Apparatus*

2.1 Sampling. A schematic of the sampling train used in this method is shown in Figure 8–1; it is similar to the Method 5 train except that the filter position is different and the filter holder does not have to be heated. Commercial models of this train are available. For those who desire to build their own, however, complete construction details are described in APTD-0581. Changes from the APTD-0581 document and allowable modifications to Figure 8–1 are discussed in the following subsections.

The operating and maintenance procedures for the sampling train are described in APTD-0576. Since correct usage is important in obtaining valid results, all users should read the APTD-0576 document and adopt the operating and maintenance procedures outlined in it, unless otherwise specified herein. Further details and guidelines on operation and maintenance are given in Method 5 and should be read and followed whenever they are applicable.

2.1.1 Probe Nozzle. Same as Method 5, Section 2.1.1.

2.1.2 Probe Liner. Borosilicate or quartz glass, with a heating system to prevent visible condensation during sampling. Do not use metal probe liners.

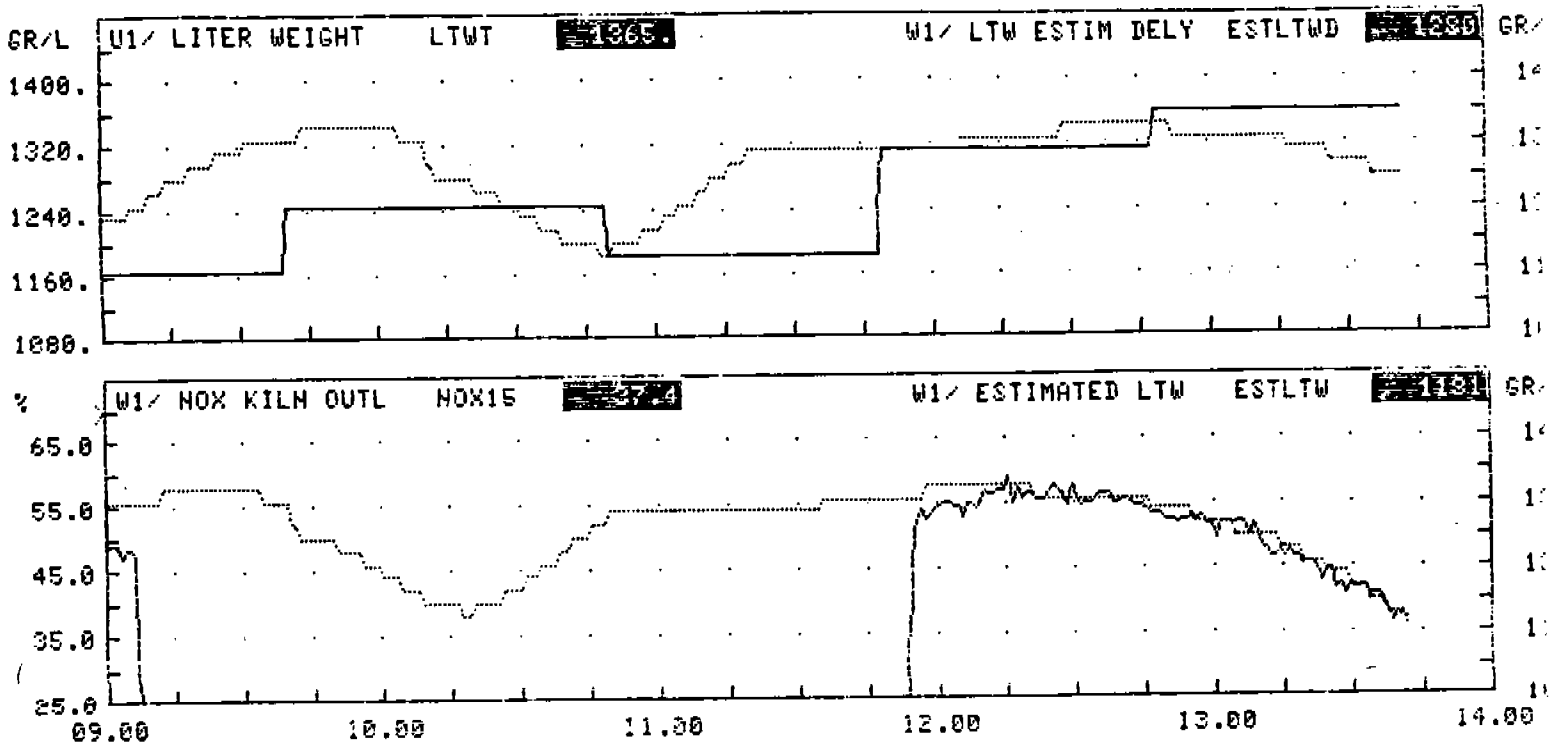
2.1.3 Pitot Tube. Same as Method 5, Section 2.1.3.

.....W1/ %O2 KILN OUTL
.....W1/ NOX KILN OUTL
WIND SPEED .....W1/ %O2 EX PREHEAT
WIND DIRECTION .....W1/ %CO EX PREHEAT
STACK OPACITY [redacted] W1/NOX-2 KILN OUTL
AIR TEMPERATURE .....W1/ %O2 EX PREHEAT
WIND SPEED W1/%CO-2 EX PREHEA
WIND DIRECTION KILN PRODUCTION

HOUR	OA WHTR1	OA WHTR2	OA WHTR3	OA 14X1	OA WHTR4	OA WHTR5	OA 15X1	ND X15	OA 1X2O2	OA 1X2CO	[redacted]	OA 1X2-2	OA 1XCO2	PR OD	HOUR
	DEG	MPH	DEG	%	DEG	MPH	%	%	%	%	%	%	%	T/H	
7	361.	3.2	50.8	13.0			2.9	47.4	2.3	--		2.2	-0.01	60.7	7
8	363.	4.1	53.1	17.4			3.0	40.9	2.6	--		2.5	-0.01	60.9	8
9	364.	4.2	51.4	16.2			2.9	48.8	2.4	--		2.3	-0.01	60.8	9
10	361.	4.3	56.7	12.6			2.7	-0.5	2.4	--	41.0	2.3	-0.01	61.0	10
11	366.	7.4	59.0	12.5			2.5	-0.3	2.3	--	52.3	2.3	-0.02	60.4	11
12	359.	9.5	65.2	15.2			2.4	54.6	2.0	--		2.0	-0.02	60.9	12
13	361.	1.7	64.1	13.9			3.6	50.2	3.0	--		2.8	-0.02	61.0	13
14	364.	4.1	63.4	17.6			3.3	35.3	2.7	--		2.6	-0.02	60.9	14
15	366.	7.3	64.8	15.7			2.8	38.7	2.3	--		2.3	-0.01	61.2	15
16	368.	5.3	67.4	14.4			2.8	41.6	2.0	--	45.7	2.1	0.01	60.7	16
17	366.	5.7	64.0	16.4			3.0	50.2	2.3	--	54.0	2.2	-0.01	61.0	17
18	364.	4.8	63.6	13.2			2.5	52.5	2.2	--	55.5	2.2	-0.01	60.9	18
19	363.	2.1	64.2	13.7			2.7	53.0	2.2	--	57.2	2.2	-0.00	60.9	19
20	367.	6.4	57.2	16.8			3.5	45.8	2.8	--	49.2	2.7	-0.03	61.0	20
21	364.	1.2	57.1	13.3			3.0	42.2	2.3	--	45.3	2.1	-0.01	60.7	21
22	359.	1.9	55.6	13.3			3.1	49.3	2.2	--	53.6	2.2	-0.01	61.0	22
23	365.	2.9	54.7	17.7			2.1	49.3	1.7	--	54.2	1.8	-0.01	60.8	23
24	362.	2.4	52.9	15.4			3.3	41.8	2.4	--	42.7	2.4	-0.02	60.7	24
1	365.	2.8	51.6	16.9			2.7	53.6	1.9	--	57.4	1.9	0.00	60.7	1
2	364.	1.9	52.4	53.7			2.7	52.0	2.1	--	55.6	2.2	0.00	61.0	2
3	363.	3.7	50.7	12.9			3.0	46.5	2.4	--	48.0	2.3	-0.01	60.7	3
4	366.	6.5	48.5	15.9			3.7	52.5	2.5	--	54.2	2.4	-0.01	60.7	4
5	360.	1.9	46.6	13.2			3.4	45.2	2.7	--	47.5	2.6	-0.02	61.0	5
6	359.	7.0	45.0	13.0			2.7	56.4	2.0	--	58.4	2.1	-0.02	60.9	6
7	363.	3.7	46.1	25.1			3.7	44.8	2.3	--	46.3	2.1	-0.00	61.4	7
MAX	371.	14.7	70.8	61.2			4.8	73.1	3.2	--	61.8	3.0	0.16	61.5	MAX
MIN	353.	0.1	43.4	6.4			2.0	-2.7	1.5	--	34.9	1.6	-0.04	60.1	MIN
M/A	363.	4.4	56.4	16.3			3.0	42.3	2.3	--	--	2.3	-0.01	1460.	M/A

OREGON JURKEE PLANT

GRAPHIC LOG LS-SDR52 13.41.50 15 SEP 1985



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W1/ KILN FEED C3S
W1/ KILN FEED MS
W1/ KILN FEED LSF
W1/ BURNING FACTOR
HEAT CONSUMPTION
W1/ COAL TO KILN
KILN PRODUCTION
W1/ KILN FEED
W1/ FEED LOSS-O-IG
U1/ LITER WEIGHT
U1/ CLINKER TEMP
U1/ FREE LIME
U1/ CLINKER LSF
U1/ CLINKER MS
KILN CONTROL
COAL TO KILN

HOUR	HO 10F1 T/H	PR OD T/H	KM 2F1 T/H	KC AL KC/KG	BF	KF -LS	KF -MS	C3 S %	KF -LOI %	LT WT GR/L	KL O DEG.C	FC AO %	CL -LS	CL -MS	KC ONTRL	KM 2F1%	HOUR
7	99.8	60.7	10.66	954.	--	--	--	--	--	1220.	223.	--	--	--			7
8	100.2	60.9	10.58	943.	110.8	0.914	2.476	60.3	--	1155.	216.	--	--	--			8
9	100.0	60.8	10.65	951.	--	--	--	--	--	1180.	229.	--	--	--			9
10	100.4	61.0	10.70	952.	--	--	--	--	--	1260.	240.	--	--	--			10
11	99.4	60.4	10.63	956.	--	--	--	--	--	1185.	237.	--	--	--			11
12	100.1	60.9	10.57	943.	--	--	--	--	--	1320.	224.	--	--	--			12
13	100.3	61.0	10.25	913.	--	--	--	--	--	1365.	229.	--	--	--			13
14	--	--	--	--	--	--	--	--	--	--	--	--	--	--			14
15	--	--	--	--	--	--	--	--	--	--	--	--	--	--			15
16	--	--	--	--	--	--	--	--	--	--	--	--	--	--			16
17	--	--	--	--	--	--	--	--	--	--	--	--	--	--			17
18	--	--	--	--	--	--	--	--	--	--	--	--	--	--			18
19	--	--	--	--	--	--	--	--	--	--	--	--	--	--			19
20	--	--	--	--	--	--	--	--	--	--	--	--	--	--			20
21	--	--	--	--	--	--	--	--	--	--	--	--	--	--			21
22	--	--	--	--	--	--	--	--	--	--	--	--	--	--			22
23	--	--	--	--	--	--	--	--	--	--	--	--	--	--			23
24	--	--	--	--	--	--	--	--	--	--	--	--	--	--			24
1	--	--	--	--	--	--	--	--	--	--	--	--	--	--			1
2	--	--	--	--	--	--	--	--	--	--	--	--	--	--			2
3	--	--	--	--	--	--	--	--	--	--	--	--	--	--			3
4	--	--	--	--	--	--	--	--	--	--	--	--	--	--			4
5	--	--	--	--	--	--	--	--	--	--	--	--	--	--			5
6	--	--	--	--	--	--	--	--	--	--	--	--	--	--			6
7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.72	7
MAX	101.2	61.5	10.74	968.	110.8	0.922	2.696	61.8	34.5	1365.	257.	0.19	0.936	2.557			MAX
MIN	98.9	60.2	10.10	900.	107.8	0.853	2.412	45.8	34.3	1155.	188.	0.19	0.901	2.548			MIN
M/A	672.4	408.8	70.91	942.	110.3	0.913	2.476	60.3	0.0	1244.	226.	0.00	0.000	0.000	3601	4586	M/A

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PLANT REPORT # 3.0 ON DEMAND KILN / PREHEATER FLS-SDR52 13.46.20 15 SEP 1985

W1/ PRESSURE AS3 ..... W1/ GAS TEMP AS2
W1/ GAS TEMP AS3 ..... W1/ GAS TEMP AS1
W1/ PRESSURE AS4 ..... W1/ GAS TEMP A61
W1/ TEMP CYCL AS4 ..... W1/ T EXIT PREHEAT
W1/ ZO2 KILN OUTL ..... W1/ PRESS EX PREH
W1/ PRES EXIT KILN..... W1/ ZO2 EX PREHEAT
W1/ KILN TORQUE W1/ ZCO EX PREHEAT
W1/ KILN ROT SPEED J1/ ID FAN SPEED

HOUR	OA 15V1	OA 15A1	OA 15P1	OA 15X1	A5 4T1	A5 4P1	A5 3T1	A5 3P1	A5 2T1	A5 1T1	A6 1T1	A5 0T1	A5 0P1	OA 1X202	OA 1X2CO	OA 2V1	HOUR
	RPM	%	MMWG	%	DEG.C	MMWG	DEG.C	MMWG	DEG.C	DEG.C	DLG.C	DEG.C	MMWG	%	%	RPM	
7	2.0	100.0	98	2.9	809	170	686	281	625	387	396	388	548	2.3	--	841	7
8	2.0	100.0	102	3.0	808	171	681	282	625	388	396	388	559	2.6	--	841	8
9	2.0	100.0	105	2.9	813	171	681	283	629	391	399	390	551	2.4	--	838	9
10	2.0	100.0	101	2.7	814	168	677	284	625	391	395	389	549	2.4	--	843	10
11	2.0	100.0	103	2.5	807	172	685	286	624	388	395	387	552	2.3	--	842	11
12	2.0	100.0	101	2.4	806	173	687	287	630	392	400	392	555	2.0	--	840	12
13	2.0	100.0	103	3.6	807	170	684	289	625	387	394	387	552	3.0	--	842	13
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MAX	2.0	100.0	113	3.9	817	182	690	300	633	393	401	392	574	3.0	--	849	MAX
MIN	2.0	100.0	93	2.0	802	159	674	274	618	384	391	384	540	1.8	--	834	MIN
M/A	2.0	100.0	103	2.9	809	171	683	286	626	389	396	388	557	2.4	--	841	M/A

PLANT REPORT # 2.0 ON DEMAND MILL REPORT FLS-SDR52 13.48.30 15 SEP 1985

CM8/ CEMENT TEMP. .....
1ST COMPARTMENT .....
CM8/ MILL FEED .....
RAW MILL CLUTCH .....
RM7/ MILL SOUND .....
RM7/ MILL OUTLET T.....
RM7/ MILL INLET T .....
RM7/ MILL FEED .....

.....CM8/ MILL SOUND
.....CEMENT MILL CLUTCH
.....W1/ COAL TO KILN
.....KM5/ MILL INLET T
.....KM5/ MILL OUTLET T
.....KM5/ MILL SOUND
COAL TO RISER PIPE
COAL TO KILN

HOUR	RM 7F1	RM 7T1	RM 7T3	RM 7X1	RM 7	CM 8F1	CM 8T1	CM 8T2	CM 8X1	CM 8	KM 2F1	KM 5T1	KM 5T2	KM 5X1	KM 13F1	KM 2F1*	HOUR
	T/H	DEG.C	DEG.C	%		T/H	DEG.C	DEG.C	%		T/H	DEG.C	DEG.C	%			
7	123.1	358.	72.1	44.6		--	--	--	--		10.66	298.	41.7	60.2			7
8	136.4	359.	79.9	42.1		--	--	--	--		10.58	286.	40.5	60.6			8
9	136.2	361.	72.1	41.5		--	--	--	--		10.65	287.	40.4	61.3			9
10	136.3	361.	71.7	44.1		--	--	--	--		10.70	283.	42.7	61.7			10
11	135.5	361.	71.1	44.4		--	--	--	--		10.63	294.	42.7	61.7			11
12	136.1	359.	76.8	49.5		--	--	--	--		10.57	285.	41.2	62.1			12
13	136.4	359.	75.5	49.5		--	--	--	--		10.25	278.	42.0	59.0			13
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MAX	158.3	368.	85.5	55.6		--	--	--	--		10.74	298.	43.6	63.7			MAX
MIN	51.6	351.	67.7	29.6		--	--	--	--		10.10	277.	39.2	57.9			MIN
M/A	892.0	360.	74.4	45.7	3224	--	--	--	--	2616	71.78	287.	41.7	61.0		4586	M/A

W1/ OUT COOL TOWER
W1/ INL COOL TOWER
J1/ COOLING WATER
J1/ PRESSURE DAMP
J1/ ID FAN SPEED
2. STAGE STAT.PRES
PREC. OASA INLET T
PREC. OASB INLET T
HOOD TEMP
STACK OPACITY

HOUR	OA 2V1 RPM	OA 2P1 MMWG	OA 3F1 L/M	OA 4T1 DEG C	OA 3T3 DEG.C	AS 2P1 MMWG	OA 5AT1 DEG.C	OA 5BT1 DEG.C	OA 15HT DEG.C	OA 14X1 %	HOUR
7	841	32.77	103.	373.	136.	356.	119.	130.	632	13.0	7
8	841	32.77	100.	374.	135.	356.	125.	132.	636	17.4	8
9	838	32.77	92.	373.	135.	361.	119.	128.	637	16.2	9
10	843	32.77	101.	374.	135.	358.	119.	127.	662	12.6	10
11	842	32.77	95.	373.	133.	345.	115.	129.	668	12.5	11
12	840	32.77	107.	374.	135.	360.	119.	128.	671	15.2	12
13	842	32.77	107.	374.	135.	362.	120.	126.	684	13.9	13
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MAX	849	32.77	110.	377.	138.	373.	126.	135.	706	60.6	MAX
MIN	834	32.77	97.	369.	132.	339.	113.	122.	614	6.6	MIN
M/A	841	37.61	675.	373.	135.	358.	119.	127.	660	16.0	M/A

W1/ %O2 KILN OUTL
W1/ NOX KILN OUTL
WIND SPEED W1/ %O2 EX PREHEAT
WIND DIRECTION W1/ %CO EX PREHEAT
STACK OPACITY W1/NOX-2 KILN OUTL
AIR TEMPERATURE W1/ %O2 EX PREHEAT
WIND SPEED W1/%CO-2 EX PREHEA
WIND DIRECTION KILN PRODUCTION

HOUR	OA WHTR1 DEG	OA WHTR2 MPH	OA WHTR3 DEG	OA 14X1 %	OA WHTR4 DEG	OA WHTR5 MPH	OA 15X1 %	NO X15 %	OA 1X2O2 %	OA 1X2CO %	NO X15-2 %	OA 1X2-2 %	OA 1XCO2 %	PR OD T/H	HOUR
7	361.	3.2	50.8	13.0			2.9	47.4	2.3	—	49.1	2.2	-0.01	60.7	7
8	363.	4.1	53.1	17.4			3.0	40.9	2.6	--	42.7	2.5	-0.01	60.9	8
9	364.	4.2	51.4	16.2			2.9	48.8	2.4	--	51.6	2.3	-0.01	60.8	9
10	361.	4.3	56.7	12.6			2.7	-0.5	2.4	--	41.0	2.3	-0.01	61.0	10
11	366.	7.4	59.0	12.5			2.5	-0.3	2.3	--	52.2	2.3	-0.02	60.4	11
12	359.	9.5	65.2	15.2			2.4	54.6	2.0	--	57.8	2.0	-0.02	60.9	12
13	361.	1.7	64.1	13.9			3.6	50.2	3.0	—	54.3	2.8	-0.02	61.0	13
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MAX	370.	14.7	67.3	60.6			3.9	73.1	3.0	--	60.9	3.0	0.06	61.5	MAX
MIN	353.	0.5	47.0	6.6			2.0	-2.7	1.8	--	37.5	1.8	-0.04	60.2	MIN
M/A	363.	6.0	57.1	16.0			2.9	28.5	2.5	--	--	2.4	-0.01	414.9	M/A

PLANT REPORT # 6.0 ON DEMAND KILN CONTROL FLS-SDR52 13.50.50 15 SEP 1985

W1/ NOX REG LTIME .....
W1/ NOX REG STIME .....
W1/ LTW FOR CONTRL.....
W1/ ESTIMATED LTW .....
U1/ LITER WEIGHT .....
KILN CON. MEASUR. .....
KILN CONTROL
COAL TO KILN

W1/ NOX CHANGE LT .....
W1/ T EXIT PREHEAT .....
W1/ AS0T1 CHANGE .....
W1/ %O2 KILN OUTL .....
W1/ %O2 EX PREHEAT .....
W1/ %CO EX PREHEAT .....
W1/ COAL TO KILN
J1/ ID FAN SPEED

HOUR	KM 2F1*	KC ONTRL	KA LARM	LT WT	ES TLTW	LT WGTSP	NO XST	NO XLT	NO XALT	AS 0T1	AS 0ALT	OA 15X1	OA 1X2O2	OA 1X2CO	KM 2F1	OA 2V1	HOUR
				GR/L	GR/L	GR/L	%	%		DEG.C		%	%	%	T/H	RPM	
7				1220.	1320	1308	47.8	47.9	0.276	388	0.06	2.9	2.3	--	10.66	841	7
8				1155.	1270	1170	42.1	43.7	-0.154	388	-0.07	3.0	2.6	--	10.58	841	8
9				1180.	1329	1277	50.6	51.4	0.269	390	-0.06	2.9	2.4	--	10.65	838	9
10				1260.	1247	1256	42.1	43.9	-0.255	389	0.03	2.7	2.4	--	10.70	843	10
11				1185.	1325	1284	51.8	54.5	0.276	387	0.00	2.5	2.3	--	10.63	842	11
12				1320.	1345	1338	57.3	57.4	0.098	392	0.11	2.4	2.0	--	10.57	840	12
13				1365.	1304	1315	51.6	52.0	-0.656	387	0.13	3.6	3.0	--	10.25	842	13
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7	6.84	--	6.84	--	--	--	--	--	--	--	--	--	--	--	--	--	7
MAX				1365.	1352	1342	58.0	58.2	1.000	392	0.27	3.9	3.0	--	10.74	849	MAX
MIN				1155.	1141	1154	35.5	35.0	-1.000	384	-0.26	2.0	1.8	--	10.10	834	MIN
M/A	4586	3601		1244.	--	1270	--	--	-0.001	388	0.00	2.9	2.5	--	72.12	841	M/A

PLANT REPORT # 7.0 ON DEMAND PRODUCTION REPORT FLS-SDRS2 13.51.50 15 SEP 1985

% ASH IN COAL ....COAL HEAT VALUE
% MOISTURE IN COAL..... .....
NET HEAT CONSUMP. ....SHORT TONS CLINKER
HEAT CONSUMPTION ....LB COAL / SH.T
W1/ COAL TO KILN ....MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION .....W1/ LITER WEIGHT
W1/ KILN FEED .....COAL TO KILN

HOUR	HO 10F1	PR OD	PR ODR	KM 2F1	KC AL	NK CAL	C- MOIST	C- ASH	C- HEAT	ST ONS	LB .COAL	BTU	LT WT	KM 2F1*	HOUR
	T/H	T/H	T	T/H	KC/KG	KC/KG	%	%		T/H			GR/L		
7	99.8	60.7	1456	10.66	954.	893	--	--	9148	65.9	357	3.26	1220.		7
8	100.2	60.9	1463	10.58	943.	882	--	--	9148	66.1	353	3.23	1155.		8
9	100.0	60.8	1460	10.65	951.	890	--	--	9148	66.0	356	3.27	1180.		9
10	100.4	61.0	1465	10.70	952.	891	--	--	9148	66.2	356	3.25	1260.		10
11	99.4	60.4	1450	10.63	956.	895	--	--	9148	65.6	358	3.26	1185.		11
12	100.1	60.9	1461	10.57	943.	883	--	--	9148	66.1	353	3.23	1320.		12
13	100.3	61.0	1463	10.25	913.	854	--	--	9148	66.2	341	3.12	1365.		13
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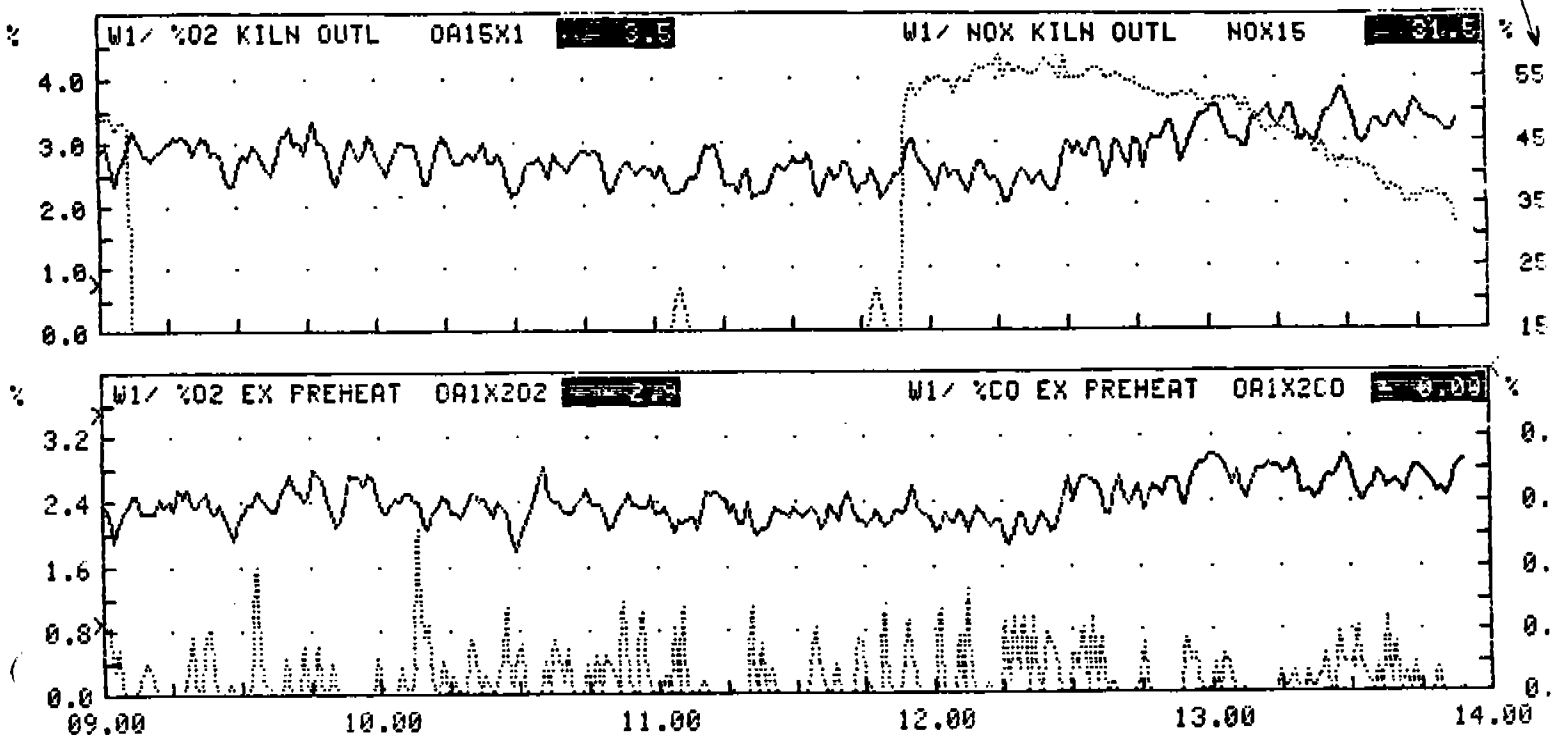
MAX	101.2	61.5	1477	10.74	968.	906	19.6	9.03	9307	66.8	362	3.31	1365.		MAX
MIN	98.9	60.2	1444	10.10	900.	838	18.0	7.64	9101	65.3	337	3.06	1155.		MIN
M/A	685.7	416.9	1461	72.29	942.	881	0.0	0.00	--	452.6	352	3.22	1244.	4586	M/A

PLANT REPORT # 7.0 ON DEMAND PRODUCTION REPORT FLS-SDRS2 13.52.20 15 SEP 1985

OREGON DURKEE PLANT

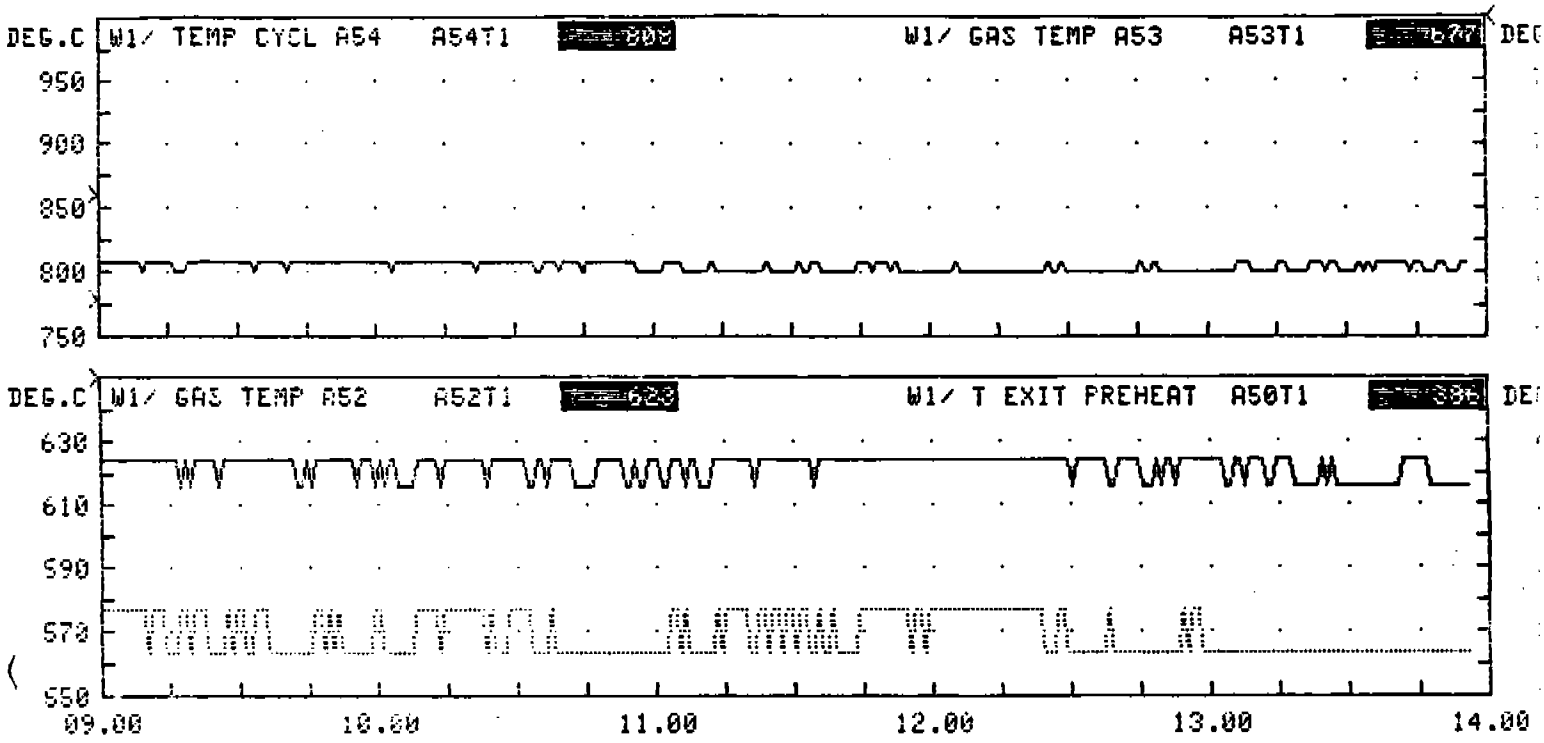
GRAPHIC LOG ILS-SDR52 13.54.10 15 SEP 1985

F.S. = 2500 PPM



OREGON DURKEE PLANT

GRAPHIC LOG U.S-SDR52 13.55.40 15 SEP 1985



PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR ..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1*
	T/H	T/H T/H KC/KG		%	% GR/L	DEG.C	%	H H
7.25	98.6	60.0 8.93 808	112.8 0.920	2.700 57.3	34.7 1420	222	0.24 0.930	2.890
8.25	99.3	60.3 8.70 783	109.9 0.880	2.800 46.5	34.7 1450	202	0.24 0.930	2.890
9.25	99.1	60.3 8.34 751	109.9 0.880	2.800 46.5	34.7 1445	239	0.24 0.930	2.890
10.25	100.2	60.9 8.38 747	109.9 0.880	2.800 46.5	34.7 1320	252	0.24 0.930	2.890
11.25	99.5	60.5 8.46 758	109.9 0.880	2.800 46.5	34.7 1170	226	0.24 0.930	2.890
12.25	98.7	60.0 8.58 776	109.9 0.880	2.800 46.5	34.7 1175	209	0.24 0.930	2.890
13.25	99.9	60.7 8.80 786	109.9 0.880	2.800 46.5	34.7 1315	206	0.24 0.930	2.890
14.25	100.1	60.8 8.68 775	111.6 0.890	2.830 50.6	34.6 1335	191	0.12 0.910	2.910
15.25	99.8	60.7 8.44 755	111.6 0.890	2.830 50.6	34.6 1380	196	0.12 0.910	2.910
16.25	98.8	60.0 8.20 741	109.0 0.850	2.980 39.4	34.6 1320	206	0.12 0.910	2.910
17.25	100.6	61.2 8.48 752	109.0 0.850	2.980 39.4	34.6 1270	227	0.12 0.910	2.910
18.25	100.3	61.0 8.66 770	109.0 0.850	2.980 39.4	34.6 1130	211	0.12 0.910	2.910
19.25	99.3	60.4 8.90 799	109.0 0.850	2.980 39.4	34.6 1185	189	0.12 0.910	2.910
20.25	99.3	60.3 8.95 805	109.0 0.850	2.980 39.4	34.6 1190	166	0.12 0.910	2.910
21.25	99.6	60.5 8.66 776	109.0 0.850	2.980 39.4	34.6 1260	202	0.12 0.910	2.910
22.25	98.9	60.1 9.01 813	109.0 0.850	2.980 39.4	34.6 1240	258	0.12 0.910	2.910
23.25	99.6	60.6 9.35 838	109.0 0.850	2.980 39.4	34.6 1135	213	0.12 0.910	2.910
0.25	99.6	60.5 8.95 802	109.0 0.850	2.980 39.4	34.6 1250	219	0.12 0.910	2.910
1.25	99.9	60.7 8.67 775	109.0 0.850	2.980 39.4	34.6 1330	224	0.12 0.910	2.910
2.25	99.2	60.3 8.77 790	109.0 0.850	2.980 39.4	34.6 1285	229	0.12 0.910	2.910
3.25	99.5	60.4 8.91 800	109.0 0.850	2.980 39.4	34.6 1225	226	0.12 0.910	2.910
4.25	99.8	60.7 9.06 811	121.8 0.990	2.780 74.7	34.6 1230	254	0.12 0.910	2.910
5.25	99.7	60.6 9.28 831	121.8 0.990	2.780 74.7	34.6 1230	251	0.12 0.910	2.910
6.25	100.2	60.9 9.37 835	121.8 0.990	2.780 74.7	34.6 1270	256	0.12 0.910	2.910
7.25	99.7	60.6 9.16 820	121.8 0.990	2.780 74.7	34.6 1370	243	0.12 0.910	2.910
0.00 - 7.35								
MAX	101.1	61.5 9.50 858.	121.8 0.990	2.980 74.8	34.7 1370.	267.	0.12 0.910	2.910
MIN	97.8	59.5 8.52 762.	109.0 0.850	2.780 39.4	34.7 1135.	196.	0.12 0.910	2.910
MEAN	99.7	60.6 9.00 807.	114.4 0.909	2.895 54.4	34.7 1262.	237.	0.12 0.910	2.910 7.59 7.59
ACCM	756.4	459.9 68.34 807.	114.5 0.910	2.894 54.6	34.7 1260.	237.	0.12 0.910	2.910 93.04 114.5
0.00 - 0.00								
MAX	101.4	61.6 9.41 849.	112.8 0.920	2.980 46258.	34.8 1450.	308.	0.24 0.930	2.910
MIN	93.4	56.8 6.29 562.	109.0 0.850	2.780 39.4	34.7 1130.	137.	0.12 0.910	2.890
MEAN	99.8	60.7 8.70 778.	110.6 0.883	2.831 55.9	34.7 1278.	221.	0.19 0.921	2.897 22.46 24.02
ACCM	2395.5	1456.4 208.70 778.	110.5 0.881	2.841 47.4	34.7 1285.	221.	0.19 0.921	2.899 85.54 107.0

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

O R E G O N 1 APR 1987 FLS-SDR52 7.35.28 DURKEE PLANT

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 ..... W1/ GAS TEMP A52
W1/ GAS TEMP A53 ..... W1/ GAS TEMP A51
W1/ PRESSURE A54 ..... W1/ GAS TEMP A61
W1/ TEMP CYCL A54 ..... W1/ T EXIT PREHEAT
W1/ %O2 KILN OUTL ..... W1/ PRESS EX PREH
W1/ PRES EXIT KILN..... .....
W1/ KILN TORQUE W1/ %CO EX PREHEAT
W1/ KILN ROT SPEED J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	1.8	22.3	102	2.54	802	164	767	284	610	376	372	383	541	-0.01	817
8.25	1.8	26.0	107	3.64	802	184	773	295	610	379	372	384	551	0.00	835
9.25	1.8	25.2	124	5.28	799	205	776	319	618	389	383	394	607	0.00	847
10.25	1.8	18.7	116	4.84	799	209	775	322	618	382	375	388	596	0.00	843
11.25	1.8	23.4	112	4.43	799	203	768	317	614	379	372	385	577	0.00	854
12.25	1.8	24.7	108	4.04	797	195	777	308	613	379	370	385	572	0.01	849
13.25	1.8	24.8	109	4.02	799	209	780	310	614	386	376	391	587	0.00	842
14.25	1.8	25.2	109	3.97	801	194	777	312	616	385	376	389	581	0.02	838
15.25	1.8	23.7	106	4.48	798	195	776	314	614	386	377	389	584	0.00	839
16.25	1.8	21.4	114	4.37	799	198	773	317	610	376	371	385	579	0.01	841
17.25	1.8	20.7	116	4.74	797	206	772	321	617	384	375	389	589	0.00	841
18.25	1.8	24.0	124	3.79	798	199	776	328	624	394	374	389	598	0.00	842
19.25	1.8	27.6	122	3.31	801	204	778	319	623	387	377	392	588	0.00	838
20.25	1.8	33.4	119	2.70	804	200	780	312	625	388	378	392	581	0.00	827
21.25	1.8	36.1	124	3.54	801	218	779	314	620	385	375	391	585	0.02	832
22.25	1.8	33.9	120	2.95	803	194	784	322	627	392	383	395	588	0.00	834
23.25	1.8	34.9	114	2.11	805	204	787	309	621	382	377	391	563	0.00	834
0.25	1.8	35.9	123	2.90	802	203	784	317	623	390	381	398	590	0.00	853
1.25	1.8	35.8	128	3.86	802	199	781	340	626	393	387	398	616	0.00	863
2.25	1.8	34.8	129	3.21	802	208	784	322	629	390	385	399	599	-0.01	847
3.25	1.8	35.6	130	3.37	804	206	782	335	625	392	384	397	615	-0.03	847
4.25	1.8	36.1	130	2.93	803	221	779	334	627	394	383	398	613	0.00	846
5.25	1.8	38.1	130	2.80	805	212	783	329	624	392	384	398	603	-0.01	843
6.25	1.8	38.9	130	2.39	806	213	784	336	630	393	387	398	602	-0.01	842
7.25	1.8	38.8	144	3.59	805	230	783	352	622	394	385	398	638	-0.01	865
0.00 - 7.36															
MAX	1.9	41.0	152.	4.57	810.	246.	794.	364.	640.	401.	393.	405.	649.	0.02	871.
MIN	1.9	34.4	116.	1.96	800.	173.	774.	311.	617.	384.	379.	398.	581.	-0.04	833.
MEAN	1.9	36.9	131.	3.24	805.	212.	784.	332.	628.	393.	385.	398.	606.	-0.01	850.
ACCM	1.9	36.9	131.		805.	212.	784.	332.	628.	393.	385.	398.	606.	-0.01	850.
0.00 - 0.00															
MAX	1.9	37.7	154.	5.78	809.	251.	791.	345.	635.	397.	392.	400.	617.	0.04	859.
MIN	1.9	18.6	85.	1.20	793.	120.	756.	264.	597.	372.	364.	379.	517.	-0.04	804.
MEAN	1.9	26.1	113.	3.68	801.	195.	775.	309.	616.	384.	377.	390.	577.	0.00	833.
ACCM	1.9	26.1	113.		801.	195.	775.	309.	616.	384.	377.	390.	577.	0.00	833.

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL ..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ ZO2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ ZCO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1%	KALARM	ESTLTW	NOXST	NOXALT	A50ALT	KM2F1
	KCONTRL	LTWT	LTWGTSP	NOXLT	A50T1	OA15X1	OA1X2CO	OA2V1
	H H H	GR/L	GR/L	GR/L	% % %	DEG.C	%	%	T/H	RPM
7.25		1420	1359	1291	48.2	46.6	0.376	383	-0.36	2.54	-0.01	8.93	817
8.25		1450	1383	1407	47.1	46.8	-0.075	384	-0.76	3.64	0.00	8.70	835
9.25		1445	1234	1340	30.0	38.4	-0.588	394	0.21	5.28	0.00	8.34	847
10.25		1320	1156	1253	19.6	18.4	-0.385	388	-0.35	4.84	0.00	8.38	843
11.25		1170	1176	1175	19.4	19.6	-0.116	385	0.13	4.43	0.00	8.46	854
12.25		1175	1261	1253	29.0	28.9	0.524	385	-0.10	4.04	0.01	8.58	849
13.25		1315	1264	1268	27.2	26.8	-0.071	391	0.02	4.02	0.00	8.80	842
14.25		1335	1388	1347	39.6	40.3	0.527	389	-0.06	3.97	0.02	8.68	838
15.25		1380	1367	1367	37.3	37.1	0.030	389	-0.12	4.48	0.00	8.44	839
16.25		1320	1316	1316	32.6	31.3	-0.153	385	-0.61	4.37	0.01	8.20	841
17.25		1270	1175	1181	17.3	16.8	-0.575	389	0.63	4.74	0.00	8.48	841
18.25		1130	1206	1198	21.6	21.7	0.135	389	-0.13	3.79	0.00	8.66	842
19.25		1185	1241	1237	25.4	25.1	0.148	392	-0.05	3.31	0.00	8.90	838
20.25		1190	1261	1302	26.4	27.0	0.012	392	-0.12	2.70	0.00	8.95	827
21.25		1260	1288	1286	29.8	29.7	0.001	391	-0.14	3.54	0.02	8.66	832
22.25		1240	1226	1227	24.1	24.2	0.059	395	0.52	2.95	0.00	9.01	834
23.25		1135	1314	1297	31.4	32.5	0.293	391	-0.29	2.11	0.00	9.35	834
0.25		1250	1454	1359	45.3	45.6	0.413	398	0.11	2.90	0.00	8.95	853
1.25		1330	1357	1314	40.3	41.4	-0.109	398	0.14	3.86	0.00	8.67	863
2.25		1285	1289	1289	36.6	35.6	-0.130	399	-0.24	3.21	-0.01	8.77	847
3.25		1225	1263	1239	34.1	34.2	-0.065	397	-0.08	3.37	-0.03	8.91	847
4.25		1230	1268	1272	34.5	34.9	0.081	398	0.02	2.93	0.00	9.06	846
5.25		1230	1259	1255	34.5	34.9	0.076	398	-0.06	2.80	-0.01	9.28	843
6.25		1270	1306	1289	43.2	43.2	0.451	398	0.03	2.39	-0.01	9.37	842
7.25		1370	1316	1323	44.4	44.9	-0.329	398	0.31	3.59	-0.01	9.16	865
0.00 -	7.37												
MAX		1370.	1462.	1442.	51.3	51.6	0.680	405.	0.55	4.57	0.02	9.50	871.
MIN		1135.	1255.	1237.	32.7	33.1	-0.596	390.	-0.70	1.96	-0.04	8.52	833.
MEAN	7.64 7.64	1263.	1315.	1297.	38.8	39.0	0.037	398.	0.00	3.24	-0.01	9.01	850.
ACCM	114.6 93.09	1260.		1297.			0.037	398.	0.00		-0.01	68.73	850.
0.00 -	0.00												
MAX		1450.	1523.	1468.	55.9	56.5	1.014	400.	1.03	5.78	0.04	9.41	859.
MIN		1130.	1141.	1164.	17.2	16.2	-0.754	379.	-1.02	1.20	-0.04	6.29	804.
MEAN	24.02 22.46	1278.	1283.	1281.	31.8	31.8	0.001	390.	0.00	3.68	0.00	8.70	833.
ACCM	187.0 85.54	1285.		1281.			0.001	390.	0.00		0.00	208.70	833.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ....COAL HEAT VALUE
% MOISTURE IN COAL..... . . ..
NET HEAT CONSUMP. ....SHORT TONS CLINKER
HEAT CONSUMPTION ....LB COAL / SH.T
W1/ COAL TO KILN ....MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION . . . . W1/ LITER WEIGHT
W1/ KILN FEED . . . . COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H T/H	T T/H	KC/KG KC/KG	% %		T/H		GR/L H
7.25	98.6 60.0	1440 8.93	808 849	21.8 3.41	9302	65.1	0 28.24	1420
8.25	99.3 60.3	1449 8.70	783 822	21.8 3.41	9302	65.5	0 27.25	1450
9.25	99.1 60.3	1447 8.34	751 789	21.8 3.41	9302	65.4	0 26.24	1445
10.25	100.2 60.9	1462 8.38	747 785	21.8 3.41	9302	66.1	0 25.92	1320
11.25	99.5 60.5	1453 8.46	758 797	21.8 3.41	9302	65.7	0 26.38	1170
12.25	98.7 60.0	1441 8.58	776 815	21.8 3.41	9302	65.2	0 26.92	1175
13.25	99.9 60.7	1459 8.80	786 826	21.8 3.41	9302	65.9	0 27.28	1315
14.25	100.1 60.8	1460 8.68	775 806	21.5 2.94	9395	66.0	0 27.22	1335
15.25	99.8 60.7	1457 8.44	755 785	21.5 2.94	9395	65.9	0 26.62	1380
16.25	98.8 60.0	1441 8.20	741 771	21.5 2.94	9395	65.2	0 25.93	1320
17.25	100.6 61.2	1469 8.48	752 783	21.5 2.94	9395	66.4	0 26.44	1270
18.25	100.3 61.0	1464 8.66	770 802	21.5 2.94	9395	66.2	0 26.97	1130
19.25	99.3 60.4	1450 8.90	799 832	21.5 2.94	9395	65.6	0 28.30	1185
20.25	99.3 60.3	1449 8.95	805 838	21.5 2.94	9395	65.5	0 28.39	1190
21.25	99.6 60.5	1454 8.66	776 807	21.5 2.94	9395	65.7	0 27.29	1260
22.25	98.9 60.1	1444 9.01	813 846	21.5 2.94	9395	65.3	0 28.50	1240
23.25	99.6 60.6	1454 9.35	838 871	21.5 2.94	9395	65.7	0 29.36	1135
0.25	99.6 60.5	1453 8.95	802 834	21.5 2.94	9395	65.7	0 28.04	1250
1.25	99.9 60.7	1458 8.67	775 806	21.5 2.94	9395	65.9	0 27.17	1330
2.25	99.2 60.3	1447 8.77	790 821	21.5 2.94	9395	65.4	0 27.77	1285
3.25	99.5 60.4	1451 8.91	800 832	21.5 2.94	9395	65.6	0 28.05	1225
4.25	99.8 60.7	1457 9.06	811 843	21.5 2.94	9395	65.9	0 28.41	1230
5.25	99.7 60.6	1455 9.28	831 864	21.5 2.94	9395	65.8	0 29.29	1230
6.25	100.2 60.9	1462 9.37	835 869	21.5 2.94	9395	66.1	0 29.41	1270
7.25	99.7 60.6	1455 9.16	820 853	21.5 2.94	9395	65.8	0 28.90	1370
0.00 - 7.38								
MAX	101.1 61.5	1475. 9.50	858. 893.	21.5 2.94	9395.	66.7	0. 30.15	1370.
MIN	97.8 59.5	1429. 8.52	762. 792.	21.5 2.94	9392.	64.6	0. 26.76	1135.
MEAN	99.7 60.6	1454. 9.01	807. 840.	21.5 2.94	9394.	65.8	0. 28.36	1263. 7.65
ACCM	761.8 463.2	68.84	807. 840.	21.5 2.94			0. 28.36	1260. 114.6
0.00 - 0.00								
MAX	101.4 61.6	1479. 9.41	849. 887.	21.8 3.41	9395.	66.9	0. 29.85	1450.
MIN	93.4 56.8	1362. 6.29	562. 590.	21.5 2.94	9380.	61.6	0. 19.55	1130.
MEAN	99.8 60.7	1456. 8.70	778. 814.	21.7 3.21	9342.	65.9	0. 27.19	1278. 24.02
ACCM	2395.5 1456.4	208.70	778. 814.	21.7 3.21			0. 27.19	1285. 107.0

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR ..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1*
	T/H	T/H	T/H KC/KG	%	%	GR/L	DEG.C	%		H	H
7.25	99.8	60.7	9.19 822	121.8	0.990	2.780	74.7	34.6	1270	252	0.12	0.910	2.910		
8.25	99.9	60.7	9.38 838	121.8	0.990	2.780	74.7	34.6	1350	252	0.12	0.910	2.910		
9.25	100.0	60.8	9.42 841	118.5	0.950	2.890	66.1	34.6	1290	264	0.12	0.910	2.910		
10.25	99.5	60.5	9.54 855	118.5	0.950	2.890	66.1	34.6	1250	258	0.12	0.910	2.910		
11.25	99.7	60.6	9.28 831	118.5	0.950	2.890	66.1	34.6	1250	286	0.12	0.910	2.910		
12.25	99.8	60.7	9.40 841	118.5	0.950	2.890	66.1	34.6	1320	278	0.12	0.910	2.910		
13.25	99.0	60.1	9.30 839	109.5	0.860	2.900	43.2	34.5	1350	295	0.24	0.890	3.060		
14.25	99.8	60.7	9.32 834	109.5	0.860	2.900	43.2	34.5	1350	277	0.24	0.890	3.060		
15.25	100.0	60.8	9.12 814	109.5	0.860	2.900	43.2	34.5	1330	218	0.24	0.890	3.060		
16.25	99.1	60.2	8.89 801	120.7	0.970	2.860	71.5	34.5	1390	217	0.24	0.890	3.060		
17.25	99.3	60.4	9.03 812	120.7	0.970	2.860	71.5	34.5	1330	279	0.24	0.890	3.060		
18.25	99.9	60.7	9.25 826	120.7	0.970	2.860	71.5	34.5	1180	228	0.24	0.890	3.060		
19.25	99.7	60.6	9.64 863	120.7	0.970	2.860	71.5	34.5	1210	254	0.24	0.890	3.060		
20.25	99.8	60.6	9.31 833	120.7	0.970	2.860	71.5	34.5	1270	257	0.24	0.890	3.060		
21.25	99.7	60.6	8.96 803	120.7	0.970	2.860	71.5	34.5	1280	261	0.24	0.890	3.060		
22.25	98.8	60.1	9.11 823	120.7	0.970	2.860	71.5	34.5	1270	262	0.24	0.890	3.060		
23.25	99.8	60.6	9.33 835	120.7	0.970	2.860	71.5	34.5	1145	234	0.24	0.890	3.060		
0.25	99.4	60.4	9.62 864	121.2	0.980	2.850	73.2	34.5	1175	224	0.24	0.890	3.060		
1.25	99.5	60.4	9.70 871	121.2	0.980	2.850	73.2	34.5	1175	226	0.24	0.890	3.060		
2.25	99.9	60.7	9.93 888	121.2	0.980	2.850	73.2	34.5	1275	235	0.24	0.890	3.060		
3.25	100.2	60.9	9.50 846	121.2	0.980	2.850	73.2	34.5	1320	255	0.24	0.890	3.060		
4.25	99.2	60.3	9.54 858	121.2	0.980	2.850	73.2	34.5	1405	236	0.24	0.890	3.060		
5.25	100.1	60.9	9.29 828	121.2	0.980	2.850	73.2	34.5	1420	235	0.24	0.890	3.060		
6.25	99.6	60.6	9.13 818	121.2	0.980	2.850	73.2	34.5	1405	198	0.24	0.890	3.060		
7.25	100.0	60.8	8.82 788	121.2	0.980	2.850	73.2	34.5	1405	224	0.24	0.890	3.060		
0.00 - 7.27															
MAX	101.1	61.4	10.05 900.	121.2	0.980	2.850	73.2	34.5	1420.	264.	0.24	0.890	3.060		
MIN	98.0	59.6	8.83 788.	121.2	0.980	2.850	73.2	34.5	1175.	194.	0.24	0.890	3.060		
MEAN	99.8	60.7	9.46 847.	121.2	0.980	2.850	73.2	34.5	1321.	232.	0.24	0.890	3.060	7.18	7.46
ACCM	743.9	452.3	70.55 847.	121.2	0.980	2.850	73.2	34.5	1344.	232.	0.24	0.890	3.060	116.4	138.1
0.00 - 0.00															
MAX	101.6	61.8	9.70 872.	121.8	0.990	2.980	74.8	34.7	1390.	325.	0.24	0.910	3.060		
MIN	97.8	59.5	8.52 762.	109.0	0.850	2.780	39.4	34.5	1135.	185.	0.12	0.890	2.910		
MEAN	99.7	60.6	9.19 823.	117.2	0.937	2.877	62.4	34.6	1280.	251.	0.17	0.901	2.979	24.02	24.02
ACCM	2393.7	1455.4	220.47 823.	117.6	0.940	2.876	63.3	34.6	1280.	251.	0.18	0.901	2.979	109.3	130.8

W1/ PRESSURE A53 .....
W1/ GAS TEMP A53 .....
W1/ PRESSURE A54 .....
W1/ TEMP CYCL A54 .....
W1/ ZO2 KILN OUTL .....
W1/ PRES EXIT KILN.....
W1/ KILN TORQUE .....
W1/ KILN ROT SPEED .....

.....W1/ GAS TEMP A52
.....W1/ GAS TEMP A51
.....W1/ GAS TEMP A61
.....W1/ T EXIT PREHEAT
.....W1/ PRESS EX PREH
.....
W1/ ZCO EX PREHEAT
J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	1.8	40.9	140	3.53	804	223	782	350	622	388	380	393	623	-0.02	854
8.25	1.8	38.5	147	3.65	804	230	787	359	631	395	388	400	639	-0.01	865
9.25	1.8	38.6	149	3.26	805	236	785	361	626	395	389	400	637	0.00	867
10.25	1.8	39.7	140	2.50	807	229	788	348	631	395	388	402	614	0.00	856
11.25	1.8	37.4	146	3.04	804	221	781	353	631	394	383	399	621	0.02	863
12.25	1.8	35.9	145	2.95	806	236	785	353	626	395	385	400	625	0.02	860
13.25	1.8	36.6	135	1.85	805	229	789	352	633	399	388	404	622	0.02	867
14.25	1.8	33.5	133	2.42	806	208	785	344	629	394	385	400	601	0.01	854
15.25	1.8	34.4	125	3.57	805	211	786	342	627	392	384	400	613	0.03	857
16.25	1.8	35.5	131	3.94	804	218	784	346	628	390	384	398	620	0.00	858
17.25	1.8	31.6	139	3.90	801	237	786	352	624	394	384	398	621	0.01	857
18.25	1.8	32.9	136	3.90	802	214	788	344	628	392	384	398	618	0.01	856
19.25	1.8	33.8	137	2.36	806	233	789	353	625	395	384	400	618	0.03	859
20.25	1.8	36.3	115	3.22	804	205	785	330	629	398	388	402	614	0.01	858
21.25	1.8	34.0	117	3.62	802	199	782	335	623	387	382	395	606	0.00	877
22.25	1.8	29.9	133	3.43	800	213	785	338	619	391	382	397	612	0.01	849
23.25	1.8	30.6	127	3.00	803	206	781	333	630	392	383	398	609	0.00	849
0.25	1.8	30.8	119	3.35	805	209	785	329	631	393	385	400	613	0.00	849
1.25	1.8	33.9	121	2.63	807	202	787	323	629	394	387	402	614	0.00	846
2.25	1.8	33.9	113	2.48	808	213	790	324	631	394	386	402	610	0.00	841
3.25	1.8	33.1	114	3.49	806	191	788	324	633	394	384	399	608	0.00	838
4.25	1.8	30.6	101	4.19	806	178	787	314	630	394	388	401	599	0.00	839
5.25	1.8	33.3	107	4.12	804	205	778	315	628	391	384	398	594	0.00	839
6.25	1.8	27.3	101	4.36	805	203	782	315	625	393	385	398	598	-0.01	837
7.25	1.8	27.1	105	5.38	801	192	777	326	620	394	386	400	618	-0.01	852
0.00 - 7.28															
MAX	1.9	35.3	137.	10.50	812.	233.	797.	344.	639.	402.	394.	405.	631.	0.04	861.
MIN	1.9	27.0	86.	2.09	800.	168.	770.	301.	613.	387.	379.	391.	574.	-0.04	824.
MEAN	1.9	31.6	110.	3.88	806.	196.	784.	320.	628.	395.	387.	400.	606.	-0.00	843.
ACCM	1.9	31.6	110.		806.	196.	784.	320.	628.	395.	387.	400.	606.	-0.00	843.
0.00 - 0.00															
MAX	1.9	42.7	161.	8.00	810.	252.	795.	370.	641.	404.	394.	406.	653.	0.06	886.
MIN	1.9	29.0	108.	0.48	797.	126.	772.	309.	616.	384.	376.	390.	574.	-0.04	833.
MEAN	1.9	35.5	134.	3.24	804.	217.	785.	342.	629.	394.	385.	399.	615.	0.00	857.
ACCM	1.9	35.5	134.		804.	217.	785.	342.	629.	394.	385.	399.	615.	0.00	857.

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL ..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ %O2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ %CO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1%	KALARM	ESTLTW	NOXST	NOXALT	A50ALT	KM2F1
	KCONTRL	LTWT	LTWGTSP	NOXLT	A50T1	OA15X1	OA1X2CO	OA2V1
	H H H	GR/L	GR/L	GR/L	% % %	DEG.C	%	%	T/H	RPM
7.25		1270	1354	1324	51.1	51.6	0.445	393	-0.24	3.53	-0.02	9.19	854
8.25		1350	1266	1286	34.0	34.2	-0.104	400	-0.06	3.65	-0.01	9.38	865
9.25		1290	1265	1271	32.0	32.8	0.029	400	-0.07	3.26	0.00	9.42	867
10.25		1250	1279	1292	36.0	35.7	0.172	402	0.04	2.50	0.00	9.54	856
11.25		1250	1312	1306	41.6	42.7	-0.010	399	0.01	3.04	0.02	9.28	863
12.25		1320	1312	1299	41.4	42.6	0.027	400	0.11	2.95	0.02	9.40	860
13.25		1350	1296	1302	30.8	38.3	-0.495	404	0.55	1.85	0.02	9.30	867
14.25		1350	1331	1298	43.5	44.0	0.341	400	-0.09	2.42	0.01	9.32	854
15.25		1330	1327	1328	43.5	43.3	-0.156	400	0.10	3.57	0.03	9.12	857
16.25		1390	1323	1354	40.9	40.7	-0.199	398	0.07	3.84	0.00	8.89	858
17.25		1330	1192	1220	30.1	29.8	-0.212	398	0.03	3.90	0.01	9.03	857
18.25		1180	1185	1184	29.7	29.4	-0.034	398	0.09	3.90	0.01	9.25	856
19.25		1210	1249	1245	34.5	33.4	0.047	400	0.05	2.36	0.03	9.64	859
20.25		1270	1350	1320	41.8	40.9	0.178	402	0.33	3.22	0.01	9.31	858
21.25		1280	1366	1330	42.4	43.6	0.208	395	-0.47	3.62	0.00	8.96	877
22.25		1270	1210	1229	31.0	31.1	0.039	397	-0.31	3.43	0.01	9.11	849
23.25		1145	1227	1193	33.9	33.6	0.082	398	0.01	3.00	0.00	9.33	849
0.25		1175	1248	1240	36.3	36.1	0.192	400	-0.15	3.35	0.00	9.62	849
1.25		1175	1391	1368	47.3	48.3	0.468	402	0.16	2.63	0.00	9.70	846
2.25		1275	1403	1389	50.9	49.3	0.461	402	0.05	2.48	0.00	9.93	841
3.25		1320	1503	1483	58.1	57.9	0.080	399	0.04	3.49	0.00	9.50	838
4.25		1405	1343	1288	51.4	49.2	-0.342	401	-0.07	4.19	0.00	9.54	839
5.25		1420	1449	1372	55.6	58.3	0.145	398	-0.28	4.12	0.00	9.29	839
6.25		1405	1400	1400	53.7	54.2	0.093	398	-0.09	4.36	-0.01	9.13	837
7.25		1405	1274	1285	42.4	40.5	-0.747	400	0.15	5.38	-0.01	8.82	852
0.00 -	7.30												
MAX		1420.	1515.	1494.	59.3	60.1	0.584	405.	0.35	10.50	0.04	10.05	861.
MIN		1175.	1224.	1219.	34.5	34.0	-0.801	391.	-0.36	2.09	-0.04	8.83	824.
MEAN	7.50 7.23	1322.	1384.	1337.	50.0	50.1	0.058	400.	-0.00	3.89	-0.00	9.46	843.
ACCM	138.2 116.4	1344.		1337.			0.058	400.	-0.00		-0.00	70.94	843.
0.00 -	0.00												
MAX		1390.	1462.	1442.	51.3	51.6	0.600	406.	0.81	8.00	0.06	9.70	886.
MIN		1135.	1178.	1174.	27.6	27.9	-0.987	390.	-0.98	0.48	-0.04	8.52	833.
MEAN	24.02 24.02	1280.	1289.	1283.	37.6	37.6	-0.006	399.	0.00	3.24	0.00	9.19	857.
ACCM	130.8 109.3	1280.		1283.			-0.006	399.	0.00		0.00	220.47	857.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL.....
NET HEAT CONSUMP. ..... SHORT TONS CLINKER
HEAT CONSUMPTION ..... LB COAL / SH.T
W1/ COAL TO KILN ..... MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.25	99.8	60.7 1457	9.19 822	855 21.5	2.94 9395	65.9	0 28.97	1270
8.25	99.9	60.7 1458	9.38 838	872 21.5	2.94 9395	66.1	0 29.55	1350
9.25	100.0	60.8 1459	9.42 841	875 21.5	2.94 9395	66.0	0 29.54	1290
10.25	99.5	60.5 1453	9.54 855	890 21.5	2.94 9392	65.7	0 30.22	1250
11.25	99.7	60.6 1455	9.28 831	864 21.5	2.94 9395	65.8	0 29.19	1250
12.25	99.8	60.7 1456	9.40 841	876 21.5	2.94 9392	65.8	0 29.60	1320
13.25	99.0	60.1 1444	9.30 839	862 20.0	3.51 9522	65.3	0 29.91	1350
14.25	99.8	60.7 1456	9.32 834	856 20.0	3.51 9519	65.8	0 29.92	1350
15.25	100.0	60.8 1459	9.12 814	836 20.0	3.51 9522	66.0	0 28.94	1330
16.25	99.1	60.2 1446	8.89 801	822 20.0	3.51 9522	65.4	0 28.54	1390
17.25	99.3	60.4 1449	9.03 812	833 20.0	3.51 9522	65.5	0 28.82	1330
18.25	99.9	60.7 1459	9.25 826	848 20.0	3.51 9519	65.9	0 29.45	1180
19.25	99.7	60.6 1455	9.64 863	886 20.0	3.51 9519	65.8	0 30.61	1210
20.25	99.8	60.6 1456	9.31 833	855 20.0	3.51 9519	65.8	0 29.64	1270
21.25	99.7	60.6 1455	8.96 803	824 20.0	3.51 9519	65.8	0 28.67	1280
22.25	98.8	60.1 1443	9.11 823	845 20.0	3.51 9522	65.2	0 29.32	1270
23.25	99.8	60.6 1456	9.33 835	857 20.0	3.51 9522	65.8	0 29.87	1145
0.25	99.4	60.4 1451	9.62 864	887 20.0	3.51 9522	65.6	0 30.78	1175
1.25	99.5	60.4 1451	9.70 871	894 20.0	3.51 9522	65.6	0 31.01	1175
2.25	99.9	60.7 1458	9.93 888	911 20.0	3.51 9522	65.9	0 31.63	1275
3.25	100.2	60.9 1463	9.50 846	868 20.0	3.51 9522	66.1	0 30.28	1320
4.25	99.2	60.3 1448	9.54 858	881 20.0	3.51 9522	65.5	0 30.53	1405
5.25	100.1	60.9 1461	9.29 828	850 20.0	3.51 9522	66.1	0 29.50	1420
6.25	99.6	60.6 1454	9.13 818	840 20.0	3.51 9522	65.7	0 29.22	1405
7.25	100.0	60.8 1459	8.82 788	809 20.0	3.51 9519	66.0	0 28.17	1405
0.00 -	7.30							
MAX	101.1	61.4 1475.	10.05 900.	924. 20.0	3.51 9522.	66.7	0. 32.07	1420.
MIN	98.0	59.6 1431.	8.83 788.	809. 20.0	3.51 9519.	64.7	0. 28.06	1175.
MEAN	99.8	60.7 1456.	9.46 847.	869. 20.0	3.51 9522.	65.8	0. 30.16	1322. 7.51
ACCM	749.3	455.6	71.04 847.	869. 20.0	3.51		0. 30.16	1344. 138.2
0.00 -	0.00							
MAX	101.6	61.8 1483.	9.70 872.	902. 21.5	3.51 9522.	67.1	0. 31.06	1390.
MIN	97.8	59.5 1429.	8.52 762.	792. 20.0	2.94 9330.	64.6	0. 26.76	1135.
MEAN	99.7	60.6 1455.	9.19 823.	851. 20.8	3.20 9451.	65.8	0. 29.09	1280. 24.02
ACCM	2393.7	1455.4	220.47 823.	851. 20.8	3.20		0. 29.08	1280. 130.8

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR ..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1%			
	T/H	T/H	KC/KG			%	%	GR/L	DEG.C	%			H	H
7.25	100.0	60.8	9.00	803	121.2	0.980	2.850	73.2	34.5	1405	224	0.24	0.890	3.060		
8.25	99.3	60.4	9.02	811	117.1	0.940	2.850	63.3	34.5	1340	212	0.24	0.890	3.060		
9.25	99.1	60.2	9.25	834	117.1	0.940	2.850	63.3	34.5	1290	222	0.24	0.890	3.060		
10.25	99.6	60.5	9.45	847	117.1	0.940	2.850	63.3	34.5	1160	219	0.24	0.890	3.060		
11.25	99.0	60.1	9.38	847	117.1	0.940	2.850	63.3	34.5	1275	233	0.24	0.890	3.060		
12.25	100.3	60.9	9.19	819	117.1	0.940	2.850	63.3	34.5	1325	234	0.24	0.890	3.060		
13.25	100.8	61.2	9.22	817	118.0	0.940	2.890	63.6	35.2	1360	254	0.18	0.960	2.990		
14.25	99.4	60.4	10.05	902	118.0	0.940	2.890	63.6	35.2	1250	241	0.18	0.960	2.990		
15.25	100.1	60.8	9.46	844	118.0	0.940	2.890	63.6	35.2	1220	238	0.18	0.960	2.990		
16.25	100.3	61.0	9.31	829	118.0	0.940	2.890	63.6	35.2	1280	255	0.18	0.960	2.990		
17.25	100.2	60.9	9.05	806	115.9	0.920	2.920	58.8	35.2	1365	246	0.18	0.960	2.990		
18.25	100.0	60.8	9.13	815	115.9	0.920	2.920	58.8	35.2	1460	232	0.18	0.960	2.990		
19.25	99.4	60.4	9.12	819	115.9	0.920	2.920	58.8	35.2	1470	214	0.18	0.960	2.990		
20.25	99.1	60.3	8.68	782	115.9	0.920	2.920	58.8	35.2	1450	185	0.18	0.960	2.990		
21.25	100.2	60.9	8.43	751	115.9	0.920	2.920	58.8	35.2	1325	197	0.18	0.960	2.990		
22.25	100.7	61.2	8.57	759	115.9	0.920	2.920	58.8	35.2	1175	238	0.18	0.960	2.990		
23.25	100.0	60.8	8.85	791	115.9	0.920	2.920	58.8	35.2	1030	207	0.18	0.960	2.990		
0.25	99.4	60.4	9.09	817	115.9	0.920	2.920	58.8	35.2	1065	188	0.18	0.960	2.990		
1.25	99.9	60.7	9.38	839	118.5	0.920	2.920	66.0	35.2	1110	193	0.18	0.960	2.990		
2.25	99.3	60.3	9.57	860	118.5	0.950	2.880	66.0	35.2	1155	222	0.18	0.960	2.990		
3.25	100.0	60.8	9.42	841	118.5	0.950	2.880	66.0	35.2	1235	229	0.18	0.960	2.990		
4.25	99.5	60.5	9.38	842	118.5	0.950	2.880	66.0	35.2	1365	241	0.18	0.960	2.990		
5.25	100.8	61.3	9.02	799	118.5	0.950	2.880	66.0	35.2	1500	212	0.18	0.960	2.990		
6.25	99.5	60.5	9.03	811	118.5	0.950	2.880	66.0	35.2	1500	219	0.18	0.960	2.990		
7.25	98.7	60.0	9.01	814	118.5	0.950	2.880	66.0	35.2	1500	185	0.18	0.960	2.990		
0.00 -	7.27															
MAX	101.5	61.7	9.75	875.	118.5	0.950	2.920	66.0	35.2	1500.	259.	0.18	0.960	2.990		
MIN	98.4	59.8	8.90	791.	115.9	0.920	2.880	58.8	35.2	1065.	177.	0.18	0.960	2.990		
MEAN	100.0	60.8	9.28	829.	118.0	0.945	2.888	64.7	35.2	1296.	218.	0.18	0.960	2.990	3.48	7.46
ACCM	745.4	453.2	69.17	829.	118.1	0.946	2.886	65.0	35.2	1331.	218.	0.18	0.960	2.990	134.1	161.9
0.00 -	0.00															
MAX	101.3	61.6	10.14	914.	121.2	0.980	2.920	73.2	35.2	1470.	274.	0.24	0.960	3.060		
MIN	98.0	59.6	8.28	738.	115.9	0.920	2.850	58.8	34.5	1030.	167.	0.18	0.890	2.990		
MEAN	99.9	60.7	9.25	828.	118.2	0.947	2.879	65.1	34.9	1308.	229.	0.21	0.924	3.027	21.68	24.02
ACCM	2396.4	1457.0	222.00	828.	118.0	0.945	2.880	64.8	34.9	1305.	229.	0.21	0.925	3.025	130.7	154.5

W1/ PRESSURE A53 ..... W1/ GAS TEMP A52
W1/ GAS TEMP A53 ..... W1/ GAS TEMP A51
W1/ PRESSURE A54 ..... W1/ GAS TEMP A61
W1/ TEMP CYCL A54 ..... W1/ T EXIT PREHEAT
W1/ %O2 KILN OUTL ..... W1/ PRESS EX PREH
W1/ PRES EXIT KILN..... .....
W1/ KILN TORQUE W1/ %CO EX PREHEAT
W1/ KILN ROT SPEED J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO OA2V1 %	RPM
7.25	1.8	30.9	102	4.60	802	179	775	313	621	392	383	397	604	0.00	843
8.25	1.8	31.8	109	4.69	800	194	782	328	616	393	384	398	624	0.00	852
9.25	1.8	31.5	121	4.04	801	201	779	336	620	393	384	398	632	0.00	859
10.25	1.8	30.9	121	3.97	804	211	784	341	632	394	384	398	631	0.00	857
11.25	1.8	37.9	120	3.29	803	208	779	333	622	393	385	398	620	0.00	857
12.25	1.8	37.5	122	3.79	802	209	784	337	621	392	380	398	630	0.02	864
13.25	1.8	36.2	127	4.01	801	221	778	346	626	392	384	398	651	0.01	873
14.25	1.8	36.0	126	4.33	801	224	784	347	627	394	388	402	651	0.01	879
15.25	1.8	35.3	124	2.75	805	212	793	348	637	399	389	400	642	0.02	872
16.25	1.8	33.1	124	2.96	806	225	786	348	627	395	387	402	630	0.03	874
17.25	1.8	27.2	130	3.62	804	216	785	347	628	398	386	401	631	0.01	874
18.25	1.8	24.7	129	4.30	804	211	778	340	630	394	389	400	630	0.01	869
19.25	1.8	25.6	127	3.82	805	209	784	339	629	394	385	401	615	0.02	866
20.25	1.8	32.8	108	4.20	801	186	777	329	631	398	389	403	614	0.01	862
21.25	1.8	31.2	122	4.92	798	209	784	329	622	395	385	401	617	0.00	867
22.25	1.8	25.1	124	4.69	797	204	781	344	620	393	384	399	632	0.01	868
23.25	1.8	27.2	128	3.90	799	218	780	340	622	392	384	399	634	0.00	864
0.25	1.8	30.6	117	4.02	801	210	788	332	626	396	387	402	641	0.00	869
1.25	1.8	35.3	114	3.41	803	203	785	325	624	395	387	399	636	0.00	866
2.25	1.8	36.0	105	3.54	805	195	785	326	632	398	388	402	631	0.00	867
3.25	1.8	34.6	96	3.45	804	176	787	301	626	399	390	405	609	0.00	857
4.25	1.8	28.3	82	10.33	805	173	778	298	621	399	391	404	593	0.01	853
5.25	1.8	25.1	78	6.54	805	154	778	295	629	398	391	403	605	0.01	854
6.25	1.8	22.4	80	5.24	803	185	775	286	619	397	390	402	607	0.00	854
7.25	1.8	19.5	86	5.08	803	166	770	303	626	393	385	398	595	0.00	855
0.00 - 7.28															
MAX	1.9	37.8	135.	10.46	809.	230.	793.	352.	639.	404.	397.	411.	648.	0.03	872.
MIN	1.9	19.8	73.	2.23	797.	119.	764.	281.	612.	387.	381.	396.	587.	-0.03	834.
MEAN	1.9	29.5	98.	5.00	804.	184.	780.	308.	626.	397.	389.	403.	615.	0.00	859.
ACCM	1.9	29.5	98.		804.	184.	780.	308.	626.	397.	389.	403.	615.	0.00	859.
0.00 - 0.00															
MAX	1.9	38.6	142.	10.50	812.	241.	797.	365.	642.	407.	394.	407.	665.	0.09	885.
MIN	1.9	24.2	86.	1.34	796.	128.	768.	301.	613.	387.	379.	391.	574.	-0.04	824.
MEAN	1.9	31.6	119.	3.92	803.	206.	783.	334.	627.	395.	386.	400.	623.	0.01	859.
ACCM	1.9	31.6	119.		803.	206.	783.	334.	627.	395.	386.	400.	623.	0.01	859.

W1/ NOX REG LTIME .....
W1/ NOX REG STIME .....
W1/ LTW FOR CONTRL.....
W1/ ESTIMATED LTW .....
U1/ LITER WEIGHT .....
KILN CON. MEASUR. .....
KILN CONTROL
COAL TO KILN

.....W1/ NOX CHANGE LT
.....W1/ T EXIT PREHEAT
.....W1/ A50T1 CHANGE
.....W1/ %O2 KILN OUTL
.....
.....W1/ %CO EX PREHEAT
W1/ COAL TO KILN
J1/ ID FAN SPEED

HOUR	KM2F1* KCONTRL	KALARM	ESTLTW LTWT	LTWGTSP	NOXST NOXLT	NOXALT A50T1	A50ALT OA15X1		KM2F1 OA1X2CO	OA2V1
	H	H H	GR/L	GR/L GR/L	%	% %	DEG.C	%	%	T/H RPM
7.25			1405	1378 1380	48.7	51.8 -0.239	397	-0.10 4.60	0.00	9.00 843
8.25			1340	1258 1312	37.4	38.3 -0.107	398	-0.26 4.69	0.00	9.02 852
9.25			1290	1155 1167	27.4	27.0 -0.283	398	-0.03 4.04	0.00	9.25 859
10.25			1160	1233 1226	34.8	33.9 0.210	398	-0.09 3.97	0.00	9.45 857
11.25			1275	1306 1303	40.6	40.7 0.323	398	0.08 3.29	0.00	9.38 857
12.25			1325	1351 1344	45.6	46.2 0.113	398	-0.07 3.79	0.02	9.19 864
13.25			1360	1294 1304	39.6	39.4 -0.271	398	0.02 4.01	0.01	9.22 873
14.25			1250	1220 1222	32.0	31.1 -0.173	402	0.00 4.33	0.01	10.05 879
15.25			1220	1301 1271	41.6	39.6 0.471	400	-0.28 2.75	0.02	9.46 872
16.25			1280	1383 1314	49.0	49.1 0.343	402	0.07 2.96	0.03	9.31 874
17.25			1365	1342 1344	47.0	47.4 -0.325	401	-0.17 3.62	0.01	9.05 874
18.25			1460	1321 1284	42.5	42.6 -0.294	400	-0.06 4.30	0.01	9.13 869
19.25			1470	1340 1342	43.7	42.4 -0.037	401	-0.03 3.82	0.02	9.12 866
20.25			1450	1279 1374	32.1	34.5 -0.518	403	0.22 4.20	0.01	8.68 862
21.25			1325	1187 1315	19.8	20.9 -0.570	401	-0.14 4.92	0.00	8.43 867
22.25			1175	1132 1146	13.1	12.5 -0.124	399	-0.13 4.69	0.01	8.57 868
23.25			1030	1124 1204	15.9	16.1 0.098	399	0.05 3.90	0.00	8.85 864
0.25			1065	1162 1131	21.3	20.9 0.193	402	0.29 4.02	0.00	9.09 869
1.25			1110	1172 1152	22.7	22.6 0.024	399	0.27 3.41	0.00	9.38 866
2.25			1155	1319 1259	32.3	33.1 0.216	402	0.38 3.54	0.00	9.57 867
3.25			1235	1607 1279	52.4	52.8 0.610	405	0.25 3.45	0.00	9.42 857
4.25			1365	1573 1496	51.1	50.4 -0.075	404	0.01 10.33	0.01	9.38 853
5.25			1500	1585 1553	51.1	51.3 -0.125	403	0.06 6.54	0.01	9.02 854
6.25			1500	1395 1227	43.6	38.5 0.014	402	0.15 5.24	0.00	9.03 854
7.25			1500	1375 1378	37.3	37.1 -0.173	398	0.15 5.08	0.00	9.01 855
0.00 - 7.30										
MAX			1500.	1661. 1574.	56.4	56.5 0.899	411.	0.45 10.46	0.03	9.75 872.
MIN			1065.	1138. 1115.	18.2	18.7 -0.752	396.	-0.72 2.23	-0.03	8.90 834.
MEAN	7.50	3.48	1297.	1406. 1281.	38.9	38.9 0.091	403.	-0.01 5.00	0.00	9.27 859.
ACCM	161.9	134.1	1331.	1281.		0.091	403.	-0.01	0.00	69.56 859.
0.00 - 0.00										
MAX			1470.	1515. 1494.	59.3	60.1 0.614	407.	0.47 10.50	0.09	10.14 885.
MIN			1030.	1114. 1031.	12.8	12.0 -0.801	391.	-0.48 1.34	-0.04	8.28 824.
MEAN	24.02	21.68	1308.	1302. 1299.	40.0	40.0 -0.020	400.	0.00 3.92	0.01	9.25 859.
ACCM	154.5	138.7	1305.	1299.		-0.020	400.	0.00	0.01	222.00 859.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL..... .....
NET HEAT CONSUMP. ..... SHORT TONS CLINKER
HEAT CONSUMPTION ..... LB COAL / SH.T
W1/ COAL TO KILN ..... MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION W1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.25	100.0	60.8 1469	9.00 803	824 20.0	3.51 9519	66.0	0 28.54	1405
8.25	99.3	60.4 1458	9.02 811	832 20.0	3.51 9519	65.6	0 28.85	1340
9.25	99.1	60.2 1446	9.25 834	856 20.0	3.51 9519	65.4	0 29.59	1290
10.25	99.6	60.5 1453	9.45 847	870 20.0	3.51 9519	65.7	0 30.06	1160
11.25	99.0	60.1 1444	9.38 847	869 20.0	3.51 9519	65.3	0 30.07	1275
12.25	100.3	60.9 1463	9.19 819	840 20.0	3.51 9522	66.2	0 29.14	1325
13.25	100.8	61.2 1470	9.22 817	826 19.3	3.03 9667	66.5	0 29.48	1360
14.25	99.4	60.4 1451	10.05 982	912 19.3	3.03 9667	65.6	0 32.74	1250
15.25	100.1	60.8 1461	9.46 844	854 19.3	3.03 9667	66.0	0 30.59	1220
16.25	100.3	61.0 1464	9.31 829	838 19.3	3.03 9664	66.2	0 30.04	1280
17.25	100.2	60.9 1462	9.05 806	815 19.3	3.03 9667	66.1	0 29.01	1365
18.25	100.0	60.8 1459	9.13 815	824 19.3	3.03 9664	66.0	0 29.56	1460
19.25	99.4	60.4 1451	9.12 819	829 19.3	3.03 9664	65.6	0 29.50	1470
20.25	99.1	60.3 1447	8.68 782	790 19.3	3.03 9664	65.4	0 28.30	1450
21.25	100.2	60.9 1462	8.43 751	759 19.3	3.03 9664	66.1	0 27.21	1325
22.25	100.7	61.2 1470	8.57 759	768 19.3	3.03 9664	66.5	0 27.59	1175
23.25	100.0	60.8 1459	8.85 791	800 19.3	3.03 9664	66.0	0 28.68	1030
0.25	99.4	60.4 1451	9.09 817	826 19.3	3.03 9667	65.6	0 29.43	1065
1.25	99.9	60.7 1458	9.38 839	848 19.3	3.03 9667	65.9	0 30.23	1110
2.25	99.3	60.3 1449	9.57 860	870 19.3	3.03 9667	65.5	0 30.98	1155
3.25	100.0	60.8 1459	9.42 841	851 19.3	3.03 9667	66.0	0 30.45	1235
4.25	99.5	60.5 1452	9.38 842	851 19.3	3.03 9667	65.6	0 30.42	1365
5.25	100.8	61.3 1471	9.02 799	808 19.3	3.03 9667	66.5	0 28.96	1500
6.25	99.5	60.5 1452	9.03 811	820 19.3	3.03 9667	65.6	0 29.33	1500
7.25	98.7	60.0 1441	9.01 814	823 19.3	3.03 9667	65.1	0 29.46	1500
0.00 - 7.30								
MAX	101.5	61.7 1481.	9.75 875.	885. 19.3	3.03 9667.	67.0	0. 31.65	1500.
MIN	98.4	59.8 1436.	8.90 791.	800. 19.3	3.03 9664.	64.9	0. 28.61	1065.
MEAN	100.0	60.8 1459.	9.27 829.	838. 19.3	3.03 9666.	66.0	0. 29.97	1298. 7.51
ACCM	750.8	456.5	69.66 829.	838. 19.3	3.03		0. 29.96	1331. 161.9
0.00 - 0.00								
MAX	101.3	61.6 1479.	10.14 914.	924. 20.0	3.51 9667.	66.9	0. 33.03	1470.
MIN	98.0	59.6 1431.	8.28 738.	746. 19.3	3.03 9519.	64.7	0. 26.66	1030.
MEAN	99.9	60.7 1457.	9.25 828.	844. 19.7	3.28 9589.	65.9	0. 29.68	1308. 24.82
ACCM	2396.4	1457.0	222.00 828.	843. 19.7	3.28		0. 29.68	1305. 154.5

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION . . . . . KILN CONTROL
W1/ KILN FEED . . . . . COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1*
	T/H	T/H	T/H KC/KG	%	%	GR/L	DEG.C	%		H	H
7.25	99.8	60.6	8.99 804	118.5 0.950	2.880	66.0	35.2	1500	200	0.18	0.960	2.990		
8.25	100.5	61.1	9.01 800	118.5 0.950	2.880	66.0	35.2	1350	194	0.18	0.960	2.990		
9.25	100.1	60.9	8.70 776	113.0 0.900	2.870	54.5	35.2	1455	243	0.18	0.960	2.990		
10.25	100.6	61.1	8.68 770	113.0 0.900	2.870	54.5	35.2	1290	201	0.18	0.960	2.990		
11.25	99.8	60.7	8.68 776	113.0 0.900	2.870	54.5	35.2	1230	202	0.18	0.960	2.990		
12.25	99.7	60.6	8.89 796	115.1 0.910	2.950	56.5	35.2	1225	185	0.30	0.930	3.050		
13.25	99.4	60.4	9.16 823	115.1 0.910	2.950	56.5	35.2	1185	184	0.30	0.930	3.050		
14.25	91.0	55.3	9.20 902	115.1 0.910	2.950	56.5	35.2	1185	171	0.30	0.930	3.050		
15.25	90.0	54.7	9.20 913	115.1 0.910	2.950	56.5	35.2	1185	187	0.30	0.930	3.050		
16.25	90.9	55.3	9.26 909	118.8 0.950	2.910	66.0	35.2	1185	207	0.30	0.930	3.050		
17.25	99.5	60.5	9.14 820	118.8 0.950	2.910	66.0	35.2	1250	195	0.30	0.930	3.050		
18.25	100.0	60.8	8.77 783	118.8 0.950	2.910	66.0	35.2	1330	238	0.30	0.930	3.050		
19.25	99.8	60.7	8.94 799	118.8 0.950	2.910	66.0	35.2	1300	235	0.30	0.930	3.050		
20.25	99.7	60.6	9.24 828	118.8 0.950	2.910	66.0	35.2	1300	205	0.30	0.930	3.050		
21.25	99.5	60.5	9.35 839	118.8 0.950	2.910	66.0	35.2	1250	204	0.30	0.930	3.050		
22.25	100.1	60.8	9.04 807	118.8 0.950	2.910	66.0	35.2	1340	201	0.30	0.930	3.050		
23.25	99.4	60.4	9.10 817	118.8 0.950	2.910	66.0	35.2	1420	191	0.30	0.930	3.050		
0.25	100.2	60.9	9.30 829	115.9 0.910	3.030	57.3	35.2	1305	222	0.30	0.930	3.050		
1.25	99.1	60.2	9.15 825	115.9 0.910	3.030	57.3	35.2	1265	235	0.30	0.930	3.050		
2.25	98.7	60.0	9.34 845	115.9 0.910	3.030	57.3	35.2	1305	220	0.30	0.930	3.050		
3.25	98.7	60.0	9.26 837	115.9 0.910	3.030	57.3	35.2	1250	241	0.30	0.930	3.050		
4.25	99.9	60.7	9.09 813	115.9 0.910	3.030	57.3	35.2	1320	240	0.30	0.930	3.050		
5.25	98.9	60.1	9.30 840	115.9 0.910	3.030	57.3	35.2	1320	249	0.30	0.930	3.050		
6.25	98.7	60.0	9.08 821	115.9 0.910	3.030	57.3	35.2	1290	227	0.30	0.930	3.050		
7.25	98.8	60.1	8.76 792	116.0 0.930	2.890	60.8	35.2	1275	240	0.30	0.930	3.050		
0.00 - 7.26														
MAX	101.1	61.5	9.46 855.	116.0 0.930	3.030	60.9	35.2	1420.	259.	0.30	0.930	3.050		
MIN	97.9	59.5	8.67 773.	115.9 0.910	2.890	57.3	35.2	1250.	197.	0.30	0.930	3.050		
MEAN	99.6	60.6	9.18 823.	115.9 0.910	3.028	57.4	35.2	1296.	232.	0.30	0.930	3.050	7.00	7.45
ACCM	742.1	451.2	68.37 823.	115.9 0.910	3.030	57.3	35.2	1289.	232.	0.30	0.930	3.050	149.4	185.2
0.00 - 0.00														
MAX	101.5	61.7	9.75 18465.	118.8 0.950	3.030	66.0	35.2	1600.	259.	0.30	0.960	3.050		
MIN	-4.8	-2.9	1.21 -6746.	113.0 0.900	2.870	54.6	35.2	1065.	89.	0.18	0.930	2.990		
MEAN	98.6	59.9	9.08 821.	117.2 0.936	2.902	62.7	35.2	1298.	209.	0.24	0.944	3.020	11.89	23.64
ACCM	2330.5	1416.0	214.49 823.	117.1 0.934	2.908	62.3	35.2	1299.	209.	0.25	0.944	3.023	142.4	177.9

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 ..... W1/ GAS TEMP A52
W1/ GAS TEMP A53 ..... W1/ GAS TEMP A51
W1/ PRESSURE A54 ..... W1/ GAS TEMP A61
W1/ TEMP CYCL A54 ..... W1/ T EXIT PREHEAT
W1/ %O2 KILN OUTL ..... W1/ PRESS EX PREH
W1/ PRES EXIT KILN..... .....
W1/ KILN TORQUE W1/ %CO EX PREHEAT
W1/ KILN ROT SPEED J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	1.8	20.4	89	5.78	800	166	774	294	620	395	387	400	609	0.00	852
8.25	1.8	22.2	87	5.01	802	167	772	298	620	395	387	401	596	0.00	857
9.25	1.8	19.9	84	4.80	801	176	773	305	620	393	384	398	596	0.01	853
10.25	1.8	20.1	100	6.30	800	185	771	314	614	388	380	393	599	0.02	853
11.25	1.8	17.9	99	3.53	800	188	770	318	613	387	377	393	601	0.00	851
12.25	1.8	18.3	107	3.82	800	192	774	328	618	390	379	395	612	-0.01	865
13.25	1.8	22.6	107	2.66	800	213	776	318	622	389	380	396	603	-0.01	866
14.25	1.8	20.9	92	4.37	799	188	783	299	633	407	402	413	581	0.03	866
15.25	1.8	29.1	87	3.33	804	184	784	302	629	404	396	409	572	0.00	870
16.25	1.8	37.3	87	3.76	804	180	788	305	638	407	400	414	578	0.00	867
17.25	1.8	34.7	86	3.39	806	166	785	313	627	397	390	404	592	0.00	870
18.25	1.8	28.6	95	3.82	800	184	779	306	622	390	379	396	595	-0.04	859
19.25	1.8	26.0	100	3.63	801	186	777	308	619	390	379	395	610	-0.07	864
20.25	1.8	29.1	97	3.31	802	175	775	306	620	389	380	394	609	-0.08	859
21.25	1.8	30.4	100	2.64	804	190	782	310	623	392	382	397	609	-0.12	860
22.25	1.8	32.9	94	3.19	802	195	780	310	622	391	381	396	617	-0.17	861
23.25	1.8	33.2	101	3.02	803	194	775	313	621	389	380	394	613	-0.16	865
0.25	1.8	34.1	108	3.14	803	198	781	314	627	391	380	397	620	-0.15	864
1.25	1.8	36.1	106	3.08	802	194	781	314	623	393	381	389	619	-0.17	863
2.25	1.8	33.9	113	2.62	802	200	781	325	623	391	381	396	620	-0.18	862
3.25	1.8	35.1	115	2.36	802	216	787	322	623	390	381	395	620	-0.18	861
4.25	1.8	35.7	111	2.44	802	187	787	325	627	394	383	398	631	-0.18	869
5.25	1.8	33.6	126	2.48	803	215	782	330	625	393	384	398	625	-0.18	864
6.25	1.8	33.6	99	3.54	803	192	780	290	627	396	388	402	598	-0.18	863
7.25	1.9	33.7	98	4.00	801	174	778	297	624	394	388	399	600	-0.01	854
0.00 - 7.28															
MAX	1.9	36.6	144.	10.43	815.	231.	791.	350.	635.	401.	392.	406.	647.	-0.01	874.
MIN	1.9	32.9	87.	1.74	798.	149.	770.	282.	616.	384.	377.	389.	576.	-0.21	842.
MEAN	1.9	34.7	114.	3.08	803.	196.	783.	321.	625.	393.	383.	398.	621.	-0.18	864.
ACCM	1.9	34.7	114.		803.	196.	783.	321.	625.	393.	383.	398.	621.	-0.18	864.
0.00 - 0.00															
MAX	1.9	38.4	137.	10.54	816.	230.	797.	377.	662.	431.	429.	418.	648.	0.39	878.
MIN	0.0	0.1	-10.	-0.08	760.	22.	741.	3.	602.	383.	375.	389.	52.	-0.20	469.
MEAN	1.9	27.6	97.	4.27	803.	184.	779.	309.	624.	395.	386.	400.	603.	-0.03	860.
ACCM	1.9	27.6	97.		803.	184.	779.	309.	624.	395.	386.	400.	603.	-0.03	860.

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ %O2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ %CO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1* KCONTRL	KALARM LTWT	ESTLTW LTWGTSP	NOXST NOXLT	NOXALT A50T1	A50ALT OA15X1	KM2F1 OA1X2CO	OA2V1
	H H H	GR/L GR/L GR/L	% % %	DEG.C	%	% T/H	RPM
7.25		1500 1396 1399	38.9 38.6	-0.304 400	0.00 5.78	0.00	8.99	852
8.25		1350 1329 1330	36.7 32.9	-0.165 401	0.20 5.01	0.00	9.01	857
9.25		1455 1336 1400	31.7 30.9	0.116 398	-0.08 4.80	0.01	8.70	853
10.25		1290 1361 1401	31.1 31.2	-0.012 393	-0.15 6.30	0.02	8.68	853
11.25		1230 1366 1328	30.8 31.5	0.224 393	-0.02 3.53	0.00	8.68	851
12.25		1225 1149 1202	23.9 23.6	-0.229 395	-0.02 3.82	-0.01	8.89	865
13.25		1185 1145 1163	22.9 21.8	-0.105 396	-0.11 2.66	-0.01	9.16	866
14.25		1185 894 5122	8.3 8.6	-0.869 413	2.31 4.37	0.03	9.20	866
15.25		1185 1091 1252	19.7 19.0	0.173 409	1.22 3.33	0.00	9.20	870
16.25		1185 1254 1222	29.3 27.5	-0.079 414	0.05 3.76	0.00	9.26	867
17.25		1250 1613 1351	43.4 44.8	0.480 404	-1.41 3.39	0.00	9.14	870
18.25		1330 1731 1356	49.6 50.4	0.019 396	-0.09 3.82	-0.04	8.77	859
19.25		1300 1291 1269	37.9 36.6	-0.342 395	0.03 3.63	-0.07	8.94	864
20.25		1300 1236 1256	28.2 27.4	-0.552 394	-0.12 3.31	-0.08	9.24	859
21.25		1250 1271 1282	39.5 40.0	0.350 397	0.23 2.64	-0.12	9.35	860
22.25		1340 1285 1312	43.4 44.1	0.048 396	-0.08 3.19	-0.17	9.04	861
23.25		1420 1267 1286	34.6 34.3	-0.178 394	-0.11 3.02	-0.16	9.10	865
0.25		1305 1248 1280	34.3 31.5	-0.044 397	-0.01 3.14	-0.15	9.30	864
1.25		1265 1284 1306	36.1 36.8	0.188 389	0.10 3.08	-0.17	9.15	863
2.25		1305 1260 1286	33.5 33.3	-0.091 396	0.15 2.62	-0.18	9.34	862
3.25		1250 1288 1305	37.4 37.4	0.120 395	0.00 2.36	-0.18	9.26	861
4.25		1320 1286 1307	36.2 37.1	-0.102 398	0.09 2.44	-0.18	9.09	869
5.25		1320 1283 1296	36.6 36.7	-0.005 398	0.06 2.48	-0.18	9.30	864
6.25		1290 1312 1312	39.6 40.9	-0.084 402	0.26 3.54	-0.18	9.08	863
7.25		1275 1231 1271	28.8 29.0	-0.558 399	-0.09 4.00	-0.01	8.76	854
0.00 - 7.29								
MAX		1420. 1322. 1318.	43.3 42.4	0.246 406.	0.58 10.43	-0.01	9.46	874.
MIN		1250. 1227. 1268.	28.2 27.9	-0.634 389.	-0.41 1.74	-0.21	8.67	842.
MEAN	7.50 7.00	1295. 1281. 1300.	36.4 36.4	-0.006 398.	0.02 3.08	-0.18	9.18	864.
ACCM	185.3 149.4	1289. 1300.		-0.006 398.	0.02	-0.18	68.74	864.
0.00 - 0.00								
MAX		1600. 1771. 6100.	56.4 56.5	0.899 418.	2.32 10.54	0.39	9.75	878.
MIN		1065. 861. 1012.	8.3 6.9	-0.888 380.	-1.58 -0.08	-0.20	1.21	469.
MEAN	23.64 11.89	1290. 1337. 1330.	34.4 34.4	0.023 400.	-0.01 4.27	-0.03	9.08	860.
ACCM	177.9 142.4	1299. 1330.		0.023 400.	-0.01	-0.03	214.49	860.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL..... .....
NET HEAT CONSUMP. ....SHORT TONS CLINKER
HEAT CONSUMPTION ....LB COAL / SH.T
W1/ COAL TO KILN ....MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION W1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL	C-MOIST NKCAL	C-HEAT C-ASH	STONS	BTU LB.COAL	LTWT KM2F1%
	T/H	T/H T	T/H	KC/KG KC/KG	% %	T/H		GR/L H
7.25	99.8	60.6 1456	8.99	804 813	19.3 3.03	9667	65.8	0 29.17 1500
8.25	100.5	61.1 1467	9.01	800 809	19.3 3.03	9667	66.3	0 28.86 1350
9.25	100.1	60.9 1461	8.70	776 784	19.3 3.03	9667	66.1	0 28.86 1455
10.25	100.6	61.1 1468	8.68	770 779	19.3 3.03	9667	66.4	0 27.83 1290
11.25	99.8	60.7 1457	8.68	776 785	19.3 3.03	9667	65.9	0 28.22 1230
12.25	99.7	60.6 1456	8.89	796 814	19.5 3.80	9553	65.8	0 28.33 1225
13.25	99.4	60.4 1451	9.16	823 842	19.5 3.80	9553	65.6	0 29.55 1185
14.25	91.0	55.3 1329	9.20	902 923	19.5 3.80	9553	60.1	0 32.37 1185
15.25	90.0	54.7 1314	9.20	913 934	19.5 3.80	9553	59.4	0 32.48 1185
16.25	90.9	55.3 1327	9.26	909 930	19.5 3.80	9553	60.0	0 32.50 1185
17.25	99.5	60.5 1453	9.14	820 839	19.5 3.80	9553	65.7	0 29.30 1250
18.25	100.0	60.8 1459	8.77	783 801	19.5 3.80	9550	66.0	0 27.95 1330
19.25	99.8	60.7 1457	8.94	799 818	19.5 3.80	9553	65.9	0 28.48 1300
20.25	99.7	60.6 1455	9.24	828 847	19.5 3.80	9553	65.8	0 29.36 1300
21.25	99.5	60.5 1453	9.35	839 858	19.5 3.80	9553	65.7	0 30.10 1250
22.25	100.1	60.8 1460	9.04	807 826	19.5 3.80	9553	66.0	0 28.76 1340
23.25	99.4	60.4 1451	9.18	817 836	19.5 3.80	9550	65.6	0 29.17 1420
0.25	100.2	60.9 1463	9.30	829 848	19.5 3.80	9550	66.1	0 29.67 1305
1.25	99.1	60.2 1446	9.15	825 844	19.5 3.80	9553	65.4	0 29.48 1265
2.25	98.7	60.0 1441	9.34	845 864	19.5 3.80	9553	65.1	0 30.21 1305
3.25	98.7	60.0 1441	9.26	837 857	19.5 3.80	9553	65.2	0 29.72 1250
4.25	99.9	60.7 1457	9.09	813 832	19.5 3.80	9553	65.9	0 29.09 1320
5.25	98.9	60.1 1443	9.30	840 859	19.5 3.80	9553	65.3	0 29.92 1320
6.25	98.7	60.0 1440	9.08	821 840	19.5 3.80	9553	65.1	0 29.28 1290
7.25	98.8	60.1 1442	8.76	792 810	19.5 3.80	9553	65.2	0 28.22 1275
0.00 - 7.30								
MAX	101.1	61.5 1475.	9.46	855. 875.	19.5 3.80	9553.	66.7	0. 30.55 1420.
MIN	97.9	59.5 1429.	8.67	773. 791.	19.5 3.80	9550.	64.6	0. 27.61 1250.
MEAN	99.6	60.6 1454.	9.18	823. 842.	19.5 3.80	9552.	65.7	0. 29.40 1295. 7.51
ACCM	747.5	454.4	68.84	823. 842.	19.5 3.80			0. 29.39 1289. 185.3
0.00 - 0.00								
MAX	101.5	61.7 1481.	9.75	18465. 18891.	19.5 3.80	9667.	67.0	7. 659.77 1600.
MIN	-4.8	-2.9 -82.	1.21	-6746. -6902.	19.3 3.03	9550.	-3.7	-3.-241.05 1065.
MEAN	98.6	59.9 1416.	9.08	821. 835.	19.4 3.42	9608.	64.1	0. 29.51 1290. 23.64
ACCM	2330.5	1416.0	214.49	823. 835.	19.4 3.42			0. 29.51 1299. 177.9

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S .... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS .... U1/ LITER WEIGHT
W1/ KILN FEED LSF .... U1/ CLINKER TEMP
W1/ BURNING FACTOR..... ..... U1/ FREE LIME
HEAT CONSUMPTION .... U1/ CLINKER LSF
W1/ COAL TO KILN .... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1%	
	T/H	T/H	T/H KC/KG			%	%	GR/L DEG.C	%		H	H
7.25	99.4	60.4	8.76 787	115.9	0.910	3.030	57.3	35.2	1290	226	0.30	0.930	3.050		
8.25	100.6	61.1	9.10 808	116.0	0.930	2.890	60.8	35.2	1180	254	0.30	0.930	3.050		
9.25	99.7	60.6	9.35 837	116.0	0.930	2.890	60.8	35.2	1125	212	0.30	0.930	3.050		
10.25	99.0	60.2	9.45 852	116.0	0.930	2.890	60.8	35.2	1190	188	0.30	0.930	3.050		
11.25	99.0	60.2	9.29 838	116.0	0.930	2.890	60.8	35.2	1300	220	0.30	0.930	3.050		
12.25	100.3	61.0	9.24 822	114.5	0.910	2.950	54.9	34.9	1275	245	0.24	0.920	3.070		
13.25	99.7	60.6	9.41 843	114.5	0.910	2.950	54.9	34.9	1250	276	0.24	0.920	3.070		
14.25	99.6	60.5	9.45 847	114.5	0.910	2.950	54.9	34.9	1275	273	0.24	0.920	3.070		
15.25	100.3	61.0	9.29 827	114.5	0.910	2.950	54.9	34.9	1315	246	0.24	0.920	3.070		
16.25	99.0	60.2	9.08 819	114.5	0.910	2.950	54.9	34.9	1380	260	0.24	0.920	3.070		
17.25	99.9	60.7	8.83 789	118.8	0.950	2.930	66.2	34.9	1375	251	0.24	0.920	3.070		
18.25	99.5	60.5	9.05 812	118.8	0.950	2.930	66.2	34.9	1280	268	0.24	0.920	3.070		
19.25	99.3	60.3	9.29 835	118.8	0.950	2.930	66.2	34.9	1110	258	0.24	0.920	3.070		
20.25	99.7	60.6	9.54 854	118.8	0.950	2.930	66.2	34.9	1090	229	0.24	0.920	3.070		
21.25	100.3	61.0	9.90 882	118.8	0.950	2.930	66.2	34.9	1150	195	0.24	0.920	3.070		
22.25	100.1	60.8	9.54 850	118.8	0.950	2.930	66.2	34.9	1250	225	0.24	0.920	3.070		
23.25	99.4	60.4	8.53 766	118.8	0.950	2.930	66.2	34.9	1380	239	0.24	0.920	3.070		
0.25	100.9	61.3	9.07 803	118.8	0.950	2.930	66.2	34.9	1405	204	0.24	0.920	3.070		
1.25	100.0	60.8	8.86 791	119.7	0.960	2.910	68.9	34.9	1360	204	0.24	0.920	3.070		
2.25	100.1	60.9	8.97 800	119.7	0.960	2.910	68.9	34.9	1360	230	0.24	0.920	3.070		
3.25	99.7	60.6	9.04 810	119.7	0.960	2.910	68.9	34.9	1385	241	0.24	0.920	3.070		
4.25	100.2	60.9	8.97 799	119.7	0.960	2.910	68.9	34.9	1270	236	0.24	0.920	3.070		
5.25	100.7	61.2	8.81 781	119.7	0.960	2.910	68.9	34.9	1300	243	0.24	0.920	3.070		
6.25	99.9	60.7	8.83 789	119.7	0.960	2.910	68.9	34.9	1305	230	0.24	0.920	3.070		
7.25	99.6	60.5	9.09 815	116.1	0.940	2.800	62.9	34.9	1310	235	0.24	0.920	3.070		
0.00 - 7.26															
MAX	101.5	61.7	9.20 832.	119.7	0.960	2.930	68.9	34.9	1405.	253.	0.24	0.920	3.070		
MIN	98.2	59.6	8.64 767.	116.1	0.940	2.800	63.0	34.9	1270.	186.	0.24	0.920	3.070		
MEAN	99.6	60.6	8.94 801.	119.3	0.957	2.906	68.1	34.9	1325.	228.	0.24	0.920	3.070	6.70	7.45
ACCM	742.2	451.3	66.56 801.	119.1	0.956	2.897	67.7	34.9	1324.	228.	0.24	0.920	3.070	167.2	209.0
0.00 - 0.00															
MAX	108.6	66.0	10.22 923.	118.8	0.950	3.030	66.2	35.2	1420.	288.	0.30	0.930	3.070		
MIN	97.6	59.3	3.90 340.	114.5	0.910	2.890	54.9	34.9	1090.	179.	0.24	0.920	3.050		
MEAN	99.7	60.6	9.26 830.	116.5	0.926	2.958	60.2	35.1	1262.	239.	0.27	0.925	3.061	18.30	24.02
ACCM	2392.5	1454.6	222.27 830.	116.6	0.927	2.957	60.4	35.1	1254.	239.	0.27	0.925	3.061	160.5	201.6

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 ..... W1/ GAS TEMP A52
W1/ GAS TEMP A53 ..... W1/ GAS TEMP A51
W1/ PRESSURE A54 ..... W1/ GAS TEMP A61
W1/ TEMP CYCL A54 ..... W1/ T EXIT PREHEAT
W1/ ZO2 KILN OUTL ..... W1/ PRESS EX PREH
W1/ PRES EXIT KILN..... .....
W1/ KILN TORQUE W1/ %CO EX PREHEAT
W1/ KILN ROT SPEED J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	1.9	34.3	103	10.31	801	178	773	298	621	394	385	400	604	-0.18	856
8.25	1.8	29.1	98	3.80	800	193	772	294	618	388	380	395	604	-0.03	855
9.25	1.8	30.9	90	3.03	804	180	780	288	622	391	383	395	592	0.00	859
10.25	1.8	32.4	76	3.17	805	145	772	280	612	393	384	398	585	-0.01	859
11.25	1.8	35.4	81	3.72	804	169	778	276	620	394	385	398	581	-0.01	861
12.25	1.8	42.4	80	4.05	803	169	781	293	627	395	388	400	596	0.00	861
13.25	1.8	39.9	81	4.00	804	164	785	296	626	394	385	400	584	-0.01	853
14.25	1.8	38.2	82	2.89	805	178	785	300	628	394	385	400	588	0.00	854
15.25	1.8	39.6	88	3.07	807	161	783	302	629	395	385	401	590	0.00	851
16.25	1.8	38.7	101	2.94	803	190	780	318	620	393	383	398	610	0.01	864
17.25	1.8	36.6	126	3.52	802	208	779	334	621	388	381	396	616	-0.01	866
18.25	1.8	32.5	88	3.87	803	177	780	300	623	394	384	397	601	0.00	864
19.25	1.8	32.9	87	3.55	804	167	782	295	626	393	384	397	595	0.00	855
20.25	1.8	35.1	87	2.27	806	182	788	298	630	392	382	398	598	0.00	855
21.25	1.8	36.4	107	0.90	809	186	789	317	623	391	380	395	600	0.01	855
22.25	1.8	39.4	103	2.24	813	190	791	314	627	396	389	403	608	0.00	860
23.25	1.8	36.2	115	3.00	806	214	785	329	628	393	384	398	614	0.00	863
0.25	1.8	30.4	120	3.56	803	219	784	324	618	388	378	393	618	0.01	860
1.25	1.8	35.9	119	3.59	804	203	783	328	622	392	381	396	616	0.00	863
2.25	1.8	35.1	110	2.96	804	196	786	317	630	390	382	397	610	0.00	861
3.25	1.8	34.3	118	3.11	802	203	788	328	625	390	381	397	613	0.00	860
4.25	1.8	35.1	130	3.22	803	214	785	332	623	391	385	398	610	0.00	860
5.25	1.8	33.7	113	3.71	805	190	784	306	630	400	394	404	609	0.00	863
6.25	1.8	34.0	114	3.87	802	196	778	314	621	390	384	397	612	0.00	856
7.25	1.8	34.0	115	3.15	803	201	778	313	625	391	384	397	612	-0.01	856
0.00 - 7.28															
MAX	1.9	37.6	156.	4.38	807.	244.	795.	354.	636.	404.	396.	407.	634.	0.03	870.
MIN	1.9	29.9	87.	2.01	799.	162.	772.	295.	610.	383.	377.	388.	585.	-0.04	842.
MEAN	1.9	34.5	119.	3.36	804.	202.	783.	323.	624.	391.	393.	397.	613.	-0.00	861.
ACCM	1.9	34.5	119.		804.	202.	783.	323.	624.	391.	383.	397.	613.	-0.00	861.
0.00 - 0.00															
MAX	1.9	42.7	146.	10.52	825.	240.	798.	350.	639.	404.	394.	408.	647.	0.08	874.
MIN	1.9	28.4	70.	0.25	797.	132.	768.	266.	610.	382.	362.	387.	568.	-0.21	842.
MEAN	1.9	35.6	101.	3.29	804.	185.	782.	308.	624.	393.	384.	398.	605.	-0.06	860.
ACCM	1.9	35.6	101.		804.	185.	782.	308.	624.	393.	384.	398.	605.	-0.06	860.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ ZO2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ ZCO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1* KCONTRL	KALARM	ESTLTW LTWT	NOXST LTWGTSP	NOXALT NOXLT	A50ALT A50T1	OA15X1	KM2F1 OA1X2CO	OA2V1
	H	H H	GR/L	GR/L GR/L	% %	% DEG.C	%	%	T/H RPM
7.25			1290	1288 1302	35.4 37.4	-0.276 400	0.09 10.31	-0.18	8.76 856
8.25			1180	1172 1174	21.2 20.4	-0.283 395	-0.31 3.80	-0.03	9.10 855
9.25			1125	1226 1228	26.9 28.1	0.313 395	0.17 3.03	0.00	9.35 859
10.25			1190	1286 1261	35.9 36.5	0.269 398	-0.64 3.17	-0.01	9.45 859
11.25			1300	1288 1291	38.6 36.8	0.167 398	0.14 3.72	-0.01	9.29 861
12.25			1275	1273 1273	35.8 35.3	-0.437 400	0.37 4.05	0.00	9.24 861
13.25			1250	1294 1283	39.3 39.0	0.148 400	-0.27 4.00	-0.01	9.41 853
14.25			1275	1310 1298	42.0 41.6	0.335 400	0.03 2.89	0.00	9.45 854
15.25			1315	1359 1319	50.5 49.9	0.174 401	-0.40 3.07	0.00	9.29 851
16.25			1380	1352 1359	45.8 45.4	-0.310 398	0.13 2.94	0.01	9.08 864
17.25			1375	1301 1314	39.8 38.6	-0.228 396	-0.21 3.52	-0.01	8.83 866
18.25			1280	1133 1153	21.1 19.1	-0.905 397	-0.08 3.87	0.00	9.05 864
19.25			1110	1136 1135	22.4 21.5	0.053 397	-0.01 3.55	0.00	9.29 855
20.25			1090	1193 1235	27.9 28.2	0.152 398	-0.06 2.27	0.00	9.54 855
21.25			1150	1191 1177	29.8 29.8	0.041 395	0.23 0.90	0.01	9.90 855
22.25			1250	1191 1192	29.8 29.8	0.000 403	0.33 2.24	0.00	9.54 860
23.25			1380	1623 1386	73.0 74.9	0.275 398	-0.22 3.00	0.00	8.53 863
0.25			1405	1364 1292	55.0 53.0	-0.467 393	-0.03 3.56	0.01	9.07 860
1.25			1360	1323 1300	46.7 46.9	-0.195 396	-0.12 3.59	0.00	8.86 863
2.25			1360	1297 1279	43.8 43.2	-0.088 397	0.01 2.96	0.00	8.97 861
3.25			1305	1300 1300	43.1 43.6	0.033 397	0.00 3.11	0.00	9.04 860
4.25			1270	1301 1298	44.7 45.1	-0.018 398	0.24 3.22	0.00	8.97 860
5.25			1300	1303 1302	44.8 45.4	-0.024 404	0.27 3.71	0.00	8.81 863
6.25			1305	1265 1268	41.8 41.0	-0.588 397	0.38 3.87	0.00	8.83 856
7.25			1310	1261 1263	40.7 40.1	0.027 397	0.05 3.15	-0.01	9.09 856
0.00 - 7.29									
MAX			1405.	1435. 1433.	56.1 55.3	0.358 407.	0.99 4.38	0.03	9.20 870.
MIN			1270.	1253. 1256.	38.5 39.0	-1.038 388.	-1.16 2.01	-0.04	8.64 842.
MEAN	7.50	6.74	1325.	1309. 1296.	45.6 45.5	-0.112 397.	0.01 3.36	-0.00	8.94 861.
ACCM	209.0	167.2	1324.	1296.		-0.112 397.	0.01	-0.00	66.95 861.
0.00 - 0.00									
MAX			1420.	1723. 1710.	78.5 85.4	2.932 408.	1.25 10.52	0.08	10.22 874.
MIN			1090.	1123. 1123.	19.0 19.0	-1.023 387.	-0.95 0.25	-0.21	3.90 842.
MEAN	24.02	18.30	1262.	1280. 1279.	36.8 36.8	0.043 398.	-0.00 3.29	-0.06	9.26 860.
ACCM	201.6	160.5	1254.	1279.		0.043 398.	-0.00	-0.06	222.27 860.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL .... COAL HEAT VALUE
% MOISTURE IN COAL..... ....
NET HEAT CONSUMP. .... SHORT TONS CLINKER
HEAT CONSUMPTION .... LB COAL / SH.T
W1/ COAL TO KILN .... MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.25	99.4	60.4 1450	8.76 787	806 19.5	3.80 9553	65.6	0 28.36	1290
8.25	100.6	61.1 1468	9.10 808	826 19.5	3.80 9553	66.4	0 28.92	1180
9.25	99.7	60.6 1454	9.35 837	857 19.5	3.80 9553	65.8	0 29.92	1125
10.25	99.0	60.2 1445	9.45 852	871 19.5	3.80 9553	65.3	0 30.33	1190
11.25	99.0	60.2 1445	9.29 838	858 19.5	3.80 9553	65.3	0 29.99	1300
12.25	100.3	61.0 1464	9.24 822	845 20.0	3.60 9509	66.2	0 29.28	1275
13.25	99.7	60.6 1456	9.41 843	866 20.0	3.60 9512	65.8	0 30.06	1250
14.25	99.6	60.5 1453	9.45 847	871 20.0	3.60 9512	65.7	0 30.20	1275
15.25	100.3	61.0 1464	9.29 827	849 20.0	3.60 9512	66.2	0 29.49	1315
16.25	99.0	60.2 1445	9.08 819	841 20.0	3.60 9512	65.3	0 29.17	1380
17.25	99.9	60.7 1458	8.83 789	811 20.0	3.60 9512	65.9	0 28.16	1375
18.25	99.5	60.5 1453	9.05 812	834 20.0	3.60 9512	65.7	0 28.89	1280
19.25	99.3	60.3 1449	9.29 835	858 20.0	3.60 9512	65.5	0 29.72	1110
20.25	99.7	60.6 1455	9.54 854	877 20.0	3.60 9512	65.8	0 30.49	1090
21.25	100.3	61.0 1464	9.90 882	906 20.0	3.60 9509	66.2	0 31.40	1150
22.25	100.1	60.8 1461	9.54 850	874 20.0	3.60 9512	66.1	0 30.35	1250
23.25	99.4	60.4 1451	8.53 766	787 20.0	3.60 9512	65.6	0 27.02	1380
0.25	100.9	61.3 1472	9.07 803	825 20.0	3.60 9512	66.6	0 28.52	1405
1.25	100.0	60.8 1460	8.86 791	813 20.0	3.60 9509	66.0	0 28.19	1360
2.25	100.1	60.9 1461	8.97 800	822 20.0	3.60 9509	66.1	0 28.59	1360
3.25	99.7	60.6 1455	9.04 810	832 20.0	3.60 9512	65.8	0 28.74	1305
4.25	100.2	60.9 1463	8.97 799	821 20.0	3.60 9512	66.1	0 28.43	1270
5.25	100.7	61.2 1470	8.81 781	802 20.0	3.60 9512	66.5	0 27.93	1300
6.25	99.9	60.7 1458	8.83 789	811 20.0	3.60 9512	65.9	0 28.15	1305
7.25	99.6	60.5 1453	9.09 815	837 20.0	3.60 9512	65.7	0 29.02	1310
0.00 - 7.30								
MAX	101.5	61.7 1482.	9.20 832.	855. 20.0	3.60 9512.	67.0	0. 29.60	1405.
MIN	98.2	59.6 1430.	8.64 767.	788. 20.0	3.60 9509.	64.7	0. 27.29	1270.
MEAN	99.6	60.6 1454.	8.94 801.	823. 20.0	3.60 9511.	65.8	0. 28.50	1325. 7.51
ACCM	747.6	454.5	67.06 801.	823. 20.0	3.60		0. 28.50	1324. 209.0
0.00 - 0.00								
MAX	108.6	66.0 1585.	10.22 923.	948. 20.0	3.80 9576.	71.7	0. 32.84	1420.
MIN	97.6	59.3 1424.	3.90 340.	350. 19.5	3.60 9509.	64.4	0. 12.11	1090.
MEAN	99.7	60.6 1455.	9.26 830.	851. 19.8	3.70 9532.	65.8	0. 29.58	1262. 24.82
ACCM	2392.5	1454.6	222.27 830.	851. 19.8	3.70		0. 29.59	1254. 201.6

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LIWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1*		
	T/H	T/H	T/H KC/KG		%	%	GR/L DEG.C	%		H H
7.26	99.2	60.3	9.01 811	116.1 0.940	2.800	62.9	34.9 1310	237	0.24 0.920 3.070	
8.26	99.0	60.3	9.21 826	116.1 0.940	2.800	62.9	34.9 1305	248	0.24 0.920 3.070	
9.26	99.3	60.4	9.14 821	116.1 0.940	2.800	62.9	34.9 1305	234	0.24 0.920 3.070	
10.26	99.5	60.5	8.83 792	116.1 0.940	2.800	62.9	34.9 1320	253	0.24 0.920 3.070	
11.26	99.9	60.7	8.91 796	116.1 0.940	2.800	62.9	34.9 1360	248	0.24 0.920 3.070	
12.26	99.8	60.7	9.05 810	115.0 0.920	2.940	57.7	34.9 1310	236	0.24 0.940 3.070	
13.26	100.2	60.9	8.98 800	115.0 0.920	2.940	57.7	34.9 1300	253	0.24 0.940 3.070	
14.26	99.0	60.1	8.78 792	115.0 0.920	2.940	57.7	34.9 1355	245	0.24 0.940 3.070	
15.26	100.2	60.9	8.75 779	121.0 0.980	2.870	73.1	34.9 1350	247	0.24 0.940 3.070	
16.26	95.4	58.0	8.78 822	121.0 0.980	2.870	73.1	34.9 1230	229	0.24 0.940 3.070	
17.26	99.4	60.4	8.86 796	121.0 0.980	2.870	73.1	34.9 1340	238	0.24 0.940 3.070	
18.26	99.6	60.5	8.96 804	121.0 0.980	2.870	73.1	34.9 1230	279	0.24 0.940 3.070	
19.26	96.9	58.9	8.97 827	121.0 0.980	2.870	73.1	34.9 1210	270	0.24 0.940 3.070	
20.26	97.7	59.4	8.97 820	121.0 0.980	2.870	73.1	34.9 1190	262	0.24 0.940 3.070	
21.26	97.3	59.1	8.95 822	121.0 0.980	2.870	73.1	34.9 1280	244	0.24 0.940 3.070	
22.26	99.7	60.6	8.94 801	121.0 0.980	2.870	73.1	34.9 1330	232	0.24 0.940 3.070	
23.26	99.3	60.4	8.88 799	121.0 0.980	2.870	73.1	34.9 1335	233	0.24 0.940 3.070	
0.25	99.2	60.3	8.51 766	112.2 0.910	2.720	55.4	34.9 1335	243	0.24 0.940 3.070	
1.25	100.0	60.8	8.84 789	112.2 0.910	2.720	55.4	34.9 1300	255	0.24 0.940 3.070	
2.25	100.1	60.8	8.96 800	112.2 0.910	2.720	55.4	34.9 1165	234	0.24 0.940 3.070	
3.25	98.7	60.0	9.23 835	112.2 0.910	2.720	55.4	34.9 1220	235	0.24 0.940 3.070	
4.25	100.5	61.1	9.45 840	112.2 0.910	2.720	55.4	34.9 1235	225	0.24 0.940 3.070	
5.25	100.1	60.8	9.11 813	112.2 0.910	2.720	55.4	34.9 1300	217	0.24 0.940 3.070	
6.25	99.6	60.6	8.84 793	112.2 0.910	2.720	55.4	34.9 1330	221	0.24 0.940 3.070	
7.25	100.1	60.8	8.99 802	112.2 0.910	2.720	55.4	34.9 1305	227	0.24 0.940 3.070	
0.00 - 7.26										
MAX	101.2	61.6	9.50 860.	112.2 0.910	2.720	55.4	35.0 1335.	270.	0.24 0.940 3.070	
MIN	97.8	59.4	8.40 755.	112.2 0.910	2.720	55.4	35.0 1165.	193.	0.24 0.940 3.070	
MEAN	99.6	60.6	9.02 809.	112.2 0.910	2.720	55.4	35.0 1271.	234.	0.24 0.940 3.070	7.44 7.44
ACCM	740.7	450.3	67.06 809.	112.2 0.910	2.720	55.4	35.0 1266.	234.	0.24 0.940 3.070	179.1 231.7
0.00 - 0.00										
MAX	103.8	63.1	9.35 870.	121.0 0.980	2.940	73.2	35.0 1405.	301.	0.24 0.940 3.070	
MIN	92.3	56.1	8.61 766.	112.2 0.910	2.720	55.4	34.9 1190.	186.	0.24 0.920 3.070	
MEAN	99.1	60.3	8.95 806.	118.7 0.957	2.880	67.5	35.0 1307.	242.	0.24 0.930 3.070	11.28 23.03
ACCM	2281.0	1386.9	205.86 806.	118.3 0.954	2.875	66.7	35.0 1307.	242.	0.24 0.931 3.070	171.7 224.3

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 .....
W1/ GAS TEMP A53 .....
W1/ PRESSURE A54 .....
W1/ TEMP CYCL A54 .....
W1/ %O2 KILN OUTL .....
W1/ PRES EXIT KILN.....
W1/ KILN TORQUE
W1/ KILN ROT SPEED

.....W1/ GAS TEMP A52
.....W1/ GAS TEMP A51
.....W1/ GAS TEMP A61
.....W1/ T EXIT PREHEAT
.....W1/ PRESS EX PREH
.....
W1/ %CO EX PREHEAT
J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.26	1.9	33.6	115	3.84	804	199	780	313	624	391	384	397	610	-0.01	856
8.26	1.8	34.5	117	3.35	804	194	781	314	626	391	385	398	610	-0.01	855
9.26	1.8	37.6	112	2.91	806	200	777	316	618	389	383	397	610	0.00	861
10.26	1.8	37.8	129	3.25	803	211	776	326	615	385	380	367	610	0.00	863
11.26	1.8	35.9	154	3.66	804	236	786	361	635	396	388	369	656	0.00	863
12.26	1.8	36.9	135	3.51	803	219	782	356	624	394	385	373	623	0.00	866
13.26	1.8	37.5	143	2.98	803	230	782	343	628	388	381	395	620	0.00	864
14.26	1.8	37.9	138	3.26	802	221	784	368	622	393	381	397	637	0.02	879
15.26	1.8	34.9	110	4.40	802	220	784	324	631	394	384	397	634	0.01	878
16.26	1.8	35.1	160	3.02	804	259	792	378	630	400	391	405	642	0.00	883
17.26	1.8	41.0	117	3.76	803	211	786	344	628	397	388	399	640	0.02	879
18.26	1.8	34.5	145	2.98	804	225	784	364	634	395	383	401	643	0.01	878
19.26	1.8	39.1	156	2.50	802	245	785	368	634	399	389	404	647	0.00	881
20.26	1.8	37.6	135	2.98	805	222	785	348	630	398	390	402	639	0.00	880
21.26	1.8	37.0	138	3.10	806	217	787	356	638	404	394	407	650	-0.02	878
22.26	1.8	38.2	118	4.20	804	209	786	331	637	406	398	412	641	0.00	879
23.26	1.8	38.7	109	3.73	804	200	782	310	631	400	394	407	618	0.00	871
0.25	1.8	37.1	110	4.54	802	173	783	311	624	398	390	403	606	-0.02	869
1.25	1.8	33.4	92	3.87	804	174	777	284	619	394	389	400	577	0.00	844
2.25	1.9	33.5	89	3.16	804	158	769	277	618	383	380	391	545	0.01	833
3.25	1.8	33.1	87	3.68	804	185	777	281	620	394	387	396	588	0.00	843
4.25	1.8	34.1	78	3.07	808	178	783	286	624	398	392	402	581	-0.01	833
5.25	1.8	37.5	83	3.08	806	178	779	288	623	398	389	403	585	-0.02	840
6.25	1.8	36.1	80	4.24	805	159	782	284	624	398	392	401	585	-0.02	839
7.25	1.8	34.4	87	4.19	805	175	774	286	614	391	384	397	582	0.00	839
0.00 - 7.27															
MAX	1.9	38.7	119.	5.02	810.	219.	789.	322.	633.	403.	394.	407.	622.	0.03	872.
MIN	1.9	32.3	71.	2.37	793.	104.	768.	264.	608.	383.	376.	390.	536.	-0.05	827.
MEAN	1.9	35.2	87.	3.82	805.	169.	778.	286.	620.	394.	387.	399.	577.	-0.01	842.
ACCM	1.9	35.2	87.		805.	169.	778.	286.	620.	394.	387.	399.	577.	-0.01	842.
0.00 - 0.00															
MAX	1.9	42.8	174.	4.63	809.	272.	795.	386.	646.	414.	407.	418.	671.	0.05	891.
MIN	1.9	29.9	87.	1.31	799.	162.	771.	294.	610.	383.	375.	359.	579.	-0.04	842.
MEAN	1.9	36.3	129.	3.31	804.	216.	784.	340.	628.	395.	386.	397.	627.	0.00	869.
ACCM	1.9	36.3	129.		804.	216.	784.	340.	628.	395.	386.	397.	627.	0.00	869.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ ZO2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ ZCO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1* KCONTRL	KALARM	ESTLTW LTWT	NOXST LTWGTSP	NOXALT NOXLT	A50ALT A50T1	OA15X1	KM2F1 OA1X2CO	OA2V1
	H	H H	GR/L	GR/L GR/L	% %	% DEG.C	%	%	T/H RPM
7.26			1310	1254 1257	39.6 39.1	-0.192 397	0.16 3.84	-0.01	9.01 856
8.26			1305	1273 1274	40.0 40.2	0.031 398	0.10 3.35	-0.01	9.21 855
9.26			1305	1286 1287	42.2 42.5	0.111 397	-0.13 2.91	0.00	9.14 861
10.26			1320	1313 1329	44.5 45.0	0.054 367	-3.28 3.25	0.00	8.93 863
11.26			1360	1264 1276	35.6 37.1	-0.131 369	0.75 3.66	0.00	8.91 863
12.26			1310	1288 1327	40.3 39.4	0.117 373	0.18 3.51	0.00	9.05 866
13.26			1300	1359 1345	47.7 47.9	0.212 395	0.20 2.98	0.00	8.98 864
14.26			1355	1370 1358	51.5 51.8	0.011 397	0.03 3.26	0.02	8.78 879
15.26			1350	1296 1311	37.3 36.7	-0.548 397	0.12 4.40	0.01	8.75 878
16.26			1230	1384 1352	52.9 54.8	0.936 405	0.29 3.02	0.00	8.78 883
17.26			1340	1281 1297	32.4 33.5	-1.071 399	-0.47 3.76	0.02	8.86 879
18.26			1230	1299 1291	40.9 38.6	0.428 401	-0.63 2.98	0.01	8.96 878
19.26			1210	1269 1297	34.8 33.6	-0.155 404	0.25 2.50	0.00	8.97 881
20.26			1190	1332 1314	44.6 44.0	0.297 402	0.01 2.90	0.00	8.97 880
21.26			1280	1335 1320	44.0 44.5	0.185 407	0.30 3.10	-0.02	8.95 878
22.26			1330	1317 1318	41.0 41.6	-0.116 412	-0.30 4.20	0.00	8.94 879
23.26			1335	1311 1312	40.1 40.1	-0.046 407	-0.32 3.73	0.00	8.88 871
0.25			1335	1307 1308	38.3 39.4	-0.218 403	0.16 4.54	-0.02	8.51 869
1.25			1300	1254 1257	30.1 30.1	-0.240 400	-0.14 3.87	0.00	8.84 844
2.25			1165	1280 1272	34.1 35.0	0.076 391	-0.08 3.16	0.01	8.96 833
3.25			1220	1264 1263	34.6 34.5	-0.188 396	0.44 3.68	0.00	9.23 843
4.25			1235	1298 1287	41.3 40.9	0.388 402	0.26 3.07	-0.01	9.45 833
5.25			1300	1332 1306	44.7 46.3	0.009 403	-0.10 3.08	-0.02	9.11 840
6.25			1330	1324 1325	43.9 44.0	-0.076 401	-0.20 4.24	-0.02	8.84 839
7.25			1305	1253 1264	35.2 35.1	-0.163 397	0.15 4.19	0.00	8.99 839
0.00 - 7.28									
MAX			1335.	1342. 1333.	48.0 47.8	0.427 407.	0.49 5.02	0.03	9.50 872.
MIN			1165.	1251. 1233.	29.9 30.1	-0.483 390.	-0.67 2.37	-0.05	8.40 827.
MEAN	7.48	7.48	1271.	1293. 1290.	38.7 38.7	-0.027 399.	-0.02 3.82	-0.01	9.02 842.
ACCM	231.7	179.1	1266.	1290.	-0.027	399. -0.02		-0.01	67.45 842.
0.00 - 0.00									
MAX			1405.	1435. 1433.	56.1 55.3	1.188 418.	3.76 4.63	0.05	9.35 891.
MIN			1190.	1251. 1254.	29.8 29.4	-1.098 359.	-3.78 1.31	-0.04	8.61 842.
MEAN	23.03	11.28	1307.	1311. 1308.	43.1 43.1	-0.033 397.	0.01 3.31	0.00	8.95 869.
ACCM	224.3	171.7	1307.	1308.	-0.033	397. 0.01		0.00	205.86 869.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL .... COAL HEAT VALUE
% MOISTURE IN COAL..... . . ..
NET HEAT CONSUMP. .... SHORT TONS CLINKER
HEAT CONSUMPTION .... LB COAL / SH.T
W1/ COAL TO KILN .... MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION . . . . . W1/ LITER WEIGHT
W1/ KILN FEED . . . . . COAL TO KILN
. . . .
. . . .

HOUR	HOIOF1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1*
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.26	99.2	60.3 1448	9.01 811	833 20.0	3.60 9512	65.5	0 28.88	1310
8.26	99.0	60.3 1449	9.21 826	849 20.0	3.60 9512	65.5	0 29.51	1305
9.26	99.3	60.4 1450	9.14 821	844 20.0	3.60 9512	65.5	0 29.22	1305
10.26	99.5	60.5 1453	8.83 792	814 20.0	3.60 9512	65.7	0 28.33	1320
11.26	99.9	60.7 1457	8.91 796	818 20.0	3.60 9512	65.9	0 28.35	1360
12.26	99.8	60.7 1457	9.05 810	824 19.8	3.01 9605	65.9	0 29.15	1310
13.26	100.2	60.9 1463	8.98 800	814 19.8	3.01 9605	66.1	0 28.72	1300
14.26	99.0	60.1 1444	8.78 792	806 19.8	3.01 9605	65.3	0 28.51	1355
15.26	100.2	60.9 1463	8.75 779	793 19.8	3.01 9605	66.1	0 28.04	1350
16.26	95.4	58.0 1392	8.78 822	836 19.8	3.01 9605	63.0	0 29.65	1230
17.26	99.4	60.4 1450	8.86 796	810 19.8	3.01 9605	65.6	0 28.54	1340
18.26	99.6	60.5 1453	8.96 804	818 19.8	3.01 9605	65.7	0 28.88	1230
19.26	96.9	58.9 1414	8.97 827	841 19.8	3.01 9605	63.9	0 29.63	1210
20.26	97.7	59.4 1426	8.97 820	834 19.8	3.01 9605	64.5	0 29.35	1190
21.26	97.3	59.1 1419	8.95 822	836 19.8	3.01 9605	64.2	0 29.58	1280
22.26	99.7	60.6 1454	8.94 801	815 19.8	3.01 9605	65.8	0 28.79	1330
23.26	99.3	60.4 1449	8.88 799	813 19.8	3.01 9605	65.5	0 28.61	1335
0.25	99.2	60.3 1448	8.51 766	780 19.8	3.01 9605	65.4	0 27.61	1335
1.25	100.0	60.8 1460	8.84 789	803 19.8	3.01 9605	66.0	0 28.37	1300
2.25	100.1	60.8 1461	8.96 800	814 19.8	3.01 9605	66.0	0 28.75	1165
3.25	98.7	60.0 1440	9.23 835	850 19.8	3.01 9605	65.1	0 29.94	1220
4.25	100.5	61.1 1467	9.45 840	854 19.8	3.01 9605	66.3	0 30.15	1235
5.25	100.1	60.8 1460	9.11 813	827 19.8	3.01 9605	66.0	0 29.20	1300
6.25	99.6	60.6 1454	8.84 793	806 19.8	3.01 9605	65.7	0 28.38	1330
7.25	100.1	60.8 1461	8.99 802	816 19.8	3.01 9605	66.0	0 28.90	1305
0.00 - 7.29								
MAX	101.2	61.6 1477.	9.50 860.	875. 19.8	3.01 9605.	66.8	0. 30.88	1335.
MIN	97.8	59.4 1426.	8.40 755.	768. 19.8	3.01 9602.	64.5	0. 27.12	1165.
MEAN	99.6	60.6 1453.	9.02 809.	823. 19.8	3.01 9606.	65.7	0. 29.06	1272. 7.49
ACCM	746.1	453.6	67.55 809.	823. 19.8	3.01		0. 29.06	1266. 231.7
0.00 - 0.00								
MAX	103.8	63.1 1515.	9.35 870.	885. 20.0	3.60 9605.	68.5	0. 31.25	1405.
MIN	92.3	56.1 1346.	8.61 766.	779. 19.8	3.01 9589.	60.9	0. 27.29	1190.
MEAN	99.1	60.3 1446.	8.95 806.	824. 19.9	3.29 9558.	65.4	0. 28.83	1307. 23.03
ACCM	2281.0	1386.9	205.86 806.	825. 19.9	3.29		0. 28.82	1307. 224.3

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-0-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR ..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1*
	T/H	T/H T/H	KC/KG	%	% GR/L	DEG.C	%	H H
7.25	100.2	60.9 8.89	792 112.2	0.910 2.720	55.4 34.9	1330 230	0.24 0.940	3.070
8.25	99.2	60.3 9.28	835 113.5	0.920 2.770	57.5 34.9	1240 234	0.24 0.940	3.070
9.25	99.9	60.7 8.96	801 113.5	0.920 2.770	57.5 34.9	1250 215	0.24 0.940	3.070
10.25	99.6	60.6 9.27	831 113.5	0.920 2.770	57.5 34.9	1315 252	0.24 0.940	3.070
11.25	101.7	61.8 8.85	776 113.5	0.920 2.770	57.5 34.9	1270 252	0.24 0.940	3.070
12.25	106.3	64.6 8.62	724 113.5	0.920 2.770	57.5 34.9	1360 254	0.24 0.940	3.070
13.25	107.8	65.5 8.94	740 113.5	0.910 2.860	55.7 34.6	1340 300	0.24 0.940	3.010
14.25	107.4	65.3 9.27	771 113.5	0.910 2.860	55.7 34.6	1115 243	0.24 0.940	3.010
15.25	107.4	65.3 9.00	748 113.5	0.910 2.860	55.7 34.6	1125 221	0.24 0.940	3.010
16.25	107.4	65.3 8.96	745 108.7	0.890 2.570	52.1 34.6	1330 214	0.24 0.940	3.010
17.25	107.9	65.6 8.79	728 108.7	0.890 2.570	52.1 34.6	1365 222	0.24 0.940	3.010
18.25	109.4	66.5 8.70	710 108.7	0.890 2.570	52.1 34.6	1365 261	0.24 0.940	3.010
19.25	109.2	66.4 9.04	739 108.7	0.890 2.570	52.1 34.6	1175 234	0.24 0.940	3.010
20.25	109.3	66.4 9.27	757 108.7	0.890 2.570	52.1 34.6	1115 286	0.24 0.940	3.010
21.25	109.2	66.4 9.48	775 108.7	0.890 2.570	52.1 34.6	1160 228	0.24 0.940	3.010
22.25	109.4	66.5 9.07	740 108.7	0.890 2.570	52.1 34.6	1280 238	0.24 0.940	3.010
23.25	109.6	66.6 8.87	723 108.7	0.890 2.570	52.1 34.6	1325 251	0.24 0.940	3.010
0.25	110.5	67.1 9.12	737 108.7	0.890 2.570	52.1 34.6	1255 294	0.24 0.940	3.010
1.25	109.9	66.8 9.50	772 108.7	0.890 2.570	52.1 34.6	1080 240	0.24 0.940	3.010
2.25	108.9	66.2 9.50	778 108.7	0.890 2.570	52.1 34.6	1100 212	0.24 0.940	3.010
3.25	105.4	64.1 9.68	820 115.4	0.960 2.450	69.9 34.6	1195 261	0.24 0.940	3.010
4.25	110.4	67.1 9.66	781 115.4	0.960 2.450	69.9 34.6	1180 244	0.24 0.940	3.010
5.25	109.5	66.6 9.44	769 115.4	0.960 2.450	69.9 34.6	1340 286	0.24 0.940	3.010
6.25	108.8	66.2 9.39	770 115.4	0.960 2.450	69.9 34.6	1275 309	0.24 0.940	3.010
7.25	110.4	67.1 9.43	762 115.4	0.960 2.450	69.9 34.6	1320 301	0.24 0.940	3.010
0.00 - 7.25								
MAX	111.3	67.7 9.97	832. 115.4	0.960 2.570	70.0 34.7	1340. 316.	0.24 0.940	3.010
MIN	103.2	62.7 8.80	718. 108.7	0.890 2.450	52.1 34.7	1080. 283.	0.24 0.940	3.010
MEAN	109.0	66.3 9.52	780. 112.5	0.930 2.501	62.4 34.7	1213. 264.	0.24 0.940	3.010 3.17 7.43
ACCM	810.2	492.6 70.72	780. 112.5	0.930 2.501	62.3 34.7	1204. 264.	0.24 0.940	3.010 196.1 255.4
0.00 - 0.00								
MAX	111.1	67.6 9.56	860. 113.5	0.920 2.860	57.6 35.0	1365. 311.	0.24 0.940	3.070
MIN	97.8	59.4 8.40	696. 108.7	0.890 2.570	52.1 34.7	1115. 193.	0.24 0.940	3.010
MEAN	104.3	63.4 9.03	775. 111.4	0.905 2.697	54.8 34.8	1262. 238.	0.24 0.940	3.041 21.48 24.02
ACCM	2502.7	1521.6 216.64	773. 111.3	0.905 2.692	54.7 34.8	1261. 238.	0.24 0.940	3.040 192.9 248.1

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 .... W1/ GAS TEMP A52
W1/ GAS TEMP A53 .... W1/ GAS TEMP A51
W1/ PRESSURE A54 .... W1/ GAS TEMP A61
W1/ TEMP CYCL A54 .... W1/ T EXIT PREHEAT
W1/ %O2 KILN OUTL .... W1/ PRESS EX PREH
W1/ PRES EXIT KILN..... .....
W1/ KILN TORQUE ..... W1/ %CO EX PREHEAT
W1/ KILN ROT SPEED ..... J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	1.9	35.5	75	4.39	804	142	774	270	616	392	385	398	552	-0.02	839
8.25	1.9	34.6	83	3.82	805	169	778	276	623	393	382	395	558	0.00	834
9.25	1.8	37.5	85	4.46	806	187	781	297	618	388	382	391	588	-0.01	853
10.25	1.8	38.9	91	3.63	807	161	779	298	621	390	383	393	578	0.00	846
11.25	1.9	40.0	99	4.18	807	189	782	313	616	383	376	388	591	0.00	853
12.25	1.9	39.3	113	3.87	804	209	772	333	613	375	367	380	620	0.00	865
13.25	1.9	30.4	111	3.67	802	215	770	333	607	379	370	382	622	0.00	868
14.25	1.9	30.2	109	1.82	804	202	770	328	601	367	361	374	614	0.01	872
15.25	1.9	35.4	111	2.01	804	207	778	338	614	382	371	384	633	0.00	880
16.25	1.9	36.7	129	3.20	807	234	783	361	620	389	378	391	665	0.01	882
17.25	1.9	36.5	111	4.51	806	184	787	350	624	386	377	392	644	0.00	883
18.25	1.9	31.1	123	5.20	806	220	790	355	623	389	377	390	669	0.00	882
19.25	1.9	30.8	130	4.60	809	227	792	363	625	387	378	391	661	0.00	884
20.25	1.9	33.1	120	4.17	808	225	789	355	630	385	376	391	652	0.00	874
21.25	1.9	35.0	125	2.62	812	210	791	351	623	387	374	391	638	0.01	868
22.25	1.9	36.7	134	3.99	813	219	790	354	628	391	384	396	649	0.03	891
23.25	1.9	37.0	129	3.90	809	211	787	348	624	382	372	386	629	0.00	878
0.25	1.9	30.6	141	2.68	804	219	780	347	609	376	366	380	636	0.00	881
1.25	1.9	30.7	135	2.41	807	222	784	345	612	375	367	382	628	0.00	883
2.25	1.9	33.9	136	2.38	811	208	788	340	619	379	370	384	620	0.00	883
3.25	1.9	35.6	136	3.07	808	221	788	352	621	385	376	389	631	0.00	882
4.25	1.9	37.6	136	2.38	811	217	793	360	627	385	376	389	651	0.00	892
5.25	1.9	38.9	155	2.61	810	243	787	368	626	384	376	389	651	0.00	899
6.25	1.9	38.3	146	3.39	809	242	782	357	618	387	377	393	649	-0.01	899
7.25	1.9	34.9	158	1.58	813	248	785	360	626	393	382	396	656	0.02	900
0.00 - 7.27															
MAX	2.0	41.3	167.	5.49	816.	266.	799.	397.	634.	394.	385.	398.	707.	0.05	907.
MIN	2.0	29.6	97.	1.21	802.	174.	772.	315.	604.	371.	362.	378.	615.	-0.03	874.
MEAN	2.0	35.5	140.	2.86	810.	228.	785.	354.	620.	383.	374.	388.	643.	-0.00	890.
ACCM	2.0	35.5	140.		810.	228.	785.	354.	620.	383.	374.	388.	643.	-0.00	890.
0.00 - 0.00															
MAX	2.0	40.8	146.	5.60	817.	251.	798.	373.	637.	403.	394.	407.	680.	0.05	891.
MIN	1.9	29.7	71.	0.49	793.	104.	761.	264.	595.	367.	360.	373.	536.	-0.05	827.
MEAN	1.9	35.4	104.	3.72	807.	192.	781.	319.	620.	387.	379.	392.	610.	-0.00	861.
ACCM	1.9	35.4	104.		807.	192.	781.	319.	620.	387.	379.	392.	610.	-0.00	861.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ %O2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ %CO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1* KCONTRL	KALARM		ESTLTW LTWT	LTWGTSP		NOXST NOXLT	NOXALT A50T1		A50ALT OA15X1		KM2F1 OA1X2CO	OA2V1	
	H	H	H	GR/L	GR/L	GR/L	%	%	%	DEG.C		%	%	T/H	RPM
7.25				1330	1264	1277	35.0	35.6	-0.483	398	-0.12	4.39	-0.02	8.89	839
8.25				1240	1288	1275	42.2	39.8	0.183	395	0.06	3.82	0.00	9.28	834
9.25				1250	1255	1254	37.0	36.7	-0.359	391	0.12	4.46	-0.01	8.96	853
10.25				1315	1236	1305	32.2	30.5	-0.156	393	0.11	3.63	0.00	9.27	846
11.25				1270	1268	1292	37.4	36.9	-0.019	388	-0.12	4.18	0.00	8.85	853
12.25				1360	1292	1358	37.7	38.5	0.353	380	-0.50	3.87	0.00	8.62	865
13.25				1340	1112	1271	15.3	13.0	-0.654	382	0.07	3.67	0.00	8.94	868
14.25				1115	1126	1170	13.9	13.8	-0.030	374	-0.33	1.82	0.01	9.27	872
15.25				1125	1122	1192	13.3	13.3	-0.023	384	0.02	2.01	0.00	9.00	880
16.25				1330	1330	1324	36.4	41.5	1.216	391	0.10	3.20	0.01	8.96	882
17.25				1365	1302	1333	29.8	30.5	-0.359	392	0.27	4.51	0.00	8.79	883
18.25				1365	1242	1283	17.0	17.1	-0.566	390	0.15	5.20	0.00	8.70	882
19.25				1175	1213	1184	14.9	14.6	0.001	391	0.08	4.60	0.00	9.04	884
20.25				1115	1218	1117	19.4	18.9	0.111	391	-0.17	4.17	0.00	9.27	874
21.25				1160	1275	1247	27.8	27.8	0.402	391	-0.06	2.62	0.01	9.48	868
22.25				1280	1340	1283	36.2	36.7	0.109	396	0.51	3.99	0.03	9.07	881
23.25				1325	1330	1329	34.8	34.7	0.039	386	-0.39	3.90	0.00	8.87	878
0.25				1255	1215	1225	18.0	18.2	-0.516	388	-0.09	2.68	0.00	9.12	881
1.25				1080	1214	1194	18.3	18.0	0.001	382	-0.44	2.41	0.00	9.50	883
2.25				1100	1218	1101	25.3	24.9	0.204	384	0.06	2.38	0.00	9.50	883
3.25				1195	1249	1241	28.1	28.2	-0.309	389	0.35	3.07	0.00	9.68	882
4.25				1180	1374	1303	37.5	39.8	0.535	389	0.15	2.38	0.00	9.66	892
5.25				1340	1331	1290	36.4	35.8	0.018	389	-0.03	2.61	0.00	9.44	899
6.25				1275	1296	1293	35.8	35.9	0.098	393	-0.10	3.39	-0.01	9.39	899
7.25				1320	1228	1240	28.0	28.0	-0.444	396	0.68	1.58	0.02	9.43	900
0.00 - 7.28															
MAX				1340.	1380.	1331.	39.8	40.3	0.586	398.	0.85	5.49	0.05	9.97	907.
MIN				1080.	1201.	1102.	17.1	16.0	-0.614	378.	-0.75	1.21	-0.03	8.80	874.
MEAN	7.48	3.17		1213.	1276.	1246.	29.3	29.3	0.012	388.	0.05	2.86	-0.00	9.52	890.
ACCM	255.5	196.1		1204.		1246.			0.012	388.	0.05		-0.00	71.13	890.
0.00 - 0.00															
MAX				1365.	1348.	1358.	48.0	47.8	1.602	407.	1.08	5.60	0.05	9.56	891.
MIN				1115.	1111.	1117.	12.9	12.8	-0.908	373.	-0.88	0.49	-0.05	8.40	827.
MEAN	24.02	21.48		1262.	1261.	1270.	31.1	31.1	-0.019	392.	-0.03	3.72	-0.00	9.03	861.
ACCM	248.1	192.9		1261.		1270.			-0.019	392.	-0.03		-0.00	216.64	861.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL.....
NET HEAT CONSUMP. ..... SHORT TONS CLINKER
HEAT CONSUMPTION ..... LB COAL / SH.T
W1/ COAL TO KILN ..... MBTU' PER SH.T
KILN PRODUC. RATE .....
KILN PRODUCTION W1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1*
	T/H T/H	T T/H	KC/KG KC/KG	% %		T/H		GR/L H
7.25	100.2 60.9	1462 8.89	792 806	19.8 3.01	9605	66.1	0 28.42	1330
8.25	99.2 60.3	1448 9.20	835 849	19.8 3.01	9605	65.5	0 29.83	1240
9.25	99.9 60.7	1458 8.96	801 815	19.8 3.01	9605	65.9	0 28.71	1250
10.25	99.6 60.6	1454 9.27	831 845	19.8 3.01	9605	65.7	0 30.02	1315
11.25	101.7 61.8	1485 8.85	776 790	19.8 3.01	9605	67.1	0 27.99	1270
12.25	106.3 64.6	1552 8.62	724 736	19.8 3.01	9605	70.2	0 26.23	1360
13.25	107.8 65.5	1574 8.94	740 755	20.0 2.97	9584	71.2	0 26.55	1340
14.25	107.4 65.3	1567 9.27	771 786	20.0 2.97	9584	70.9	0 27.71	1115
15.25	107.4 65.3	1568 9.00	748 763	20.0 2.97	9581	70.9	0 26.71	1125
16.25	107.4 65.3	1567 8.96	745 760	20.0 2.97	9584	70.8	0 26.76	1330
17.25	107.9 65.6	1574 8.79	728 742	20.0 2.97	9584	71.2	0 26.34	1365
18.25	109.4 66.5	1596 8.70	710 724	20.0 2.97	9584	72.2	0 25.50	1365
19.25	109.2 66.4	1593 9.04	739 754	20.0 2.97	9584	72.0	0 26.58	1175
20.25	109.3 66.4	1595 9.27	757 772	20.0 2.97	9584	72.1	0 27.11	1115
21.25	109.2 66.4	1593 9.48	775 790	20.0 2.97	9584	72.0	0 27.74	1160
22.25	109.4 66.5	1596 9.07	740 755	20.0 2.97	9584	72.2	0 26.58	1280
23.25	109.6 66.6	1599 8.87	723 737	20.0 2.97	9584	72.3	0 25.92	1325
0.25	110.5 67.1	1612 9.12	737 752	20.0 2.97	9584	72.9	0 26.49	1255
1.25	109.9 66.8	1604 9.50	772 787	20.0 2.97	9584	72.5	0 27.61	1080
2.25	108.9 66.2	1589 9.50	778 794	20.0 2.97	9584	71.9	0 27.94	1100
3.25	105.4 64.1	1539 9.68	820 836	20.0 2.97	9584	69.6	0 29.48	1195
4.25	110.4 67.1	1611 9.66	781 796	20.0 2.97	9584	72.8	0 28.24	1180
5.25	109.5 66.6	1599 9.44	769 784	20.0 2.97	9584	72.3	0 27.57	1340
6.25	108.8 66.2	1588 9.39	770 785	20.0 2.97	9584	71.8	0 27.52	1275
7.25	110.4 67.1	1611 9.43	762 778	20.0 2.97	9584	72.8	0 27.33	1320
0.00 - 7.29								
MAX	111.3 67.7	1625. 9.97	832. 848.	20.0 2.97	9584.	73.5	0. 29.81	1340.
MIN	103.2 62.7	1505. 8.80	718. 733.	20.0 2.97	9584.	68.1	0. 25.71	1080.
MEAN	109.0 66.3	1591. 9.52	780. 795.	20.0 2.97	9584.	72.0	0. 27.95	1213. 7.49
ACCM	816.2 496.2	71.23	780. 795.	20.0 2.97			0. 27.95	1204. 255.5
0.00 - 0.00								
MAX	111.1 67.6	1622. 9.56	860. 875.	20.0 3.01	9610.	73.4	0. 30.88	1365.
MIN	97.8 59.4	1426. 8.40	696. 709.	19.8 2.97	9581.	64.5	0. 24.93	1115.
MEAN	104.3 63.4	1522. 9.03	775. 789.	19.9 2.99	9599.	68.8	0. 27.80	1262. 24.02
ACCM	2502.7 1521.6	216.64	773. 789.	19.9 2.99			0. 27.81	1261. 248.1

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1*
	T/H	T/H	T/H KC/KG		%	% GR/L	DEG.C %	H H
7.25	109.4	66.5	9.42 769	115.4 0.960	2.450 69.9	34.6 1275	293 0.24	0.940 3.010
8.25	110.5	67.2	9.36 756	108.5 0.900	2.380 55.0	34.6 1270	305 0.24	0.940 3.010
9.25	109.5	66.6	8.53 695	108.5 0.900	2.380 55.0	34.6 1540	303 0.24	0.940 3.010
10.25	110.3	67.0	8.57 693	108.5 0.900	2.380 55.0	34.6 1540	302 0.24	0.940 3.010
11.25	109.9	66.8	8.45 686	108.5 0.900	2.380 55.0	34.6 1350	244 0.24	0.940 3.010
12.25	109.6	66.6	8.41 685	108.5 0.900	2.380 55.0	34.6 1290	246 0.24	0.940 3.010
13.25	110.2	67.0	9.20 745	109.6 0.890	2.640 54.0	34.4 1290	239 0.24	0.910 2.680
14.25	105.1	63.9	9.33 793	109.6 0.890	2.640 54.0	34.4 1125	190 0.24	0.910 2.680
15.25	104.7	63.6	9.35 797	109.6 0.890	2.640 54.0	34.4 1185	229 0.24	0.910 2.680
16.25	109.8	66.7	9.35 761	106.2 0.860	2.530 46.9	34.4 1325	250 0.24	0.910 2.680
17.25	110.2	67.0	9.47 767	106.2 0.860	2.530 46.9	34.4 1455	246 0.24	0.910 2.680
18.25	109.2	66.4	9.43 771	106.2 0.860	2.530 46.9	34.4 1375	233 0.24	0.910 2.680
19.25	109.9	66.8	9.49 771	106.2 0.860	2.530 46.9	34.4 1330	233 0.24	0.910 2.680
20.25	109.6	66.6	9.23 752	106.2 0.860	2.530 46.9	34.4 1260	222 0.24	0.910 2.680
21.25	110.7	67.3	9.58 772	106.2 0.860	2.530 46.9	34.4 1240	216 0.24	0.910 2.680
22.25	104.2	63.3	9.66 828	106.2 0.860	2.530 46.9	34.4 1175	208 0.24	0.910 2.680
23.25	110.5	67.2	9.63 777	106.2 0.860	2.530 46.9	34.4 1305	241 0.24	0.910 2.680
0.25	109.6	66.6	9.67 788	106.6 0.880	2.480 49.0	34.4 1335	258 0.24	0.910 2.680
1.25	110.1	66.9	9.70 787	106.6 0.880	2.480 49.0	34.4 1270	242 0.24	0.910 2.680
2.25	110.9	67.4	9.77 787	106.6 0.880	2.480 49.0	34.4 1275	246 0.24	0.910 2.680
3.25	110.3	67.0	9.69 785	106.6 0.880	2.480 49.0	34.4 1180	234 0.24	0.910 2.680
4.25	110.3	67.1	9.73 787	106.6 0.880	2.480 49.0	34.4 1230	271 0.24	0.910 2.680
5.25	109.7	66.7	9.81 798	106.6 0.880	2.480 49.0	34.4 1240	250 0.24	0.910 2.680
6.25	109.6	66.6	9.58 780	106.6 0.880	2.480 49.0	34.4 1310	249 0.24	0.910 2.680
7.25	110.3	67.0	9.45 765	106.6 0.880	2.480 49.0	34.4 1350	248 0.24	0.910 2.680
0.00 - 7.25								
MAX	111.4	67.7	10.03 814.	106.6 0.880	2.480 49.0	34.5 1350.	283. 0.24	0.910 2.680
MIN	108.5	66.0	9.38 761.	106.6 0.880	2.480 49.0	34.5 1180.	209. 0.24	0.910 2.680
MEAN	110.0	66.9	9.71 788.	106.6 0.880	2.480 49.0	34.5 1265.	249. 0.24	0.910 2.680 6.02 7.43
ACCM	817.7	497.1	72.13 788.	106.6 0.880	2.480 49.0	34.5 1263.	249. 0.24	0.910 2.680 204.7 279.1
0.00 - 0.00								
MAX	111.8	67.9	9.97 863.	115.4 0.960	2.640 70.0	34.7 1540.	323. 0.24	0.940 3.010
MIN	100.2	60.9	8.33 673.	106.2 0.860	2.380 46.9	34.5 1080.	183. 0.24	0.910 2.680
MEAN	109.0	66.3	9.30 762.	109.1 0.895	2.497 54.6	34.6 1283.	252. 0.24	0.927 2.860 5.90 24.02
ACCM	2616.6	1590.9	223.14 762.	108.9 0.894	2.491 54.1	34.6 1290.	252. 0.24	0.926 2.859 198.8 271.8

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 ..... W1/ GAS TEMP A52
W1/ GAS TEMP A53 ..... W1/ GAS TEMP A51
W1/ PRESSURE A54 ..... W1/ GAS TEMP A61
W1/ TEMP CYCL A54 ..... W1/ T EXIT PREHEAT
W1/ ZO2 KILN OUTL ..... W1/ PRESS EX PREH
W1/ PRES EXIT KILN..... .....
W1/ KILN TORQUE W1/ ZCO EX PREHEAT
W1/ KILN ROT SPEED J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15P1 %	OA15A1 MMWG	A54T1 %	OA15X1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2C0 %	OA2V1 RPM
7.25	1.9	37.0	136	3.83	807	242	783	357	621	384	375	389	652	-0.01	901
8.25	1.9	31.1	143	3.30	809	221	777	346	611	376	368	383	626	-0.01	882
9.25	1.9	29.3	137	3.56	807	217	780	347	617	379	368	383	634	-0.01	879
10.25	1.9	23.1	142	3.48	807	240	781	351	615	379	369	383	651	-0.01	878
11.25	1.9	21.8	133	3.83	805	222	776	347	615	382	373	386	636	0.00	879
12.25	1.9	18.7	133	4.15	805	216	781	350	615	384	373	388	639	0.00	876
13.25	1.9	18.2	134	3.75	806	222	781	345	616	378	372	384	631	-0.01	882
14.25	1.8	23.0	127	3.66	807	213	780	336	620	387	379	390	613	0.00	880
15.25	1.8	27.1	135	3.39	806	238	785	340	626	391	379	394	617	0.00	878
16.25	1.9	24.5	128	2.96	808	212	781	344	608	377	368	384	631	0.00	883
17.25	1.9	19.6	134	2.80	805	219	778	339	611	376	367	381	626	0.00	874
18.25	1.9	19.0	137	3.96	811	221	786	354	620	381	373	387	653	0.01	880
19.25	1.9	18.7	134	3.50	810	224	787	349	617	383	376	388	645	0.01	881
20.25	1.9	20.3	122	4.19	809	215	780	337	615	380	373	387	631	0.00	882
21.25	1.9	22.2	121	3.75	809	223	787	352	618	381	373	387	648	0.00	873
22.25	1.9	25.7	134	3.55	810	219	792	351	629	393	383	396	631	0.00	872
23.25	2.0	26.9	139	3.39	811	223	789	350	623	384	377	393	645	0.00	872
0.25	2.0	25.9	140	2.49	809	230	784	355	614	379	372	385	643	0.00	872
1.25	1.9	23.3	140	2.94	809	237	784	384	619	383	372	386	669	-0.01	879
2.25	2.0	23.9	144	2.67	808	240	785	358	617	382	370	388	662	0.00	876
3.25	1.9	28.3	146	2.93	808	239	786	370	616	384	375	388	672	0.00	881
4.25	1.9	26.0	150	2.88	808	251	783	375	617	385	374	390	675	-0.01	881
5.25	1.9	23.6	148	3.52	807	237	783	365	619	386	378	391	676	-0.01	881
6.25	1.9	23.3	147	3.66	810	244	786	370	627	388	379	393	679	0.00	882
7.25	1.9	19.3	146	4.00	806	228	782	359	622	387	377	393	664	-0.01	869
0.00 - 7.27															
MAX	2.0	29.3	162.	4.32	814.	260.	793.	400.	631.	394.	386.	396.	693.	0.02	892.
MIN	2.0	19.3	112.	1.94	805.	202.	772.	345.	607.	376.	366.	382.	638.	-0.05	864.
MEAN	2.0	24.5	146.	3.19	808.	235.	784.	368.	620.	385.	375.	390.	671.	-0.01	880.
ACCM	2.0	24.5	146.		808.	235.	784.	368.	620.	385.	375.	390.	671.	-0.01	880.
0.00 - 0.00															
MAX	2.0	41.3	178.	5.49	816.	274.	799.	397.	638.	399.	390.	402.	707.	0.07	911.
MIN	1.9	17.8	97.	0.89	801.	174.	770.	315.	603.	371.	362.	378.	607.	-0.04	866.
MEAN	2.0	27.2	136.	3.27	809.	224.	784.	350.	618.	383.	374.	388.	637.	-0.00	883.
ACCM	2.0	27.2	136.		809.	224.	784.	350.	618.	383.	374.	388.	637.	-0.00	883.

W1/ NOX REG LTIME .... W1/ NOX CHANGE LT
W1/ NOX REG STIME .... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL..... ..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW .... W1/ ZO2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. .... W1/ ZCO EX PREHEAT
KILN CONTROL ..... W1/ COAL TO KILN
COAL TO KILN ..... J1/ ID FAN SPEED

HOUR	KM2F1* KCONTRL	KALARM	ESTLTW LTWT	NOXST LTWGTSP	NOXALT NOXLT	A50ALT A50T1	OA15X1	KM2F1 OA1X2CO	OA2V1
	H	H H	GR/L GR/L	GR/L GR/L	% %	% DEG.C	%	% T/H	RPM
7.25			1275 1283	1282 34.8	34.4 -0.057	389 -0.33	3.83	-0.01 9.42	901
8.25			1270 1383	1288 34.9	43.2 0.923	383 -0.03	3.30	-0.01 9.36	882
9.25			1540 1440	1384 38.9	41.6 0.828	383 -0.12	3.56	-0.01 8.53	879
10.25			1540 1383	1241 32.2	32.7 -0.047	383 0.47	3.48	-0.01 8.57	878
11.25			1350 1231	1325 27.4	28.1 -0.219	386 0.09	3.83	0.00 8.45	879
12.25			1290 1273	1289 26.2	26.9 -0.037	388 0.16	4.15	0.00 8.41	876
13.25			1290 1124	1284 15.5	16.6 -0.559	384 0.41	3.75	-0.01 9.20	882
14.25			1125 1241	1230 21.8	21.3 0.244	390 0.66	3.66	0.00 9.33	880
15.25			1185 1373	1312 35.6	35.7 0.356	394 0.13	3.39	0.00 9.35	878
16.25			1325 1406	1376 39.9	42.2 -0.096	384 -0.16	2.96	0.00 9.35	883
17.25			1455 1375	1301 38.2	38.6 0.081	381 0.08	2.80	0.00 9.47	874
18.25			1375 1332	1347 33.9	33.4 -0.152	387 0.12	3.96	0.01 9.43	880
19.25			1330 1274	1286 27.8	27.1 -0.113	388 0.18	3.50	0.01 9.49	881
20.25			1260 1267	1265 26.6	27.3 -0.139	387 0.09	4.19	0.00 9.23	882
21.25			1240 1212	1219 20.9	19.9 -0.066	387 -0.18	3.75	0.00 9.58	873
22.25			1175 1275	1251 30.1	29.5 0.687	396 0.14	3.55	0.00 9.66	872
23.25			1305 1352	1343 39.8	39.3 0.237	393 -0.41	3.39	0.00 9.63	872
0.25			1335 1301	1303 34.4	33.7 -0.131	385 -0.46	2.49	0.00 9.67	872
1.25			1270 1277	1276 30.5	30.7 -0.082	386 0.12	2.94	-0.01 9.70	879
2.25			1275 1235	1250 23.7	24.1 -0.346	388 -0.04	2.67	0.00 9.77	876
3.25			1180 1270	1294 27.1	28.8 0.181	388 0.00	2.93	0.00 9.69	891
4.25			1230 1266	1265 28.5	28.9 0.012	390 0.05	2.83	-0.01 9.73	881
5.25			1240 1294	1290 33.7	33.6 0.261	391 0.03	3.52	-0.01 9.81	881
6.25			1310 1305	1306 35.0	34.6 -0.064	393 0.29	3.66	0.00 9.58	882
7.25			1350 1272	1276 29.6	30.2 -0.187	393 -0.16	4.00	-0.01 9.45	869
0.00 - 7.28									
MAX			1350. 1317.	1315. 37.3	36.8 0.329	396. 0.50	4.32	0.02 10.03	892.
MIN			1180. 1218.	1223. 22.1	21.7 -0.384	382. -0.56	1.94	-0.05 9.38	864.
MEAN	7.48	6.06	1266. 1278.	1279. 30.5	30.5 -0.025	390. 0.03	3.20	-0.01 9.71	880.
ACCM	279.2	204.7	1263.	1279.	-0.025	390. 0.03		-0.01 72.54	880.
0.00 - 0.00									
MAX			1540. 1467.	1535. 47.6	46.3 1.212	402. 1.54	5.49	0.07 9.97	911.
MIN			1080. 1087.	1102. 15.5	14.1 -0.671	378. -1.25	0.89	-0.04 8.33	866.
MEAN	24.02	5.98	1283. 1286.	1275. 30.1	30.1 0.012	388. 0.01	3.27	-0.00 9.30	883.
ACCM	271.8	198.8	1290.	1275.	0.012	388. 0.01		-0.00 223.14	883.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ....COAL HEAT VALUE
% MOISTURE IN COAL..... . . ..
NET HEAT CONSUMP. ....SHORT TONS CLINKER
HEAT CONSUMPTION ....LB COAL / SH.T
W1/ COAL TO KILN ....MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION . . . . . U1/ LITER WEIGHT
W1/ KILN FEED . . . . . COAL TO KILN
. . . .
. . . .

HOUR	H010F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.25	109.4	66.5 1597	9.42 769	784 20.0	2.97 9584	72.2	0 27.56	1275
8.25	110.5	67.2 1613	9.36 756	771 20.0	2.97 9584	72.9	0 27.16	1270
9.25	109.5	66.6 1598	8.53 695	709 20.0	2.97 9584	72.3	0 24.89	1540
10.25	110.3	67.0 1610	8.57 693	707 20.0	2.97 9584	72.8	0 24.91	1540
11.25	109.9	66.8 1604	8.45 686	700 20.0	2.97 9584	72.5	0 24.76	1350
12.25	109.6	66.6 1600	8.41 685	699 20.0	2.97 9581	72.3	0 24.65	1290
13.25	110.2	67.0 1608	9.20 745	757 19.5	3.21 9620	72.7	0 26.83	1290
14.25	105.1	63.9 1534	9.33 793	805 19.5	3.21 9617	69.4	0 28.58	1125
15.25	104.7	63.6 1528	9.35 797	810 19.5	3.21 9620	69.1	0 28.65	1185
16.25	109.8	66.7 1602	9.35 761	773 19.5	3.21 9620	72.4	0 27.33	1325
17.25	110.2	67.0 1608	9.47 767	780 19.5	3.21 9620	72.7	0 27.61	1455
18.25	109.2	66.4 1594	9.43 771	783 19.5	3.21 9620	72.1	0 27.73	1375
19.25	109.9	66.8 1604	9.49 771	783 19.5	3.21 9620	72.5	0 27.82	1330
20.25	109.6	66.6 1600	9.23 752	764 19.5	3.21 9620	72.3	0 26.85	1260
21.25	110.7	67.3 1616	9.58 772	784 19.5	3.21 9620	73.1	0 27.87	1240
22.25	104.2	63.3 1521	9.66 828	841 19.5	3.21 9620	68.8	0 29.96	1175
23.25	110.5	67.2 1613	9.63 777	790 19.5	3.21 9620	72.9	0 28.08	1305
0.25	109.6	66.6 1599	9.67 788	800 19.5	3.21 9620	72.3	0 28.24	1335
1.25	110.1	66.9 1607	9.70 787	799 19.5	3.21 9620	72.7	0 28.28	1270
2.25	110.9	67.4 1618	9.77 787	799 19.5	3.21 9620	73.1	0 28.36	1275
3.25	110.3	67.0 1609	9.69 785	797 19.5	3.21 9620	72.8	0 28.33	1180
4.25	110.3	67.1 1610	9.73 787	800 19.5	3.21 9620	72.8	0 28.15	1230
5.25	109.7	66.7 1601	9.81 798	811 19.5	3.21 9620	72.4	0 28.67	1240
6.25	109.6	66.6 1599	9.58 780	793 19.5	3.21 9620	72.3	0 28.11	1310
7.25	110.3	67.0 1609	9.45 765	778 19.5	3.21 9620	72.8	0 27.56	1350
0.00 - 7.29								
MAX	111.4	67.7 1626.	10.03 814.	827. 19.5	3.21 9621.	73.5	0. 29.29	1350.
MIN	108.5	66.0 1584.	9.38 761.	773. 19.5	3.21 9618.	71.6	0. 27.37	1180.
MEAN	110.0	66.9 1606.	9.71 788.	800. 19.5	3.21 9622.	72.6	0. 28.35	1266. 7.49
ACCM	823.6	500.8	72.64 788.	800. 19.5	3.21		0. 28.35	1263. 279.2
0.00 - 0.00								
MAX	111.8	67.9 1631.	9.97 863.	876. 20.0	3.21 9621.	73.8	0. 31.04	1540.
MIN	100.2	60.9 1462.	8.33 673.	687. 19.5	2.97 9554.	66.1	0. 24.14	1080.
MEAN	109.0	66.3 1591.	9.30 762.	776. 19.8	3.08 9602.	72.0	0. 27.37	1283. 24.02
ACCM	2616.6	1590.9	223.14 762.	776. 19.8	3.08		0. 27.37	1290. 271.8

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-0-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR ..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	H010F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1%
	T/H	T/H T/H KC/KG		%	% GR/L	DEG.C	%	H H
7.25	110.5	67.2 9.51 768	106.6 0.880 2.480	49.0	34.4 1310	246	0.24 0.910 2.680	
8.25	109.9	66.8 9.39 762	106.6 0.880 2.480	49.0	34.4 1260	224	0.24 0.910 2.680	
9.25	109.1	66.3 9.56 782	105.7 0.880 2.380	49.0	34.4 1370	235	0.24 0.910 2.680	
10.25	109.6	66.6 9.42 767	105.7 0.880 2.380	49.0	34.4 1285	216	0.24 0.910 2.680	
11.25	105.1	63.9 9.55 811	105.7 0.880 2.380	49.0	34.4 1190	237	0.24 0.910 2.680	
12.25	104.1	63.3 9.52 816	105.7 0.880 2.380	49.0	34.4 1135	265	0.24 0.910 2.680	
13.25	110.1	66.9 9.49 769	105.7 0.880 2.380	49.0	34.4 1350	265	0.24 0.910 2.680	
14.25	110.3	67.1 9.31 753	107.3 0.890 2.400	52.5	34.3 1260	245	0.12 0.900 2.540	
15.25	103.8	63.1 9.52 819	107.3 0.890 2.400	52.5	34.3 1260	220	0.12 0.900 2.540	
16.25	103.9	63.2 9.30 798	107.3 0.890 2.400	52.5	34.3 1190	240	0.12 0.900 2.540	
17.25	106.1	64.5 9.00 757	108.9 0.900 2.450	55.9	34.3 1310	242	0.12 0.900 2.540	
18.25	106.6	64.8 8.71 730	108.9 0.900 2.450	55.9	34.3 1410	241	0.12 0.900 2.540	
19.25	104.5	63.5 8.94 763	108.9 0.900 2.450	55.9	34.3 1325	214	0.12 0.900 2.540	
20.25	104.3	63.4 8.83 756	108.9 0.900 2.450	55.9	34.3 1160	217	0.12 0.900 2.540	
21.25	102.9	62.6 9.09 788	108.9 0.900 2.450	55.9	34.3 1225	223	0.12 0.900 2.540	
22.25	103.5	62.9 8.87 765	108.9 0.900 2.450	55.9	34.3 1210	241	0.12 0.900 2.540	
23.25	104.9	63.8 9.01 766	108.9 0.900 2.450	55.9	34.3 1290	231	0.12 0.900 2.540	
0.25	104.3	63.4 9.18 786	108.6 0.900 2.450	54.8	34.3 1085	205	0.12 0.900 2.540	
1.25	95.6	58.1 8.84 825	108.6 0.900 2.450	54.8	34.3 1025	352	0.12 0.900 2.540	
2.25	--	-- -- --	108.6 0.900 2.450	54.8	34.3 1025	--	0.12 0.900 2.540	
3.25	--	-- -- --	108.6 0.900 2.450	54.8	34.3 1025	--	0.12 0.900 2.540	
4.25	--	-- -- --	108.6 0.900 2.450	54.8	34.3 1025	--	0.12 0.900 2.540	
5.25	--	-- -- --	108.6 0.900 2.450	54.8	34.3 1025	--	0.12 0.900 2.540	
6.25	37.5	22.8 4.53 1078	108.6 0.900 2.450	54.8	34.3 1025	79	0.12 0.900 2.540	
7.25	37.9	23.0 5.07 1196	108.6 0.900 2.450	54.8	34.3 1025	93	0.12 0.900 2.540	
0.00 - 7.25								
MAX	105.9	64.4 9.36 6128.	108.6 0.900 2.450	54.8	34.3 1085.	510.	0.12 0.900 2.540	
MIN	-4.6	2.8 1.08 715.	108.6 0.900 2.450	54.8	34.3 1025.	11.	0.12 0.900 2.540	
MEAN	70.3	42.7 7.01 1049.	108.6 0.900 2.450	54.8	34.3 1033.	164.	0.12 0.900 2.540	0.98 3.04
ACCM	219.1	130.1 21.35 891.	108.6 0.900 2.450	54.8	34.3 1025.	164.	0.12 0.900 2.540	221.2 298.5
0.00 - 0.00								
MAX	111.7	67.8 10.03 847.	108.9 0.900 2.480	55.9	34.5 1410.	283.	0.24 0.910 2.680	
MIN	100.1	61.0 8.64 715.	105.7 0.880 2.380	49.0	34.3 1085.	187.	0.12 0.900 2.540	
MEAN	107.6	65.4 9.37 778.	107.3 0.888 2.443	51.5	34.4 1264.	239.	0.19 0.906 2.620	21.77 24.01
ACCM	2583.6	1570.8 224.89 778.	107.3 0.888 2.443	51.7	34.4 1261.	239.	0.19 0.905 2.616	220.3 295.5

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 ..... W1/ GAS TEMP A52
W1/ GAS TEMP A53 ..... W1/ GAS TEMP A51
W1/ PRESSURE A54 ..... W1/ GAS TEMP A61
W1/ TEMP CYCL A54 ..... W1/ T EXIT PREHEAT
W1/ ZO2 KILN OUTL ..... W1/ PRESS EX PREH
W1/ PRES EXIT KILN..... .....
W1/ KILN TORQUE W1/ ZCO EX PREHEAT
W1/ KILN ROT SPEED J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	2.0	20.3	150	4.21	809	246	783	372	619	387	381	392	679	-0.01	884
8.25	1.9	19.3	138	3.84	806	212	782	352	612	382	374	386	643	0.00	856
9.25	1.9	18.3	144	3.37	807	231	783	361	620	381	373	388	654	-0.02	867
10.25	1.9	26.7	144	3.62	806	238	782	362	616	384	373	388	664	-0.01	867
11.25	1.8	24.8	144	2.44	806	232	783	345	622	384	376	389	622	0.00	838
12.25	1.9	23.8	136	3.36	806	224	784	346	621	386	377	391	644	-0.02	854
13.25	1.9	20.4	138	2.77	807	206	780	346	605	373	364	377	642	-0.01	867
14.25	1.9	20.1	148	3.23	805	227	773	357	607	373	365	378	644	-0.01	883
15.25	1.9	21.3	142	2.32	808	224	783	347	617	383	375	388	640	-0.02	873
16.25	1.9	22.3	137	3.01	805	218	780	350	622	384	378	392	650	-0.02	887
17.25	1.9	21.4	137	3.12	806	216	780	350	619	383	374	387	644	-0.02	876
18.25	1.9	18.0	144	4.10	804	226	776	354	610	379	369	385	652	-0.02	881
19.25	1.9	18.8	147	3.04	803	224	773	363	614	379	373	386	658	-0.02	892
20.25	1.9	20.3	138	3.57	802	222	769	357	607	381	370	386	657	-0.04	881
21.25	1.9	22.3	150	2.82	802	231	776	360	616	384	377	389	649	-0.03	890
22.25	1.9	21.8	133	3.94	807	209	783	348	614	384	379	388	632	-0.03	885
23.25	1.9	21.3	141	3.26	808	218	786	346	615	384	375	389	638	-0.02	878
0.25	1.9	27.2	142	3.33	807	218	782	351	619	385	378	392	632	-0.01	880
1.25	1.7	13.7	128	2.72	807	211	779	331	614	383	376	388	614	-0.03	882
2.25	--	--	--	--	--	--	--	--	--	--	--	367	--	--	--
3.25	--	--	--	--	--	--	--	--	--	--	--	348	--	--	--
4.25	--	--	--	--	--	--	--	--	--	--	--	336	--	--	--
5.25	--	--	--	--	--	--	--	--	--	--	--	325	--	--	--
6.25	0.4	32.4	16	10.32	712	49	689	67	580	406	409	398	149	-0.01	495
7.25	0.6	28.0	21	10.27	776	59	734	88	603	411	409	408	180	-0.03	533
0.00 - 7.27															
MAX	2.0	46.0	152.	10.43	818.	242.	795.	353.	631.	431.	429.	417.	640.	1.06	893.
MIN	0.0	0.1	-11.	0.65	588.	8.	602.	3.	532.	335.	347.	320.	41.	-0.20	445.
MEAN	1.3	28.8	75.	6.27	771.	133.	743.	205.	602.	393.	390.	365.	387.	-0.01	696.
ACCM	1.3	28.8	75.		771.	133.	743.	205.	602.	393.	390.	365.	387.	-0.01	696.
0.00 - 0.00															
MAX	2.0	29.6	162.	4.39	814.	260.	794.	400.	631.	394.	386.	396.	693.	0.02	892.
MIN	1.9	16.6	112.	1.83	797.	183.	763.	324.	598.	367.	359.	375.	608.	-0.06	831.
MEAN	2.0	22.4	143.	3.20	807.	228.	781.	358.	617.	383.	374.	388.	654.	-0.02	876.
ACCM	2.0	22.4	143.		807.	228.	781.	358.	617.	383.	374.	388.	654.	-0.02	876.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME .... W1/ NOX CHANGE LT
W1/ NOX REG STIME .... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL..... ..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW .... W1/ %O2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. .... W1/ %CO EX PREHEAT
KILN CONTROL ..... W1/ COAL TO KILN
COAL TO KILN ..... J1/ ID FAN SPEED

HOUR	KM2F1%	KALARM	ESTLTW	NOXST	NOXALT	A50ALT		KM2F1		
	KCONTRL		LTWT	LTWGTSP	NOXLT	A50T1	OA15X1	OA1X2CO	OA2V1	
	H	H	H	GR/L	GR/L	GR/L	%	%	%	DEG.C	%	%	T/H	RPM
7.25				1310	1289	1290	32.7	32.7	-0.121	392	-0.02	4.21	-0.01	9.51	884
8.25				1260	1335	1321	33.6	35.7	0.529	386	-0.16	3.84	0.00	9.39	856
9.25				1370	1174	1259	22.0	21.2	-0.324	388	0.05	3.37	-0.02	9.56	867
10.25				1285	1174	1181	18.9	19.8	-0.047	388	0.04	3.62	-0.01	9.42	867
11.25				1190	1171	1174	21.1	18.2	0.195	389	-0.71	2.44	0.00	9.55	838
12.25				1135	1392	1351	37.5	38.1	0.443	391	0.44	3.36	-0.02	9.52	854
13.25				1350	1263	1277	26.9	26.5	-0.707	377	0.09	2.77	-0.01	9.49	867
14.25				1260	1276	1273	25.7	27.6	0.853	378	-0.03	3.23	-0.01	9.31	883
15.25				1260	1226	1237	24.5	23.1	0.141	388	0.08	2.32	-0.02	9.52	873
16.25				1190	1298	1281	30.5	29.6	0.164	392	0.03	3.01	-0.02	9.30	887
17.25				1310	1368	1359	35.4	36.0	0.296	387	0.00	3.12	-0.02	9.00	876
18.25				1410	1302	1352	27.9	28.8	-0.265	385	-0.40	4.10	-0.02	8.71	881
19.25				1325	1163	1249	17.7	16.5	-0.205	386	0.08	3.04	-0.02	8.94	882
20.25				1160	1227	1246	20.9	21.6	0.139	386	-0.20	3.57	-0.04	8.83	881
21.25				1225	1189	1241	20.8	18.2	0.001	389	0.27	2.82	-0.03	9.09	880
22.25				1210	1333	1292	28.6	29.3	0.122	388	0.03	3.94	-0.03	8.87	885
23.25				1290	1131	1149	15.1	14.0	-0.125	389	-0.07	3.26	-0.02	9.01	878
0.25				1085	1105	1103	11.5	13.4	-0.393	392	-0.10	3.33	-0.01	9.18	880
1.25				1025	1062	1059	8.3	11.5	-0.370	388	-0.24	2.72	-0.03	8.84	882
2.25				1025	820	991	-2.9	-3.2	-0.343	367	-1.93	--	--	--	--
3.25				1025	739	969	-8.1	-8.1	-0.119	348	-0.46	--	--	--	--
4.25				1025	722	965	-9.2	-9.2	-0.023	336	-0.47	--	--	--	--
5.25				1025	727	966	-8.9	-8.9	0.015	325	-0.41	--	--	--	--
6.25				1025	744	4080	-7.8	-7.9	0.037	398	3.51	10.32	-0.01	4.53	495
7.25				1025	765	1100	-6.5	-6.5	0.044	408	0.26	10.27	-0.03	5.07	533
0.00 - 7.28															
MAX				1085.	1224.	5073.	21.0	21.3	0.385	417.	10.22	10.43	1.06	9.36	893.
MIN				1025.	722.	853.	-9.2	-9.3	-0.711	320.	-2.47	0.65	-0.20	1.08	445.
MEAN	3.09	0.98		1033.	838.	1172.	-2.4	-2.3	-0.187	365.	0.06	6.30	-0.01	6.98	694.
ACCM	298.6	221.2		1025.		1172.			-0.187	365.	0.06		-0.01	21.57	694.
0.00 - 0.00															
MAX				1410.	1398.	1372.	38.3	38.7	0.783	396.	0.92	4.39	0.02	10.03	892.
MIN				1085.	1095.	1117.	13.8	11.4	-0.891	375.	-1.02	1.83	-0.06	8.64	831.
MEAN	24.01	21.77		1264.	1256.	1266.	26.7	26.7	-0.027	388.	-0.01	3.20	-0.02	9.37	876.
ACCM	295.5	220.3		1261.		1266.			-0.027	388.	-0.01		-0.02	224.89	876.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL .... COAL HEAT VALUE
% MOISTURE IN COAL..... ....
NET HEAT CONSUMP. .... SHORT TONS CLINKER
HEAT CONSUMPTION .... LB COAL / SH.T
W1/ COAL TO KILN .... MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL MKCAL		C-MOIST C-ASH		C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%	
	T/H	T/H	T	T/H	KC/KG	KC/KG	%	%		T/H		GR/L	H
7.25	110.5	67.2	1613	9.51	768	780	19.5	3.21	9620	72.9	0 27.71	1310	
8.25	109.9	66.8	1604	9.39	762	775	19.5	3.21	9620	72.5	0 27.35	1260	
9.25	109.1	66.3	1593	9.56	782	795	19.5	3.21	9617	72.0	0 28.02	1370	
10.25	109.6	66.6	1600	9.42	767	779	19.5	3.21	9617	72.4	0 27.69	1205	
11.25	105.1	63.9	1535	9.55	811	824	19.5	3.21	9620	69.4	0 29.34	1190	
12.25	104.1	63.3	1519	9.52	816	830	19.5	3.21	9617	68.7	0 29.20	1135	
13.25	110.1	66.9	1607	9.49	769	781	19.5	3.21	9620	72.7	0 27.62	1350	
14.25	110.3	67.1	1610	9.31	753	773	20.0	3.54	9519	72.8	0 26.75	1260	
15.25	103.8	63.1	1515	9.52	819	841	20.0	3.54	9519	68.5	0 29.05	1260	
16.25	103.9	63.2	1517	9.38	798	820	20.0	3.54	9519	68.6	0 28.53	1190	
17.25	106.1	64.5	1549	9.00	757	778	20.0	3.54	9519	70.0	0 26.96	1310	
18.25	106.6	64.8	1555	8.71	730	749	20.0	3.54	9519	70.3	0 25.97	1410	
19.25	104.5	63.5	1525	8.94	763	784	20.0	3.54	9519	69.0	0 27.24	1325	
20.25	104.3	63.4	1523	8.83	756	776	20.0	3.54	9519	68.8	0 26.91	1160	
21.25	102.9	62.6	1502	9.09	788	809	20.0	3.54	9519	67.9	0 28.07	1225	
22.25	103.5	62.9	1510	8.87	765	786	20.0	3.54	9519	68.3	0 27.27	1210	
23.25	104.9	63.8	1532	9.01	766	787	20.0	3.54	9519	69.2	0 27.30	1290	
0.25	104.3	63.4	1522	9.18	786	807	20.0	3.54	9519	68.8	0 28.02	1085	
1.25	95.6	58.1	1395	8.84	825	847	20.0	3.54	9519	63.1	0 28.41	1025	
2.25	--	--	-72	--	--	--	20.0	3.54	9519	-3.2	-- --	1025	
3.25	--	--	-72	--	--	--	20.0	3.54	9515	-3.2	-- --	1025	
4.25	--	--	-65	--	--	--	20.0	3.54	9519	-2.9	-- --	1025	
5.25	--	--	-71	--	--	--	20.0	3.54	9515	-3.2	-- --	1025	
6.25	37.5	22.8	547	4.53	1078	1188	20.0	3.54	9519	24.7	0 38.44	1025	
7.25	37.9	23.0	553	5.07	1196	1228	20.0	3.54	9515	25.0	0 42.58	1025	
0.00 - 7.29													
MAX	105.9	64.4	1546.	9.36	6128.	6292.	20.0	3.54	9519.	69.9	2. 218.17	1085.	
MIN	-4.6	2.8	-81.	1.88	715.	734.	20.0	3.54	9516.	-3.6	0. 0.36	1025.	
MEAN	69.7	42.4	393.	6.98	1051.	1080.	20.0	3.54	9518.	17.8	0. 37.41	1033.	3.10
ACCM	221.2	131.3		21.62	894.	1080.	20.0	3.54			0. 37.41	1025.	298.6
0.00 - 0.00													
MAX	111.7	67.8	1628.	10.03	847.	860.	20.0	3.54	9621.	73.6	0. 30.46	1410.	
MIN	100.1	61.0	1463.	8.64	715.	734.	19.5	3.21	9516.	66.2	0. 25.46	1085.	
MEAN	107.6	65.4	1571.	9.37	778.	794.	19.7	3.35	9574.	71.0	0. 27.85	1264.	24.01
ACCM	2583.6	1570.8		224.89	778.	794.	19.7	3.35			0. 27.84	1261.	295.5

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1	BF KCAL	KF-LS	KF-MS C3S	KF-LOI	KLD LTWT	FCAO	CL-LS CL-MS	KCONTRL KM2F1*
	T/H	T/H	T/H KC/KG		%	%	GR/L	DEG.C	%	H H
7.25	35.5	21.5	4.73 1191	108.6 0.980	2.450	54.8	34.3	1025	19	0.12 0.900 2.540
8.25	32.9	20.0	5.34 1449	110.0 0.920	2.390	59.3	34.3	1025	52	0.12 0.900 2.540
9.25	41.6	25.3	4.50 967	110.0 0.920	2.390	59.3	34.3	1025	34	0.12 0.900 2.540
10.25	44.3	26.9	4.77 960	110.0 0.920	2.390	59.3	34.3	1025	39	0.12 0.900 2.540
11.25	48.7	29.6	5.92 1084	110.0 0.920	2.390	59.3	34.3	1025	80	0.12 0.900 2.540
12.25	56.4	34.3	6.83 1081	110.0 0.920	2.390	59.3	34.3	1560	86	0.12 0.900 2.540
13.25	71.7	43.6	7.32 912	110.0 0.920	2.390	59.3	34.3	1590	111	0.12 0.900 2.540
14.25	77.2	46.9	8.38 969	106.4 0.890	2.370	51.6	34.4	1570	125	0.47 0.910 2.490
15.25	79.3	48.2	8.35 940	106.4 0.890	2.370	51.6	34.4	1490	126	0.47 0.910 2.490
16.25	82.4	50.1	8.35 905	110.2 0.910	2.410	59.1	34.4	1530	142	0.47 0.910 2.490
17.25	83.1	50.5	8.48 911	110.2 0.910	2.410	59.1	34.4	1530	159	0.47 0.910 2.490
18.25	86.2	52.4	8.46 877	110.2 0.910	2.410	59.1	34.4	1470	158	0.47 0.910 2.490
19.25	88.9	54.0	8.49 853	110.2 0.910	2.410	59.1	34.4	1470	168	0.47 0.910 2.490
20.25	90.9	55.3	8.63 848	110.2 0.910	2.410	59.1	34.4	1430	164	0.47 0.910 2.490
21.25	93.7	57.0	8.80 839	110.2 0.910	2.410	59.1	34.4	1320	169	0.47 0.910 2.490
22.25	94.1	57.2	8.75 830	110.2 0.910	2.410	59.1	34.4	1320	48	0.47 0.910 2.490
23.25	93.1	56.6	8.83 847	110.8 0.920	2.370	61.4	34.4	1385	18	0.47 0.910 2.490
0.25	95.9	58.3	9.08 846	110.8 0.920	2.370	61.4	34.4	1385	181	0.47 0.910 2.490
1.25	97.7	59.4	9.14 835	110.8 0.920	2.370	61.4	34.4	1345	192	0.47 0.910 2.490
2.25	99.2	60.3	9.18 826	110.8 0.920	2.370	61.4	34.4	1335	208	0.47 0.910 2.490
3.25	99.4	60.4	9.23 829	110.8 0.920	2.370	61.4	34.4	1320	210	0.47 0.910 2.490
4.25	98.7	60.0	9.17 829	110.8 0.920	2.370	61.4	34.4	1320	216	0.47 0.910 2.490
5.25	100.5	61.1	9.06 804	110.8 0.920	2.370	61.4	34.4	1310	203	0.47 0.910 2.490
6.25	100.3	61.0	9.05 805	110.8 0.920	2.370	61.4	34.4	1310	221	0.47 0.910 2.490
7.25	100.0	60.8	9.08 811	110.8 0.920	2.370	61.4	34.4	1260	199	0.47 0.910 2.490
0.00 - 7.25										
MAX	101.5	61.7	9.30 859.	110.8 0.920	2.370	61.5	34.4	1385.	231.	0.47 0.910 2.490
MIN	94.5	57.5	8.92 789.	110.8 0.920	2.370	61.5	34.4	1260.	94.	0.47 0.910 2.490
MEAN	99.0	60.2	9.12 823.	110.8 0.920	2.370	61.5	34.4	1327.	206.	0.47 0.910 2.490 0.68 7.43
ACCM	735.5	447.2	67.74 823.	110.8 0.920	2.370	61.5	34.4	1321.	286.	0.47 0.910 2.490 221.9 322.1
0.00 - 0.00										
MAX	105.9	64.4	9.36 12012.	110.8 0.920	2.450	61.5	34.4	1590.	510.	0.47 0.910 2.540
MIN	-5.1	-3.0	1.08-366888	106.4 0.890	2.370	51.6	34.3	1025.	7.	0.12 0.900 2.490
MEAN	72.4	44.0	7.42 924.	109.4 0.909	2.413	57.4	34.4	1259.	113.	0.27 0.904 2.519 0.98 19.47
ACCM	1416.3	857.2	144.32 914.	109.4 0.908	2.412	57.4	34.4	1269.	113.	0.28 0.905 2.517 221.2 314.8

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 .....
W1/ GAS TEMP A53 .....
W1/ PRESSURE A54 .....
W1/ TEMP CYCL A54 .....
W1/ %O2 KILN OUTL .....
W1/ PRES EXIT KILN.....
W1/ KILN TORQUE
W1/ KILN ROT SPEED

.....W1/ GAS TEMP A52
.....W1/ GAS TEMP A51
.....W1/ GAS TEMP A61
.....W1/ T EXIT PREHEAT
.....W1/ PRESS EX PREH
.....
W1/ %CO EX PREHEAT
J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	0.4	30.9	13	10.33	747	48	712	71	600	417	417	412	145	-0.03	491
8.25	0.7	5.7	20	10.33	749	56	718	79	607	423	423	423	146	0.01	506
9.25	0.8	11.0	20	8.26	784	62	737	87	609	416	415	418	184	-0.02	534
10.25	0.9	8.0	17	7.88	789	61	745	90	617	418	417	420	184	-0.02	532
11.25	1.0	10.9	19	7.87	795	68	754	106	609	398	397	401	213	-0.01	571
12.25	1.1	14.3	57	8.50	793	114	757	173	626	412	412	418	300	0.00	649
13.25	1.4	13.9	52	7.93	795	123	749	187	603	389	386	398	337	-0.01	681
14.25	1.5	12.7	57	7.45	798	136	769	231	611	394	390	400	428	-0.02	752
15.25	1.6	15.6	92	7.86	799	171	767	259	617	403	393	407	448	-0.01	756
16.25	1.6	16.2	62	7.56	799	156	767	240	610	391	383	397	440	-0.01	758
17.25	1.7	14.4	89	8.30	798	164	763	261	616	392	385	397	471	-0.02	772
18.25	1.7	16.2	63	7.62	798	140	766	253	606	387	380	394	468	-0.01	773
19.25	1.8	15.5	79	7.35	799	161	766	253	603	378	373	387	467	0.00	784
20.25	1.8	14.7	74	7.61	799	162	759	264	605	379	369	385	486	0.00	781
21.25	1.9	19.6	92	7.13	799	182	763	279	605	382	376	388	514	0.00	802
22.25	1.9	19.4	99	7.57	798	170	770	301	616	389	380	394	552	-0.01	816
23.25	1.9	18.7	87	7.12	799	180	767	288	617	388	381	394	554	-0.02	815
0.25	1.9	18.4	106	5.98	799	201	769	319	618	391	382	395	587	-0.01	835
1.25	1.9	20.0	107	6.05	799	200	762	317	615	389	383	395	593	-0.02	840
2.25	1.9	20.9	107	5.48	800	188	763	326	612	385	379	390	599	-0.01	841
3.25	1.9	21.8	102	5.64	799	200	762	321	606	387	377	390	597	0.00	841
4.25	1.9	21.4	117	5.60	800	206	764	326	606	384	375	389	602	-0.01	837
5.25	1.9	23.4	113	5.17	800	197	765	329	611	383	376	388	599	-0.02	842
6.25	1.9	22.9	108	10.39	799	201	771	325	608	385	377	391	599	-0.03	843
7.25	1.9	24.6	115	10.34	800	205	766	328	610	383	377	387	589	0.00	840
0.00 - 7.27															
MAX	2.0	25.0	125.	10.45	805.	224.	778.	345.	623.	396.	387.	401.	613.	0.01	854.
MIN	2.0	17.7	84.	4.57	795.	161.	753.	302.	599.	380.	367.	385.	573.	-0.05	827.
MEAN	2.0	21.6	108.	6.78	800.	194.	766.	324.	611.	386.	379.	392.	595.	-0.02	841.
ACCM	2.0	21.6	108.		800.	194.	766.	324.	611.	386.	379.	392.	595.	-0.02	841.
0.00 - 0.00															
MAX	2.0	46.0	152.	10.43	818.	242.	795.	353.	644.	456.	452.	444.	640.	1.06	893.
MIN	0.0	0.1	-11.	0.65	588.	-0.	602.	-15.	532.	335.	347.	320.	2.	-0.28	411.
MEAN	1.5	16.8	62.	7.76	791.	130.	757.	211.	611.	396.	392.	391.	391.	-0.01	707.
ACCM	1.5	16.8	62.		791.	130.	757.	211.	611.	396.	392.	391.	391.	-0.01	707.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME .....
W1/ NOX REG STIME .....
W1/ LTW FOR CONTRL.....
W1/ ESTIMATED LTW .....
U1/ LITER WEIGHT .....
KILN CON. MEASUR. .....
KILN CONTROL
COAL TO KILN

.....W1/ NOX CHANGE LT
.....W1/ T EXIT PREHEAT
.....W1/ A50T1 CHANGE
.....W1/ %O2 KILN OUTL
.....
.....W1/ %CO EX PREHEAT
W1/ COAL TO KILN
J1/ ID FAN SPEED

HOUR	KM2F1* KCONTRL	KALARM	ESTLTW LTWT	NOXST LTWGTSP	NOXALT NOXLT	A50ALT A50T1	OA15X1	KM2F1 OA1X2CO	OA2V1
	H H H	GR/L GR/L GR/L	% % %	DEG.C	%	% T/H	RPM
7.25		1025 756 1098	-7.1 -7.1	0.042	412 2.12	10.33	-0.03	4.73	491
8.25		1025 788 983	-5.1 -5.1	0.049	423 2.03	10.33	0.01	5.34	506
9.25		1025 1361 1182	22.0 29.8	1.933	418 0.38	8.26	-0.02	4.50	534
10.25		1025 1479 1197	38.5 37.0	1.333	420 0.00	7.88	-0.02	4.77	532
11.25		1025 1340 1317	33.4 28.5	-0.640	401 0.41	7.87	-0.01	5.92	571
12.25		1560 1512 1280	36.5 34.9	-0.332	418 -0.23	8.50	0.00	6.83	649
13.25		1590 1466 1506	35.6 33.3	-0.103	398 0.19	7.93	-0.01	7.32	681
14.25		1570 1351 1476	28.1 26.7	0.060	400 0.03	7.45	-0.02	8.38	752
15.25		1490 1381 1483	27.1 27.6	0.087	407 -0.57	7.86	-0.01	8.35	756
16.25		1530 1415 1488	28.4 27.8	0.002	397 -0.35	7.56	-0.01	8.35	758
17.25		1530 1347 1465	25.4 24.3	-0.199	397 0.07	8.30	-0.02	8.48	772
18.25		1470 1392 1489	24.6 24.9	-0.021	394 -0.74	7.62	-0.01	8.46	773
19.25		1470 1361 1474	23.5 23.1	-0.008	387 -0.76	7.35	0.00	8.49	784
20.25		1430 1445 1469	19.5 19.1	-0.150	385 -0.49	7.61	0.00	8.63	781
21.25		1320 1394 1440	18.1 19.0	0.048	388 0.23	7.13	0.00	8.80	802
22.25		1320 1431 1458	23.2 22.9	0.044	394 0.18	7.57	-0.01	8.75	816
23.25		1385 1340 1346	18.5 17.7	-0.214	394 -0.16	7.12	-0.02	8.83	815
0.25		1385 1318 1327	15.6 16.1	-0.177	395 0.16	5.98	-0.01	9.08	835
1.25		1345 1350 1350	18.6 18.5	0.118	395 -0.02	6.05	-0.02	9.14	840
2.25		1335 1379 1378	20.4 20.5	0.071	398 -0.02	5.48	-0.01	9.18	841
3.25		1320 1407 1370	21.9 22.4	0.140	398 -0.03	5.64	0.00	9.23	841
4.25		1320 1385 1338	21.4 22.2	0.111	389 0.18	5.60	-0.01	9.17	837
5.25		1310 1350 1338	22.0 21.2	0.000	388 -0.16	5.17	-0.02	9.06	842
6.25		1310 1330 1314	20.2 20.2	-0.033	391 0.13	10.39	-0.03	9.05	843
7.25		1260 1320 1315	19.0 19.0	-0.041	387 -0.39	10.34	0.00	9.08	840
0.00 - 7.28									
MAX		1385. 1407. 1385.	22.8 22.4	0.222	401. 0.28	10.45	0.01	9.30	854.
MIN		1260. 1302. 1311.	14.2 15.0	-0.194	385. -0.48	4.57	-0.05	8.92	827.
MEAN	7.48 0.68	1327. 1350. 1338.	19.8 19.8	0.002	392. -0.03	6.79	-0.02	9.12	841.
ACCM	322.2 221.9	1321. 1338.		0.002	392. -0.03		-0.02	68.13	841.
0.00 - 0.00									
MAX		1590. 1670. 5073.	47.4 48.1	2.050	444. 10.22	10.43	1.06	9.36	893.
MIN		1025. 722. 853.	-9.2 -9.3	-1.016	320. -2.85	0.65	-0.20	1.08	411.
MEAN	19.47 0.98	1259. 1184. 1336.	15.3 15.3	0.003	391. 0.01	7.76	-0.01	7.42	707.
ACCM	314.8 221.2	1269. 1336.		0.003	391. 0.01		-0.01	144.32	707.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL..... .....
NET HEAT CONSUMP. ....SHORT TONS CLINKER
HEAT CONSUMPTION ....LB COAL / SH.T
W1/ COAL TO KILN ....MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.25	35.5	21.5 518	4.73 1191	1223 20.0	3.54 9515	23.4	0 42.56	1025
8.25	32.9	20.0 480	5.34 1449	1488 20.0	3.54 9519	21.7	0 51.33	1025
9.25	41.6	25.3 607	4.50 967	993 20.0	3.54 9519	27.4	0 34.40	1025
10.25	44.3	26.9 647	4.77 960	986 20.0	3.54 9519	29.3	0 34.22	1025
11.25	48.7	29.6 711	5.92 1084	1113 20.0	3.54 9519	32.1	0 38.34	1025
12.25	56.4	34.3 823	6.83 1081	1110 20.0	3.54 9519	37.2	0 38.28	1560
13.25	71.7	43.6 1047	7.32 912	936 20.0	3.54 9519	47.3	0 32.36	1590
14.25	77.2	46.9 1127	8.38 969	1000 19.0	5.06 9473	50.9	0 34.28	1570
15.25	79.3	48.2 1157	8.35 940	970 19.0	5.06 9473	52.3	0 33.39	1490
16.25	82.4	50.1 1203	8.35 905	933 19.0	5.06 9473	54.4	0 32.00	1530
17.25	83.1	50.5 1213	8.48 911	940 19.0	5.06 9473	54.8	0 32.11	1530
18.25	86.2	52.4 1258	8.46 877	905 19.0	5.06 9473	56.9	0 31.04	1470
19.25	88.9	54.0 1297	8.49 853	880 19.0	5.06 9473	58.6	0 30.31	1470
20.25	90.9	55.3 1327	8.63 848	874 19.0	5.06 9473	60.0	0 30.02	1430
21.25	93.7	57.0 1368	8.80 839	865 19.0	5.06 9473	61.8	0 29.65	1320
22.25	94.1	57.2 1373	8.75 830	857 19.0	5.06 9470	62.1	0 29.59	1320
23.25	93.1	56.6 1358	8.83 847	874 19.0	5.06 9473	61.4	0 30.01	1385
0.25	95.9	58.3 1400	9.08 846	872 19.0	5.06 9473	63.3	0 29.92	1385
1.25	97.7	59.4 1426	9.14 835	861 19.0	5.06 9473	64.5	0 29.63	1345
2.25	99.2	60.3 1448	9.18 826	852 19.0	5.06 9473	65.5	0 29.22	1335
3.25	99.4	60.4 1450	9.23 829	855 19.0	5.06 9473	65.6	0 29.45	1320
4.25	98.7	60.0 1441	9.17 829	856 19.0	5.06 9473	65.2	0 29.42	1320
5.25	100.5	61.1 1467	9.06 804	830 19.0	5.06 9473	66.3	0 28.33	1310
6.25	100.3	61.0 1464	9.05 805	831 19.0	5.06 9473	66.2	0 28.51	1310
7.25	100.0	60.8 1459	9.08 811	836 19.0	5.06 9473	66.0	0 28.79	1260
0.00 - 7.29								
MAX	101.5	61.7 1481.	9.30 859.	886. 19.0	5.06 9473.	67.0	0. 30.44	1385.
MIN	94.5	57.5 1380.	8.92 789.	814. 19.0	5.06 9470.	62.4	0. 27.96	1260.
MEAN	99.0	60.2 1444.	9.12 823.	849. 19.0	5.06 9473.	65.3	0. 29.15	1327. 7.49
ACCM	740.9	450.5	68.23 823.	849. 19.0	5.06		0. 29.15	1321. 322.2
0.00 - 0.00								
MAX	105.9	64.4 1546.	9.36 12012.	12333. 20.0	5.06 9519.	69.9	4. 427.64	1590.
MIN	-5.1	-3.0 -81.	1.08-366888	-376836 19.0	3.54 9345.	-3.6	-137.-13062.	1025.
MEAN	72.4	44.0 849.	7.42 924.	951. 19.6	4.18 9499.	38.4	0. 32.82	1259. 19.47
ACCM	1416.3	857.2	144.32 914.	952. 19.6	4.18		0. 32.82	1269. 314.8

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR ..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1*
	T/H	T/H T/H KC/KG		%	% GR/L	DEG.C %		H H
7.25	100.6	61.1 9.07 805	110.8 0.920	2.370 61.4	34.4 1310	213 0.47	0.910 2.490	
8.25	99.7	60.6 9.15 819	110.8 0.920	2.370 61.4	34.4 1250	178 0.47	0.910 2.490	
9.25	100.2	60.9 9.20 819	119.8 1.000	2.450 61.6	34.4 1250	190 0.47	0.910 2.490	
10.25	99.2	60.3 8.89 801	119.8 1.000	2.450 61.6	34.4 1280	201 0.47	0.910 2.490	
11.25	100.1	60.9 8.35 745	119.8 1.000	2.450 61.6	34.4 1310	223 0.47	0.910 2.490	
12.25	97.9	59.5 9.20 839	119.8 1.000	2.450 61.6	34.4 1235	204 0.47	0.910 2.490	
13.25	98.6	59.9 9.07 821	108.5 0.900	2.400 55.4	34.5 1235	158 0.12	0.910 2.490	
14.25	99.6	60.5 8.90 798	108.5 0.900	2.400 55.4	34.5 1235	163 0.12	0.920 2.510	
15.25	99.0	60.2 8.82 796	108.5 0.900	2.400 55.4	34.5 1340	239 0.12	0.920 2.510	
16.25	100.4	61.0 8.94 795	108.5 0.900	2.400 55.4	34.5 1270	231 0.12	0.920 2.510	
17.25	100.3	60.9 8.83 787	108.5 0.890	2.440 54.3	34.5 1260	232 0.12	0.920 2.510	
18.25	99.1	60.2 9.51 857	108.5 0.890	2.440 54.3	34.5 1280	318 0.12	0.920 2.510	
19.25	99.8	60.6 9.33 834	108.5 0.890	2.440 54.3	34.5 1150	234 0.12	0.920 2.510	
20.25	100.1	60.9 8.73 779	108.5 0.890	2.440 54.3	34.5 1290	227 0.12	0.920 2.510	
21.25	100.3	61.0 8.89 791	108.5 0.890	2.440 54.3	34.5 1380	208 0.12	0.920 2.510	
22.25	99.6	60.5 8.78 787	108.5 0.890	2.440 54.3	34.5 1385	223 0.12	0.920 2.510	
23.25	99.4	60.4 8.87 797	108.5 0.890	2.440 54.3	34.5 1330	243 0.12	0.920 2.510	
0.25	99.3	60.3 9.03 812	108.5 0.890	2.440 54.3	34.5 1285	255 0.12	0.920 2.510	
1.25	99.6	60.5 8.86 794	108.5 0.890	2.440 54.3	34.5 1270	246 0.12	0.920 2.510	
2.25	99.1	60.2 8.94 806	108.5 0.890	2.440 54.3	34.5 1305	231 0.12	0.920 2.510	
3.25	100.7	61.2 8.98 796	111.5 0.930	2.410 62.4	34.5 1250	248 0.12	0.920 2.510	
4.25	99.9	60.7 9.06 809	111.5 0.930	2.410 62.4	34.5 1270	214 0.12	0.920 2.510	
5.25	100.0	60.8 8.94 798	111.5 0.930	2.410 62.4	34.5 1340	211 0.12	0.920 2.510	
6.25	100.1	60.8 8.74 780	111.5 0.930	2.410 62.4	34.5 1310	219 0.12	0.920 2.510	
7.25	98.9	60.1 8.78 792	111.5 0.930	2.410 62.4	34.5 1345	224 0.12	0.920 2.510	
0.00 - 7.25								
MAX	101.6	61.8 9.17 831.	111.5 0.930	2.440 62.5	34.6 1345.	267. 0.12	0.920 2.510	
MIN	96.9	58.8 8.52 761.	108.5 0.890	2.410 54.3	34.6 1250.	177. 0.12	0.920 2.510	
MEAN	99.6	60.6 8.91 799.	110.2 0.912	2.424 58.8	34.6 1293.	229. 0.12	0.920 2.510	6.80 7.43
ACCM	749.3	450.1 66.20 799.	110.2 0.913	2.423 59.0	34.6 1290.	229. 0.12	0.920 2.510	229.9 345.9
0.00 - 0.00								
MAX	102.1	62.1 9.99 902.	119.8 1.000	2.450 61.6	34.6 1385.	332. 0.47	0.920 2.510	
MIN	94.2	57.3 8.28 736.	108.5 0.890	2.370 54.3	34.4 1150.	94. 0.12	0.910 2.490	
MEAN	99.4	60.5 9.02 810.	111.4 0.923	2.410 62.2	34.5 1297.	214. 0.32	0.914 2.498	1.95 24.02
ACCM	2386.5	1451.0 216.41 810.	111.6 0.924	2.414 62.5	34.5 1296.	214. 0.31	0.915 2.499	223.2 338.5

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 .....
W1/ GAS TEMP A53 .....
W1/ PRESSURE A54 .....
W1/ TEMP CYCL A54 .....
W1/ ZO2 KILN OUTL .....
W1/ PRES EXIT KILN.....
W1/ KILN TORQUE .....
W1/ KILN ROT SPEED .....

.....W1/ GAS TEMP A52
.....W1/ GAS TEMP A51
.....W1/ GAS TEMP A61
.....W1/ T EXIT PREHEAT
.....W1/ PRESS EX PREH
.....
W1/ %CO EX PREHEAT
J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	1.9	23.8	99	10.34	798	196	769	321	608	385	377	390	597	-0.01	842
8.25	1.9	28.9	119	10.38	803	204	770	333	611	382	377	389	605	-0.02	840
9.25	1.9	31.5	124	10.36	801	207	764	332	609	382	375	388	595	-0.01	845
10.25	1.9	31.6	114	1.20	802	205	765	330	612	383	374	388	586	-0.01	854
11.25	1.9	31.5	123	3.19	797	213	767	347	608	383	375	388	614	-0.03	866
12.25	1.9	30.8	118	1.94	799	205	768	336	610	384	378	388	598	-0.01	847
13.25	1.9	33.5	131	1.93	801	223	772	353	619	391	381	393	630	-0.02	868
14.25	1.9	34.8	124	2.61	805	230	786	354	627	390	383	397	622	0.00	862
15.25	1.9	34.7	115	3.12	801	202	779	345	620	390	382	396	609	-0.01	862
16.25	1.9	33.7	113	2.89	804	203	776	339	620	389	381	394	611	0.00	862
17.25	1.9	36.2	116	3.57	803	210	782	337	622	394	384	398	608	0.00	860
18.25	1.9	39.2	127	2.56	803	222	781	343	623	391	383	397	624	0.00	870
19.25	1.9	36.8	135	2.38	805	214	783	355	635	400	387	402	641	-0.01	877
20.25	1.9	36.9	119	3.12	803	204	781	344	628	392	384	397	612	0.00	858
21.25	1.9	35.8	117	3.15	803	203	778	348	626	391	383	396	610	-0.01	861
22.25	1.9	34.9	126	3.25	800	212	776	333	624	392	383	396	621	-0.02	862
23.25	1.9	34.0	124	3.16	801	204	776	341	622	390	381	394	627	-0.03	860
0.25	1.9	33.3	125	3.03	801	200	781	346	616	389	381	396	627	-0.03	858
1.25	1.9	34.5	126	3.07	802	202	781	343	620	389	381	394	638	-0.02	861
2.25	1.9	36.4	126	3.42	801	194	777	343	624	391	380	396	632	-0.04	862
3.25	1.9	34.8	133	2.69	803	204	777	337	615	386	378	391	620	-0.04	859
4.25	1.9	34.8	124	2.13	804	209	779	335	618	389	382	393	619	-0.02	866
5.25	1.9	36.0	136	3.37	802	207	775	338	619	390	382	397	626	-0.02	866
6.25	1.9	35.7	125	2.78	803	208	784	344	621	391	384	396	620	-0.02	861
7.25	1.9	33.7	126	3.59	801	209	779	323	620	388	382	394	626	-0.02	860
0.00 - 7.27															
MAX	2.0	37.4	142.	4.16	808.	231.	787.	356.	631.	395.	391.	400.	643.	0.00	873.
MIN	2.0	33.1	117.	2.14	798.	180.	771.	269.	610.	382.	376.	389.	608.	-0.06	851.
MEAN	2.0	35.1	129.	3.15	803.	208.	779.	338.	620.	390.	382.	395.	626.	-0.03	863.
ACCM	2.0	35.1	129.		803.	208.	779.	338.	620.	390.	382.	395.	626.	-0.03	863.
0.00 - 0.00															
MAX	2.0	45.8	148.	10.51	810.	243.	792.	376.	637.	402.	392.	412.	665.	0.32	886.
MIN	2.0	17.7	84.	0.27	790.	124.	753.	300.	596.	374.	367.	380.	573.	-0.07	827.
MEAN	2.0	30.3	118.	4.59	801.	206.	773.	336.	616.	388.	380.	393.	607.	-0.02	853.
ACCM	2.0	30.3	118.		801.	206.	773.	336.	616.	388.	380.	393.	607.	-0.02	853.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL ..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ %O2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ %CO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1* KCONTRL	KALARM	ESTLTW LTWT	NOXST LTWGTSP	NOXALT NOXLT	A50ALT A50T1		KM2F1 OA15X1	OA1X2CO	OA2V1
	H	H H	GR/L GR/L	GR/L	% %	%	DEG.C	%	%	T/H RPM
7.25			1310 1324	1313	19.5 19.5	-0.037	398	-0.15 10.34	-0.01	9.07 842
8.25			1250 1309	1326	17.6 17.6	-0.049	389	-0.36 10.38	-0.02	9.15 840
9.25			1250 1297	1333	16.1 16.1	-0.049	388	-0.01 10.36	-0.01	9.20 845
10.25			1280 1390	1343	29.7 29.7	0.331	388	-0.58 1.20	-0.01	8.89 854
11.25			1310 1386	1344	25.7 29.2	-0.291	388	0.28 3.19	-0.03	8.35 866
12.25			1235 1219	1262	12.6 12.3	-0.351	388	0.04 1.94	-0.01	9.20 847
13.25			1235 1380	1348	24.1 27.7	1.019	393	0.12 1.93	-0.02	9.07 868
14.25			1235 1456	1388	35.1 35.0	0.899	397	0.37 2.61	0.00	8.98 862
15.25			1340 1322	1323	28.6 27.7	-0.180	396	-0.01 3.12	-0.01	8.82 862
16.25			1270 1296	1287	26.0 24.8	-0.216	394	0.13 2.89	0.00	8.94 862
17.25			1260 1305	1287	28.9 30.1	0.219	398	-0.34 3.57	0.00	8.83 860
18.25			1280 1236	1253	10.8 10.7	-0.417	397	-0.02 2.56	0.00	9.51 870
19.25			1150 1215	1243	15.6 15.2	0.049	402	0.03 2.38	-0.01	9.33 877
20.25			1290 1386	1338	44.6 46.2	0.850	397	-0.09 3.12	0.00	8.73 858
21.25			1380 1332	1340	36.9 36.4	-0.225	396	-0.16 3.15	-0.01	8.89 861
22.25			1385 1344	1305	37.9 38.3	0.080	396	-0.12 3.25	-0.02	8.78 862
23.25			1330 1305	1307	32.1 32.4	-0.192	394	-0.09 3.16	-0.03	8.87 860
0.25			1285 1275	1275	28.8 28.5	-0.149	396	0.09 3.03	-0.03	9.03 858
1.25			1270 1272	1276	28.2 28.5	-0.037	394	0.29 3.07	-0.02	8.86 861
2.25			1305 1268	1269	26.9 27.3	-0.068	396	0.01 3.42	-0.04	8.94 862
3.25			1250 1262	1262	26.6 26.5	0.005	391	0.01 2.69	-0.04	8.98 859
4.25			1270 1284	1283	30.2 29.7	0.073	393	0.20 2.13	-0.02	9.06 866
5.25			1340 1277	1279	28.6 27.9	-0.123	397	0.11 3.37	-0.02	8.94 866
6.25			1310 1302	1302	30.4 30.7	0.065	396	0.28 2.78	-0.02	8.74 861
7.25			1345 1267	1277	25.3 24.8	-0.151	394	-0.08 3.59	-0.02	8.78 860
0.00 - 7.28										
MAX			1345. 1306.	1306.	32.7 32.4	0.203	400.	0.67 4.16	0.00	9.17 873.
MIN			1250. 1250.	1250.	24.5 24.5	-0.318	389.	-0.32 2.14	-0.06	8.52 851.
MEAN	7.48 6.85		1293. 1278.	1279.	28.4 28.4	-0.024	395.	0.01 3.15	-0.03	8.91 863.
ACCM	345.9 229.9		1290.	1279.		-0.024	395.	0.01	-0.03	66.57 863.
0.00 - 0.00										
MAX			1385. 1464.	1394.	45.1 46.6	1.205	412.	0.88 10.51	0.32	9.99 886.
MIN			1150. 1178.	1153.	8.5 8.4	-0.900	380.	-0.75 0.27	-0.07	8.28 827.
MEAN	24.02 1.95		1297. 1331.	1323.	24.4 24.4	0.017	393.	-0.00 4.59	-0.02	9.02 853.
ACCM	338.5 223.2		1296.	1323.		0.017	393.	-0.00	-0.02	216.41 853.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL..... .....
NET HEAT CONSUMP. ....SHORT TONS CLINKER
HEAT CONSUMPTION ....LB COAL / SH.T
Wi/ COAL TO KILN ....MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION Ui/ LITER WEIGHT
Wi/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.25	100.6	61.1 1468	9.07 805	830 19.0	5.06 9473	66.4	0 28.59	1310
8.25	99.7	60.6 1455	9.15 819	845 19.0	5.06 9473	65.8	0 28.99	1250
9.25	100.2	60.9 1463	9.20 819	845 19.0	5.06 9473	66.1	0 28.96	1250
10.25	99.2	60.3 1447	8.89 801	826 19.0	5.06 9473	65.4	0 28.34	1280
11.25	100.1	60.9 1461	8.35 745	768 19.0	5.06 9473	66.1	0 26.65	1310
12.25	97.9	59.5 1430	9.20 839	865 19.0	5.06 9473	64.6	0 29.56	1235
13.25	98.6	59.9 1439	9.07 821	848 19.0	5.06 9470	65.0	0 28.92	1235
14.25	99.6	60.5 1453	8.98 798	825 20.0	4.10 9453	65.7	0 28.36	1235
15.25	99.0	60.2 1444	8.82 796	822 20.0	4.10 9453	65.3	0 28.06	1340
16.25	100.4	61.0 1465	8.94 795	822 20.0	4.10 9453	66.2	0 28.09	1270
17.25	100.3	60.9 1463	8.83 787	813 20.0	4.10 9453	66.2	0 27.66	1260
18.25	99.1	60.2 1446	9.51 857	886 20.0	4.10 9453	65.4	0 30.31	1280
19.25	99.8	60.6 1456	9.33 834	863 20.0	4.10 9453	65.8	0 29.51	1150
20.25	100.1	60.9 1461	8.73 779	805 20.0	4.10 9453	66.1	0 27.58	1290
21.25	100.3	61.0 1464	8.89 791	818 20.0	4.10 9453	66.2	0 28.07	1380
22.25	99.6	60.5 1454	8.78 787	814 20.0	4.10 9453	65.7	0 27.96	1385
23.25	99.4	60.4 1451	8.87 797	824 20.0	4.10 9453	65.6	0 28.19	1330
0.25	99.3	60.3 1449	9.03 812	840 20.0	4.10 9453	65.5	0 28.45	1285
1.25	99.6	60.5 1454	8.86 794	821 20.0	4.10 9450	65.7	0 28.06	1270
2.25	99.1	60.2 1446	8.94 806	833 20.0	4.10 9453	65.4	0 28.46	1305
3.25	100.7	61.2 1470	8.98 796	823 20.0	4.10 9453	66.5	0 28.11	1250
4.25	99.9	60.7 1458	9.06 809	837 20.0	4.10 9453	65.9	0 28.78	1270
5.25	100.0	60.8 1460	8.94 798	825 20.0	4.10 9453	66.0	0 28.34	1340
6.25	100.1	60.8 1461	8.74 780	806 20.0	4.10 9453	66.0	0 27.43	1310
7.25	98.9	60.1 1444	8.78 792	819 20.0	4.10 9453	65.3	0 27.97	1345
0.00 - 7.29								
MAX	101.6	61.8 1482.	9.17 831.	859. 20.0	4.11 9454.	67.1	0. 29.39	1345.
MIN	96.9	58.8 1411.	8.52 761.	787. 20.0	4.11 9451.	63.8	0. 26.92	1250.
MEAN	99.6	60.6 1454.	8.91 799.	826. 20.0	4.11 9454.	65.8	0. 28.24	1293. 7.49
ACCM	745.7	453.4	66.67 799.	826. 20.0	4.11		0. 28.24	1290. 345.9
0.00 - 0.00								
MAX	102.1	62.1 1490.	9.99 902.	931. 20.0	5.06 9579.	67.4	0. 31.98	1385.
MIN	94.2	57.3 1375.	8.28 736.	760. 19.0	4.11 9451.	62.2	0. 26.09	1150.
MEAN	99.4	60.5 1451.	9.02 810.	837. 19.4	4.64 9463.	65.6	0. 28.68	1297. 24.02
ACCM	2386.5	1451.0	216.41 810.	837. 19.4	4.64		0. 28.67	1296. 338.5

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1%		
	T/H	T/H	T/H KC/KG			%	%	GR/L	DEG.C	%		H	H
7.25	98.9	60.1	8.66	781	111.5	0.930	2.410	62.4	34.5	1310	212	0.12	0.920	2.510
8.25	98.5	59.9	9.00	816	103.6	0.840	2.490	40.3	34.5	1285	255	0.12	0.920	2.510
9.25	100.5	61.1	8.78	780	103.6	0.840	2.490	40.3	34.5	1290	233	0.12	0.920	2.510
10.25	99.9	60.7	8.59	767	103.6	0.840	2.490	40.3	34.5	1345	244	0.12	0.920	2.510
11.25	100.0	60.8	8.42	751	103.6	0.840	2.490	40.3	34.5	1330	228	0.12	0.920	2.510
12.25	99.2	60.3	8.63	776	103.6	0.840	2.490	40.3	34.5	1330	215	0.12	0.920	2.510
13.25	99.5	60.5	8.77	787	103.6	0.840	2.490	40.3	34.5	1195	197	0.12	0.920	2.510
14.25	99.7	60.6	8.95	802	108.7	0.900	2.440	56.2	34.3	1215	173	0.24	0.910	2.530
15.25	98.7	60.0	8.88	803	108.7	0.900	2.440	56.2	34.3	1240	209	0.24	0.910	2.530
16.25	99.4	60.4	8.57	770	109.0	0.910	2.370	56.5	34.3	1310	185	0.24	0.910	2.530
17.25	99.4	60.4	8.70	781	109.0	0.910	2.370	56.5	34.3	1310	211	0.24	0.910	2.530
18.25	99.0	60.2	8.79	793	109.0	0.910	2.370	56.5	34.3	1245	234	0.24	0.910	2.530
19.25	100.3	61.0	8.77	780	109.0	0.910	2.370	56.5	34.3	1230	227	0.24	0.910	2.530
20.25	100.0	60.8	8.91	795	109.0	0.910	2.370	56.5	34.3	1205	187	0.24	0.910	2.530
21.25	98.9	60.1	8.87	801	109.0	0.910	2.370	56.5	34.3	1175	200	0.24	0.910	2.530
22.25	100.2	60.9	8.73	777	109.0	0.910	2.370	56.5	34.3	1250	248	0.24	0.910	2.530
23.25	99.5	60.5	9.16	822	109.0	0.910	2.370	56.5	34.3	1200	197	0.24	0.910	2.530
0.25	99.3	60.4	9.25	831	106.2	0.870	2.450	48.1	34.3	1210	202	0.24	0.910	2.530
1.25	99.3	60.4	9.47	851	106.2	0.870	2.450	48.1	34.3	1180	230	0.24	0.910	2.530
2.25	99.9	60.7	9.26	827	106.2	0.870	2.450	48.1	34.3	1255	216	0.24	0.910	2.530
3.25	99.5	60.4	8.99	807	106.2	0.870	2.450	48.1	34.3	1320	248	0.24	0.910	2.530
4.25	100.0	60.8	9.14	817	106.2	0.870	2.450	48.1	34.3	1300	247	0.24	0.910	2.530
5.25	100.3	60.9	9.24	823	106.2	0.870	2.450	48.1	34.3	1210	193	0.24	0.910	2.530
6.25	98.3	59.8	9.00	817	106.2	0.870	2.450	48.1	34.3	1310	213	0.24	0.910	2.530
7.25	99.8	60.7	8.86	793	106.2	0.870	2.450	48.1	34.3	1350	259	0.24	0.910	2.530
0.00 - 7.25														
MAX	101.3	61.6	9.58	867.	106.2	0.870	2.450	48.2	34.3	1350.	267.	0.24	0.910	2.530		
MIN	97.9	59.5	8.76	779.	106.2	0.870	2.450	48.2	34.3	1180.	189.	0.24	0.910	2.530		
MEAN	99.7	60.6	9.18	822.	106.2	0.870	2.450	48.2	34.3	1256.	228.	0.24	0.910	2.530	7.43	7.43
ACCM	741.1	450.6	68.21	822.	106.2	0.870	2.450	48.2	34.3	1247.	228.	0.24	0.910	2.530	253.5	369.6
0.00 - 0.00														
MAX	101.6	61.8	9.36	845.	111.5	0.930	2.490	62.5	34.6	1345.	269.	0.24	0.920	2.530		
MIN	96.9	58.8	8.29	742.	103.6	0.840	2.370	40.4	34.3	1175.	162.	0.12	0.910	2.510		
MEAN	99.7	60.6	8.83	791.	108.2	0.894	2.422	53.7	34.4	1273.	220.	0.17	0.916	2.520	23.31	24.02
ACCM	2393.0	1454.9	211.90	791.	108.2	0.895	2.421	53.7	34.4	1276.	220.	0.18	0.915	2.519	246.2	362.2

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 ..... W1/ GAS TEMP A52
W1/ GAS TEMP A53 ..... W1/ GAS TEMP A51
W1/ PRESSURE A54 ..... W1/ GAS TEMP A61
W1/ TEMP CYCL A54 ..... W1/ T EXIT PREHEAT
W1/ ZO2 KILN OUTL ..... W1/ PRESS EX PREH
W1/ PRES EXIT KILN..... .....
W1/ KILN TORQUE W1/ ZCO EX PREHEAT
W1/ KILN ROT SPEED J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	1.9	36.0	120	3.74	802	206	774	341	619	389	381	395	617	-0.02	864
8.25	1.9	31.6	131	3.38	800	200	778	345	622	391	383	396	624	-0.03	859
9.25	1.9	31.6	125	3.47	801	197	779	344	619	389	382	395	619	-0.02	862
10.25	1.9	28.6	126	3.86	801	198	779	329	619	389	380	394	620	-0.03	861
11.25	1.9	25.8	126	4.17	799	215	778	332	619	388	382	395	620	-0.01	864
12.25	1.9	24.5	126	4.11	800	209	778	325	615	389	382	395	616	-0.01	864
13.25	1.9	25.6	119	3.39	800	190	769	300	609	383	376	389	601	-0.01	863
14.25	1.9	29.5	129	3.34	801	213	775	328	617	389	380	395	616	-0.01	873
15.25	1.9	30.3	130	2.72	802	207	783	323	621	391	384	397	612	-0.02	874
16.25	1.9	33.3	126	3.06	804	217	780	336	622	393	385	397	610	-0.02	874
17.25	1.9	33.0	125	3.70	800	203	774	326	620	390	379	395	607	0.00	867
18.25	1.9	34.0	123	3.12	801	208	778	321	612	390	380	394	610	-0.02	866
19.25	1.9	30.0	127	2.79	802	210	779	313	624	391	383	396	612	-0.01	865
20.25	1.9	31.5	132	2.78	803	207	778	331	621	391	380	394	604	-0.02	860
21.25	1.9	32.8	127	3.23	802	207	779	329	615	393	383	395	605	-0.01	862
22.25	1.9	33.8	123	3.45	802	202	770	316	613	389	379	394	602	0.00	868
23.25	1.9	31.7	127	3.12	803	208	780	338	617	386	381	393	606	0.00	859
0.25	1.9	39.0	129	2.30	805	203	779	337	613	389	382	395	608	0.00	862
1.25	1.9	35.3	135	2.29	805	215	777	329	619	391	382	394	611	0.00	857
2.25	1.9	36.8	141	3.18	804	220	777	331	622	389	380	393	616	-0.01	860
3.25	1.9	37.5	140	2.97	804	229	778	349	620	387	381	393	613	0.00	862
4.25	1.9	31.3	129	2.97	801	210	775	343	609	385	381	393	612	0.00	863
5.25	1.9	31.8	135	2.62	805	215	783	333	626	390	384	396	608	0.00	861
6.25	1.9	33.7	125	3.32	804	214	781	331	621	390	384	396	605	-0.01	860
7.25	1.9	32.0	114	3.60	804	204	778	293	616	385	382	393	606	-0.01	864
0.00 - 7.27															
MAX	2.0	39.4	155.	4.06	811.	242.	788.	354.	630.	394.	389.	400.	625.	0.03	870.
MIN	2.0	30.4	110.	1.84	801.	179.	769.	285.	609.	383.	374.	387.	596.	-0.03	852.
MEAN	2.0	34.4	130.	2.88	805.	210.	779.	334.	619.	390.	383.	395.	609.	-0.00	862.
ACCM	2.0	34.4	130.		805.	210.	779.	334.	619.	390.	383.	395.	609.	-0.00	862.
0.00 - 0.00															
MAX	2.0	37.4	142.	4.44	808.	231.	788.	356.	631.	396.	391.	402.	643.	0.01	881.
MIN	2.0	23.8	114.	2.14	796.	180.	767.	262.	606.	381.	374.	386.	587.	-0.06	849.
MEAN	2.0	32.0	127.	3.30	802.	206.	778.	329.	619.	390.	382.	395.	617.	-0.02	865.
ACCM	2.0	32.0	127.		802.	206.	778.	329.	619.	390.	382.	395.	617.	-0.02	865.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL ..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ %O2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ %CO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1* KCONTRL	KALARM LTWT	ESTLTW LTWGTSP	NOXST NOXLT	NOXALT A50T1	A50ALT OA15X1	KM2F1 OA1X2CO	OA2V1
	H H H	GR/L GR/L GR/L	% % %	DEG.C	%	% T/H	RPM	
7.25		1310 1274 1276	26.2 26.1	-0.305 395	-0.08 3.74	-0.02	8.66	864
8.25		1285 1278 1280	25.8 25.6	0.088 396	0.04 3.38	-0.03	9.00	859
9.25		1290 1292 1291	26.6 27.1	-0.041 395	-0.27 3.47	-0.02	8.78	862
10.25		1345 1284 1306	24.6 24.7	-0.007 394	0.15 3.86	-0.03	8.59	861
11.25		1330 1269 1290	20.2 20.7	-0.153 395	-0.18 4.17	-0.01	8.42	864
12.25		1330 1218 1256	14.0 13.3	-0.177 395	0.01 4.11	-0.01	8.63	864
13.25		1195 1228 1212	15.9 16.2	0.078 389	-0.45 3.39	-0.01	8.77	863
14.25		1215 1228 1227	16.7 16.8	0.113 395	-0.01 3.34	-0.01	8.95	873
15.25		1240 1311 1304	24.6 25.3	0.193 397	-0.03 2.72	-0.02	8.88	874
16.25		1310 1290 1291	24.3 23.3	-0.112 397	-0.07 3.06	-0.02	8.57	874
17.25		1310 1244 1249	18.3 18.2	-0.142 395	-0.31 3.70	0.00	8.70	867
18.25		1245 1261 1260	19.3 19.5	0.071 394	-0.07 3.12	-0.02	8.79	866
19.25		1230 1282 1280	21.5 22.0	0.038 396	0.06 2.79	-0.01	8.77	865
20.25		1205 1237 1235	18.2 17.7	-0.140 394	-0.20 2.78	-0.02	8.91	860
21.25		1175 1275 1266	22.1 22.5	0.131 395	0.06 3.23	-0.01	8.87	862
22.25		1250 1211 1219	16.8 16.6	-0.468 394	0.08 3.45	0.00	8.73	868
23.25		1200 1229 1221	19.0 18.6	0.116 393	0.12 3.12	0.00	9.16	859
0.25		1210 1229 1224	19.0 19.3	-0.169 395	0.01 2.30	0.00	9.25	862
1.25		1180 1291 1262	26.0 26.3	0.498 394	0.09 2.29	0.00	9.47	857
2.25		1255 1376 1292	34.8 34.9	0.167 393	-0.08 3.18	-0.01	9.26	860
3.25		1320 1313 1278	34.6 34.3	0.031 393	-0.15 2.97	0.00	8.99	862
4.25		1300 1231 1228	23.5 22.6	-0.153 393	0.03 2.97	0.00	9.14	863
5.25		1210 1280 1269	29.3 29.7	0.290 396	-0.03 2.62	0.00	9.24	861
6.25		1310 1303 1304	31.7 32.5	-0.077 396	-0.03 3.32	-0.01	9.00	860
7.25		1350 1255 1260	24.0 24.9	-0.372 393	0.03 3.60	-0.01	8.86	864
0.00 - 7.28								
MAX		1350. 1376. 1343.	35.0 34.9	0.552 400.	0.38 4.06	0.03	9.58	870.
MIN		1180. 1213. 1208.	17.6 17.7	-0.609 387.	-0.64 1.84	-0.03	8.76	852.
MEAN	7.48 7.48	1257. 1287. 1271.	28.2 28.3	0.033 395.	-0.01 2.88	-0.00	9.18	862.
ACCM	369.6 253.6	1247. 1271.		0.033 395.	-0.01	-0.00	68.59	862.
0.00 - 0.00								
MAX		1345. 1324. 1317.	32.7 32.4	0.397 402.	0.67 4.44	0.01	9.36	881.
MIN		1175. 1195. 1202.	13.7 13.3	-0.483 386.	-0.65 2.14	-0.06	8.29	849.
MEAN	24.02 23.31	1273. 1266. 1269.	23.2 23.2	-0.015 395.	0.00 3.30	-0.02	8.83	865.
ACCM	362.2 246.2	1276. 1269.		-0.015 395.	0.00	-0.02	211.90	865.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ....COAL HEAT VALUE
% MOISTURE IN COAL..... .....
NET HEAT CONSUMP. ....SHORT TONS CLINKER
HEAT CONSUMPTION ....LB COAL / SH.T
W1/ COAL TO KILN ....MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HOIOF1 PROD	PRODR KM2F1	KCAL MKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1*
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.25	98.9	60.1 1444	8.66 781	808 20.0	4.10 9453	65.3	0 27.55	1310
8.25	98.5	59.9 1438	9.00 816	843 20.0	4.10 9453	65.0	0 28.80	1285
9.25	100.5	61.1 1467	8.78 780	806 20.0	4.10 9453	66.3	0 27.69	1290
10.25	99.9	60.7 1458	8.59 767	793 20.0	4.10 9453	65.9	0 27.80	1345
11.25	100.0	60.8 1460	8.42 751	777 20.0	4.10 9453	66.0	0 26.38	1330
12.25	99.2	60.3 1448	8.63 776	802 20.0	4.10 9453	65.5	0 27.39	1330
13.25	99.5	60.5 1452	8.77 787	813 20.0	4.10 9450	65.6	0 27.77	1195
14.25	99.7	60.6 1454	8.95 802	827 20.0	3.85 9483	65.8	0 28.38	1215
15.25	98.7	60.0 1441	8.88 803	828 20.0	3.85 9483	65.2	0 28.48	1240
16.25	99.4	60.4 1451	8.57 770	793 20.0	3.85 9483	65.6	0 27.35	1310
17.25	99.4	60.4 1451	8.70 781	805 20.0	3.85 9483	65.6	0 27.63	1310
18.25	99.0	60.2 1445	8.79 793	817 20.0	3.85 9483	65.3	0 28.15	1245
19.25	100.3	61.0 1465	8.77 788	814 20.0	3.85 9483	66.2	0 27.70	1230
20.25	100.0	60.8 1460	8.91 795	820 20.0	3.85 9483	66.0	0 28.14	1205
21.25	98.9	60.1 1443	8.87 801	825 20.0	3.85 9483	65.2	0 28.37	1175
22.25	100.2	60.9 1462	8.73 777	801 20.0	3.85 9483	66.1	0 27.77	1250
23.25	99.5	60.5 1453	9.16 822	847 20.0	3.85 9480	65.7	0 29.10	1200
0.25	99.3	60.4 1450	9.25 831	857 20.0	3.85 9480	65.5	0 29.66	1210
1.25	99.3	60.4 1450	9.47 851	877 20.0	3.85 9480	65.5	0 30.18	1180
2.25	99.9	60.7 1458	9.26 827	853 20.0	3.85 9480	65.9	0 29.22	1255
3.25	99.5	60.4 1451	8.99 807	832 20.0	3.85 9480	65.6	0 28.69	1320
4.25	100.0	60.8 1459	9.14 817	842 20.0	3.85 9483	66.0	0 29.00	1300
5.25	100.3	60.9 1463	9.24 823	848 20.0	3.85 9483	66.2	0 29.10	1210
6.25	98.3	59.8 1435	9.00 817	842 20.0	3.85 9483	64.9	0 29.00	1310
7.25	99.8	60.7 1457	8.86 793	817 20.0	3.85 9483	65.9	0 28.03	1350
0.00 -	7.29							
MAX	101.3	61.6 1478.	9.58 867.	894. 20.0	3.85 9484.	66.8	0. 30.75	1350.
MIN	97.9	59.5 1429.	8.76 779.	803. 20.0	3.85 9481.	64.6	0. 27.64	1180.
MEAN	99.7	60.6 1455.	9.18 822.	847. 20.0	3.85 9481.	65.8	0. 29.15	1257. 7.49
ACCM	746.5	453.9	68.69 822.	847. 20.0	3.85		0. 29.15	1247. 369.6
0.00 -	0.00							
MAX	101.6	61.8 1482.	9.36 845.	871. 20.0	4.11 9484.	67.1	0. 29.98	1345.
MIN	96.9	58.8 1411.	8.29 742.	767. 20.0	3.85 9451.	63.8	0. 26.24	1175.
MEAN	99.7	60.6 1455.	8.83 791.	817. 20.0	4.00 9466.	65.8	0. 28.01	1273. 24.02
ACCM	2393.0	1454.9	211.90 791.	817. 20.0	4.00		0. 28.01	1276. 362.2

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S .....
W1/ KILN FEED MS .....
W1/ KILN FEED LSF .....
W1/ BURNING FACTOR.....
HEAT CONSUMPTION .....
W1/ COAL TO KILN .....
KILN PRODUCTION
W1/ KILN FEED

.....W1/ FEED LOSS-O-IG
.....U1/ LITER WEIGHT
.....U1/ CLINKER TEMP
.....U1/ FREE LIME
.....U1/ CLINKER LSF
.....U1/ CLINKER MS
KILN CONTROL
COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1*		
	T/H	T/H	T/H	KC/KG			%	%	GR/L	DEG.C	%		H	H
7.26	99.9	60.7	8.90	795	106.2	0.870	2.450	48.1	34.3	1310	230	0.24	0.910	2.530
8.26	99.4	60.4	9.22	828	106.2	0.870	2.450	48.1	34.3	1350	222	0.24	0.910	2.530
9.26	99.8	60.6	9.12	816	111.4	0.930	2.370	63.0	34.3	1205	210	0.24	0.910	2.530
10.26	100.3	60.9	8.91	793	111.4	0.930	2.370	63.0	34.3	1235	231	0.24	0.910	2.530
11.26	99.2	60.3	9.06	816	111.4	0.930	2.370	63.0	34.3	1335	252	0.24	0.910	2.530
12.26	100.1	60.8	9.05	808	105.0	0.860	2.450	45.8	34.1	1255	235	0.24	0.900	2.600
13.26	100.3	61.0	8.86	789	105.0	0.860	2.450	45.8	34.1	1245	242	0.24	0.900	2.600
14.26	100.2	60.9	8.74	779	105.0	0.860	2.450	45.8	34.1	1295	253	0.24	0.900	2.600
15.26	98.7	60.0	9.05	818	105.0	0.860	2.450	45.8	34.1	1230	252	0.24	0.900	2.600
16.26	100.0	60.8	9.07	810	105.0	0.860	2.450	45.8	34.1	1280	241	0.24	0.900	2.600
17.26	99.6	60.5	8.74	784	107.4	0.870	2.540	48.9	34.1	1260	249	0.24	0.900	2.600
18.26	99.5	60.5	8.69	779	107.4	0.870	2.540	48.9	34.1	1310	271	0.24	0.900	2.600
19.26	101.0	61.4	8.82	780	107.4	0.870	2.540	48.9	34.1	1240	244	0.24	0.900	2.600
20.26	98.7	60.0	8.79	795	107.4	0.870	2.540	48.9	34.1	1215	224	0.24	0.900	2.600
21.26	99.4	60.4	8.92	801	107.4	0.870	2.540	48.9	34.1	1255	245	0.24	0.900	2.600
22.26	100.2	60.9	8.73	778	107.4	0.870	2.540	48.9	34.1	1220	230	0.24	0.900	2.600
23.26	99.4	60.4	8.49	763	107.4	0.870	2.540	48.9	34.1	1330	251	0.24	0.900	2.600
0.25	100.1	60.9	8.47	755	107.4	0.870	2.540	48.9	34.1	1280	270	0.24	0.900	2.600
1.25	99.3	60.4	8.57	770	107.4	0.870	2.540	48.9	34.1	1260	239	0.24	0.900	2.600
2.25	100.1	60.9	8.57	764	107.4	0.870	2.540	48.9	34.1	1250	222	0.24	0.900	2.600
3.25	99.3	60.4	8.56	769	107.4	0.870	2.540	48.9	34.1	1270	208	0.24	0.900	2.600
4.25	98.2	59.7	8.54	776	107.4	0.870	2.540	48.9	34.1	1250	194	0.24	0.900	2.600
5.25	99.0	60.2	8.49	766	107.4	0.870	2.540	48.9	34.1	1280	187	0.24	0.900	2.600
6.25	99.2	60.3	8.51	766	107.4	0.870	2.540	48.9	34.1	1300	199	0.24	0.900	2.600
7.25	99.8	60.7	8.69	777	107.4	0.870	2.540	48.9	34.1	1250	185	0.24	0.900	2.600
0.00 -	7.25													
MAX	101.3	61.6	8.88	824.	107.4	0.870	2.540	48.9	34.1	1330.	274.	0.24	0.900	2.600
MIN	92.8	56.4	8.27	738.	107.4	0.870	2.540	48.9	34.1	1250.	173.	0.24	0.900	2.600
MEAN	99.4	60.4	8.54	768.	107.4	0.870	2.540	48.9	34.1	1270.	211.	0.24	0.900	2.600	7.43	7.43
ACCM	738.7	449.1	63.49	768.	107.4	0.870	2.540	48.9	34.1	1270.	211.	0.24	0.900	2.600	277.3	393.3
0.00 -	0.00													
MAX	101.4	61.7	9.58	867.	111.4	0.930	2.540	63.1	34.3	1350.	280.	0.24	0.910	2.600
MIN	97.9	59.5	8.34	744.	105.0	0.860	2.370	45.8	34.1	1130.	189.	0.24	0.900	2.530
MEAN	99.8	60.7	8.98	804.	107.2	0.877	2.466	50.2	34.2	1261.	239.	0.24	0.905	2.565	24.02	24.02
ACCM	2394.4	1455.8	215.55	804.	107.3	0.878	2.467	50.5	34.2	1257.	239.	0.24	0.905	2.565	269.9	386.0

W1/ PRESSURE A53 ..... W1/ GAS TEMP A52
W1/ GAS TEMP A53 ..... W1/ GAS TEMP A51
W1/ PRESSURE A54 ..... W1/ GAS TEMP A61
W1/ TEMP CYCL A54 ..... W1/ T EXIT PREHEAT
W1/ ZO2 KILN OUTL ..... W1/ PRESS EX PREH
W1/ PRES EXIT KILN..... .....
W1/ KILN TORQUE W1/ ZCO EX PREHEAT
W1/ KILN ROT SPEED J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 Z	OA15P1 MMWG	OA15X1 Z	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO Z	OA2V1 RPM
7.26	1.9	32.9	121	3.52	804	193	775	291	611	388	379	393	611	-0.01	860
8.26	1.9	30.9	125	3.16	806	207	778	321	620	389	384	396	607	0.01	864
9.26	1.9	33.9	126	2.99	805	194	783	338	617	393	386	396	606	-0.01	861
10.26	1.9	34.5	125	2.69	807	211	784	333	622	389	383	395	615	0.00	863
11.26	1.9	32.6	124	2.80	804	201	783	333	614	389	383	395	601	-0.01	862
12.26	1.9	34.7	131	2.55	806	210	786	333	620	391	381	396	607	0.00	858
13.26	1.9	34.8	127	2.79	805	211	787	328	619	390	384	395	600	0.00	859
14.26	1.9	32.7	116	3.06	804	200	777	339	614	388	383	395	595	0.01	864
15.26	1.9	32.9	126	2.94	805	208	779	338	619	387	382	394	596	0.00	859
16.26	1.9	33.8	120	2.72	806	195	779	333	617	389	382	397	582	0.00	852
17.26	1.9	34.9	123	5.36	805	199	779	333	621	388	383	393	584	0.00	857
18.26	1.9	33.0	120	2.95	803	192	779	335	614	386	383	394	590	0.01	859
19.26	1.9	31.6	125	2.61	804	212	779	334	622	390	382	395	601	0.00	855
20.26	1.9	33.2	117	2.88	805	191	780	328	619	392	385	397	600	0.00	856
21.26	1.9	32.7	120	2.94	805	210	781	300	618	394	388	398	588	0.01	852
22.26	1.9	33.5	128	3.01	803	200	777	326	618	390	384	397	590	0.00	842
23.26	1.9	31.2	138	3.29	801	222	774	328	611	388	381	394	592	0.00	840
0.25	1.9	26.4	130	3.27	801	204	776	320	615	386	382	395	586	0.00	842
1.25	1.9	23.0	136	3.19	801	220	773	322	617	390	384	397	585	0.00	837
2.25	1.9	21.0	124	3.62	801	208	771	314	615	391	385	397	573	0.00	836
3.25	1.9	19.9	103	3.66	801	184	778	304	616	394	382	401	575	0.00	835
4.25	1.9	19.1	119	3.59	801	200	776	306	619	393	387	398	586	-0.01	839
5.25	1.9	18.3	106	3.59	802	179	771	305	610	392	387	397	567	0.00	835
6.25	1.9	16.9	121	3.83	801	204	775	308	616	388	384	397	587	-0.01	840
7.25	1.9	19.3	122	3.18	801	210	768	317	622	394	385	397	583	0.00	840
0.00 - 7.27															
MAX	2.0	27.9	147.	4.21	805.	234.	782.	340.	628.	399.	394.	404.	601.	0.02	850.
MIN	2.0	16.8	97.	2.66	798.	166.	765.	294.	607.	385.	380.	389.	567.	-0.04	827.
MEAN	2.0	20.5	120.	3.52	801.	199.	774.	314.	617.	392.	386.	397.	583.	-0.01	838.
ACCM	2.0	20.5	120.		801.	199.	774.	314.	617.	392.	386.	397.	583.	-0.01	838.
0.00 - 0.00															
MAX	2.0	39.4	155.	10.48	811.	242.	792.	354.	630.	397.	392.	403.	625.	0.03	870.
MIN	2.0	27.8	107.	1.84	799.	176.	769.	277.	609.	383.	374.	387.	566.	-0.04	835.
MEAN	2.0	33.4	126.	2.96	805.	205.	780.	330.	619.	390.	383.	395.	601.	0.00	858.
ACCM	2.0	33.4	126.		805.	205.	780.	330.	619.	390.	383.	395.	601.	0.00	858.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ %O2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ %CO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1* KCONTRL	KALARM	ESTLTW LTWT	NOXST LTWGTSP	NOXALT NOXLT	A50ALT A50T1	OA15X1	KM2F1 OA1X2CO	OA2V1
	H H H		GR/L GR/L GR/L	% % %	DEG.C		%	% T/H	RPM
7.26			1310 1288 1290	30.3 30.5	-0.121	393 -0.32	3.52	-0.01 8.90	860
8.26			1350 1226 1232	21.5 21.1	-0.007	396 0.25	3.16	0.01 9.22	864
9.26			1205 1263 1277	26.1 26.3	0.193	396 0.44	2.99	-0.01 9.12	861
10.26			1235 1289 1292	29.5 29.6	-0.028	395 -0.23	2.69	0.00 8.91	863
11.26			1335 1250 1270	24.7 25.0	-0.040	395 0.13	2.80	-0.01 9.06	862
12.26			1255 1266 1288	27.0 26.7	0.056	396 -0.22	2.55	0.00 9.05	858
13.26			1245 1298 1315	29.6 29.9	0.092	395 0.10	2.79	0.00 8.86	859
14.26			1295 1255 1258	24.5 25.0	-0.219	395 0.04	3.06	0.01 8.74	864
15.26			1230 1220 1246	21.3 21.2	-0.117	394 -0.02	2.94	0.00 9.05	859
16.26			1200 1262 1274	26.0 25.8	0.193	397 0.15	2.72	0.00 9.07	852
17.26			1260 1301 1298	30.0 30.3	0.039	393 0.00	5.36	0.00 8.74	857
18.26			1310 1282 1281	29.0 28.2	-0.260	394 -0.16	2.95	0.01 8.69	859
19.26			1240 1264 1262	26.4 26.1	0.000	395 0.10	2.61	0.00 8.82	855
20.26			1215 1254 1263	26.0 26.0	-0.032	397 -0.12	2.88	0.00 8.79	856
21.26			1255 1232 1235	25.0 24.0	-0.143	398 0.20	2.94	0.01 8.92	852
22.26			1220 1342 1325	34.1 34.0	0.217	397 0.01	3.01	0.00 8.73	842
23.26			1330 1313 1285	31.8 31.4	-0.188	394 0.13	3.29	0.00 8.49	840
0.25			1280 1290 1288	29.6 29.0	-0.097	395 0.06	3.27	0.00 8.47	842
1.25			1260 1258 1258	27.3 26.6	-0.085	397 -0.03	3.19	0.00 8.57	837
2.25			1250 1272 1268	29.1 28.6	-0.002	397 -0.15	3.62	0.00 8.57	836
3.25			1270 1282 1278	29.5 29.8	-0.067	401 0.12	3.66	0.00 8.56	835
4.25			1250 1270 1262	31.4 30.2	-0.007	398 -0.16	3.59	-0.01 8.54	839
5.25			1280 1304 1294	32.8 32.6	0.059	397 -0.13	3.59	0.00 8.49	835
6.25			1300 1195 1216	25.5 24.8	-0.249	397 -0.12	3.83	-0.01 8.51	840
7.25			1250 1250 1250	26.4 26.6	0.127	397 -0.04	3.18	0.00 8.69	840
0.00 - 7.28									
MAX			1330. 1311. 1304.	33.4 33.2	0.206	404. 0.41	4.21	0.02 8.88	850.
MIN			1250. 1188. 1210.	23.7 24.2	-0.359	389. -0.27	2.66	-0.04 8.27	827.
MEAN	7.48 7.48		1269. 1269. 1269.	29.0 29.0	-0.023	397. 0.01	3.52	-0.01 8.55	838.
ACCM	393.4 277.3		1270. 1269.		-0.023	397. 0.01		-0.01 63.86	838.
0.00 - 0.00									
MAX			1350. 1376. 1343.	35.4 35.6	0.552	403. 0.48	10.48	0.03 9.58	870.
MIN			1180. 1213. 1208.	17.6 17.7	-0.609	387. -0.64	1.84	-0.04 8.34	835.
MEAN	24.02 24.02		1261. 1278. 1273.	27.6 27.6	0.014	395. 0.00	2.96	0.00 8.98	858.
ACCM	386.0 269.9		1257. 1273.		0.014	395. 0.00		0.00 215.55	858.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL..... .....
NET HEAT CONSUMP. ..... SHORT TONS CLINKER
HEAT CONSUMPTION ..... LB COAL / SH.T
W1/ COAL TO KILN ..... MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HD10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H	T/H T	T/H KC/KG	KC/KG	% %		T/H	GR/L H
7.26	99.9	60.7 1458	8.90 795	820	20.0 3.85	9483	65.9	0 28.16 1310
8.26	99.4	60.4 1451	9.22 828	853	20.0 3.85	9483	65.6	0 29.43 1350
9.26	99.8	60.6 1456	9.12 816	841	20.0 3.85	9483	65.8	0 28.86 1285
10.26	100.3	60.9 1463	8.91 793	818	20.0 3.85	9483	66.2	0 28.14 1235
11.26	99.2	60.3 1447	9.06 816	841	20.0 3.85	9483	65.4	0 28.92 1335
12.26	100.1	60.8 1460	9.05 808	833	20.0 3.69	9483	66.0	0 28.75 1255
13.26	100.3	61.0 1464	8.86 789	812	20.0 3.69	9501	66.2	0 28.10 1245
14.26	100.2	60.9 1462	8.74 779	801	20.0 3.69	9501	66.1	0 27.70 1295
15.26	98.7	60.0 1441	9.05 818	842	20.0 3.69	9501	65.2	0 28.96 1230
16.26	100.0	60.8 1459	9.07 810	833	20.0 3.69	9501	66.0	0 29.00 1200
17.26	99.6	60.5 1454	8.74 784	806	20.0 3.69	9501	65.7	0 27.82 1260
18.26	99.5	60.5 1452	8.69 779	801	20.0 3.69	9501	65.7	0 27.71 1310
19.26	101.0	61.4 1474	8.82 780	802	20.0 3.69	9501	66.6	0 27.75 1240
20.26	98.7	60.0 1440	8.79 795	818	20.0 3.69	9501	65.1	0 28.26 1215
21.26	99.4	60.4 1450	8.92 801	824	20.0 3.69	9498	65.6	0 28.35 1255
22.26	100.2	60.9 1462	8.73 778	801	20.0 3.69	9501	66.1	0 27.59 1220
23.26	99.4	60.4 1451	8.49 763	785	20.0 3.69	9498	65.6	0 27.04 1330
0.25	100.1	60.9 1462	8.47 755	776	20.0 3.69	9501	66.1	0 26.87 1280
1.25	99.3	60.4 1450	8.57 770	792	20.0 3.69	9498	65.5	0 27.28 1260
2.25	100.1	60.9 1462	8.57 764	786	20.0 3.69	9501	66.1	0 27.16 1250
3.25	99.3	60.4 1450	8.56 769	791	20.0 3.69	9501	65.6	0 27.36 1270
4.25	98.2	59.7 1434	8.54 776	798	20.0 3.69	9501	64.8	0 27.61 1250
5.25	99.0	60.2 1445	8.49 766	788	20.0 3.69	9501	65.3	0 27.29 1280
6.25	99.2	60.3 1448	8.51 766	787	20.0 3.69	9501	65.5	0 27.23 1300
7.25	99.8	60.7 1457	8.69 777	800	20.0 3.69	9501	65.9	0 27.63 1250
0.00 -	7.29							
MAX	101.3	61.6 1478.	8.88 824.	848.	20.0 3.69	9502.	66.8	0. 29.30 1330.
MIN	92.8	56.4 1355.	8.27 738.	759.	20.0 3.69	9499.	61.3	0. 26.23 1250.
MEAN	99.4	60.4 1451.	8.55 768.	790.	20.0 3.69	9501.	65.6	0. 27.29 1269. 7.49
ACCM	744.0	452.4	63.96 768.	790.	20.0 3.69			0. 27.29 1270. 393.4
0.00 -	0.00							
MAX	101.4	61.7 1480.	9.58 867.	894.	20.0 3.85	9502.	66.9	0. 30.75 1350.
MIN	97.9	59.5 1429.	8.34 744.	766.	20.0 3.69	9481.	64.6	0. 26.44 1180.
MEAN	99.8	60.7 1456.	8.98 804.	828.	20.0 3.77	9491.	65.8	0. 28.55 1261. 24.02
ACCM	2394.4	1455.8	215.55 804.	828.	20.0 3.77			0. 28.55 1257. 386.0

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR ..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1%
	T/H	T/H T/H KC/KG		%	% GR/L	DEG.C	%	H H
7.25	100.1	60.8 8.68 775	107.4 0.870	2.540	48.9 34.1	1300 182	0.24 0.900	2.600
8.25	100.7	61.2 9.52 844	107.4 0.870	2.540	48.9 34.1	1265 197	0.24 0.900	2.600
9.25	99.3	60.4 8.41 756	107.4 0.870	2.540	48.9 34.1	1265 195	0.24 0.900	2.600
10.25	98.5	59.9 9.08 823	106.4 0.870	2.450	48.7 34.1	1260 166	0.24 0.900	2.600
11.25	99.9	60.7 8.97 802	106.4 0.870	2.450	48.7 34.1	1140 169	0.24 0.900	2.600
12.25	99.2	60.3 9.04 814	106.4 0.870	2.450	48.7 34.1	1235 240	0.24 0.900	2.600
13.25	99.0	60.2 8.89 802	108.7 0.900	2.440	55.8 34.4	1100 195	0.24 0.920	2.560
14.25	99.6	60.5 8.94 801	108.7 0.900	2.440	55.8 34.4	1220 210	0.24 0.920	2.560
15.25	100.8	61.2 8.94 792	108.7 0.900	2.440	55.8 34.4	1255 219	0.24 0.920	2.560
16.25	101.5	61.7 8.98 790	109.1 0.900	2.420	56.2 34.4	1280 240	0.24 0.920	2.560
17.25	101.0	61.4 9.04 799	109.1 0.900	2.420	56.2 34.4	1250 237	0.24 0.920	2.560
18.25	101.0	61.4 8.95 791	109.1 0.900	2.420	56.2 34.4	1270 281	0.24 0.920	2.560
19.25	103.1	62.7 8.99 778	109.1 0.900	2.420	56.2 34.4	1185 238	0.24 0.920	2.560
20.25	103.4	62.8 9.24 798	109.1 0.900	2.420	56.2 34.4	1305 243	0.24 0.920	2.560
21.25	102.7	62.4 9.26 805	109.1 0.900	2.420	56.2 34.4	1290 257	0.24 0.920	2.560
22.25	103.1	62.7 8.96 776	109.1 0.900	2.420	56.2 34.4	1280 269	0.24 0.920	2.560
23.25	102.2	62.1 9.23 807	108.0 0.890	2.440	52.9 34.4	1290 269	0.24 0.920	2.560
0.25	104.0	63.2 9.29 798	108.0 0.890	2.440	52.9 34.4	1245 251	0.24 0.920	2.560
1.25	102.7	62.4 9.29 807	108.0 0.890	2.440	52.9 34.4	1275 267	0.24 0.920	2.560
2.25	102.5	62.3 9.27 807	108.0 0.890	2.440	52.9 34.4	1250 249	0.24 0.920	2.560
3.25	102.2	62.1 9.21 804	108.0 0.890	2.440	52.9 34.4	1275 239	0.24 0.920	2.560
4.25	102.5	62.3 9.07 790	108.0 0.890	2.440	52.9 34.4	1360 228	0.24 0.920	2.560
5.25	102.6	62.4 9.05 787	108.0 0.890	2.440	52.9 34.4	1330 258	0.24 0.920	2.560
6.25	103.0	62.6 9.31 807	108.0 0.890	2.440	52.9 34.4	1330 285	0.24 0.920	2.560
7.25	103.6	63.0 9.37 807	108.0 0.890	2.440	52.9 34.4	1320 223	0.24 0.920	2.560
0.00 - 7.25								
MAX	104.4	63.5 9.52 829.	108.0 0.890	2.440	53.0 34.4	1360. 275.	0.24 0.920	2.560
MIN	101.2	61.5 8.81 764.	108.0 0.890	2.440	53.0 34.4	1245. 192.	0.24 0.920	2.560
MEAN	102.9	62.5 9.21 800.	108.0 0.890	2.440	53.0 34.4	1298. 241.	0.24 0.920	2.560 4.03 7.43
ACCM	764.4	464.8 68.46 800.	108.0 0.890	2.440	53.0 34.4	1299. 241.	0.24 0.920	2.560 291.5 417.0
0.00 - 0.00								
MAX	104.7	63.7 9.88 889.	109.1 0.900	2.540	56.2 34.4	1330. 310.	0.24 0.920	2.600
MIN	92.8	56.4 8.27 738.	106.4 0.870	2.420	48.7 34.1	1100. 138.	0.24 0.900	2.560
MEAN	100.5	61.1 8.85 787.	107.9 0.884	2.477	52.1 34.2	1251. 222.	0.24 0.909	2.583 17.82 24.02
ACCM	2411.9	1466.4 212.50 787.	107.9 0.883	2.472	52.1 34.2	1255. 222.	0.24 0.909	2.582 287.6 409.7

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 ..... W1/ GAS TEMP A52
W1/ GAS TEMP A53 ..... W1/ GAS TEMP A51
W1/ PRESSURE A54 ..... W1/ GAS TEMP A61
W1/ TEMP CYCL A54 ..... W1/ T EXIT PREHEAT
W1/ %O2 KILN OUTL ..... W1/ PRESS EX PREH
W1/ PRES EXIT KILN..... .....
W1/ KILN TORQUE W1/ %CO EX PREHEAT
W1/ KILN ROT SPEED J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	1.9	18.5	111	3.57	801	189	774	310	618	392	387	397	581	-0.01	839
8.25	1.9	21.3	102	3.76	802	193	770	295	625	399	390	403	580	0.00	841
9.25	1.9	21.0	127	3.35	802	214	771	320	613	387	383	394	586	-0.01	844
10.25	1.9	23.6	121	2.38	803	217	772	332	612	386	384	394	601	0.00	845
11.25	1.9	28.1	120	1.23	804	211	773	338	619	396	387	398	614	0.00	857
12.25	1.9	29.0	117	2.15	806	208	783	329	628	398	392	404	604	0.00	860
13.25	1.9	29.9	121	1.84	804	214	781	330	630	398	389	402	602	0.00	872
14.25	1.9	33.0	110	2.27	804	203	779	335	619	396	390	402	606	0.00	871
15.25	1.9	31.2	113	2.31	807	201	787	333	633	398	390	404	606	0.03	871
16.25	1.9	31.8	113	2.70	810	211	785	320	628	394	385	399	591	0.02	870
17.25	1.9	31.8	103	2.05	811	193	788	315	623	394	385	398	580	0.01	870
18.25	1.9	33.7	106	3.40	808	195	786	315	626	389	381	397	574	0.03	872
19.25	1.9	31.4	108	2.73	811	185	787	316	633	394	388	401	578	0.01	862
20.25	1.9	33.8	108	3.01	812	194	789	318	627	384	378	393	582	0.01	846
21.25	1.9	34.1	123	2.99	810	205	791	327	630	392	384	398	600	0.01	850
22.25	1.9	33.6	111	3.23	811	198	790	323	622	393	383	398	598	0.03	849
23.25	1.9	31.2	115	2.35	811	198	788	323	619	387	380	394	578	0.02	847
0.25	1.9	30.3	124	2.25	808	203	783	326	621	392	383	397	610	0.02	853
1.25	1.9	32.7	114	1.95	807	194	786	322	626	392	384	397	605	0.02	864
2.25	1.9	29.7	111	2.01	809	194	785	316	626	394	383	398	613	0.00	869
3.25	1.9	31.0	115	2.83	809	198	787	324	623	394	386	398	597	0.01	868
4.25	1.9	30.5	117	3.14	806	202	782	329	623	394	386	400	611	0.00	863
5.25	1.9	28.9	112	2.84	807	207	784	311	618	389	380	395	591	0.00	859
6.25	1.9	27.8	124	2.15	809	201	780	321	620	389	391	393	596	-0.01	858
7.25	1.9	29.4	119	1.57	811	204	786	314	619	392	383	396	602	0.00	854
0.00 - 7.27															
MAX	2.0	35.5	135.	3.45	814.	225.	794.	344.	637.	402.	392.	405.	634.	0.04	873.
MIN	2.0	26.7	104.	0.91	806.	172.	775.	300.	610.	383.	376.	390.	573.	-0.02	845.
MEAN	2.0	30.2	117.	2.34	809.	198.	785.	323.	623.	392.	383.	397.	603.	0.01	862.
ACCM	2.0	30.2	117.		809.	198.	785.	323.	623.	392.	383.	397.	603.	0.01	862.
0.00 - 0.00															
MAX	2.0	38.0	147.	10.34	816.	242.	797.	358.	638.	404.	397.	410.	643.	0.06	879.
MIN	2.0	16.8	78.	0.51	794.	143.	764.	278.	607.	381.	373.	387.	517.	-0.04	827.
MEAN	2.0	26.9	116.	3.01	805.	200.	780.	322.	622.	393.	386.	399.	592.	0.00	852.
ACCM	2.0	26.9	116.		805.	200.	780.	322.	622.	393.	386.	399.	592.	0.00	852.

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ %02 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ %CO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1#	KCONTRL	KALARM	LTWT	ESTLTW	LTWGTSP	NOXST	NOXLT	NOXALT	A50T1	A50ALT	OA15X1	KM2F1 OA1X2CO	OA2V1
	H	H	H	GR/L	GR/L	GR/L	%	%	%	DEG.C		%	%	T/H	RPM
7.25				1300	1193	1213	25.5	24.6	-0.035	397	-0.01	3.57	-0.01	8.68	839
8.25				1265	1247	1271	25.7	26.0	-0.206	403	0.13	3.76	0.00	9.52	841
9.25				1265	1262	1262	27.3	28.6	0.051	394	-0.18	3.35	-0.01	8.41	844
10.25				1260	1193	1214	14.8	14.1	-0.391	394	0.20	2.38	0.00	9.08	845
11.25				1140	1185	1247	12.4	12.4	-0.103	398	0.15	1.23	0.00	8.97	857
12.25				1235	1244	1275	18.4	19.3	-0.016	404	0.46	2.15	0.00	9.04	860
13.25				1100	1242	1264	23.9	25.5	0.436	402	-0.06	1.84	0.00	8.89	872
14.25				1220	1272	1251	30.6	31.8	0.120	402	0.24	2.27	0.00	8.94	871
15.25				1255	1263	1250	30.3	30.5	-0.060	404	0.49	2.31	0.03	8.94	871
16.25				1280	1254	1247	28.7	28.5	-0.067	399	-0.37	2.70	0.02	8.98	870
17.25				1250	1264	1258	31.8	32.3	0.227	398	-0.03	2.05	0.01	9.04	870
18.25				1270	1230	1263	25.8	24.9	-0.279	397	-0.10	3.40	0.03	8.95	872
19.25				1185	1246	1218	30.0	30.2	0.276	401	0.40	2.73	0.01	8.99	862
20.25				1305	1250	1262	30.0	29.4	-0.135	393	-0.90	3.01	0.01	9.24	846
21.25				1290	1275	1270	31.6	31.4	0.144	398	0.56	2.99	0.01	9.26	850
22.25				1280	1258	1259	30.2	29.9	-0.195	398	0.03	3.23	0.03	8.96	849
23.25				1290	1248	1253	29.2	28.8	-0.081	394	0.10	2.35	0.02	9.23	847
0.25				1245	1270	1266	31.1	30.5	0.060	397	0.15	2.25	0.02	9.29	853
1.25				1275	1269	1269	30.2	30.5	-0.103	397	0.03	1.95	0.02	9.29	864
2.25				1250	1245	1249	29.1	28.5	-0.017	398	0.00	2.01	0.00	9.27	869
3.25				1275	1343	1335	36.6	36.6	0.147	398	-0.26	2.83	0.01	9.21	868
4.25				1360	1310	1276	32.3	33.9	-0.258	400	0.36	3.14	0.00	9.07	863
5.25				1330	1234	1245	28.0	27.7	-0.343	395	-0.05	2.84	0.00	9.05	859
6.25				1330	1167	1207	22.1	22.1	-0.171	393	0.12	2.15	-0.01	9.31	858
7.25				1320	1285	1274	31.6	32.5	0.446	396	0.01	1.57	0.00	9.37	854
0.00 - 7.28															
MAX				1360.	1361.	1354.	38.1	38.1	0.449	405.	0.60	3.45	0.04	9.52	873.
MIN				1245.	1157.	1204.	21.5	21.4	-0.347	390.	-0.63	0.91	-0.02	8.81	845.
MEAN	7.48	4.07		1298.	1269.	1267.	30.6	30.5	-0.003	397.	0.00	2.34	0.01	9.21	862.
ACCM	417.1	291.6		1299.		1267.			-0.003	397.	0.00		0.01	68.86	862.
0.00 - 0.00															
MAX				1330.	1311.	1304.	34.5	33.8	0.596	410.	0.96	10.34	0.06	9.88	879.
MIN				1100.	1182.	1102.	11.7	11.6	-0.520	387.	-1.10	0.51	-0.04	8.27	827.
MEAN	24.02	17.82		1251.	1254.	1258.	27.4	27.4	-0.001	399.	0.00	3.01	0.00	8.85	852.
ACCM	409.7	287.6		1255.		1258.			-0.001	399.	0.00		0.00	212.50	852.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL.....
NET HEAT CONSUMP. ..... SHORT TONS CLINKER
HEAT CONSUMPTION ..... LB COAL / SH.T
W1/ COAL TO KILN ..... MBTU' PER SH.T
KILN PRODUC. RATE .....
KILN PRODUCTION W1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1*
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.25	100.1	60.8 1460	8.68 775	797 20.0	3.69 9501	66.0	0 27.58	1300
8.25	100.7	61.2 1469	9.52 844	868 20.0	3.69 9498	66.4	0 30.04	1265
9.25	99.3	60.4 1449	8.41 756	778 20.0	3.69 9498	65.5	0 26.77	1265
10.25	98.5	59.9 1437	9.08 823	846 20.0	3.69 9501	65.0	0 29.15	1260
11.25	99.9	60.7 1458	8.97 802	825 20.0	3.69 9498	65.9	0 28.47	1140
12.25	99.2	60.3 1448	9.04 814	837 20.0	3.69 9498	65.4	0 28.85	1235
13.25	99.0	60.2 1445	8.89 802	827 20.0	3.84 9484	65.3	0 28.40	1100
14.25	99.6	60.5 1454	8.94 801	826 20.0	3.84 9484	65.7	0 28.28	1220
15.25	100.8	61.2 1470	8.94 792	817 20.0	3.84 9484	66.5	0 28.00	1255
16.25	101.5	61.7 1481	8.98 790	814 20.0	3.84 9484	67.0	0 28.01	1280
17.25	101.0	61.4 1474	9.04 799	823 20.0	3.84 9484	66.7	0 28.33	1250
18.25	101.0	61.4 1475	8.95 791	815 20.0	3.84 9484	66.7	0 28.22	1270
19.25	103.1	62.7 1505	8.99 778	802 20.0	3.84 9484	68.1	0 27.59	1185
20.25	103.4	62.8 1508	9.24 798	822 20.0	3.84 9484	68.2	0 28.40	1305
21.25	102.7	62.4 1499	9.26 805	829 20.0	3.84 9484	67.8	0 28.59	1290
22.25	103.1	62.7 1505	8.96 776	800 20.0	3.84 9484	68.0	0 27.58	1280
23.25	102.2	62.1 1491	9.23 807	831 20.0	3.84 9484	67.4	0 28.64	1290
0.25	104.0	63.2 1517	9.29 798	822 20.0	3.84 9484	68.6	0 28.33	1245
1.25	102.7	62.4 1499	9.29 807	832 20.0	3.84 9484	67.8	0 28.64	1275
2.25	102.5	62.3 1496	9.27 807	832 20.0	3.84 9484	67.6	0 28.68	1250
3.25	102.2	62.1 1491	9.21 804	829 20.0	3.84 9484	67.4	0 28.65	1275
4.25	102.5	62.3 1496	9.07 790	814 20.0	3.84 9484	67.6	0 28.13	1360
5.25	102.6	62.4 1498	9.05 787	811 20.0	3.84 9484	67.7	0 28.09	1330
6.25	103.0	62.6 1504	9.31 807	832 20.0	3.84 9484	68.0	0 28.59	1330
7.25	103.6	63.0 1513	9.37 807	832 20.0	3.84 9484	68.4	0 28.70	1320
0.00 - 7.29								
MAX	104.4	63.5 1525.	9.52 829.	854. 20.0	3.84 9485.	69.0	0. 29.41	1360.
MIN	101.2	61.5 1477.	8.81 764.	787. 20.0	3.84 9482.	66.8	0. 27.10	1245.
MEAN	102.9	62.5 1501.	9.21 800.	824. 20.0	3.84 9485.	67.9	0. 28.38	1298. 7.49
ACCM	770.0	468.2	68.96 800.	824. 20.0	3.84		0. 28.38	1299. 417.1
0.00 - 0.00								
MAX	104.7	63.7 1529.	9.88 889.	914. 20.0	3.84 9502.	69.1	0. 31.58	1330.
MIN	92.8	56.4 1355.	8.27 738.	759. 20.0	3.69 9482.	61.3	0. 26.23	1100.
MEAN	100.5	61.1 1466.	8.85 787.	810. 20.0	3.76 9492.	66.3	0. 27.94	1251. 24.02
ACCM	2411.9	1466.4	212.50 787.	810. 20.0	3.76		0. 27.94	1255. 489.7

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION .....
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KM2F1*
	T/H	T/H T/H KC/KG		%	% GR/L	DEG.C %		H
7.25	102.6	62.3 9.46 823	108.0 0.890	2.440	52.9 34.4	1330 217	0.24 0.920	2.560
8.25	103.0	62.6 9.10 788	107.7 0.880	2.500	51.3 34.4	1370 252	0.24 0.920	2.560
9.25	102.6	62.3 8.90 774	107.7 0.880	2.500	51.3 34.4	1430 243	0.24 0.920	2.560
10.25	103.1	62.6 8.59 744	107.7 0.880	2.500	51.3 34.4	1430 256	0.24 0.920	2.560
11.25	102.5	62.3 8.36 729	107.7 0.880	2.500	51.3 34.4	1395 254	0.24 0.920	2.560
12.25	104.1	63.3 8.15 699	107.7 0.880	2.500	51.3 34.4	1370 245	0.24 0.920	2.560
13.25	104.1	63.3 8.65 741	107.5 0.890	2.430	53.2 34.4	1280 227	0.24 0.910	2.520
14.25	104.8	63.7 8.55 729	107.5 0.890	2.430	53.2 34.4	1210 239	0.24 0.910	2.520
15.25	105.4	64.1 8.65 732	107.5 0.890	2.430	53.2 34.4	1215 234	0.24 0.910	2.520
16.25	105.6	64.2 8.39 710	105.8 0.850	2.610	43.8 34.4	1270 216	0.24 0.910	2.520
17.25	105.1	63.9 8.64 734	105.8 0.850	2.610	43.8 34.4	1285 243	0.24 0.910	2.520
18.25	104.4	63.5 8.94 764	105.8 0.850	2.610	43.8 34.4	1175 227	0.24 0.910	2.520
19.25	104.9	63.8 8.77 747	105.8 0.850	2.610	43.8 34.4	1250 231	0.24 0.910	2.520
20.25	105.7	64.2 8.42 711	105.8 0.850	2.610	43.8 34.4	1345 262	0.24 0.910	2.520
21.25	104.6	63.5 8.51 727	105.8 0.850	2.610	43.8 34.4	1300 264	0.24 0.910	2.520
22.25	104.6	63.6 8.78 750	105.8 0.850	2.610	43.8 34.4	1180 244	0.24 0.910	2.520
23.25	99.7	60.6 9.09 814	105.8 0.850	2.610	43.8 34.4	1125 233	0.24 0.910	2.520
0.25	104.3	63.4 8.96 767	105.8 0.850	2.610	43.8 34.4	1205 276	0.24 0.910	2.520
1.25	103.7	63.0 8.93 769	105.8 0.850	2.610	43.8 34.4	1310 270	0.24 0.910	2.520
2.25	105.0	63.8 8.93 760	105.8 0.850	2.610	43.8 34.4	1325 295	0.24 0.910	2.520
3.25	104.6	63.6 8.79 751	105.8 0.850	2.610	43.8 34.4	1315 284	0.24 0.910	2.520
4.25	104.7	63.6 8.88 757	110.9 0.920	2.420	60.8 34.4	1290 256	0.24 0.910	2.520
5.25	105.0	63.8 9.02 767	110.9 0.920	2.420	60.8 34.4	1230 266	0.24 0.910	2.520
6.25	104.1	63.3 8.98 770	110.9 0.920	2.420	60.8 34.4	1245 269	0.24 0.910	2.520
7.25	104.7	63.6 8.99 766	110.9 0.920	2.420	60.8 34.4	1390 261	0.24 0.910	2.520
0.00 - 7.25								
MAX	106.4	64.7 9.10 809.	110.9 0.920	2.610	60.9 34.4	1390. 310.	0.24 0.910	2.520
MIN	98.6	60.1 8.66 735.	105.8 0.850	2.420	43.9 34.4	1125. 203.	0.24 0.910	2.520
MEAN	104.5	63.6 8.93 763.	107.9 0.879	2.531	50.9 34.4	1271. 268.	0.24 0.910	2.520 7.43
ACCM	776.8	472.3 66.33 763.	108.0 0.880	2.529	51.2 34.4	1274. 268.	0.24 0.910	2.520 440.8
0.00 - 0.00								
MAX	106.4	64.8 9.52 831.	108.0 0.890	2.610	53.2 34.4	1430. 275.	0.24 0.920	2.560
MIN	98.2	59.8 8.11 696.	105.8 0.850	2.430	43.9 34.4	1125. 192.	0.24 0.910	2.520
MEAN	103.6	63.0 8.83 762.	107.1 0.874	2.510	49.5 34.4	1294. 242.	0.24 0.915	2.542 24.02
ACCM	2486.4	1511.7 212.01 762.	107.0 0.873	2.515	49.3 34.4	1299. 242.	0.24 0.915	2.540 433.4

W1/ PRESSURE A53 ..... W1/ GAS TEMP A52
W1/ GAS TEMP A53 ..... W1/ GAS TEMP A51
W1/ PRESSURE A54 ..... W1/ GAS TEMP A61
W1/ TEMP CYCL A54 ..... W1/ T EXIT PREHEAT
W1/ ZO2 KILN OUTL ..... W1/ PRESS EX PREH
W1/ PRES EXIT KILN..... .....
W1/ KILN TORQUE W1/ %CO EX PREHEAT
W1/ KILN ROT SPEED J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2C0 %	OA2V1 RPM
7.25	1.9	27.5	116	2.28	810	198	788	324	626	393	382	396	602	0.00	856
8.25	1.9	30.0	114	3.01	811	193	789	317	630	394	385	398	589	-0.03	854
9.25	1.9	29.0	111	2.74	812	199	793	318	628	394	384	398	583	-0.01	856
10.25	1.9	30.1	111	2.75	810	203	791	329	620	392	382	397	587	0.00	851
11.25	1.9	29.3	106	2.97	811	182	785	310	617	386	379	393	570	-0.01	857
12.25	1.9	28.7	106	4.09	808	205	787	333	623	388	382	393	616	-0.01	864
13.25	1.9	27.8	112	3.07	807	196	786	321	619	385	375	392	603	0.00	861
14.25	1.9	31.7	120	3.06	807	214	781	337	615	383	376	393	599	0.00	868
15.25	1.9	30.6	116	2.84	810	212	784	335	620	386	379	394	609	0.00	867
16.25	1.9	31.7	108	3.68	809	202	789	334	619	389	379	393	595	-0.01	868
17.25	1.9	32.1	111	3.40	809	196	784	329	615	387	377	393	597	0.00	870
18.25	1.9	32.1	114	2.57	812	207	789	334	623	390	383	397	602	0.00	865
19.25	1.9	34.4	123	2.43	811	207	793	335	620	392	383	395	595	0.00	866
20.25	1.9	33.9	110	3.22	809	207	784	330	622	386	381	393	599	0.00	866
21.25	1.9	32.1	114	3.44	807	198	783	336	622	388	380	395	598	-0.01	864
22.25	1.9	33.0	125	3.28	810	211	788	342	620	389	381	394	613	-0.02	862
23.25	1.8	34.9	123	2.86	809	203	792	334	634	398	390	403	600	-0.01	867
0.25	1.8	35.8	105	3.10	813	198	788	327	626	395	388	403	604	-0.01	869
1.25	1.9	34.7	113	3.15	812	200	794	329	630	396	386	402	603	-0.02	867
2.25	1.9	33.2	121	3.64	813	198	788	335	627	401	392	407	624	-0.02	869
3.25	1.9	31.7	106	4.00	810	198	787	329	631	396	386	402	604	-0.02	869
4.25	1.9	31.0	106	10.43	811	188	791	337	637	400	391	407	618	-0.01	870
5.25	1.9	32.0	108	10.41	811	190	788	319	626	395	386	403	598	-0.02	866
6.25	1.9	29.2	110	3.44	812	198	786	325	633	399	390	403	613	-0.02	870
7.25	1.9	27.3	116	3.76	811	201	791	334	631	403	393	407	632	-0.01	868
0.00 - 7.27															
MAX	2.0	38.6	133.	10.48	816.	229.	797.	360.	642.	406.	397.	410.	641.	0.02	879.
MIN	1.9	26.9	97.	2.54	808.	173.	783.	306.	617.	387.	381.	396.	573.	-0.05	857.
MEAN	2.0	32.0	113.	5.10	812.	199.	790.	331.	630.	398.	389.	404.	611.	-0.02	870.
ACCM	2.0	32.0	113.		812.	199.	790.	331.	630.	398.	389.	404.	611.	-0.02	870.
0.00 - 0.00															
MAX	2.0	40.1	136.	5.53	817.	236.	799.	360.	642.	407.	397.	412.	634.	0.04	877.
MIN	1.9	26.7	90.	0.91	805.	168.	775.	288.	610.	381.	374.	387.	564.	-0.04	845.
MEAN	2.0	31.1	114.	2.85	810.	200.	786.	327.	623.	391.	382.	396.	599.	-0.00	862.
ACCM	2.0	31.1	114.		810.	200.	786.	327.	623.	391.	382.	396.	599.	-0.00	862.

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ ZO2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ ZCO EX PREHEAT
..... W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1%	KALARM	ESTLTW	NOXST	NOXALT	A50ALT	KM2F1
		LTWT	LTWGTSP	NOXLT	A50T1	OA15X1	OA1X2CO	OA2V1
	H	H	GR/L	GR/L	GR/L	%	%	%	DEG.C	%	%	T/H	RPM
7.25			1330	1214	1228	25.8	26.1	0.229	396	0.13	2.28	0.00	9.46	856
8.25			1370	1356	1323	49.9	47.4	0.796	398	0.22	3.01	-0.03	9.10	854
9.25			1430	1300	1284	37.8	35.7	-0.428	398	-0.03	2.74	-0.01	8.90	856
10.25			1430	1345	1321	45.3	45.2	0.154	397	0.00	2.75	0.00	8.59	851
11.25			1395	1340	1318	40.4	39.6	-0.164	393	-0.47	2.97	-0.01	8.36	857
12.25			1370	1267	1297	26.7	26.6	-0.368	393	-0.42	4.09	-0.01	8.15	864
13.25			1280	1247	1255	21.4	20.4	-0.072	392	-0.60	3.07	0.00	8.65	861
14.25			1210	1245	1235	22.9	22.1	0.043	393	-0.44	3.06	0.00	8.55	868
15.25			1215	1285	1277	29.7	28.4	0.264	394	-0.67	2.84	0.00	8.65	867
16.25			1270	1284	1281	27.3	28.2	-0.191	393	0.40	3.68	-0.01	8.39	868
17.25			1285	1223	1235	18.5	18.2	-0.193	393	0.10	3.40	0.00	8.64	870
18.25			1175	1239	1229	23.4	23.4	0.209	397	-0.27	2.57	0.00	8.94	865
19.25			1250	1308	1285	31.7	32.1	0.265	395	0.00	2.43	0.00	8.77	866
20.25			1345	1308	1311	30.5	30.6	-0.091	393	-0.05	3.22	0.00	8.42	866
21.25			1300	1211	1220	20.4	20.3	-0.297	395	0.34	3.44	-0.01	8.51	864
22.25			1180	1171	1172	19.1	18.3	-0.064	394	0.04	3.28	-0.02	8.78	862
23.25			1125	1198	1223	21.7	21.8	0.123	403	1.00	2.86	-0.01	9.09	867
0.25			1205	1451	1347	39.6	41.9	0.648	403	-0.12	3.10	-0.01	8.96	869
1.25			1310	1389	1311	41.5	41.4	0.234	402	-0.09	3.15	-0.02	8.93	867
2.25			1325	1326	1325	36.9	36.7	-0.338	407	0.27	3.64	-0.02	8.93	869
3.25			1315	1324	1323	38.3	37.1	0.081	402	-0.75	4.00	-0.02	8.79	869
4.25			1290	1267	1271	30.2	30.2	-0.157	407	-0.03	10.43	-0.01	8.88	870
5.25			1230	1242	1266	27.4	27.3	-0.091	403	0.24	10.41	-0.02	9.02	866
6.25			1245	1349	1336	36.5	40.0	0.564	403	0.72	3.44	-0.02	8.98	870
7.25			1390	1343	1295	37.5	37.7	0.047	407	-0.03	3.76	-0.01	8.99	868
0.00 -	7.28													
MAX			1390.	1452.	1408.	42.9	42.6	0.838	410.	1.07	10.48	0.02	9.10	879.
MIN			1125.	1233.	1248.	26.3	26.2	-0.352	396.	-0.84	2.54	-0.05	8.66	857.
MEAN	7.48		1272.	1328.	1309.	35.4	35.5	0.041	404.	-0.01	5.10	-0.02	8.93	870.
ACCM	449.8		1274.		1309.			0.041	404.	-0.01		-0.02	66.72	870.
0.00 -	0.00													
MAX			1430.	1368.	1354.	50.2	49.9	0.828	412.	1.02	5.53	0.04	9.52	877.
MIN			1125.	1157.	1170.	18.0	18.0	-0.594	387.	-0.78	0.91	-0.04	8.11	845.
MEAN	24.02		1294.	1272.	1267.	29.4	29.4	-0.002	396.	0.02	2.85	-0.00	8.83	862.
ACCM	433.4		1299.		1267.			-0.002	396.	0.02		-0.00	212.01	862.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ....COAL HEAT VALUE
% MOISTURE IN COAL..... .....
NET HEAT CONSUMP. ....SHORT TONS CLINKER
HEAT CONSUMPTION ....LB COAL / SH.T
W1/ COAL TO KILN ....MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION ..... W1/ LITER WEIGHT
W1/ KILN FEED ..... COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.25	102.6	62.3 1497	9.46 823	848 20.0	3.84 9484	67.7	0 29.19	1330
8.25	103.0	62.6 1503	9.10 788	813 20.0	3.84 9484	68.0	0 28.00	1370
9.25	102.6	62.3 1497	8.90 774	798 20.0	3.84 9484	67.7	0 27.50	1430
10.25	103.1	62.6 1504	8.59 744	767 20.0	3.84 9484	68.0	0 26.38	1430
11.25	102.5	62.3 1496	8.36 729	751 20.0	3.84 9484	67.6	0 25.82	1395
12.25	104.1	63.3 1519	8.15 699	720 20.0	3.84 9484	68.7	0 24.86	1370
13.25	104.1	63.3 1520	8.65 741	749 18.7	3.57 9679	68.7	0 26.74	1280
14.25	104.8	63.7 1529	8.55 729	736 18.7	3.57 9682	69.1	0 26.37	1210
15.25	105.4	64.1 1538	8.65 732	739 18.7	3.57 9682	69.5	0 26.52	1215
16.25	105.6	64.2 1541	8.39 710	716 18.7	3.57 9682	69.7	0 25.78	1270
17.25	105.1	63.9 1534	8.64 734	740 18.7	3.57 9682	69.4	0 26.53	1285
18.25	104.4	63.5 1524	8.94 764	771 18.7	3.57 9682	68.9	0 27.58	1175
19.25	104.9	63.8 1531	8.77 747	754 18.7	3.57 9682	69.2	0 27.13	1250
20.25	105.7	64.2 1543	8.42 711	718 18.7	3.57 9682	69.7	0 25.87	1345
21.25	104.6	63.5 1526	8.51 727	733 18.7	3.57 9682	69.0	0 26.26	1300
22.25	104.6	63.6 1526	8.78 750	757 18.7	3.57 9682	69.0	0 27.18	1180
23.25	99.7	60.6 1455	9.09 814	822 18.7	3.57 9682	65.8	0 29.55	1125
0.25	104.3	63.4 1521	8.96 767	774 18.7	3.57 9682	68.8	0 27.82	1205
1.25	103.7	63.0 1514	8.93 769	776 18.7	3.57 9682	68.4	0 27.74	1310
2.25	105.0	63.8 1532	8.93 760	767 18.7	3.57 9682	69.3	0 27.50	1325
3.25	104.6	63.6 1527	8.79 751	758 18.7	3.57 9682	69.0	0 27.14	1315
4.25	104.7	63.6 1527	8.88 757	764 18.7	3.57 9682	69.1	0 27.47	1290
5.25	105.0	63.8 1532	9.02 767	774 18.7	3.57 9682	69.3	0 27.78	1230
6.25	104.1	63.3 1519	8.98 770	778 18.7	3.57 9682	68.7	0 27.97	1245
7.25	104.7	63.6 1528	8.99 766	774 18.7	3.57 9679	69.1	0 27.76	1390
0.00 - 7.29								
MAX	106.4	64.7 1552.	9.10 809.	816. 18.7	3.57 9682.	70.2	0. 29.29	1390.
MIN	98.6	60.1 1442.	8.66 735.	742. 18.7	3.57 9679.	65.2	0. 26.61	1125.
MEAN	104.5	63.6 1526.	8.93 763.	770. 18.7	3.57 9682.	69.0	0. 27.62	1272. 7.49
ACCM	782.5	475.8	66.82 763.	770. 18.7	3.57		0. 27.62	1274. 440.8
0.00 - 0.00								
MAX	106.4	64.8 1555.	9.52 831.	854. 20.0	3.84 9682.	70.4	0. 30.09	1430.
MIN	98.2	59.8 1435.	8.11 696.	707. 18.7	3.57 9482.	64.9	0. 24.70	1125.
MEAN	103.6	63.0 1512.	8.83 762.	778. 19.4	3.71 9581.	68.4	0. 27.29	1294. 24.02
ACCM	2486.4	1511.7	212.01 762.	777. 19.4	3.71		0. 27.30	1299. 433.4

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-0-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR ..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	H010F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLD FCAO	CL-LS CL-MS	KCONTRL KM2F1*		
	T/H	T/H	T/H	KC/KG			%	%	GR/L	DEG.C	%			H	H
7.25	0.0	0.0	0.00	0	0.0	0.000	0.000	0.0	0.0	0	0	0.00	0.000	0.000		
8.25	0.0	0.0	0.00	0	0.0	0.000	0.000	0.0	0.0	0	0	0.00	0.000	0.000		
9.25	0.0	0.0	0.00	0	0.0	0.000	0.000	0.0	0.0	0	0	0.00	0.000	0.000		
10.25	104.6	63.6	8.65	738	0.0	0.000	0.000	0.0	0.0	0	235	0.00	0.000	0.000		
11.25	104.8	63.7	8.80	749	105.2	0.860	2.480	45.1	0.0	1350	239	0.00	0.000	0.000		
12.25	104.4	63.5	8.79	752	105.2	0.860	2.480	45.1	0.0	1450	231	0.00	0.000	0.000		
13.25	105.1	63.9	8.37	711	105.5	0.870	2.530	47.3	34.0	1450	221	0.12	0.900	0.000		
14.25	104.1	63.3	8.25	707	105.5	0.870	2.530	47.3	34.0	1500	230	0.12	0.900	2.570		
15.25	105.3	64.0	8.15	691	102.6	0.840	2.460	38.6	34.0	1500	217	0.12	0.900	2.570		
16.25	104.4	63.5	8.60	735	102.6	0.840	2.460	38.6	34.0	1450	215	0.12	0.900	2.570		
17.25	103.2	62.7	8.70	752	102.6	0.840	2.460	38.6	34.0	1240	187	0.12	0.900	2.570		
18.25	105.3	64.0	8.79	745	102.6	0.840	2.460	38.6	34.0	1160	206	0.12	0.900	2.570		
19.25	95.6	58.1	8.77	819	102.6	0.840	2.460	38.6	34.0	1130	311	0.12	0.900	2.570		
20.25	104.9	63.8	8.88	756	102.6	0.840	2.460	38.6	34.0	1060	198	0.12	0.900	2.570		
21.25	104.8	63.7	8.92	760	102.6	0.840	2.460	38.6	34.0	1060	256	0.12	0.900	2.570		
22.25	104.3	63.4	8.90	762	102.6	0.840	2.460	38.6	34.0	1220	248	0.12	0.900	2.570		
23.25	105.3	64.0	8.86	751	102.6	0.840	2.460	38.6	34.0	1200	219	0.12	0.900	2.570		
0.25	105.0	63.8	9.05	770	104.4	0.850	2.510	42.8	34.0	1215	230	0.12	0.900	2.570		
1.25	104.3	63.4	9.30	795	104.4	0.850	2.510	42.8	34.0	1190	208	0.12	0.900	2.570		
2.25	104.5	63.5	9.50	812	104.4	0.850	2.510	42.8	34.0	1220	242	0.12	0.900	2.570		
3.25	105.4	64.1	9.21	780	104.4	0.850	2.510	42.8	34.0	1290	237	0.12	0.900	2.570		
4.25	104.9	63.8	9.04	769	104.4	0.850	2.510	42.8	34.0	1390	233	0.12	0.900	2.570		
5.25	104.7	63.6	9.31	794	104.4	0.850	2.510	42.8	34.0	1355	217	0.12	0.900	2.570		
6.25	105.3	64.0	9.15	776	104.4	0.850	2.510	42.8	34.0	1340	215	0.12	0.900	2.570		
7.25	105.0	63.8	9.17	780	104.4	0.850	2.510	42.8	34.0	1325	227	0.12	0.900	2.570		
0.00 - 7.27																
MAX	106.3	64.7	9.58	825.	104.4	0.850	2.510	42.8	34.1	1390.	250.	0.12	0.900	2.570		
MIN	103.0	62.7	8.88	753.	104.4	0.850	2.510	42.8	34.1	1190.	173.	0.12	0.900	2.570		
MEAN	104.9	63.8	9.22	786.	104.4	0.850	2.510	42.8	34.1	1289.	226.	0.12	0.900	2.570	7.46	7.46
ACCM	782.0	475.5	68.77	786.	104.4	0.850	2.510	42.8	34.1	1291.	226.	0.12	0.900	2.570	8.30	21.30
0.00 - 0.00																
MAX	106.1	64.5	9.23	843.	105.5	0.870	2.530	47.4	34.1	1500.	323.	0.12	0.900	2.570		
MIN	42.2	29.3	3.58	683.	0.0	0.000	0.000	0.0	0.0	0.	103.	0.00	0.000	0.000		
MEAN	104.2	63.3	8.68	745.	100.4	0.823	2.400	40.2	26.2	1216.	229.	0.09	0.693	1.976	0.83	13.83
ACCM	1440.6	875.9	120.04	744.	103.7	0.849	2.478	41.6	26.8	1214.	229.	0.09	0.707	2.019	0.83	13.83

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 ..... W1/ GAS TEMP A52
W1/ GAS TEMP A53 ..... W1/ GAS TEMP A51
W1/ PRESSURE A54 ..... W1/ GAS TEMP A61
W1/ TEMP CYCL A54 ..... W1/ T EXIT PREHEAT
W1/ %O2 KILN OUTL ..... W1/ PRESS EX PREH
W1/ PRES EXIT KILN..... .....
W1/ KILN TORQUE W1/ %CO EX PREHEAT
W1/ KILN ROT SPEED J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0	0	0.00	0
8.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0	0	0.00	0
9.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0	0	0.00	0
10.25	1.9	24.1	112	10.44	810	201	787	334	631	399	389	403	615	0.00	873
11.25	1.9	24.0	113	2.97	810	199	788	327	631	397	391	403	610	-0.01	872
12.25	1.9	21.5	105	10.49	808	195	788	313	631	399	392	406	605	0.00	870
13.25	1.9	21.2	105	10.49	806	195	786	314	624	396	388	403	604	0.00	864
14.25	1.9	19.8	120	10.50	808	205	786	329	623	396	387	401	609	0.00	863
15.25	1.9	18.7	110	4.17	803	201	778	315	624	394	386	400	591	-0.01	865
16.25	1.9	16.6	106	4.89	804	201	782	320	614	388	379	396	592	0.00	855
17.25	1.9	20.1	115	4.43	805	214	779	324	622	393	383	398	592	0.00	856
18.25	1.9	22.0	128	3.01	803	221	772	338	607	385	376	393	605	-0.01	857
19.25	1.9	18.9	82	3.96	808	162	783	291	628	413	404	416	556	-0.01	845
20.25	1.9	24.6	88	3.76	809	157	778	301	619	395	385	403	577	0.01	846
21.25	1.9	24.2	96	4.20	807	182	778	306	618	398	388	403	583	0.01	845
22.25	1.9	23.8	93	3.47	805	174	775	302	621	395	386	401	580	0.00	844
23.25	1.9	23.0	89	3.32	808	184	779	300	618	392	385	399	574	-0.01	846
0.25	1.9	23.7	94	3.59	806	184	774	302	622	396	389	402	584	0.00	843
1.25	1.9	24.5	102	2.76	807	184	776	306	616	393	384	400	588	0.00	843
2.25	1.9	24.1	88	2.35	808	177	776	302	618	392	383	398	568	-0.01	842
3.25	1.9	22.5	94	3.20	809	192	780	303	616	395	389	403	593	-0.02	846
4.25	1.9	21.5	101	4.13	809	173	781	313	622	396	389	402	594	-0.02	849
5.25	1.9	20.9	97	3.92	809	190	783	294	625	396	389	402	584	-0.02	844
6.25	1.9	21.4	92	4.19	809	200	784	310	625	394	389	402	586	-0.03	843
7.25	1.9	22.1	93	3.63	807	176	785	298	628	394	387	402	592	-0.02	843
0.00 - 7.28															
MAX	2.0	25.0	108.	5.44	813.	216.	789.	320.	629.	404.	394.	406.	603.	0.01	863.
MIN	2.0	19.9	82.	1.89	803.	149.	770.	284.	611.	388.	380.	397.	565.	-0.05	835.
MEAN	2.0	22.5	95.	3.58	809.	183.	780.	301.	620.	395.	388.	402.	587.	-0.01	845.
ACCM	2.0	22.5	95.		809.	183.	780.	301.	620.	395.	388.	402.	587.	-0.01	845.
0.00 - 0.00															
MAX	2.0	33.8	137.	10.64	815.	238.	798.	351.	638.	414.	407.	417.	626.	0.03	879.
MIN	1.9	10.2	76.	1.08	784.	152.	760.	277.	599.	380.	375.	373.	471.	-0.04	825.
MEAN	2.0	21.9	105.	5.43	807.	195.	782.	315.	622.	395.	387.	402.	591.	-0.00	856.
ACCM	2.0	21.9	105.		807.	195.	782.	315.	622.	395.	387.	402.	591.	-0.00	856.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL ..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ ZO2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ ZCO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1% KCONTRL	KALARM	ESTLTW LTWT	NOXST LTWGTSP	NOXALT NOXLT	A50ALT A50T1	OA15X1	KM2F1 OA1X2CO	OA2V1
	H	H H	GR/L GR/L GR/L	% % %	% %	DEG.C	%	%	T/H RPM
7.25			0 0 0	0.0 0.0 0.000	0 0.00	0.00	0.00	0.00	0
8.25			0 0 0	0.0 0.0 0.000	0 0.00	0.00	0.00	0.00	0
9.25			0 0 0	0.0 0.0 0.000	0 0.00	0.00	0.00	0.00	0
10.25			0 0 0	0.0 0.0 0.000	403 0.00	10.44	0.00	8.65	873
11.25			1350 1235 602	49.3 27.7 2.032	403 -0.06	2.97	-0.01	8.80	872
12.25			1450 1466 704	54.8 54.9 0.442	406 0.38	10.49	0.00	8.79	870
13.25			1450 1511 718	59.9 60.1 0.152	403 -0.33	10.49	0.00	8.37	864
14.25			1500 1524 718	61.7 61.7 0.038	401 0.10	10.50	0.00	8.25	863
15.25			1500 1324 1339	36.3 38.1 -0.119	400 0.13	4.17	-0.01	8.15	865
16.25			1450 1210 738	24.5 27.1 -0.519	396 0.10	4.89	0.00	8.60	855
17.25			1240 1107 825	15.7 15.2 -0.138	398 -0.03	4.43	0.00	8.70	856
18.25			1160 1188 1179	19.6 19.6 0.144	393 -0.38	3.01	-0.01	8.79	857
19.25			1130 1056 930	10.0 6.6 -0.576	416 2.34	3.96	-0.01	8.77	845
20.25			1060 1328 1266	30.0 32.5 0.497	403 -1.05	3.76	0.01	8.88	846
21.25			1060 1189 1159	20.6 20.5 -0.175	403 0.15	4.20	0.01	8.92	845
22.25			1220 1195 1198	20.6 19.2 -0.117	401 -0.34	3.47	0.00	8.90	844
23.25			1200 1240 1235	21.9 22.3 0.105	399 -0.11	3.32	-0.01	8.86	846
0.25			1215 1202 1203	19.0 19.1 -0.116	402 0.09	3.59	0.00	9.05	843
1.25			1190 1252 1250	22.4 22.2 0.128	400 0.02	2.76	0.00	9.30	843
2.25			1220 1405 1400	32.4 31.7 0.380	398 -0.18	2.35	-0.01	9.50	842
3.25			1290 1579 1304	41.7 42.4 0.385	403 0.07	3.20	-0.02	9.21	846
4.25			1390 1281 1256	28.7 28.4 -0.607	402 -0.08	4.13	-0.02	9.04	849
5.25			1355 1296 1277	29.2 28.8 0.079	402 0.00	3.92	-0.02	9.31	844
6.25			1340 1323 1325	30.5 31.0 0.079	402 -0.06	4.19	-0.03	9.15	843
7.25			1325 1265 1271	23.5 24.6 -0.242	402 -0.38	3.63	-0.02	9.17	843
0.00 - 7.30									
MAX			1390. 1580. 1568.	42.4 42.5 0.405	406. 0.32	5.44	0.01	9.58	863.
MIN			1190. 1202. 1203.	19.1 19.1 -0.618	397. -0.44	1.89	-0.05	8.88	835.
MEAN	7.50 7.50		1289. 1335. 1299.	29.1 29.1 0.021	402. -0.01	3.58	-0.02	9.22	845.
ACCM	21.34 8.34		1291. 1299.	0.021	402. -0.01		-0.02	69.17	845.
0.00 - 0.00									
MAX			1500. 1525. 1469.	61.7 61.8 3.283	417. 58.78	10.64	0.03	9.23	879.
MIN			0. 0. 0.	0.0 0.0 -1.593	373. -1.22	1.08	-0.04	3.58	825.
MEAN	13.83 0.83		1216. 1229. 993.	28.9 28.9 0.053	402. 0.34	5.43	-0.00	8.68	856.
ACCM	13.83 0.83		1214. 993.	0.053	402. 0.34		-0.00	120.04	856.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

Z ASH IN COAL ..... COAL HEAT VALUE
Z MOISTURE IN COAL.....
NET HEAT CONSUMP. ..... SHORT TONS CLINKER
HEAT CONSUMPTION ..... LB COAL / SH.T
W1/ COAL TO KILN ..... MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H	T/H T	T/H KC/KG	KC/KG	Z Z		T/H	GR/L H
7.25	0.0	0.0 0	0.00 0	0	0.0 0.00	0	0.0 0 0.00	0
8.25	0.0	0.0 0	0.00 0	0	0.0 0.00	0	0.0 0 0.00	0
9.25	0.0	0.0 0	0.00 0	0	0.0 0.00	0	0.0 0 0.00	0
10.25	104.6	63.6 1527	8.65 738	578	0.0 0.00	12486	69.0 0 34.43	0
11.25	104.8	63.7 1529	8.80 749	587	0.0 0.00	12486	69.2 0 35.13	1350
12.25	104.4	63.5 1524	8.79 752	588	0.0 0.00	12486	68.9 0 35.11	1450
13.25	105.1	63.9 1533	8.37 711	556	0.0 0.00	12486	69.3 0 33.18	1450
14.25	104.1	63.3 1519	8.25 707	722	19.3 3.82	9573	68.7 0 25.33	1500
15.25	105.3	64.0 1537	8.15 691	705	19.3 3.82	9576	69.5 0 24.79	1500
16.25	104.4	63.5 1524	8.60 735	751	19.3 3.82	9576	68.9 0 26.32	1450
17.25	103.2	62.7 1506	8.70 752	768	19.3 3.82	9576	68.1 0 27.31	1240
18.25	105.3	64.0 1537	8.79 745	760	19.3 3.82	9576	69.5 0 26.68	1160
19.25	95.6	58.1 1395	8.77 819	836	19.3 3.82	9576	63.1 0 29.35	1130
20.25	104.9	63.8 1531	8.88 756	771	19.3 3.82	9576	69.2 0 27.86	1060
21.25	104.8	63.7 1529	8.92 760	776	19.3 3.82	9576	69.1 0 27.19	1060
22.25	104.3	63.4 1522	8.90 762	777	19.3 3.82	9576	68.8 0 27.26	1220
23.25	105.3	64.0 1537	8.86 751	767	19.3 3.82	9576	69.5 0 26.92	1200
0.25	105.0	63.8 1532	9.05 770	785	19.3 3.82	9576	69.3 0 27.62	1215
1.25	104.3	63.4 1523	9.30 795	812	19.3 3.82	9576	68.8 0 28.45	1190
2.25	104.5	63.5 1525	9.50 812	828	19.3 3.82	9576	69.0 0 29.23	1220
3.25	105.4	64.1 1539	9.21 780	796	19.3 3.82	9576	69.6 0 28.10	1290
4.25	104.9	63.8 1531	9.04 769	785	19.3 3.82	9576	69.2 0 27.60	1390
5.25	104.7	63.6 1528	9.31 794	810	19.3 3.82	9576	69.1 0 28.48	1355
6.25	105.3	64.0 1537	9.15 776	792	19.3 3.82	9576	69.5 0 27.75	1340
7.25	105.0	63.8 1532	9.17 780	796	19.3 3.82	9576	69.3 0 28.03	1325
0.00 - 7.30								
MAX	106.3	64.7 1552.	9.58 825.	842.	19.3 3.82	9577.	70.2 0. 29.56	1390.
MIN	103.0	62.7 1504.	8.88 753.	769.	19.3 3.82	9574.	68.0 0. 26.98	1190.
MEAN	104.9	63.8 1530.	9.22 786.	802.	19.3 3.82	9576.	69.2 0. 28.14	1289. 7.52
ACCM	787.7	478.9	69.27 786.	802.	19.3 3.82		0. 28.13	1291. 21.35
0.00 - 0.00								
MAX	106.1	64.5 1548.	9.23 843.	*******	19.3 3.82	12490.	70.0 0. 36.96	1500.
MIN	42.2	29.3 703.	3.58 683.	552.	0.0 0.00	9574.	31.8 0. 0.00	0.
MEAN	104.2	63.3 1520.	8.68 745.	*******	14.8 2.94	10254.	68.7 0. 28.54	1216. 13.83
ACCM	1440.6	875.9	120.04 744.	710.	14.8 2.94		0. 28.56	1214. 13.83

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S	....	....	W1/ FEED LOSS-O-IG
W1/ KILN FEED MS	....	....	U1/ LITER WEIGHT
W1/ KILN FEED LSF	....	....	U1/ CLINKER TEMP
W1/ BURNING FACTOR	....	....	U1/ FREE LIME
HEAT CONSUMPTION	....	....	U1/ CLINKER LSF
W1/ COAL TO KILN	....	....	U1/ CLINKER MS
KILN PRODUCTION	.	.	KILN CONTROL
W1/ KILN FEED	.	.	COAL TO KILN

HOUR	H010F1	PROD	KM2F1	KCAL	BF	KF-LS	KF-MS	C3S	KF-LOI	LTWT	KLO	FCAO	CL-LS	CL-MS	KCONTRL	KM2F1*
	T/H	T/H	T/H	KC/KG				%	%	GR/L	DEG.C	%			H	H
7.25	104.7	63.7	9.12	777	104.4	0.850	2.510	42.8	34.0	1340	226	0.12	0.900	2.570		
8.25	105.4	64.1	9.27	785	106.6	0.880	2.420	42.8	34.0	1325	224	0.12	0.900	2.570		
9.25	105.1	63.9	9.05	768	106.6	0.880	2.420	42.8	34.0	1310	216	0.12	0.900	2.570		
10.25	--	--	--	--	106.6	0.880	2.420	42.8	34.0	1310	--	0.12	0.900	2.570		
11.25	--	--	--	--	106.6	0.880	2.420	42.8	34.0	1310	--	0.12	0.900	2.570		
12.25	--	--	--	--	106.6	0.880	2.420	42.8	34.0	1310	--	0.12	0.900	2.570		
13.25	56.3	34.2	5.20	824	106.6	0.880	2.420	42.8	34.0	1310	79	0.12	0.900	2.570		
14.25	61.3	37.3	6.35	924	105.7	0.860	2.500	46.6	33.9	1310	153	0.47	0.890	2.560		
15.25	71.9	43.7	7.15	888	105.7	0.860	2.500	46.6	33.9	1310	96	0.47	0.890	2.560		
16.25	86.6	52.6	8.49	876	104.5	0.840	2.570	40.9	33.9	1230	125	0.47	0.890	2.560		
17.25	104.5	63.5	9.39	802	104.5	0.840	2.570	40.9	33.9	1340	176	0.47	0.890	2.560		
18.25	105.0	63.8	9.23	785	104.5	0.840	2.570	40.9	33.9	1370	224	0.47	0.890	2.560		
19.25	104.6	63.6	9.18	784	104.5	0.840	2.570	40.9	33.9	1380	253	0.47	0.890	2.560		
20.25	99.7	60.6	9.08	813	104.5	0.840	2.570	40.9	33.9	1400	255	0.47	0.890	2.560		
21.25	99.3	60.3	8.77	788	104.5	0.840	2.570	40.9	33.9	1410	220	0.47	0.890	2.560		
22.25	99.1	60.2	8.88	800	104.5	0.840	2.570	40.9	33.9	1410	183	0.47	0.890	2.560		
23.25	99.8	60.7	8.99	804	104.5	0.840	2.570	40.9	33.9	1380	194	0.47	0.890	2.560		
0.25	100.2	60.9	8.99	801	119.5	0.970	2.770	71.0	33.9	1315	229	0.47	0.890	2.560		
1.25	100.8	61.3	8.89	787	119.5	0.970	2.770	71.0	33.9	1280	191	0.47	0.890	2.560		
2.25	100.3	61.0	8.83	786	119.5	0.970	2.770	71.0	33.9	1385	235	0.47	0.890	2.560		
3.25	99.9	60.7	8.84	790	119.5	0.970	2.770	71.0	33.9	1285	248	0.47	0.890	2.560		
4.25	99.2	60.3	8.90	801	119.5	0.970	2.770	71.0	33.9	1285	315	0.47	0.890	2.560		
5.25	100.8	61.3	8.77	777	119.5	0.970	2.770	71.0	33.9	1220	257	0.47	0.890	2.560		
6.25	99.6	60.6	8.87	795	119.5	0.970	2.770	71.0	33.9	1290	264	0.47	0.890	2.560		
7.25	99.8	60.7	8.89	795	119.5	0.970	2.770	71.0	33.9	1175	255	0.47	0.890	2.560		
0.00 -	7.27															
MAX	101.3	61.6	9.08	822.	119.5	0.970	2.770	71.0	33.9	1385.	332.	0.47	0.890	2.560		
MIN	98.1	59.5	8.67	773.	119.5	0.970	2.770	71.0	33.9	1175.	185.	0.47	0.890	2.560		
MEAN	99.8	60.7	8.86	793.	119.5	0.970	2.770	71.0	33.9	1290.	245.	0.47	0.890	2.560	7.46	7.46
ACCM	744.2	452.5	66.04	793.	119.5	0.970	2.770	71.0	33.9	1291.	245.	0.47	0.890	2.560	32.33	42.06
0.00 -	0.00															
MAX	106.3	64.7	9.58	37530.	119.5	0.970	2.770	71.0	34.1	1410.	263.	0.47	0.900	2.570		
MIN	-4.3	-2.6	1.07	-8598.	104.4	0.840	2.420	40.9	33.9	1190.	22.	0.12	0.890	2.560		
MEAN	96.8	58.9	8.69	812.	105.5	0.858	2.513	43.2	34.0	1321.	199.	0.27	0.896	2.566	24.01	20.72
ACCM	2006.6	1219.2	180.07	802.	105.7	0.860	2.518	43.7	34.0	1317.	199.	0.28	0.895	2.565	24.85	34.58

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 .....
W1/ GAS TEMP A53 .....
W1/ PRESSURE A54 .....
W1/ TEMP CYCL A54 .....
W1/ %O2 KILN OUTL .....
W1/ PRES EXIT KILN.....
W1/ KILN TORQUE
W1/ KILN ROT SPEED

.....W1/ GAS TEMP A52
.....W1/ GAS TEMP A51
.....W1/ GAS TEMP A61
.....W1/ T EXIT PREHEAT
.....W1/ PRESS EX PREH
.....
W1/ %CO EX PREHEAT
J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	1.9	21.6	93	4.43	809	182	782	296	626	397	389	402	588	-0.01	844
8.25	1.9	20.6	101	3.80	809	181	776	298	625	394	388	400	584	-0.01	846
9.25	1.9	20.5	92	3.34	808	177	779	295	617	396	389	402	598	-0.03	847
10.25	--	--	--	--	--	--	--	--	--	--	--	373	--	--	--
11.25	--	--	--	--	--	--	--	--	--	--	--	341	--	--	--
12.25	--	--	--	--	--	--	--	--	--	--	--	356	--	--	--
13.25	1.2	22.7	20	10.45	745	74	717	99	589	403	401	405	183	0.05	553
14.25	1.2	4.7	17	1.42	795	77	755	130	614	403	398	408	257	0.03	633
15.25	1.3	13.2	52	0.73	799	131	774	201	626	414	410	420	374	0.00	729
16.25	1.5	20.9	64	2.12	802	157	773	240	621	410	403	416	440	0.02	772
17.25	1.9	23.6	87	3.33	809	194	779	305	626	404	396	412	574	0.00	852
18.25	1.9	24.3	93	2.95	811	198	781	305	617	394	384	398	578	0.00	846
19.25	1.9	24.8	93	2.83	811	188	774	306	616	391	381	396	567	-0.01	850
20.25	1.9	21.9	76	3.22	807	196	783	282	623	395	388	403	558	-0.03	849
21.25	1.9	22.0	87	3.74	807	188	785	286	623	392	384	397	576	-0.03	849
22.25	1.9	26.3	96	3.62	806	174	786	302	623	394	384	400	591	-0.04	849
23.25	1.9	29.2	114	3.51	808	209	785	308	623	394	383	398	597	-0.03	851
0.25	1.9	30.7	91	2.15	811	191	787	298	633	400	389	403	579	-0.03	854
1.25	1.9	34.4	68	3.48	810	177	785	287	631	401	389	405	576	-0.02	857
2.25	1.9	32.7	72	4.26	809	173	786	280	630	403	389	406	580	-0.10	855
3.25	1.9	33.1	71	4.08	810	172	788	276	634	400	390	405	573	-0.04	848
4.25	1.9	32.7	71	3.96	810	159	788	279	635	402	389	404	569	-0.04	850
5.25	1.9	32.0	71	4.45	809	193	790	290	635	404	393	408	579	-0.04	852
6.25	1.9	30.1	75	4.05	808	164	792	286	637	402	390	406	581	-0.16	849
7.25	1.9	30.8	76	3.93	810	174	793	297	636	403	393	408	585	-0.13	847
0.00 - 7.28															
MAX	2.0	42.2	129.	4.93	816.	227.	805.	327.	645.	408.	396.	411.	607.	-0.00	864.
MIN	2.0	29.1	58.	1.71	806.	135.	782.	261.	616.	393.	380.	397.	551.	-0.20	830.
MEAN	2.0	32.5	75.	3.91	810.	173.	790.	287.	634.	402.	390.	406.	580.	-0.06	851.
ACCM	2.0	32.5	75.		810.	173.	790.	287.	634.	402.	390.	406.	580.	-0.06	851.
0.00 - 0.00															
MAX	2.0	31.5	127.	10.60	814.	222.	795.	324.	647.	483.	475.	445.	603.	1.28	863.
MIN	0.0	0.1	-11.	0.36	629.	-4.	653.	-11.	564.	369.	369.	336.	-2.	-0.19	407.
MEAN	1.9	21.9	84.	3.35	804.	170.	775.	276.	619.	397.	390.	398.	534.	-0.01	815.
ACCM	1.9	21.9	84.		804.	170.	775.	276.	619.	397.	390.	398.	534.	-0.01	815.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME .....
W1/ NOX REG STIME .....
W1/ LTW FOR CONTRL.....
W1/ ESTIMATED LTW .....
U1/ LITER WEIGHT .....
KILN CON. MEASUR. .....
KILN CONTROL
COAL TO KILN

.....W1/ NOX CHANGE LT
.....W1/ T EXIT PREHEAT
.....W1/ A50T1 CHANGE
.....W1/ %O2 KILN OUTL
.....
.....W1/ %CO EX PREHEAT
W1/ COAL TO KILN
J1/ ID FAN SPEED

HOUR	KM2F1% KCONTRL	KALARM LTWT	ESTLTW LTWGTSP	NOXST NOXLT	NOXALT A50T1	A50ALT OA15X1	KM2F1 OA1X2CO	OA2V1
	H H H	GR/L GR/L GR/L	% % %	DEG.C	%	%	T/H	RPM
7.25		1340 1290 1295	26.5 27.4	-0.190 402	-0.17 4.43	-0.01	9.12	844
8.25		1325 1320 1321	29.1 30.7	0.554 400	0.18 3.88	-0.01	9.27	846
9.25		1310 1315 1315	29.8 29.5	-0.050 402	-0.10 3.34	-0.03	9.05	847
10.25		1310 1266 1189	23.7 23.7	-0.175 373	-1.69 --	--	--	--
11.25		1310 1235 1173	20.1 20.0	-0.112 341	-0.98 --	--	--	--
12.25		1310 1213 1162	17.5 17.5	-0.081 356	0.18 --	--	--	--
13.25		1310 1197 2694	15.6 15.6	-0.060 405	2.91 10.45	0.05	5.20	553
14.25		1310 1184 1198	16.4 14.0	-0.509 408	-0.54 1.42	0.03	6.35	633
15.25		1310 1161 1194	11.6 11.3	-0.041 420	-0.19 0.73	0.00	7.15	729
16.25		1230 1384 1348	37.7 39.2	0.782 416	0.13 2.12	0.02	8.49	772
17.25		1340 1315 1321	31.2 28.2	-0.823 412	-0.08 3.33	0.00	9.39	852
18.25		1370 1333 1339	31.3 31.2	0.180 398	-0.03 2.95	0.00	9.23	846
19.25		1380 1365 1353	36.5 36.2	0.149 396	-0.07 2.83	-0.01	9.18	850
20.25		1400 1376 1394	39.8 37.9	0.189 403	1.10 3.22	-0.03	9.08	849
21.25		1410 1432 1429	49.2 48.1	0.002 397	-0.12 3.74	-0.03	8.77	849
22.25		1410 1363 1365	36.5 35.9	-0.376 400	0.02 3.62	-0.04	8.88	849
23.25		1380 1338 1339	32.4 31.2	-0.084 398	-0.07 3.51	-0.03	8.99	851
0.25		1315 1337 1371	33.6 31.9	0.031 403	0.33 2.15	-0.03	8.99	854
1.25		1280 1410 1421	44.7 45.6	0.162 405	-0.06 3.48	-0.02	8.89	857
2.25		1385 1348 1349	34.9 34.7	-0.124 406	0.09 4.26	-0.10	8.83	855
3.25		1285 1318 1348	32.4 30.4	-0.364 405	-0.19 4.08	-0.04	8.84	848
4.25		1285 1348 1342	35.1 37.0	0.361 404	0.03 3.96	-0.04	8.90	850
5.25		1220 1303 1299	33.4 33.6	-0.191 408	0.19 4.45	-0.04	8.77	852
6.25		1290 1265 1273	27.9 28.4	-0.255 406	0.06 4.05	-0.16	8.87	849
7.25		1175 1266 1252	31.2 31.4	-0.005 408	-0.04 3.93	-0.13	8.89	847
0.00 - 7.30								
MAX		1385. 1417. 1425.	45.8 46.8	0.662 411.	0.88 4.93	-0.00	9.08	864.
MIN		1175. 1260. 1179.	27.6 27.6	-0.518 397.	-0.89 1.71	-0.20	8.67	830.
MEAN	7.50 7.50	1289. 1331. 1335.	34.8 34.8	-0.001 406.	0.04 3.91	-0.06	8.86	851.
ACCM	42.10 32.37	1291. 1335.		-0.001 406.	0.04	-0.06	66.44	851.
0.00 - 0.00								
MAX		1410. 1580. 6231.	52.0 52.9	1.126 445.	8.70 10.60	1.28	9.58	863.
MIN		1190. 1147. 1155.	9.2 9.7	-0.854 336.	-6.01 0.36	-0.19	1.07	407.
MEAN	20.72 24.01	1321. 1313. 1348.	28.8 28.8	0.014 398.	-0.01 3.35	-0.01	8.69	815.
ACCM	34.58 24.85	1317. 1348.		0.014 398.	-0.01	-0.01	180.07	815.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ....COAL HEAT VALUE
% MOISTURE IN COAL..... .....
NET HEAT CONSUMP. ....SHORT TONS CLINKER
HEAT CONSUMPTION ....LB COAL / SH.T
W1/ COAL TO KILN ....MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.25	104.7	63.7 1528	9.12 777	794 19.3	3.82 9576	69.1	0 28.02	1340
8.25	105.4	64.1 1539	9.27 785	801 19.3	3.82 9573	69.6	0 28.17	1325
9.25	105.1	63.9 1534	9.05 768	784 19.3	3.82 9576	69.4	0 27.61	1310
10.25	--	-- -70	-- --	-- 19.3	3.82 9576	-3.2	-- --	1310
11.25	--	-- -73	-- --	-- 19.3	3.82 9576	-3.3	-- --	1310
12.25	--	-- -65	-- --	-- 19.3	3.82 9573	-2.9	-- --	1310
13.25	56.3	34.2 822	5.20 824	841 19.3	3.82 9576	37.2	0 29.58	1310
14.25	61.3	37.3 895	6.35 924	945 20.0	3.22 9552	40.5	0 33.14	1310
15.25	71.9	43.7 1049	7.15 888	908 20.0	3.22 9555	47.4	0 31.91	1310
16.25	86.6	52.6 1264	8.49 876	896 20.0	3.22 9555	57.1	0 31.32	1230
17.25	104.5	63.5 1525	9.39 802	821 20.0	3.22 9555	69.0	0 28.80	1340
18.25	105.0	63.8 1532	9.23 785	803 20.0	3.22 9555	69.3	0 28.02	1370
19.25	104.6	63.6 1527	9.18 784	801 20.0	3.22 9555	69.0	0 28.00	1380
20.25	99.7	60.6 1455	9.08 813	832 20.0	3.22 9555	65.8	0 29.19	1400
21.25	99.3	60.3 1449	8.77 788	807 20.0	3.22 9555	65.5	0 28.12	1410
22.25	99.1	60.2 1446	8.88 800	818 20.0	3.22 9555	65.4	0 28.45	1410
23.25	99.8	60.7 1457	8.99 804	823 20.0	3.22 9552	65.9	0 28.87	1380
0.25	100.2	60.9 1463	8.99 801	819 20.0	3.22 9555	66.1	0 28.56	1315
1.25	100.8	61.3 1472	8.89 787	805 20.0	3.22 9555	66.5	0 28.10	1280
2.25	100.3	61.0 1464	8.83 786	804 20.0	3.22 9555	66.2	0 28.23	1385
3.25	99.9	60.7 1458	8.84 790	808 20.0	3.22 9555	65.9	0 28.34	1285
4.25	99.2	60.3 1448	8.90 801	819 20.0	3.22 9555	65.4	0 28.55	1285
5.25	100.8	61.3 1472	8.77 777	795 20.0	3.22 9555	66.5	0 27.81	1220
6.25	99.6	60.6 1454	8.87 795	813 20.0	3.22 9555	65.7	0 28.36	1290
7.25	99.8	60.7 1457	8.89 795	813 20.0	3.22 9555	65.9	0 28.48	1175
0.00 - 7.30								
MAX	101.3	61.6 1478.	9.08 822.	841. 20.0	3.22 9556.	66.9	0. 29.37	1385.
MIN	98.1	59.5 1429.	8.67 773.	791. 20.0	3.22 9556.	64.6	0. 27.64	1175.
MEAN	99.8	60.7 1456.	8.86 793.	811. 20.0	3.22 9555.	65.9	0. 28.33	1289. 7.51
ACCM	749.7	455.8	66.53 793.	811. 20.0	3.22		0. 28.33	1291. 42.11
0.00 - 0.00								
MAX	106.3	64.7 1552.	9.58 37530.	38315. 20.0	3.82 9645.	70.2	14. 1344.3	1410.
MIN	-4.3	-2.6 -81.	1.07 -8598.	-8778. 19.3	3.22 9553.	-3.7	-3.-387.88	1190.
MEAN	96.8	58.9 1211.	8.69 812.	830. 19.6	3.56 9569.	54.8	0. 29.84	1321. 20.72
ACCM	2006.6	1219.2	180.07 802.	829. 19.6	3.56		0. 29.84	1317. 34.58

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR ..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1	BF KCAL	KF-LS	KF-MS C3S	KF-LOI	KLO LTWT	FCAO	CL-LS CL-MS	KCONTRL KM2F1%		
	T/H	T/H	T/H KC/KG			%	%	GR/L	DEG.C	%	H	H
7.25	98.8	60.0	8.83 798	119.5	0.970	2.770	71.0	33.9	1290	256	0.47	0.890	2.560
8.25	99.1	60.3	9.00 810	119.5	0.970	2.770	71.0	33.9	1220	251	0.47	0.890	2.560
9.25	99.1	60.2	9.03 814	119.5	0.970	2.770	71.0	33.9	1270	243	0.47	0.890	2.560
10.25	99.5	60.5	9.01 808	118.0	0.950	2.840	66.8	33.9	1260	257	0.47	0.890	2.560
11.25	99.7	60.6	9.04 810	118.0	0.950	2.840	66.8	33.9	1260	270	0.47	0.890	2.560
12.25	100.7	61.2	8.94 792	118.0	0.950	2.840	66.8	33.9	1220	275	0.47	0.890	2.560
13.25	100.1	60.9	9.00 803	118.0	0.950	2.840	66.8	33.9	1290	267	0.47	0.890	2.560
14.25	100.6	61.1	9.16 813	118.0	0.950	2.840	66.8	33.9	1290	259	0.47	0.890	2.560
15.25	99.0	60.2	9.17 826	118.0	0.950	2.840	66.8	33.9	1140	238	0.47	0.890	2.560
16.25	98.8	60.1	9.18 829	119.5	0.950	2.950	67.6	33.9	1140	247	0.47	0.890	2.560
17.25	99.7	60.6	9.19 822	119.5	0.950	2.950	67.6	33.9	1250	226	0.47	0.890	2.560
18.25	100.0	60.8	9.21 823	119.5	0.950	2.950	67.6	33.9	1250	258	0.47	0.890	2.560
19.25	99.9	60.7	9.13 815	119.5	0.950	2.950	67.6	33.9	1250	251	0.47	0.890	2.560
20.25	99.4	60.4	9.05 813	119.5	0.950	2.950	67.6	33.9	1300	262	0.47	0.890	2.560
21.25	98.0	59.6	8.93 814	119.5	0.950	2.950	67.6	33.9	1250	258	0.47	0.890	2.560
22.25	100.1	60.8	8.88 792	119.5	0.950	2.950	67.6	33.9	1250	253	0.47	0.890	2.560
23.25	99.7	60.6	8.94 800	119.5	0.950	2.950	67.6	33.9	1170	257	0.47	0.890	2.560
0.25	99.5	60.5	8.96 804	112.6	0.900	2.830	53.3	33.9	1170	230	0.47	0.890	2.560
1.25	98.6	60.0	8.95 810	112.6	0.900	2.830	53.3	33.9	1265	248	0.47	0.890	2.560
2.25	100.8	61.2	8.92 790	112.6	0.900	2.830	53.3	33.9	1265	250	0.47	0.890	2.560
3.25	99.3	60.4	8.91 801	112.6	0.900	2.830	53.3	33.9	1280	242	0.47	0.890	2.560
4.25	99.9	60.7	8.89 795	112.6	0.900	2.830	53.3	33.9	1280	235	0.47	0.890	2.560
5.25	99.7	60.6	8.82 790	112.6	0.900	2.830	53.3	33.9	1335	234	0.47	0.890	2.560
6.25	100.1	60.8	8.45 754	112.6	0.900	2.830	53.3	33.9	1405	238	0.47	0.890	2.560
7.25	--	--	-- --	112.6	0.900	2.830	53.3	33.9	1405	--	0.47	0.890	2.560
0.00 - 7.27													
MAX	101.4	61.6	9.03 844.	112.6	0.900	2.830	53.4	33.9	1405.	261.	0.47	0.890	2.560
MIN	33.9	57.4	2.41 217.	112.6	0.900	2.830	53.4	33.9	1170.	197.	0.47	0.890	2.560
MEAN	99.5	60.5	8.76 786.	112.6	0.900	2.830	53.4	33.9	1297.	240.	0.47	0.890	2.560 7.46 6.83
ACCM	682.6	413.3	59.84 786.	112.6	0.900	2.830	53.4	33.9	1301.	240.	0.47	0.890	2.560 56.39 65.47
0.00 - 0.00													
MAX	101.4	61.6	9.32 875.	119.5	0.970	2.950	71.0	33.9	1385.	332.	0.47	0.890	2.560
MIN	94.2	57.3	8.67 773.	112.6	0.900	2.770	53.4	33.9	1140.	185.	0.47	0.890	2.560
MEAN	99.6	60.6	8.99 806.	119.0	0.957	2.850	68.6	33.9	1254.	252.	0.47	0.890	2.560 24.01 24.02
ACCM	2391.1	1453.8	215.74 806.	118.8	0.955	2.850	68.1	33.9	1251.	252.	0.47	0.890	2.560 48.91 58.64

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 .....
W1/ GAS TEMP A53 .....
W1/ PRESSURE A54 .....
W1/ TEMP CYCL A54 .....
W1/ ZO2 KILN OUTL .....
W1/ PRES EXIT KILN.....
W1/ KILN TORQUE
W1/ KILN ROT SPEED

.....W1/ GAS TEMP A52
.....W1/ GAS TEMP A51
.....W1/ GAS TEMP A61
.....W1/ T EXIT PREHEAT
.....W1/ PRESS EX PREH
.....
W1/ ZCO EX PREHEAT
J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	1.9	30.4	75	4.30	810	163	792	292	634	405	393	408	588	-0.17	845
8.25	1.9	30.7	74	3.90	810	158	792	282	640	404	392	408	582	-0.04	846
9.25	1.9	31.6	69	3.64	812	185	791	280	636	403	391	406	584	-0.03	849
10.25	1.9	33.7	72	3.84	812	152	792	286	640	400	389	405	580	-0.03	848
11.25	1.9	32.2	78	4.02	809	157	794	292	639	404	392	405	587	-0.03	850
12.25	1.9	35.3	72	3.91	812	172	790	296	637	401	393	408	579	-0.02	859
13.25	1.9	35.2	78	3.75	812	177	794	305	638	407	393	408	599	-0.02	860
14.25	1.9	32.3	78	4.10	811	182	795	310	641	404	392	407	597	-0.03	851
15.25	1.9	34.3	82	3.14	808	172	786	303	629	398	385	402	601	-0.02	856
16.25	1.9	31.1	72	3.13	809	187	792	305	644	411	398	413	605	0.00	869
17.25	1.9	34.9	96	3.04	806	189	788	327	634	403	392	406	615	-0.02	872
18.25	1.9	33.7	85	2.89	808	175	788	305	640	404	391	408	596	-0.02	871
19.25	1.9	34.3	126	10.50	807	216	788	342	626	395	384	402	619	-0.02	871
20.25	1.9	33.1	128	1.84	806	213	789	349	633	398	385	402	635	-0.04	870
21.25	1.9	33.3	120	2.57	805	215	786	331	630	395	384	400	631	-0.04	873
22.25	1.9	32.0	108	3.28	803	197	782	324	630	398	386	403	630	-0.05	873
23.25	1.9	29.2	124	3.22	801	217	786	331	630	401	389	404	635	-0.05	870
0.25	1.9	31.1	99	3.38	805	186	783	304	633	402	392	407	619	-0.04	871
1.25	2.0	31.1	101	3.06	805	191	782	305	636	403	394	405	624	-0.04	872
2.25	1.9	30.4	102	3.06	803	198	781	304	633	404	394	407	614	-0.04	871
3.25	2.0	30.2	96	3.16	803	175	780	307	629	400	393	406	617	-0.05	873
4.25	2.0	30.6	95	3.61	804	187	785	307	636	403	394	408	608	-0.07	873
5.25	1.9	28.6	98	3.96	804	182	782	304	627	404	396	408	622	-0.06	872
6.25	2.0	23.9	103	4.68	802	171	778	297	626	397	387	401	609	-0.05	854
7.25	--	--	--	--	--	--	--	--	--	--	--	364	--	--	--
0.00 - 7.28															
MAX	2.0	32.1	123.	4.86	809.	219.	790.	328.	640.	409.	400.	412.	634.	-0.03	880.
MIN	0.5	19.5	79.	2.67	789.	148.	761.	244.	606.	385.	378.	360.	492.	-0.19	769.
MEAN	2.0	29.7	100.	3.63	804.	189.	783.	305.	629.	402.	393.	404.	615.	-0.06	869.
ACCM	2.0	29.7	100.		804.	189.	783.	305.	629.	402.	393.	404.	615.	-0.06	869.
0.00 - 0.00															
MAX	2.0	42.2	153.	10.62	816.	249.	805.	369.	648.	414.	402.	416.	648.	0.00	883.
MIN	1.9	28.8	58.	0.88	800.	135.	775.	261.	616.	392.	378.	397.	551.	-0.20	830.
MEAN	2.0	33.0	85.	3.68	810.	182.	790.	303.	635.	402.	390.	406.	597.	-0.04	859.
ACCM	2.0	33.0	85.		810.	182.	790.	303.	635.	402.	390.	406.	597.	-0.04	859.

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ %O2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ %CO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1%	KCONTRL	KALARM	LTWT	ESTLTW	LTWGTSP	NOXST	NOXLT	NOXALT	A50T1	A50ALT	DA15X1	KM2F1 DA1X2CO	DA2V1
	H	H	H	GR/L	GR/L	GR/L	%	%	%	DEG.C		%	%	T/H	RPM
7.25				1290	1291	1290	32.2	32.3	0.205	408	0.09	4.30	-0.17	8.83	845
8.25				1220	1270	1250	32.8	33.8	0.182	408	-0.05	3.90	-0.04	9.00	846
9.25				1270	1270	1270	34.8	35.0	-0.071	406	0.15	3.64	-0.03	9.03	849
10.25				1260	1263	1263	37.3	36.4	-0.038	405	0.00	3.84	-0.03	9.01	848
11.25				1260	1252	1254	34.1	33.9	0.082	405	-0.01	4.02	-0.03	9.04	850
12.25				1220	1224	1236	30.2	28.9	0.043	408	0.03	3.91	-0.02	8.94	859
13.25				1290	1219	1262	30.1	30.0	-0.163	408	0.00	3.75	-0.02	9.00	860
14.25				1290	1191	1252	27.1	25.8	-0.124	407	-0.20	4.10	-0.03	9.16	851
15.25				1140	1199	1255	26.6	27.1	-0.105	402	-0.17	3.14	-0.02	9.17	856
16.25				1140	1200	1211	35.6	29.9	0.421	413	0.88	3.13	0.00	9.18	869
17.25				1250	1282	1256	35.8	35.8	0.055	406	0.32	3.04	-0.02	9.19	872
18.25				1250	1268	1244	34.3	34.8	0.066	408	0.66	2.89	-0.02	9.21	871
19.25				1250	1235	1242	32.1	32.4	-0.116	402	-0.74	10.50	-0.02	9.13	871
20.25				1300	1501	1466	50.3	50.7	0.667	402	0.49	1.84	-0.04	9.05	870
21.25				1250	1448	1414	45.5	47.2	-0.437	400	0.13	2.57	-0.04	8.93	873
22.25				1250	1288	1243	35.5	36.2	-0.230	403	0.04	3.28	-0.05	8.88	873
23.25				1170	1344	1251	40.8	40.0	0.431	404	0.00	3.22	-0.05	8.94	870
0.25				1170	1325	1299	37.7	38.7	-0.106	407	0.30	3.38	-0.04	8.96	871
1.25				1265	1282	1278	38.1	37.3	-0.017	405	-0.27	3.06	-0.04	8.95	872
2.25				1265	1279	1276	37.8	37.0	-0.050	407	0.26	3.06	-0.04	8.92	871
3.25				1280	1297	1293	40.2	39.1	0.127	406	0.03	3.16	-0.05	8.91	873
4.25				1280	1346	1330	43.5	43.9	0.061	408	0.20	3.61	-0.07	8.89	873
5.25				1335	1356	1351	45.7	45.5	0.026	408	0.20	3.96	-0.06	8.82	872
6.25				1405	1354	1349	45.3	45.3	-0.151	401	-0.35	4.68	-0.05	8.45	854
7.25				1405	1337	1204	42.6	42.6	-0.042	364	-1.57	--	--	--	--
0.00 - 7.30															
MAX				1405.	1383.	1376.	48.7	48.3	0.288	412.	0.35	4.86	-0.03	9.03	880.
MIN				1170.	1274.	1202.	36.3	36.5	-0.234	359.	-2.04	2.67	-0.19	2.41	769.
MEAN	6.83	7.50		1298.	1325.	1316.	41.5	41.5	0.014	404.	-0.16	3.63	-0.06	8.76	869.
ACCM	65.47	56.43		1301.		1316.			0.014	404.	-0.16		-0.06	59.84	869.
0.00 - 0.00															
MAX				1385.	1571.	1524.	55.3	55.6	0.864	416.	1.01	10.62	0.00	9.32	883.
MIN				1140.	1101.	1143.	23.1	23.0	-0.610	397.	-1.22	0.88	-0.20	8.67	830.
MEAN	24.02	24.01		1254.	1294.	1286.	34.8	34.8	0.011	406.	0.01	3.68	-0.04	8.99	859.
ACCM	58.64	48.91		1251.		1286.			0.011	406.	0.01		-0.04	215.74	859.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL ....
NET HEAT CONSUMP. ..... SHORT TONS CLINKER
HEAT CONSUMPTION ..... LB COAL / SH.T
W1/ COAL TO KILN ..... MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	RTU	LTWT KM2F1%
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.25	98.8	60.0 1442	8.83 798	816 20.0	3.22 9555	65.2	0 28.61	1290
8.25	99.1	60.3 1447	9.00 810	829 20.0	3.22 9555	65.4	0 28.81	1220
9.25	99.1	60.2 1446	9.03 814	832 20.0	3.22 9555	65.4	0 28.99	1270
10.25	99.5	60.5 1452	9.01 808	827 20.0	3.22 9555	65.7	0 28.76	1260
11.25	99.7	60.6 1455	9.04 810	828 20.0	3.22 9555	65.8	0 29.10	1260
12.25	100.7	61.2 1470	8.94 792	811 20.0	3.22 9555	66.4	0 28.36	1220
13.25	100.1	60.9 1461	9.00 803	821 20.0	3.22 9555	66.1	0 28.95	1290
14.25	100.6	61.1 1468	9.16 813	832 20.0	3.22 9552	66.4	0 29.09	1290
15.25	99.0	60.2 1445	9.17 826	845 20.0	3.22 9555	65.4	0 29.42	1140
16.25	98.8	60.1 1442	9.18 829	848 20.0	3.22 9552	65.2	0 29.60	1140
17.25	99.7	60.6 1455	9.19 822	841 20.0	3.22 9552	65.8	0 29.32	1250
18.25	100.0	60.8 1459	9.21 823	842 20.0	3.22 9552	66.0	0 29.49	1250
19.25	99.9	60.7 1459	9.13 815	834 20.0	3.22 9555	65.9	0 29.05	1250
20.25	99.4	60.4 1451	9.05 813	832 20.0	3.22 9552	65.6	0 29.01	1300
21.25	98.0	59.6 1430	8.93 814	833 20.0	3.22 9552	64.7	0 28.96	1250
22.25	100.1	60.8 1461	8.88 792	811 20.0	3.22 9552	66.0	0 28.29	1250
23.25	99.7	60.6 1455	8.94 800	819 20.0	3.22 9552	65.8	0 28.54	1170
0.25	99.5	60.5 1453	8.96 804	822 20.0	3.22 9552	65.7	0 28.78	1170
1.25	98.6	60.0 1440	8.95 810	829 20.0	3.22 9552	65.1	0 29.03	1265
2.25	100.8	61.2 1471	8.92 790	808 20.0	3.22 9555	66.5	0 28.21	1265
3.25	99.3	60.4 1449	8.91 801	819 20.0	3.22 9552	65.5	0 28.55	1280
4.25	99.9	60.7 1458	8.89 795	813 20.0	3.22 9555	65.9	0 28.54	1280
5.25	99.7	60.6 1455	8.82 790	808 20.0	3.22 9555	65.8	0 28.31	1335
6.25	100.1	60.8 1460	8.45 754	771 20.0	3.22 9555	66.0	0 26.95	1405
7.25	--	-- -63	-- --	-- 20.0	3.22 9555	-2.8	-- --	1405
0.00 - 7.30								
MAX	101.4	61.6 1479.	9.03 844.	864. 20.0	3.22 9556.	66.9	0. 30.17	1405.
MIN	33.9	57.4 -79.	2.41 217.	222. 20.0	3.22 9550.	-3.6	0. 7.77	1170.
MEAN	99.5	60.5 1321.	8.76 786.	804. 20.0	3.22 9553.	59.7	0. 28.10	1298. 6.83
ACCM	682.6	413.3	59.84 786.	804. 20.0	3.22		0. 28.10	1301. 65.47
0.00 - 0.00								
MAX	101.4	61.6 1479.	9.32 875.	896. 20.0	3.22 9556.	66.9	0. 31.28	1385.
MIN	94.2	57.3 1374.	8.67 773.	791. 20.0	3.22 9553.	62.2	0. 27.64	1140.
MEAN	99.6	60.6 1454.	8.99 806.	825. 20.0	3.22 9557.	65.8	0. 28.80	1254. 24.02
ACCM	2391.1	1453.8	215.74 806.	824. 20.0	3.22		0. 28.81	1251. 58.64

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR ..... UH/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1	BF KCAL	KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1%		
	T/H	T/H	T/H KC/KG		%	%	GR/L	DEG.C	%	H	H
7.25	--	--	-- --	112.6	0.900	2.830	53.3	33.9	1405	--	0.47	0.890	2.560		
8.25	--	--	-- --	112.6	0.900	2.830	53.3	33.9	1405	--	0.47	0.890	2.560		
9.25	--	--	-- --	112.6	0.900	2.830	53.3	33.9	1405	--	0.47	0.890	2.560		
10.25	--	--	-- --	112.6	0.900	2.830	53.3	33.9	1405	--	0.47	0.890	2.560		
11.25	--	-3.1	0.00 9	112.6	0.900	2.830	53.3	33.9	1405	22	0.47	0.890	2.560		
12.25	61.5	37.4	6.53 948	112.6	0.900	2.830	53.3	33.9	1405	75	0.47	0.890	2.560		
13.25	71.5	43.4	7.20 899	117.8	0.940	2.940	65.0	35.0	1405	108	0.24	0.970	3.020		
14.25	80.9	49.2	7.82 863	117.8	0.940	2.940	65.0	35.0	1405	107	0.24	0.970	3.020		
15.25	98.8	60.1	8.18 739	117.8	0.940	2.940	65.0	35.0	1510	130	0.24	0.970	3.020		
16.25	98.9	60.1	8.79 794	117.8	0.940	2.940	65.0	35.0	1525	174	0.24	0.970	3.020		
17.25	99.6	60.5	8.51 763	111.5	0.880	2.930	47.1	35.0	1160	165	0.24	0.970	3.020		
18.25	99.9	60.7	8.48 758	111.5	0.880	2.930	47.1	35.0	1350	176	0.24	0.970	3.020		
19.25	98.8	60.0	8.22 743	111.5	0.880	2.930	47.1	35.0	1445	167	0.24	0.970	3.020		
20.25	100.1	60.9	8.25 735	111.5	0.880	2.930	47.1	35.0	1340	183	0.24	0.970	3.020		
21.25	99.4	60.4	8.30 745	111.5	0.880	2.930	47.1	35.0	1275	176	0.24	0.970	3.020		
22.25	99.4	60.4	8.32 747	111.5	0.880	2.930	47.1	35.0	1260	179	0.24	0.970	3.020		
23.25	100.5	61.1	8.35 742	111.5	0.880	2.930	47.1	35.0	1295	187	0.24	0.970	3.020		
0.25	100.1	60.8	8.45 754	111.5	0.880	2.930	47.1	35.0	1335	190	0.24	0.970	3.020		
1.25	100.0	60.8	8.46 755	119.8	0.970	2.780	70.4	35.0	1295	193	0.24	0.970	3.020		
2.25	--	--	-- --	119.8	0.970	2.780	70.4	35.0	1295	--	0.24	0.970	3.020		
3.25	71.0	43.1	7.24 910	119.8	0.970	2.780	70.4	35.0	1295	164	0.24	0.970	3.020		
4.25	96.7	58.8	8.47 782	119.8	0.970	2.780	70.4	35.0	1140	180	0.24	0.970	3.020		
5.25	100.4	61.0	8.48 754	119.8	0.970	2.780	70.4	35.0	1245	165	0.24	0.970	3.020		
6.25	99.8	60.6	8.66 775	119.8	0.970	2.780	70.4	35.0	1265	190	0.24	0.970	3.020		
7.25	99.4	60.4	8.60 773	119.4	0.970	2.760	69.7	35.0	1290	174	0.24	0.970	3.020		
0.00 - 7.27															
MAX	101.7	61.9	8.74 24139.	119.8	0.970	2.930	70.4	35.0	1335.	218.	0.24	0.970	3.020		
MIN	-4.4	-2.8	1.12-39964.	111.5	0.880	2.760	47.1	35.0	1140.	111.	0.24	0.970	3.020		
MEAN	93.7	57.4	8.23 778.	119.3	0.965	2.788	68.9	35.0	1273.	180.	0.24	0.970	3.020	7.46	6.81
ACCM	649.5	390.4	56.01 779.	119.8	0.970	2.780	70.4	35.0	1270.	180.	0.24	0.970	3.020	80.22	84.72
0.00 - 0.00															
MAX	101.4	61.6	9.03 29888.	117.8	0.940	2.940	65.1	35.0	1525.	261.	0.47	0.970	3.020		
MIN	-4.5	-3.4	2.04-23878.	111.5	0.880	2.830	47.1	33.9	1160.	20.	0.24	0.890	2.560		
MEAN	93.3	56.7	8.24 801.	113.1	0.900	2.878	53.3	34.4	1350.	183.	0.36	0.928	2.775	24.01	19.50
ACCM	1820.4	1105.0	160.61 789.	113.1	0.900	2.882	53.2	34.5	1340.	183.	0.36	0.930	2.790	72.85	77.99

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 .....
W1/ GAS TEMP A53 .....
W1/ PRESSURE A54 .....
W1/ TEMP CYCL A54 .....
W1/ %O2 KILN OUTL .....
W1/ PRES EXIT KILN.....
W1/ KILN TORQUE
W1/ KILN ROT SPEED

.....W1/ GAS TEMP A52
.....W1/ GAS TEMP A51
.....W1/ GAS TEMP A61
.....W1/ T EXIT PREHEAT
.....W1/ PRESS EX PREH
.....
W1/ %CO EX PREHEAT
J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	--	--	--	--	--	--	--	--	--	--	--	383	--	--	--
8.25	--	--	--	--	--	--	--	--	--	--	--	370	--	--	--
9.25	--	--	--	--	--	--	--	--	--	--	--	366	--	--	--
10.25	--	--	--	--	--	--	--	--	--	--	--	359	--	--	--
11.25	0.4	0.4	-9	10.34	591	7	624	-5	560	344	360	339	-15	-0.18	421
12.25	1.2	6.6	64	1.37	798	121	754	181	619	415	410	412	292	-0.05	679
13.25	1.4	9.8	48	2.41	794	111	763	179	618	404	401	410	318	-0.05	703
14.25	1.6	15.4	56	1.58	799	121	770	188	630	404	401	411	357	-0.03	731
15.25	1.9	16.4	130	2.78	798	210	768	308	611	375	370	382	555	-0.05	851
16.25	1.9	13.8	116	2.14	799	207	781	308	613	379	373	384	570	-0.04	852
17.25	1.9	16.9	126	3.02	799	208	778	315	614	380	371	385	578	-0.04	854
18.25	1.9	15.6	132	3.13	799	190	784	326	617	381	374	387	578	-0.05	852
19.25	1.9	16.4	132	3.52	799	209	780	331	620	381	373	387	587	-0.07	853
20.25	1.9	14.4	137	3.45	799	203	783	330	614	382	375	387	587	-0.07	854
21.25	1.9	15.3	123	3.56	799	190	779	324	620	382	373	386	583	-0.06	852
22.25	1.9	16.2	137	1.95	797	221	774	330	615	378	370	383	587	-0.05	855
23.25	1.9	15.6	140	2.33	801	218	778	328	612	377	369	383	583	-0.05	851
0.25	1.9	16.6	134	2.18	802	223	778	330	615	379	368	385	587	-0.05	851
1.25	1.9	18.7	132	2.33	800	219	777	335	616	379	372	385	598	-0.06	851
2.25	--	--	--	--	--	--	--	--	--	--	--	408	--	--	--
3.25	1.5	12.3	74	0.99	799	132	774	206	620	394	390	398	351	0.08	688
4.25	1.9	18.2	127	2.41	801	196	767	297	608	375	367	378	531	0.05	802
5.25	1.9	20.7	99	2.55	806	183	779	285	620	386	384	394	543	0.02	820
6.25	1.9	21.8	92	2.57	806	165	777	283	612	394	388	389	545	0.02	819
7.25	1.9	24.4	93	2.33	805	184	771	282	606	378	372	383	543	0.02	820
0.00 - 7.28															
MAX	2.0	25.0	150.	10.42	808.	242.	789.	345.	636.	424.	420.	422.	606.	0.45	860.
MIN	-0.4	0.1	-11.	-0.13	700.	-13.	683.	-12.	578.	351.	355.	358.	-1.	-0.19	551.
MEAN	1.9	18.8	103.	2.37	801.	177.	773.	281.	614.	383.	378.	389.	520.	0.01	802.
ACCM	1.9	18.8	103.		801.	177.	773.	281.	614.	383.	378.	389.	520.	0.01	802.
0.00 - 0.00															
MAX	2.0	39.6	153.	10.44	809.	245.	790.	345.	640.	470.	464.	439.	634.	1.15	880.
MIN	0.2	0.1	-11.	-0.09	574.	-3.	683.	-6.	548.	346.	348.	329.	-19.	-0.19	418.
MEAN	1.9	20.5	103.	3.17	797.	182.	774.	287.	619.	393.	386.	391.	536.	-0.06	822.
ACCM	1.9	20.5	103.		797.	182.	774.	287.	619.	393.	386.	391.	536.	-0.06	822.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME .....
W1/ NOX REG STIME .....
W1/ LTW FOR CONTRL.....
W1/ ESTIMATED LTW .....
U1/ LITER WEIGHT .....
KILN CON. MEASUR. .....
KILN CONTROL
COAL TO KILN

.....W1/ NOX CHANGE LT
.....W1/ T EXIT PREHEAT
.....W1/ A50T1 CHANGE
.....W1/ ZO2 KILN OUTL
.....
.....W1/ ZCO EX PREHEAT
W1/ COAL TO KILN
J1/ ID FAN SPEED

HOUR	KM2F1# KCONTRL	KALARM	ESTLTW LTWT	NOXST LTWGTSP	NOXALT NOXLT	A50ALT A50T1	OA15X1	KM2F1 OA1X2CO	OA2V1
	H	H H	GR/L GR/L GR/L	% % %	DEG.C	%	%	T/H	RPM
7.25			1405 1341 1352	43.9 43.0	-0.113 383	-1.58 --	--	-- --	--
8.25			1405 1318 1195	40.9 40.9	-0.056 370	0.17 --	--	-- --	--
9.25			1405 1302 1187	39.4 39.4	-0.049 366	-0.20 --	--	-- --	--
10.25			1405 1285 1179	37.9 37.9	-0.049 359	-0.20 --	--	-- --	--
11.25			1405 1269 1171	36.4 36.4	-0.049 339	-0.75 10.34	-0.18	0.00	421
12.25			1405 1088 1077	15.6 12.8	-0.263 412	-1.45 1.37	-0.05	6.53	679
13.25			1405 1254 1280	33.7 35.1	0.843 410	-0.37 2.41	-0.05	7.20	703
14.25			1405 1375 1380	45.8 46.0	0.316 411	-0.27 1.58	-0.03	7.82	731
15.25			1510 1758 1430	63.1 69.0	0.468 382	-1.80 2.78	-0.05	8.18	851
16.25			1525 1108 1300	28.7 24.5	0.034 394	0.18 2.14	-0.04	8.79	852
17.25			1160 1402 1371	40.7 44.1	0.329 385	0.21 3.02	-0.04	8.51	854
18.25			1350 1497 1467	49.5 50.1	0.239 387	-0.12 3.13	-0.05	8.48	852
19.25			1445 1428 1431	45.1 45.6	-0.320 387	0.09 3.52	-0.07	8.22	853
20.25			1340 1323 1327	37.3 38.8	-0.038 387	0.23 3.45	-0.07	8.25	854
21.25			1275 1297 1292	37.8 37.0	-0.247 386	-0.26 3.56	-0.06	8.30	852
22.25			1260 1308 1297	38.4 37.9	-0.032 383	-0.40 1.95	-0.05	8.32	855
23.25			1295 1338 1328	43.2 39.8	0.203 383	0.06 2.33	-0.05	8.35	851
0.25			1335 1522 1338	55.4 54.5	0.174 385	-0.20 2.18	-0.05	8.45	851
1.25			1295 1312 1320	41.5 41.0	-0.633 385	-0.10 2.33	-0.06	8.46	851
2.25			1295 1335 1250	45.3 45.1	0.535 408	3.36 --	--	-- --	--
3.25			1295 1100 1161	0.7 2.8	-1.194 398	1.63 0.99	0.08	7.24	688
4.25			1140 1037 1159	7.7 -8.5	0.479 378	-0.20 2.41	0.05	8.47	802
5.25			1245 1366 1347	48.3 50.7	0.824 394	-0.60 2.55	0.02	8.48	820
6.25			1265 1290 1304	43.1 42.3	0.188 389	-0.15 2.57	0.02	8.66	819
7.25			1290 1304 1300	43.8 44.6	-0.082 383	-0.01 2.33	0.02	8.60	820
0.00 - 7.30									
MAX			1335. 1605. 4252.	56.0 56.2	3.840 422.	4.25 10.42	0.45	8.74	860.
MIN			1140. 956. 1113.	-22.7 -23.3	-2.195 358.	-4.92 -0.13	-0.19	1.12	551.
MEAN	6.85 7.50		1273. 1290. 1383.	33.9 34.0	-0.018 389.	0.00 2.37	0.01	8.24	802.
ACCM	84.76 80.26		1278. 1383.		-0.018 389.	0.00	0.01	56.39	802.
0.00 - 0.00									
MAX			1525. 1801. 5244.	71.7 71.9	1.146 439.	11.54 10.44	1.15	9.03	880.
MIN			1160. 928. 1022.	8.5 5.6	-2.708 329.	-4.70 -0.89	-0.19	2.04	418.
MEAN	19.50 24.01		1350. 1322. 1337.	40.8 40.8	0.013 391.	-0.03 3.17	-0.06	8.24	822.
ACCM	77.99 72.85		1340. 1337.		0.013 391.	-0.03	-0.06	160.61	822.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL ....
NET HEAT CONSUMP. ....SHORT TONS CLINKER
HEAT CONSUMPTION ....LB COAL / SH.T
W1/ COAL TO KILN ....MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL MKCAL	C-MOIST C-ASH	C-HEAT	STONS	BTU LB.COAL	LTWT KM2F1*
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.25	--	-- -68	-- --	-- 20.0	3.22 9555	-3.1	-- --	1405
8.25	--	-- -63	-- --	-- 20.0	3.22 9555	-2.8	-- --	1405
9.25	--	-- -66	-- --	-- 20.0	3.22 9552	-2.9	-- --	1405
10.25	--	-- -63	-- --	-- 20.0	3.22 9552	-2.8	-- --	1405
11.25	--	-3.1 -75	0.00 9	9 20.0	3.22 9555	-3.4	0 -0.08	1405
12.25	61.5	37.4 897	6.53 948	969 20.0	3.22 9555	40.6	0 33.87	1405
13.25	71.5	43.4 1043	7.20 899	920 20.0	3.22 9552	47.2	0 32.21	1405
14.25	80.9	49.2 1181	7.82 863	883 20.0	3.22 9555	53.4	0 30.79	1405
15.25	98.8	60.1 1442	8.18 739	756 20.0	3.22 9555	65.2	0 26.39	1510
16.25	98.9	60.1 1443	8.79 794	812 20.0	3.22 9555	65.2	0 28.50	1525
17.25	99.6	60.5 1453	8.51 763	781 20.0	3.22 9555	65.7	0 27.20	1160
18.25	99.9	60.7 1457	8.48 758	775 20.0	3.22 9555	65.9	0 26.97	1350
19.25	98.8	60.0 1441	8.22 743	760 20.0	3.22 9552	65.2	0 26.53	1445
20.25	100.1	60.9 1461	8.25 735	752 20.0	3.22 9552	66.1	0 26.39	1340
21.25	99.4	60.4 1450	8.30 745	763 20.0	3.22 9552	65.6	0 26.52	1275
22.25	99.4	60.4 1451	8.32 747	764 20.0	3.22 9552	65.6	0 26.73	1260
23.25	100.5	61.1 1467	8.35 742	759 20.0	3.22 9552	66.3	0 26.62	1295
0.25	100.1	60.8 1461	8.45 754	771 20.0	3.22 9555	66.0	0 26.97	1335
1.25	100.0	60.8 1459	8.46 755	773 20.0	3.22 9552	66.0	0 27.03	1295
2.25	--	-- -65	-- --	-- 20.0	3.22 9555	-2.9	-- --	1295
3.25	71.0	43.1 1036	7.24 910	931 20.0	3.22 9555	46.8	0 32.42	1295
4.25	96.7	58.8 1412	8.47 782	800 20.0	3.22 9552	63.8	0 27.94	1140
5.25	100.4	61.0 1465	8.48 754	771 20.0	3.22 9552	66.2	0 26.98	1245
6.25	99.8	60.6 1456	8.66 775	793 20.0	3.22 9552	65.8	0 27.79	1265
7.25	99.4	60.4 1450	8.60 773	791 20.0	3.22 9555	65.6	0 27.71	1290
0.00 - 7.30								
MAX	101.7	61.9 1485.	8.74 24139.	24698. 20.0	3.22 9556.	67.2	9. 862.43	1335.
MIN	-4.4	-2.8 -79.	1.12-39964.	-40877. 20.0	3.22 9553.	-3.6	-15.-1427.8	1140.
MEAN	93.7	57.4 1271.	8.24 778.	796. 20.0	3.22 9554.	57.5	0. 27.77	1273. 6.86
ACCM	654.7	393.7	56.47 779.	796. 20.0	3.22		0. 27.77	1270. 84.77
0.00 - 0.00								
MAX	101.4	61.6 1479.	9.03 29888.	30581. 20.0	3.22 9556.	66.9	11. 1068.2	1525.
MIN	-4.5	-3.4 -82.	2.04-23878.	-24432. 20.0	3.22 9550.	-3.7	-9.-853.13	1160.
MEAN	93.3	56.7 1094.	8.24 801.	820. 20.0	3.22 9556.	49.5	0. 28.63	1350. 19.50
ACCM	1820.4	1105.0	160.61 789.	820. 20.0	3.22		0. 28.63	1340. 77.99

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1	BF	KCAL	KF-LS	KF-MS C3S	KF-LOI	KLO LTWT	CL-LS FCAO	KCONTRL CL-MS	KM2F1%		
	T/H	T/H	T/H	KC/KG			%	%	GR/L	DEG.C	%	H	H
7.26	99.1	60.2	8.62	777	119.8	0.970	2.760	70.4	35.0	1290	181	0.24	0.970	3.020
8.26	--	--	--	--	119.4	0.970	2.760	69.7	35.0	1320	--	0.24	0.970	3.020
9.26	-1.2	--	--	--	119.4	0.970	2.760	69.7	35.0	1320	--	0.24	0.970	3.020
10.26	--	--	--	--	119.4	0.970	2.760	69.7	35.0	1320	--	0.24	0.970	3.020
11.26	72.0	43.7	5.89	730	119.4	0.970	2.760	69.7	35.0	1320	102	0.24	0.970	3.020
12.26	76.5	46.5	6.62	772	112.5	0.890	2.760	50.1	34.7	1320	204	0.47	0.910	3.100
13.26	81.8	49.7	7.14	779	112.5	0.890	2.760	50.1	34.7	1320	145	0.47	0.910	3.100
14.26	86.5	52.6	8.06	831	112.5	0.890	2.760	50.1	34.7	1320	106	0.47	0.910	3.100
15.26	84.9	51.6	8.29	872	112.5	0.890	2.760	50.1	34.7	1320	145	0.47	0.910	3.100
16.26	87.3	53.0	8.45	865	116.8	0.920	2.980	60.0	34.7	1080	144	0.47	0.910	3.100
17.26	92.1	56.0	8.73	847	116.8	0.920	2.980	60.0	34.7	1220	168	0.47	0.910	3.100
18.26	95.8	58.2	8.79	819	116.8	0.920	2.980	60.0	34.7	1340	193	0.47	0.910	3.100
19.26	99.7	60.6	8.75	784	116.8	0.920	2.980	60.0	34.7	1330	243	0.47	0.910	3.100
20.26	99.0	60.2	8.98	810	116.8	0.920	2.980	60.0	34.7	1330	242	0.47	0.910	3.100
21.26	100.2	60.9	8.92	795	116.8	0.920	2.980	60.0	34.7	1250	233	0.47	0.910	3.100
22.26	99.3	60.4	8.76	788	116.8	0.920	2.980	60.0	34.7	1360	252	0.47	0.910	3.100
23.26	98.9	60.1	8.78	793	116.8	0.920	2.980	60.0	34.7	1305	259	0.47	0.910	3.100
0.25	100.5	61.1	8.84	785	120.2	0.970	2.810	71.2	34.7	1200	241	0.47	0.910	3.100
1.25	99.7	60.6	8.96	802	120.2	0.970	2.810	71.2	34.7	1185	212	0.47	0.910	3.100
2.25	99.5	60.5	8.97	805	120.2	0.970	2.810	71.2	34.7	1275	219	0.47	0.910	3.100
3.25	99.8	60.7	8.90	796	120.2	0.970	2.810	71.2	34.7	1345	216	0.47	0.910	3.100
4.25	--	--	--	--	120.2	0.970	2.810	71.2	34.7	1345	--	0.47	0.910	3.100
5.25	-0.5	--	--	--	120.2	0.970	2.810	71.2	34.7	1375	--	0.47	0.910	3.100
6.25	--	--	--	--	120.2	0.970	2.810	71.2	34.7	1375	--	0.47	0.910	3.100
7.25	48.8	29.7	4.01	734	120.2	0.970	2.810	71.2	34.7	1375	93	0.47	0.910	3.100
0.00 - 7.27														
MAX	101.1	61.5	9.28	10082.	120.2	0.970	2.810	71.2	34.7	1375.	253.	0.47	0.910	3.100		
MIN	-4.5	-2.9	0.01	-30171.	120.2	0.970	2.810	71.2	34.7	1185.	43.	0.47	0.910	3.100		
MEAN	92.5	56.9	8.54	810.	120.2	0.970	2.810	71.2	34.7	1304.	203.	0.47	0.910	3.100	7.46	5.61
ACCM	529.6	319.2	47.88	815.	120.2	0.970	2.810	71.2	34.7	1304.	203.	0.47	0.910	3.100	104.0	104.0
0.00 - 0.00														
MAX	101.7	61.9	9.01	24139.	120.2	0.970	2.980	71.2	35.0	1360.	381.	0.47	0.970	3.100		
MIN	-4.8	-2.8	1.12	-39964.	111.5	0.880	2.760	47.1	34.7	1080.	28.	0.24	0.910	3.020		
MEAN	90.6	55.5	8.20	803.	117.5	0.940	2.844	63.4	34.9	1291.	185.	0.36	0.940	3.061	24.02	20.75
ACCM	1908.5	1151.4	170.03	882.	117.5	0.940	2.841	63.5	34.9	1291.	185.	0.36	0.937	3.063	96.58	98.50

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 .....
W1/ GAS TEMP A53 .....
W1/ PRESSURE A54 .....
W1/ TEMP CYCL A54 .....
W1/ ZO2 KILN OUTL .....
W1/ PRES EXIT KILN.....
W1/ KILN TORQUE
W1/ KILN ROT SPEED

.....W1/ GAS TEMP A52
.....W1/ GAS TEMP A51
.....W1/ GAS TEMP A61
.....W1/ T EXIT PREHEAT
.....W1/ PRESS EX PREH
.....
W1/ ZCO EX PREHEAT
J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.26	1.9	23.8	89	2.60	804	170	772	282	607	377	373	385	549	0.00	819
8.26	--	--	--	--	--	--	--	--	--	--	--	433	--	--	--
9.26	--	--	--	--	--	--	--	--	--	--	--	427	--	--	--
10.26	--	--	--	--	--	--	--	--	--	--	--	418	--	--	--
11.26	1.4	27.9	46	3.43	782	102	753	144	618	407	409	416	254	0.01	625
12.26	1.5	7.7	62	3.59	794	130	779	205	642	422	423	431	362	0.00	697
13.26	1.6	17.5	63	3.42	797	133	776	222	637	415	412	423	407	0.00	746
14.26	1.7	25.5	107	3.75	796	188	775	308	632	404	396	410	556	0.00	842
15.26	1.7	25.6	133	3.20	800	226	784	322	643	408	399	413	574	-0.01	851
16.26	1.7	29.3	116	2.11	803	201	790	321	639	409	403	415	573	-0.01	845
17.26	1.8	33.6	140	2.46	804	228	784	335	637	399	394	406	605	-0.01	865
18.26	1.9	35.1	135	2.85	807	238	786	334	627	394	386	399	618	-0.01	868
19.26	1.9	33.6	123	3.34	805	197	789	340	628	387	379	394	607	-0.02	865
20.26	1.9	35.2	124	3.04	805	205	788	341	629	387	378	394	611	-0.01	862
21.26	1.9	34.0	138	1.80	806	219	783	345	628	388	377	391	618	-0.01	867
22.26	1.9	32.4	132	2.26	805	213	785	350	622	390	381	394	629	-0.03	864
23.26	1.9	29.9	142	2.79	805	223	788	346	629	389	383	395	636	-0.03	863
0.25	1.9	29.6	128	2.88	804	197	786	349	626	389	384	396	630	-0.02	866
1.25	1.9	29.6	138	2.48	806	227	786	348	632	391	385	395	644	-0.04	872
2.25	1.9	31.0	141	2.93	805	213	787	350	625	392	384	397	639	-0.05	874
3.25	1.9	32.3	109	3.04	807	195	789	315	639	399	392	400	615	-0.04	872
4.25	--	--	--	--	--	--	--	--	--	--	--	398	--	--	--
5.25	0.0	0.1	--	--	--	--	--	--	--	--	--	414	--	--	--
6.25	--	--	--	--	--	--	--	--	--	--	--	379	--	--	--
7.25	0.6	28.0	17	2.42	773	55	729	84	605	406	415	418	147	0.32	583
0.00 - 7.28															
MAX	2.0	42.8	157.	10.39	811.	252.	797.	370.	667.	470.	470.	455.	650.	1.14	879.
MIN	0.3	0.1	-11.	-0.06	711.	4.	706.	-2.	586.	370.	372.	378.	46.	-0.20	444.
MEAN	1.9	30.1	115.	3.03	801.	194.	781.	305.	628.	396.	391.	403.	572.	-0.05	832.
ACCM	1.9	30.1	115.		801.	194.	781.	305.	628.	396.	391.	403.	572.	-0.05	832.
0.00 - 0.00															
MAX	2.0	36.4	162.	10.45	810.	257.	797.	367.	662.	467.	463.	447.	645.	1.39	880.
MIN	-0.5	0.1	-11.	-0.13	651.	-13.	657.	-12.	578.	351.	355.	358.	-1.	-0.19	380.
MEAN	1.8	24.2	110.	2.82	801.	187.	779.	295.	625.	396.	389.	402.	536.	-0.00	816.
ACCM	1.8	24.2	110.		801.	187.	779.	295.	625.	396.	389.	402.	536.	-0.00	816.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ %O2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ %CO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1% KCONTRL	KALARM	ESTLTW LTWT	LTWGTSP	NOXST NOXLT	NOXALT	A50ALT A50T1	OA15X1	KM2F1 OA1X2CO	OA2V1
	H	H H	GR/L	GR/L GR/L	%	% %	DEG.C	%	%	T/H RPM
7.26			1290	1308 1320	46.0	46.4 0.228	385	-0.53 2.60	0.00	8.62 819
8.26			1320	1253 1162	22.3	27.9 -0.881	433	5.47 --	--	-- --
9.26			1320	1194 1086	6.9	6.5 -0.563	427	0.64 --	--	-- --
10.26			1320	1169 1053	-2.4	-2.6 -0.257	418	-0.11 --	--	-- --
11.26			1320	1250 5052	23.3	26.6 1.988	416	-1.60 3.43	0.01	5.89 625
12.26			1320	1240 1161	23.3	23.1 0.386	431	0.79 3.59	0.00	6.62 697
13.26			1320	1263 1247	37.4	31.1 0.441	423	0.13 3.42	0.00	7.14 746
14.26			1320	1272 1278	32.0	34.4 0.116	410	-1.49 3.75	0.00	8.06 842
15.26			1320	1232 1235	19.9	20.3 -0.013	413	0.02 3.20	-0.01	8.29 851
16.26			1080	1199 1252	31.4	31.5 0.360	415	0.15 2.11	-0.01	8.45 845
17.26			1220	1319 1308	48.3	49.0 0.372	406	0.31 2.46	-0.01	8.73 865
18.26			1340	1335 1326	49.8	51.2 0.023	399	-0.55 2.85	-0.01	8.79 868
19.26			1330	1323 1324	49.7	49.3 0.216	394	-0.53 3.34	-0.02	8.75 865
20.26			1330	1263 1269	41.6	41.2 -0.120	394	0.01 3.04	-0.01	8.98 862
21.26			1250	1326 1319	49.8	50.4 0.324	391	-0.09 1.80	-0.01	8.92 867
22.26			1360	1377 1316	54.2	57.4 0.061	394	-0.08 2.26	-0.03	8.76 864
23.26			1305	1300 1301	46.3	46.9 -0.193	395	0.10 2.79	-0.03	8.78 863
0.25			1200	1253 1244	40.9	40.4 -0.178	396	0.01 2.88	-0.02	8.84 866
1.25			1185	1292 1233	43.7	44.4 0.234	395	-0.16 2.48	-0.04	8.96 872
2.25			1275	1363 1276	52.5	52.0 0.347	397	0.19 2.93	-0.05	8.97 874
3.25			1345	1393 1327	59.1	59.0 0.167	400	0.35 3.04	-0.04	8.90 872
4.25			1345	1408 1177	60.7	61.0 0.078	398	-0.02 --	--	-- --
5.25			1375	1143 1044	33.2	27.0 -1.053	414	5.64 --	--	-- --
6.25			1375	1060 1002	17.5	17.4 -0.351	379	-1.35 --	--	-- --
7.25			1375	1003 974	10.0	10.3 -0.499	418	3.50 2.42	0.32	4.01 503
0.00 - 7.30										
MAX			1375.	1423. 6087.	62.9	61.5 0.483	455.	6.23 10.39	1.14	9.28 879.
MIN			1185.	1002. 974.	8.4	10.1 -1.454	378.	-4.48 -0.06	-0.20	0.01 444.
MEAN	5.65	7.50	1304.	1256. 1506.	40.9	40.9 -0.133	403.	0.17 3.03	-0.05	8.51 831.
ACCM	104.1	104.0	1304.	1506.		-0.133	403.	0.17	-0.05	48.05 831.
0.00 - 0.00										
MAX			1360.	1605. 5231.	60.1	60.1 3.840	447.	5.73 10.45	1.39	9.01 880.
MIN			1080.	956. 1045.	-22.7	-23.3 -2.195	358.	-4.92 -0.13	-0.19	1.12 380.
MEAN	20.75	24.02	1291.	1275. 1343.	33.4	33.5 -0.007	402.	0.02 2.82	-0.00	8.20 816.
ACCM	98.50	96.58	1291.	1343.		-0.007	402.	0.02	-0.00	170.03 816.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL.....
NET HEAT CONSUMP. ..... SHORT TONS CLINKER
HEAT CONSUMPTION ..... LB COAL / SH.T
W1/ COAL TO KILN ..... MBTU' PER SH.T
KILN PRODUC. RATE .....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.26	99.1	60.2 1446	8.62 777	795 20.0	3.22 9552	65.4	0 27.73	1290
8.26	--	-- -26	-- --	-- 20.0	3.22 9552	-1.1	-- --	1320
9.26	-1.2	-- -17	-- --	-- 20.0	3.22 9552	-0.8	-- --	1320
10.26	--	-- -73	-- --	-- 20.0	3.22 9552	-3.3	-- --	1320
11.26	72.0	43.7 1050	5.89 730	747 20.0	3.22 9552	47.5	0 26.30	1320
12.26	76.5	46.5 1116	6.62 772	791 20.0	3.34 9538	50.5	0 27.63	1320
13.26	81.8	49.7 1194	7.14 779	797 20.0	3.34 9541	54.0	0 27.89	1320
14.26	86.5	52.6 1263	8.06 831	852 20.0	3.34 9538	57.1	0 29.55	1320
15.26	84.9	51.6 1239	8.29 872	893 20.0	3.34 9538	56.0	0 31.07	1320
16.26	87.3	53.0 1274	8.45 865	886 20.0	3.34 9538	57.6	0 30.77	1080
17.26	92.1	56.0 1344	8.73 847	867 20.0	3.34 9541	60.7	0 30.29	1220
18.26	95.8	58.2 1399	9.79 819	839 20.0	3.34 9541	63.2	0 29.14	1340
19.26	99.7	60.6 1454	8.75 784	803 20.0	3.34 9541	65.8	0 27.93	1330
20.26	99.0	60.2 1445	8.98 810	830 20.0	3.34 9541	65.3	0 28.92	1330
21.26	100.2	60.9 1462	8.92 795	814 20.0	3.34 9541	66.1	0 28.34	1250
22.26	99.3	60.4 1449	8.76 788	807 20.0	3.34 9541	65.5	0 28.10	1360
23.26	98.9	60.1 1443	8.78 793	812 20.0	3.34 9538	65.2	0 28.21	1305
0.25	100.5	61.1 1467	8.84 785	805 20.0	3.34 9541	66.3	0 27.93	1200
1.25	99.7	60.6 1456	8.96 802	822 20.0	3.34 9538	65.8	0 28.57	1185
2.25	99.5	60.5 1452	8.97 805	825 20.0	3.34 9541	65.7	0 28.53	1275
3.25	99.8	60.7 1457	8.90 796	816 20.0	3.34 9538	65.9	0 28.45	1345
4.25	--	-- -67	-- --	-- 20.0	3.34 9538	-3.0	-- --	1345
5.25	-0.5	-- -7	-- --	-- 20.0	3.34 9538	-0.3	-- --	1375
6.25	--	-- -67	-- --	-- 20.0	3.34 9538	-3.0	-- --	1375
7.25	48.8	29.7 712	4.01 734	752 20.0	3.34 9538	32.2	0 25.93	1375
0.00 - 7.30								
MAX	101.1	61.5 1475.	9.28 10082.	10331. 20.0	3.34 9542.	66.7	4. 359.71	1375.
MIN	-4.5	-2.9 -83.	0.01-30171.	-30914. 20.0	3.34 9539.	-3.7	-11.-1076.4	1185.
MEAN	92.0	56.7 1024.	8.50 809.	829. 20.0	3.34 9539.	46.3	0. 28.73	1304. 5.66
ACCM	532.3	320.8	48.10 814.	829. 20.0	3.34		0. 28.73	1304. 104.1
0.00 - 0.00								
MAX	101.7	61.9 1485.	9.01 24139.	24698. 20.0	3.34 9556.	67.2	9. 862.43	1360.
MIN	-4.8	-2.8 -80.	1.12-39964.	-40877. 20.0	3.22 9539.	-3.6	-15.-1427.8	1080.
MEAN	90.6	55.5 1155.	8.28 803.	822. 20.0	3.28 9545.	52.2	0. 28.65	1291. 20.75
ACCM	1908.5	1151.4	170.03 802.	823. 20.0	3.28		0. 28.65	1291. 98.50

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-0-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1%
	T/H	T/H	KC/KG	%	%	GR/L	DEG.C	%	H	H
7.25	--	--	-- --	120.2	0.970	2.810	71.2	34.7	1375	--	0.47	0.910	3.100	
8.25	66.9	40.7	7.34 979	118.6	0.970	2.750	68.8	34.7	1080	108	0.47	0.910	3.100	
9.25	93.1	56.6	8.80 844	118.6	0.970	2.750	68.8	34.7	1180	148	0.47	0.910	3.100	
10.25	97.2	59.1	9.09 835	118.6	0.970	2.750	68.8	34.7	1180	130	0.47	0.910	3.100	
11.25	99.0	60.1	9.04 815	118.6	0.970	2.750	68.8	34.7	1195	158	0.47	0.910	3.100	
12.25	99.6	60.6	9.02 808	118.6	0.970	2.750	68.8	34.7	1210	184	0.47	0.910	3.100	
13.25	100.0	60.8	8.74 780	117.4	0.940	2.940	63.6	35.2	1330	202	0.53	0.940	3.100	
14.25	99.9	60.7	8.18 731	117.4	0.940	2.940	63.6	35.2	1410	205	0.53	0.940	3.100	
15.25	99.6	60.5	8.60 771	117.4	0.940	2.940	63.6	35.2	1395	262	0.53	0.940	3.100	
16.25	99.2	60.3	8.58 772	117.4	0.940	2.940	63.6	35.2	1395	219	0.53	0.940	3.100	
17.25	100.2	60.9	8.48 755	118.5	0.950	2.850	66.4	35.2	1400	224	0.53	0.940	3.100	
18.25	99.5	60.5	8.43 756	118.5	0.950	2.850	66.4	35.2	1355	223	0.53	0.940	3.100	
19.25	98.8	60.0	8.28 749	118.5	0.950	2.850	66.4	35.2	1400	232	0.53	0.940	3.100	
20.25	99.2	60.3	8.24 742	118.5	0.950	2.850	66.4	35.2	1385	235	0.53	0.940	3.100	
21.25	99.9	60.7	8.29 741	118.5	0.950	2.850	66.4	35.2	1380	219	0.53	0.940	3.100	
22.25	100.2	60.9	8.24 735	118.5	0.950	2.850	66.4	35.2	1375	235	0.53	0.940	3.100	
23.25	100.4	61.0	8.31 738	118.5	0.950	2.850	66.4	35.2	1300	253	0.53	0.940	3.100	
0.25	99.3	60.4	8.18 735	118.5	0.950	2.850	66.4	35.2	1320	259	0.53	0.940	3.100	
1.25	99.2	60.3	8.20 738	118.5	0.950	2.850	66.4	35.2	1275	252	0.53	0.940	3.100	
2.25	99.3	60.3	8.43 758	117.6	0.950	2.850	64.4	35.2	1305	238	0.53	0.940	3.100	
3.25	99.2	60.3	8.28 745	117.6	0.950	2.850	64.4	35.2	1300	236	0.53	0.940	3.100	
4.25	99.9	60.7	8.26 738	117.6	0.950	2.850	64.4	35.2	1330	242	0.53	0.940	3.100	
5.25	99.5	60.5	8.21 737	117.6	0.950	2.850	64.4	35.2	1340	245	0.53	0.940	3.100	
6.25	99.9	60.7	7.87 703	117.6	0.950	2.850	64.4	35.2	1310	248	0.53	0.940	3.100	
7.25	100.9	61.3	8.26 731	117.6	0.950	2.850	64.4	35.2	1400	250	0.53	0.940	3.100	
0.00 - 7.27														
MAX	101.1	61.5	8.57 776.	118.5	0.950	2.850	66.4	35.2	1400.	267.	0.53	0.940	3.100	
MIN	98.0	59.6	7.82 698.	117.6	0.950	2.850	64.4	35.2	1275.	220.	0.53	0.940	3.100	
MEAN	99.6	60.5	8.21 737.	117.8	0.950	2.850	64.8	35.2	1315.	243.	0.53	0.940	3.100	7.46
ACCM	742.5	451.5	61.23 737.	117.7	0.950	2.850	64.7	35.2	1311.	243.	0.53	0.940	3.100	127.8
0.00 - 0.00														
MAX	101.3	61.5	9.28 10082.	120.2	0.970	2.940	71.2	35.2	1440.	275.	0.53	0.940	3.100	
MIN	-4.5	-2.9	0.01-30171.	117.4	0.940	2.750	63.6	34.7	1080.	43.	0.47	0.910	3.100	
MEAN	95.0	57.9	8.42 791.	118.9	0.959	2.830	68.1	35.0	1315.	200.	0.50	0.924	3.101	22.16
ACCM	2115.4	1283.4	186.43 789.	118.9	0.958	2.835	68.0	35.0	1316.	200.	0.50	0.925	3.100	120.4

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 ..... W1/ GAS TEMP A52
W1/ GAS TEMP A53 ..... W1/ GAS TEMP A51
W1/ PRESSURE A54 ..... W1/ GAS TEMP A61
W1/ TEMP CYCL A54 ..... W1/ T EXIT PREHEAT
W1/ %O2 KILN OUTL ..... W1/ PRESS EX PREH
W1/ PRES EXIT KILN..... .....
W1/ KILN TORQUE W1/ %CO EX PREHEAT
W1/ KILN ROT SPEED J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	--	--	--	--	--	--	--	--	--	--	--	429	--	--	--
8.25	1.3	21.4	63	0.23	798	122	767	171	629	410	411	415	305	-0.03	645
9.25	1.9	18.9	109	3.02	805	191	784	301	632	401	392	405	561	-0.03	831
10.25	1.9	25.1	115	2.99	804	210	790	348	638	404	394	405	636	-0.03	869
11.25	1.9	29.6	131	2.65	805	225	792	352	637	400	392	406	628	-0.03	862
12.25	1.9	32.7	129	2.51	807	218	794	348	629	395	391	402	633	-0.03	866
13.25	1.9	33.6	131	2.65	809	217	791	349	633	394	391	402	635	-0.01	864
14.25	1.9	35.2	131	4.07	806	227	785	351	632	394	388	399	631	-0.04	867
15.25	1.9	34.4	127	3.17	809	221	789	349	639	395	392	402	630	-0.04	863
16.25	1.9	36.2	138	3.28	808	228	796	360	633	398	389	403	630	-0.03	866
17.25	1.9	35.1	118	3.40	810	211	797	343	640	399	392	404	630	-0.03	864
18.25	1.9	34.7	134	3.63	808	228	796	356	636	397	392	404	639	-0.07	866
19.25	1.9	36.1	122	3.06	808	209	793	346	631	397	386	399	616	-0.12	869
20.25	1.9	33.3	117	3.40	810	214	792	339	637	396	387	401	618	-0.05	871
21.25	1.9	32.3	119	3.64	810	214	791	348	631	395	388	401	619	-0.04	863
22.25	1.9	31.3	115	3.81	806	213	789	347	629	393	384	398	618	-0.18	867
23.25	1.9	30.1	131	3.65	807	217	788	337	628	393	380	398	608	-0.17	869
0.25	1.9	30.9	129	3.02	806	210	788	339	623	389	379	394	612	-0.17	862
1.25	1.9	30.3	120	2.88	807	190	790	322	618	383	375	389	582	-0.18	866
2.25	1.9	31.5	129	3.42	807	202	790	358	631	394	384	398	628	-0.18	861
3.25	1.9	33.7	117	3.40	805	200	785	328	632	392	383	397	608	-0.18	859
4.25	1.9	32.8	138	3.15	807	230	793	335	631	392	382	397	613	-0.18	860
5.25	1.9	30.9	133	3.25	806	208	791	330	626	394	389	401	614	-0.18	853
6.25	1.9	29.5	134	3.10	806	216	783	325	611	383	376	388	588	-0.19	840
7.25	1.9	26.5	131	3.43	805	216	784	321	623	389	383	395	606	-0.18	845
0.00 - 7.28															
MAX	2.0	34.2	153.	4.07	811.	253.	797.	366.	639.	399.	391.	402.	646.	-0.15	870.
MIN	2.0	26.2	100.	2.57	802.	173.	777.	306.	611.	379.	373.	388.	566.	-0.20	831.
MEAN	2.0	31.1	128.	3.34	807.	213.	789.	336.	627.	390.	382.	396.	608.	-0.18	857.
ACCM	2.0	31.1	128.		807.	213.	789.	336.	627.	390.	382.	396.	608.	-0.18	857.
0.00 - 0.00															
MAX	2.0	42.8	157.	10.41	813.	252.	802.	375.	667.	470.	470.	455.	650.	1.14	879.
MIN	0.3	0.1	-11.	-0.06	711.	4.	706.	-2.	586.	370.	372.	378.	46.	-0.20	444.
MEAN	1.9	30.9	117.	3.07	805.	202.	787.	322.	632.	397.	391.	403.	587.	-0.06	840.
ACCM	1.9	30.9	117.		805.	202.	787.	322.	632.	397.	391.	403.	587.	-0.06	840.

W1/ NOX REG LTIME .....
W1/ NOX REG STIME .....
W1/ LTW FOR CONTRL.....
W1/ ESTIMATED LTW .....
U1/ LITER WEIGHT .....
KILN CON. MEASUR. .....
KILN CONTROL
COAL TO KILN

.....W1/ NOX CHANGE LT
.....W1/ T EXIT PREHEAT
.....W1/ A50T1 CHANGE
.....W1/ %O2 KILN OUTL
.....
.....W1/ %CO EX PREHEAT
W1/ COAL TO KILN
J1/ ID FAN SPEED

HOUR	KM2F1%	KALARM	KCONTRL	ESTLTW	LTWT	NOXST	LTWGTSP	NOXALT	NOXLT	A50ALT	A50T1	OA15X1	KM2F1 OA1X2CO	OA2V1
	H	H	H	GR/L	GR/L	GR/L	%	%	%	DEG.C		%	%	T/H	RPM
7.25				1375	1059	2306	10.7	17.2	-0.171	429	1.67	--	--	--	--
8.25				1080	1374	1268	62.2	63.4	1.208	415	1.09	0.23	-0.03	7.34	645
9.25				1180	1239	598	45.6	43.8	-1.431	405	-0.87	3.02	-0.03	8.80	831
10.25				1180	1083	448	23.3	21.0	-0.381	405	0.30	2.99	-0.03	9.09	869
11.25				1195	1155	508	31.3	31.5	0.161	406	-0.02	2.65	-0.03	9.04	862
12.25				1210	1265	567	48.6	49.2	0.849	402	-0.12	2.51	-0.03	9.02	866
13.25				1330	1364	628	65.3	65.7	0.565	402	-0.08	2.65	-0.01	8.74	864
14.25				1410	1384	1393	65.6	66.4	-0.169	399	-0.17	4.87	-0.04	8.18	867
15.25				1395	1270	601	51.8	48.6	0.093	402	-0.04	3.17	-0.04	8.60	863
16.25				1395	1377	657	63.5	65.3	0.271	403	0.07	3.28	-0.03	8.58	866
17.25				1400	1360	1369	60.2	60.6	-0.131	404	0.22	3.40	-0.03	8.48	864
18.25				1355	1406	1397	66.4	66.5	0.116	404	0.06	3.63	-0.07	8.43	866
19.25				1400	1458	1449	73.5	72.9	0.485	399	-0.14	3.06	-0.12	8.28	869
20.25				1385	1417	1388	69.3	70.5	-0.127	401	0.14	3.40	-0.05	8.24	871
21.25				1380	1426	1417	73.2	73.2	0.153	401	-0.04	3.64	-0.04	8.29	863
22.25				1375	1342	1345	59.9	61.0	-0.400	398	-0.16	3.81	-0.18	8.24	867
23.25				1300	1345	1321	56.2	55.7	-0.114	398	-0.10	3.65	-0.17	8.31	869
0.25				1320	1323	1325	54.7	55.5	-0.059	394	0.07	3.02	-0.17	8.18	862
1.25				1275	1313	1303	58.3	57.1	0.145	389	-0.48	2.88	-0.18	8.20	866
2.25				1305	1285	1282	51.4	51.7	-0.119	398	0.10	3.42	-0.18	8.43	861
3.25				1300	1327	1324	60.6	60.9	0.274	397	-0.04	3.40	-0.18	8.28	859
4.25				1330	1313	1313	57.7	57.8	-0.103	397	0.12	3.15	-0.18	8.26	860
5.25				1340	1319	1320	58.1	58.9	0.007	401	0.29	3.25	-0.18	8.21	853
6.25				1310	1338	1335	63.7	64.6	-0.036	398	-0.32	3.10	-0.19	7.87	840
7.25				1400	1244	1268	45.9	45.9	-0.593	395	0.53	3.43	-0.18	8.26	845
0.00 - 7.30															
MAX				1400.	1351.	1378.	66.4	66.6	0.415	402.	1.07	4.07	-0.15	8.57	870.
MIN				1275.	1237.	1264.	45.7	44.8	-0.623	388.	-0.80	2.57	-0.20	7.82	831.
MEAN	7.50			1315.	1314.	1314.	57.3	57.4	-0.031	396.	-0.01	3.34	-0.18	8.21	857.
ACCM	127.8			1311.		1314.			-0.031	396.	-0.01		-0.18	61.59	857.
0.00 - 0.00															
MAX				1440.	1466.	6119.	74.6	73.8	2.363	455.	6.23	10.41	1.14	9.28	879.
MIN				1080.	1002.	436.	8.4	10.1	-1.454	378.	-4.48	-0.06	-0.20	0.01	444.
MEAN	22.16			1315.	1305.	1254.	51.7	51.7	0.018	403.	0.00	3.07	-0.06	8.42	840.
ACCM	120.4			1316.		1254.			0.018	403.	0.00		-0.06	186.43	840.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL..... .....
NET HEAT CONSUMP. ....SHORT TONS CLINKER
HEAT CONSUMPTION ....LB COAL / SH.T
W1/ COAL TO KILN ....MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.25	--	-- -67	-- --	-- 20.0	3.34 9538	-3.0	-- --	1375
8.25	66.9	40.7 977	7.34 979	1003 20.0	3.34 9538	44.2	0 34.86	1080
9.25	93.1	56.6 1359	8.80 844	865 20.0	3.34 9538	61.4	0 30.21	1180
10.25	97.2	59.1 1419	9.09 835	856 20.0	3.34 9538	64.1	0 29.76	1180
11.25	99.0	60.1 1444	9.04 815	835 20.0	3.34 9538	65.3	0 29.06	1195
12.25	99.6	60.6 1454	9.02 808	828 20.0	3.34 9538	65.7	0 28.75	1210
13.25	100.0	60.8 1460	8.74 780	807 20.0	4.07 9455	66.0	0 27.72	1330
14.25	99.9	60.7 1458	8.18 731	756 20.0	4.07 9455	65.9	0 25.97	1410
15.25	99.6	60.5 1453	8.60 771	797 20.0	4.07 9455	65.7	0 27.42	1395
16.25	99.2	60.3 1448	8.58 772	798 20.0	4.07 9455	65.5	0 27.20	1395
17.25	100.2	60.9 1462	8.48 755	781 20.0	4.07 9455	66.1	0 26.73	1400
18.25	99.5	60.5 1452	8.43 756	782 20.0	4.07 9455	65.7	0 26.61	1355
19.25	98.8	60.0 1442	8.28 749	774 20.0	4.07 9458	65.2	0 26.36	1400
20.25	99.2	60.3 1447	8.24 742	767 20.0	4.07 9455	65.4	0 26.24	1385
21.25	99.9	60.7 1457	8.29 741	766 20.0	4.07 9455	65.9	0 26.32	1380
22.25	100.2	60.9 1462	8.24 735	759 20.0	4.07 9458	66.1	0 26.04	1375
23.25	100.4	61.0 1465	8.31 738	763 20.0	4.07 9458	66.3	0 26.32	1300
0.25	99.3	60.4 1450	8.18 735	759 20.0	4.07 9455	65.5	0 26.01	1320
1.25	99.2	60.3 1448	8.20 738	763 20.0	4.07 9455	65.5	0 26.21	1275
2.25	99.3	60.3 1449	8.43 758	784 20.0	4.07 9458	65.5	0 26.91	1305
3.25	99.2	60.3 1448	8.28 745	770 20.0	4.07 9455	65.5	0 26.29	1300
4.25	99.9	60.7 1459	8.26 738	762 20.0	4.07 9458	65.9	0 26.08	1330
5.25	99.5	60.5 1452	8.21 737	761 20.0	4.07 9458	65.6	0 26.05	1340
6.25	99.9	60.7 1458	7.87 703	727 20.0	4.07 9458	65.9	0 24.99	1310
7.25	100.9	61.3 1473	8.26 731	755 20.0	4.07 9458	66.6	0 25.92	1400
0.00 - 7.30								
MAX	101.1	61.5 1475.	8.57 776.	802. 20.0	4.07 9458.	66.7	0. 27.44	1400.
MIN	98.0	59.6 1431.	7.82 698.	722. 20.0	4.07 9455.	64.7	0. 24.70	1275.
MEAN	99.6	60.5 1453.	8.21 737.	761. 20.0	4.07 9457.	65.7	0. 26.06	1316. 7.51
ACCM	747.9	454.7	61.68 737.	761. 20.0	4.07		0. 26.06	1311. 127.8
0.00 - 0.00								
MAX	101.3	61.5 1477.	9.28 10082.	10331. 20.0	4.07 9542.	66.8	4. 359.71	1440.
MIN	-4.5	-2.9 -83.	0.01-30171.	-30914. 20.0	3.34 9455.	-3.7	-11.-1076.4	1080.
MEAN	95.0	57.9 1283.	8.42 791.	814. 20.0	3.68 9500.	58.0	0. 28.09	1315. 22.16
ACCM	2115.4	1283.4	186.43 789.	814. 20.0	3.68		0. 28.08	1316. 120.4

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1%
	T/H	T/H T/H KC/KG		%	% GR/L	DEG.C	%	H H
7.25	0.0	0.0 0.00 0	0.0 0.000	0.000 0.0	0.0 0	0	0.00 0.000	0.000
8.25	0.0	0.0 0.00 0	0.0 0.000	0.000 0.0	0.0 0	0	0.00 0.000	0.000
9.25	0.0	0.0 0.00 0	0.0 0.000	0.000 0.0	0.0 0	0	0.00 0.000	0.000
10.25	0.0	0.0 0.00 0	0.0 0.000	0.000 0.0	0.0 0	0	0.00 0.000	0.000
11.25	99.9	60.7 8.46 756	0.0 0.000	0.000 0.0	0.0 0	231	0.00 0.000	0.000
12.25	99.5	60.5 8.47 760	0.0 0.000	0.000 0.0	0.0 1385	239	0.00 0.000	0.000
13.25	99.3	60.4 8.28 744	0.0 0.000	0.000 0.0	0.0 1380	265	0.00 0.000	0.000
14.25	94.5	57.4 8.24 779	115.8 0.920	2.940 58.3	35.0 1435	340	0.96 0.000	2.980
15.25	97.5	59.2 8.24 755	115.8 0.920	2.940 58.3	35.0 1345	275	0.96 0.000	2.980
16.25	99.7	60.6 8.15 730	112.8 0.890	2.940 50.8	35.0 1440	272	0.96 0.000	2.980
17.25	99.6	60.5 8.23 737	112.8 0.890	2.940 50.8	35.0 1380	230	0.96 0.000	2.980
18.25	99.4	60.4 8.26 742	112.8 0.890	2.940 50.8	35.0 1220	173	0.96 0.000	2.980
19.25	99.7	60.6 8.40 752	112.8 0.890	2.940 50.8	35.0 1140	177	0.96 0.000	2.980
20.25	100.5	61.1 8.53 757	112.8 0.890	2.940 50.8	35.0 1080	183	0.96 0.000	2.980
21.25	99.0	60.1 8.46 763	112.8 0.890	2.940 50.8	35.0 1140	215	0.96 0.000	2.980
22.25	100.5	61.1 8.56 761	112.8 0.890	2.940 50.8	35.0 1140	223	0.96 0.000	2.980
23.25	100.0	60.8 8.57 765	112.8 0.890	2.940 50.8	35.0 1265	237	0.96 0.000	2.980
0.25	99.7	60.6 8.62 771	112.1 0.890	2.850 50.8	35.0 1195	270	0.96 0.000	2.980
1.25	100.4	61.0 8.80 782	112.1 0.890	2.850 50.8	35.0 1175	245	0.96 0.000	2.980
2.25	100.0	60.8 8.81 787	112.1 0.890	2.850 50.8	35.0 1250	246	0.96 0.000	2.980
3.25	100.0	60.8 8.68 774	112.1 0.890	2.850 50.8	35.0 1305	238	0.96 0.000	2.980
4.25	99.6	60.6 8.49 761	112.1 0.890	2.850 50.8	35.0 1305	257	0.96 0.000	2.980
5.25	100.4	61.0 8.41 748	112.1 0.890	2.850 50.8	35.0 1305	264	0.96 0.000	2.980
6.25	100.4	61.0 8.43 750	112.1 0.890	2.850 50.8	35.0 1295	266	0.96 0.000	2.980
7.25	100.3	61.0 8.29 738	112.1 0.890	2.850 50.8	35.0 1360	236	0.96 0.000	2.980
0.00 - 7.27								
MAX	101.3	61.6 8.95 810.	112.1 0.890	2.850 50.9	35.1 1360.	298.	0.96 0.000	2.980
MIN	96.1	58.5 8.16 726.	112.1 0.890	2.850 50.9	35.1 1175.	228.	0.96 0.000	2.980
MEAN	99.8	60.7 8.59 768.	112.1 0.890	2.850 50.9	35.1 1264.	250.	0.96 0.000	2.980 0.59 7.46
ACCM	744.4	452.6 64.03 768.	112.1 0.890	2.850 50.9	35.1 1261.	250.	0.96 0.000	2.980 1.30 20.36
0.00 - 0.00								
MAX	101.6	61.7 8.66 809.	115.8 0.920	2.940 58.4	35.1 1440.	354.	0.96 0.000	2.980
MIN	41.1	28.5 3.44 720.	0.0 0.000	0.000 0.0	0.0 0.	105.	0.00 0.000	0.000
MEAN	99.2	60.3 8.38 755.	88.2 0.697	2.287 40.5	27.3 1226.	233.	0.75 0.000	2.316 0.71 12.89
ACCM	1279.4	777.9 108.14 755.	95.9 0.758	2.481 44.2	29.7 1269.	233.	0.81 0.000	2.522 0.71 12.89

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 .....
W1/ GAS TEMP A53 .....
W1/ PRESSURE A54 .....
W1/ TEMP CYCL A54 .....
W1/ %O2 KILN OUTL .....
W1/ PRES EXIT KILN.....
W1/ KILN TORQUE .....
W1/ KILN ROT SPEED .....

.....W1/ GAS TEMP A52
.....W1/ GAS TEMP A51
.....W1/ GAS TEMP A61
.....W1/ T EXIT PREHEAT
.....W1/ PRESS EX PREH
.....
W1/ %CO EX PREHEAT
J1/ ID FAN SPEED

HOUR	OA15V1 OA15A1 RPM	OA15P1 OA15X1 %	A54T1 A54P1 MMWG	A53T1 A53P1 %	A52T1 DEG.C	A61T1 A51T1 MMWG	A50P1 A50T1 DEG.C	OA1X2CO DEG.C	OA2V1 DEG.C	DEG.C	MMWG	%	RPM
7.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0.00	0
8.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0.00	0
9.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0.00	0
10.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0.00	0
11.25	1.9	32.9	96	2.85	809	207	785	328	623	399	389	401	605	-0.01	856
12.25	1.9	33.5	117	1.79	807	220	791	331	623	385	377	389	597	-0.02	853
13.25	1.9	32.8	127	2.95	805	213	787	350	623	386	379	391	616	0.00	865
14.25	1.8	36.1	125	3.23	807	216	792	343	632	392	383	397	598	0.00	855
15.25	1.8	28.7	120	3.53	806	221	792	347	631	391	384	397	614	0.00	857
16.25	1.9	21.0	121	2.86	804	200	783	342	622	391	379	394	615	0.00	866
17.25	1.9	18.6	117	3.42	803	204	787	343	620	394	383	397	613	0.00	860
18.25	1.9	21.6	120	3.67	803	218	790	345	627	393	382	397	616	0.00	867
19.25	1.9	24.1	116	3.16	804	197	789	339	631	396	385	400	612	0.01	865
20.25	1.9	28.6	97	3.70	805	187	786	321	631	400	382	405	607	0.00	864
21.25	1.9	31.1	113	2.91	806	193	794	340	629	394	384	399	615	0.00	862
22.25	1.9	32.7	105	3.29	807	206	793	332	632	393	385	398	607	-0.01	862
23.25	1.9	34.7	120	2.92	807	205	790	334	628	389	381	395	601	-0.01	866
0.25	1.9	31.8	133	3.30	806	219	791	342	628	394	387	403	613	-0.02	859
1.25	1.9	31.6	114	2.64	807	204	789	331	632	399	388	403	616	-0.01	863
2.25	1.9	32.8	97	3.11	812	199	789	315	635	400	394	405	609	-0.03	862
3.25	1.9	32.5	101	3.55	809	199	788	314	637	401	390	404	605	-0.02	860
4.25	1.9	32.2	118	2.97	807	197	783	333	631	393	386	398	616	-0.03	864
5.25	1.9	32.3	126	3.04	807	209	787	339	634	398	391	404	619	-0.03	860
6.25	1.9	28.8	122	3.21	807	204	789	318	635	395	388	403	585	-0.03	859
7.25	1.9	26.7	128	3.72	806	210	791	316	625	399	390	402	615	-0.04	861
0.00 - 7.28													
MAX	2.0	35.9	150.	4.12	814.	249.	799.	364.	646.	404.	401.	408.	630.	0.00	870.
MIN	2.0	26.5	86.	2.17	803.	149.	779.	294.	619.	389.	379.	395.	572.	-0.08	851.
MEAN	2.0	31.5	117.	3.19	808.	204.	790.	331.	632.	397.	389.	402.	609.	-0.03	862.
ACCM	2.0	31.5	117.		808.	204.	790.	331.	632.	397.	389.	402.	609.	-0.03	862.
0.00 - 0.00													
MAX	2.0	43.2	142.	4.03	811.	246.	799.	363.	641.	402.	396.	407.	632.	0.03	873.
MIN	1.8	13.5	79.	1.26	783.	161.	760.	253.	611.	380.	371.	369.	460.	-0.13	833.
MEAN	2.0	29.2	116.	3.07	806.	209.	789.	335.	628.	392.	383.	397.	608.	-0.01	863.
ACCM	2.0	29.2	116.		806.	209.	789.	335.	628.	392.	383.	397.	608.	-0.01	863.

W1/ NOX REG LTIME
W1/ NOX REG STIME
W1/ LTW FOR CONTRL
W1/ ESTIMATED LTW
U1/ LITER WEIGHT
KILN CON. MEASUR.
KILN CONTROL
COAL TO KILN

W1/ NOX CHANGE LT
W1/ T EXIT PREHEAT
W1/ A50T1 CHANGE
W1/ %O2 KILN OUTL
W1/ %CO EX PREHEAT
W1/ COAL TO KILN
J1/ ID FAN SPEED

HOUR	KM2F1%	KALARM	ESTLTW	NOXST	NOXALT	A50ALT		KM2F1		
	KCONTRL	LTWT	LTWGTSP	NOXLT	A50T1	OA15X1		OA1X2CO	OA2V1	
	H	H	H	GR/L	GR/L	GR/L	%	%	%	DEG.C		%	%	T/H	RPM
7.25				0	0	0	0.0	0.0	0.000	0	0.00	0.00	0.00	0.00	0
8.25				0	0	0	0.0	0.0	0.000	0	0.00	0.00	0.00	0.00	0
9.25				0	0	0	0.0	0.0	0.000	0	0.00	0.00	0.00	0.00	0
10.25				0	0	0	0.0	0.0	0.000	0	0.00	0.00	0.00	0.00	0
11.25				0	0	0	0.0	0.0	0.000	401	58.34	2.85	-0.01	8.46	856
12.25				1385	1703	1645	58.7	59.2	0.486	389	-0.24	1.79	-0.02	8.47	853
13.25				1380	1751	1668	63.9	65.1	0.157	391	0.09	2.95	0.00	8.28	865
14.25				1435	1367	1525	48.9	45.1	0.050	397	-0.27	3.23	0.00	8.24	855
15.25				1345	1384	1533	56.2	55.9	0.181	397	0.10	3.53	0.00	8.24	857
16.25				1440	1428	1488	52.5	54.7	-0.273	394	0.16	2.86	0.00	8.15	866
17.25				1380	1381	1381	38.1	38.0	-0.493	397	0.06	3.42	0.00	8.23	860
18.25				1220	1338	1308	27.1	27.1	-0.287	397	-0.07	3.67	0.00	8.26	867
19.25				1140	1300	1266	21.1	21.7	-0.242	400	0.14	3.16	0.01	8.40	865
20.25				1080	1278	1288	28.8	28.2	0.044	405	0.25	3.70	0.00	8.53	864
21.25				1140	1276	1242	36.1	36.8	0.318	399	-0.22	2.91	0.00	8.46	862
22.25				1140	1290	1256	40.8	39.9	0.122	398	-0.14	3.29	-0.01	8.56	862
23.25				1265	1287	1255	41.1	39.2	-0.036	395	-0.46	2.92	-0.01	8.57	866
0.25				1195	1199	1197	34.4	33.2	-0.280	403	0.10	3.30	-0.02	8.62	859
1.25				1175	1247	1222	39.4	38.5	0.165	403	0.00	2.64	-0.01	8.80	863
2.25				1250	1338	1337	48.1	47.4	0.108	405	0.02	3.11	-0.03	8.81	862
3.25				1305	1385	1374	52.6	54.8	-0.026	404	0.15	3.55	-0.02	8.68	860
4.25				1305	1441	1325	62.4	60.9	0.382	398	-0.09	2.97	-0.03	8.49	864
5.25				1305	1388	1377	55.5	55.1	-0.086	404	-0.02	3.04	-0.03	8.41	860
6.25				1295	1336	1334	54.3	53.7	0.056	403	-0.25	3.21	-0.03	8.43	859
7.25				1360	1311	1313	50.6	50.3	-0.118	402	0.30	3.72	-0.04	8.29	861
0.00 - 7.30															
MAX				1360.	1446.	1444.	62.4	61.1	0.537	408.	0.82	4.12	0.00	8.95	870.
MIN				1175.	1197.	1196.	33.5	33.0	-0.386	395.	-0.59	2.17	-0.08	8.16	848.
MEAN	7.50	0.64		1265.	1338.	1315.	49.5	49.5	0.059	402.	0.02	3.20	-0.03	8.58	862.
ACCM	20.40	1.35		1261.		1315.			0.059	402.	0.02		-0.03	64.39	862.
0.00 - 0.00															
MAX				1440.	1766.	1720.	65.4	67.0	3.862	407.	58.35	4.03	0.03	8.66	873.
MIN				0.	0.	0.	0.0	0.0	-1.483	369.	-1.83	1.26	-0.13	3.44	833.
MEAN	12.89	0.71		1226.	1376.	1372.	41.9	42.0	0.097	397.	0.43	3.07	-0.01	8.38	863.
ACCM	12.89	0.71		1269.		1372.			0.097	397.	0.43		-0.01	108.14	863.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL..... .....
NET HEAT CONSUMP. ....SHORT TONS CLINKER
HEAT CONSUMPTION ....LB COAL / SH.T
W1/ COAL TO KILN ....MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD T/H	PRODR T/H	KCAL KM2F1 T	C-MOIST MKCAL T/H	C-HEAT KC/KG	STONS KC/KG	BTU C-ASH %	LB.COAL %		LTWT KM2F1% T/H		GR/L	H
7.25	0.0	0.0	0	0.00	0	0	0.0	0.00	0	0.0	0	0.00	0
8.25	0.0	0.0	0	0.00	0	0	0.0	0.00	0	0.0	0	0.00	0
9.25	0.0	0.0	0	0.00	0	0	0.0	0.00	0	0.0	0	0.00	0
10.25	0.0	0.0	0	0.00	0	0	0.0	0.00	0	0.0	0	0.00	0
11.25	99.9	60.7	1458	8.46	756	591	0.0	0.00	12486	65.9	0	35.43	0
12.25	99.5	60.5	1452	8.47	760	595	0.0	0.00	12486	65.6	0	35.58	1305
13.25	99.3	60.4	1449	8.28	744	583	0.0	0.00	12486	65.5	0	34.93	1380
14.25	94.5	57.4	1378	8.24	779	794	20.0	2.93	9588	62.3	0	28.16	1435
15.25	97.5	59.2	1422	8.24	755	770	20.0	2.93	9588	64.3	0	27.00	1345
16.25	99.7	60.6	1455	8.15	730	744	20.0	2.93	9588	65.8	0	26.12	1440
17.25	99.6	60.5	1453	8.23	737	752	20.0	2.93	9588	65.7	0	26.27	1390
18.25	99.4	60.4	1451	8.26	742	756	20.0	2.93	9588	65.6	0	26.61	1220
19.25	99.7	60.6	1455	8.40	752	767	20.0	2.93	9588	65.8	0	26.95	1140
20.25	100.5	61.1	1467	8.53	757	772	20.0	2.93	9588	66.3	0	27.20	1080
21.25	99.0	60.1	1444	8.46	763	778	20.0	2.93	9588	65.3	0	27.41	1140
22.25	100.5	61.1	1466	8.56	761	775	20.0	2.93	9588	66.3	0	27.33	1140
23.25	100.0	60.8	1460	8.57	765	780	20.0	2.93	9588	66.0	0	27.50	1265
0.25	99.7	60.6	1456	8.62	771	786	20.0	2.93	9588	65.8	0	27.76	1195
1.25	100.4	61.0	1466	8.80	782	797	20.0	2.93	9588	66.3	0	28.04	1175
2.25	100.0	60.8	1459	8.81	787	802	20.0	2.93	9588	66.0	0	28.39	1250
3.25	100.0	60.8	1460	8.68	774	789	20.0	2.93	9588	66.0	0	27.90	1305
4.25	99.6	60.6	1454	8.49	761	776	20.0	2.93	9588	65.7	0	27.31	1305
5.25	100.4	61.0	1466	8.41	748	762	20.0	2.93	9588	66.3	0	26.85	1305
6.25	100.4	61.0	1465	8.43	750	764	20.0	2.93	9588	66.2	0	26.85	1295
7.25	100.3	61.0	1464	8.29	738	753	20.0	2.93	9588	66.2	0	26.67	1360
0.00 - 7.30													
MAX	101.3	61.6	1479.	8.95	810.	826.	20.0	2.93	9589.	66.9	0.	29.05	1360.
MIN	96.1	58.5	1404.	8.16	726.	740.	20.0	2.93	9586.	63.5	0.	26.04	1175.
MEAN	99.8	60.7	1456.	8.58	768.	783.	20.0	2.93	9589.	65.9	0.	27.55	1265. 7.51
ACCM	749.7	455.8		64.47	768.	783.	20.0	2.93			0.	27.55	1261. 20.42
0.00 - 0.00													
MAX	101.6	61.7	1482.	8.66	809.*******		20.0	2.93	12490.	67.0	0.	37.71	1440.
MIN	41.1	28.5	684.	3.44	720.	572.	0.0	0.00	9586.	31.0	0.	0.00	0.
MEAN	99.2	60.3	1447.	8.38	755.*******		15.5	2.27	10239.	65.5	0.	28.93	1226. 12.89
ACCM	1279.4	777.9		108.14	755.	721.	15.5	2.27			0.	28.91	1269. 12.89

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S .... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS .... U1/ LITER WEIGHT
W1/ KILN FEED LSF .... U1/ CLINKER TEMP
W1/ BURNING FACTOR..... ..... U1/ FREE LIME
HEAT CONSUMPTION .... U1/ CLINKER LSF
W1/ COAL TO KILN .... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1%		
	T/H	T/H	T/H	KC/KG			%	%	GR/L	DEG.C	%		H	H
7.25	100.0	60.8	8.23	735	112.1	0.890	2.850	50.8	35.0	1295	239	0.96	0.000	2.980
8.25	100.2	60.9	8.45	753	121.8	0.990	2.770	75.7	35.0	1340	217	0.96	0.000	2.980
9.25	100.1	60.8	8.56	763	121.8	0.990	2.770	75.7	35.0	1170	225	0.96	0.000	2.980
10.25	99.4	60.4	8.68	779	121.8	0.990	2.770	75.7	35.0	1170	214	0.96	0.000	2.980
11.25	99.9	60.7	8.52	762	121.8	0.990	2.770	75.7	35.0	1170	221	0.96	0.000	2.980
12.25	99.9	60.7	8.38	749	121.8	0.990	2.770	75.7	35.0	1325	241	0.96	0.000	2.980
13.25	99.5	60.5	8.46	760	110.4	0.870	2.950	45.5	34.7	1285	259	0.24	0.930	3.020
14.25	99.6	60.5	8.42	755	110.4	0.870	2.950	45.5	34.7	1190	265	0.24	0.930	3.020
15.25	99.9	60.7	7.97	713	110.4	0.870	2.950	45.5	34.7	1355	250	0.24	0.930	3.020
16.25	98.7	60.0	8.24	745	110.4	0.870	2.950	45.5	34.7	1310	253	0.24	0.930	3.020
17.25	99.6	60.5	8.30	744	115.3	0.920	2.880	58.9	34.7	1385	266	0.24	0.930	3.020
18.25	98.7	60.0	8.16	738	115.3	0.920	2.880	58.9	34.7	1430	298	0.24	0.930	3.020
19.25	100.5	61.1	7.88	700	115.3	0.920	2.880	58.9	34.7	1510	286	0.24	0.930	3.020
20.25	99.4	60.4	7.24	650	115.3	0.920	2.880	58.9	34.7	1510	254	0.24	0.930	3.020
21.25	100.1	60.9	8.11	724	115.3	0.920	2.880	58.9	34.7	1475	232	0.24	0.930	3.020
22.25	100.5	61.1	8.12	721	115.3	0.920	2.880	58.9	34.7	1175	183	0.24	0.930	3.020
23.25	100.1	60.8	8.10	723	115.3	0.920	2.880	58.9	34.7	1215	176	0.24	0.930	3.020
0.25	99.4	60.4	8.03	721	126.0	1.020	2.870	83.6	34.7	1175	221	0.24	0.930	3.020
1.25	99.5	60.5	8.10	726	126.0	1.020	2.870	83.6	34.7	1125	241	0.24	0.930	3.020
2.25	99.9	60.7	8.23	735	126.0	1.020	2.870	83.6	34.7	1065	282	0.24	0.930	3.020
3.25	99.8	60.6	8.41	753	126.0	1.020	2.870	83.6	34.7	1160	200	0.24	0.930	3.020
4.25	98.8	60.0	8.76	792	126.0	1.020	2.870	83.6	34.7	1195	241	0.24	0.930	3.020
5.25	100.0	60.8	8.53	762	126.0	1.020	2.870	83.6	34.7	1280	250	0.24	0.930	3.020
6.25	99.1	60.2	8.14	733	126.0	1.020	2.870	83.6	34.7	1460	248	0.24	0.930	3.020
7.25	101.4	61.6	8.82	777	126.0	1.020	2.870	83.6	34.7	1450	250	0.24	0.930	3.020
0.00 - 7.27														
MAX	102.0	62.0	9.02	813.	126.0	1.020	2.870	83.6	34.7	1460.	280.	0.24	0.930	3.020		
MIN	97.9	59.5	7.81	697.	126.0	1.020	2.870	83.6	34.7	1065.	144.	0.24	0.930	3.020		
MEAN	99.8	60.7	8.35	747.	126.0	1.020	2.870	83.6	34.7	1227.	227.	0.24	0.930	3.020	5.04	7.46
ACCM	744.7	452.8	62.28	747.	126.0	1.020	2.870	83.6	34.7	1253.	227.	0.24	0.930	3.020	16.30	44.42
0.00 - 0.00														
MAX	105.4	64.1	8.98	810.	126.0	1.020	2.950	83.6	35.1	1510.	320.	0.96	0.930	3.020		
MIN	96.1	58.5	7.15	611.	110.4	0.870	2.770	45.5	34.7	1170.	172.	0.24	0.000	2.980		
MEAN	99.8	60.7	8.34	746.	115.1	0.920	2.856	58.4	34.9	1295.	245.	0.64	0.413	2.999	10.56	24.02
ACCM	2395.9	1456.7	200.13	746.	115.8	0.927	2.852	60.1	34.9	1280.	245.	0.63	0.426	2.998	11.26	36.94

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 .....
W1/ GAS TEMP A53 .....
W1/ PRESSURE A54 .....
W1/ TEMP CYCL A54 .....
W1/ %O2 KILN OUTL .....
W1/ PRES EXIT KILN.....
W1/ KILN TORQUE
W1/ KILN ROT SPEED

.....W1/ GAS TEMP A52
.....W1/ GAS TEMP A51
.....W1/ GAS TEMP A61
.....W1/ T EXIT PREHEAT
.....W1/ PRESS EX PREH
.....
W1/ %CO EX PREHEAT
J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	1.9	27.7	109	3.58	805	208	785	308	628	394	391	401	583	-0.03	859
8.25	1.9	25.0	117	2.93	805	209	789	341	623	388	382	396	611	-0.02	856
9.25	1.9	24.7	114	2.39	807	233	788	352	628	393	384	397	618	-0.01	869
10.25	1.9	27.2	117	2.24	806	206	785	342	625	391	381	395	610	-0.02	873
11.25	1.9	29.3	117	2.31	805	202	790	335	631	391	381	396	600	-0.02	877
12.25	1.9	30.2	116	3.01	805	211	789	344	632	395	386	399	613	-0.01	879
13.25	1.9	33.7	123	2.90	805	222	790	344	635	396	385	398	618	-0.01	869
14.25	1.9	30.6	123	2.76	809	228	793	357	635	397	387	401	625	0.00	874
15.25	1.9	30.2	110	3.94	804	199	785	313	629	394	384	399	600	-0.02	857
16.25	1.9	31.1	111	3.69	802	198	783	335	626	393	383	398	617	-0.01	869
17.25	1.9	33.3	111	3.00	804	200	782	337	625	391	379	395	619	0.00	872
18.25	1.9	28.4	119	2.74	802	205	785	333	619	388	379	396	591	-0.02	878
19.25	1.9	22.5	116	4.59	800	216	785	357	622	393	381	397	631	-0.01	884
20.25	1.9	17.8	110	4.49	796	192	776	328	618	382	374	389	585	-0.02	847
21.25	1.9	16.6	132	3.09	800	206	777	336	611	382	372	386	593	-0.04	844
22.25	1.9	21.5	120	3.00	800	214	782	331	621	384	374	390	607	-0.02	852
23.25	1.9	24.0	128	2.41	803	221	781	339	617	385	375	392	618	-0.04	855
0.25	1.9	24.1	134	2.92	801	217	778	345	624	387	379	394	615	-0.03	856
1.25	1.9	23.9	121	3.10	801	195	780	340	619	388	379	394	627	-0.04	857
2.25	1.9	24.9	125	2.82	802	206	784	335	618	388	379	392	626	-0.07	856
3.25	1.9	28.4	140	2.32	804	228	782	341	622	387	378	391	614	-0.06	855
4.25	1.9	30.6	145	1.21	806	241	785	346	624	389	380	393	616	-0.03	853
5.25	1.9	31.6	148	1.40	808	229	784	359	624	392	383	397	631	-0.02	863
6.25	1.9	29.3	135	2.91	802	226	785	359	624	392	380	396	631	-0.05	868
7.25	1.9	29.6	123	3.43	802	206	784	359	624	392	384	398	637	-0.18	868
0.00 - 7.28															
MAX	2.0	32.1	164.	4.19	814.	264.	797.	376.	634.	395.	398.	401.	645.	0.01	875.
MIN	2.0	23.4	104.	0.29	798.	162.	774.	322.	613.	382.	372.	378.	599.	-0.20	847.
MEAN	2.0	27.8	132.	2.34	804.	216.	784.	342.	622.	389.	380.	395.	621.	-0.06	860.
ACCM	2.0	27.8	132.		804.	216.	784.	342.	622.	389.	380.	395.	621.	-0.06	860.
0.00 - 0.00															
MAX	2.0	35.9	151.	5.96	814.	259.	799.	377.	646.	404.	401.	408.	653.	0.01	889.
MIN	1.9	14.4	86.	1.61	795.	149.	765.	210.	602.	373.	364.	382.	563.	-0.18	825.
MEAN	2.0	28.1	119.	3.15	805.	209.	787.	335.	627.	393.	383.	398.	612.	-0.03	865.
ACCM	2.0	28.1	119.		805.	209.	787.	335.	627.	393.	383.	398.	612.	-0.03	865.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME .....
W1/ NOX REG STIME .....
W1/ LTW FOR CONTRL.....
W1/ ESTIMATED LTW .....
U1/ LITER WEIGHT .....
KILN CON. MEASUR. .....
KILN CONTROL
COAL TO KILN

.....W1/ NOX CHANGE LT
.....W1/ T EXIT PREHEAT
.....W1/ A50T1 CHANGE
.....W1/ ZO2 KILN OUTL
.....
.....W1/ ZCO EX PREHEAT
W1/ COAL TO KILN
J1/ ID FAN SPEED

HOUR	KM2F1%	KALARM	ESTLTW	NOXST	NOXALT	A50ALT	KM2F1
	KCONTRL	LTWT	LTWGTSP	NOXLT	A50T1	OA15X1	OA1X2CO	OA2V1
	H H H	GR/L GR/L GR/L	% % %	DEG.C	%	%	T/H	RPM
7.25		1295 1323 1322	50.9 52.0 -0.186	401	0.16	3.58	-0.03	8.23	859
8.25		1340 1241 1243	37.1 41.0 -0.466	396	-0.16	2.93	-0.02	8.45	856
9.25		1170 1133 1204	26.6 26.6 -0.263	397	0.24	2.39	-0.01	8.56	869
10.25		1170 1169 1169	31.4 31.1 -0.150	395	-0.18	2.24	-0.02	8.68	873
11.25		1170 1311 1305	47.9 48.7 0.555	396	-0.10	2.31	-0.02	8.52	877
12.25		1325 1256 1290	43.3 41.9 -0.582	399	0.21	3.01	-0.01	8.38	879
13.25		1285 1220 1223	37.6 36.8 -0.412	398	0.32	2.90	-0.01	8.46	869
14.25		1190 1310 1320	47.5 48.3 0.347	401	0.15	2.76	0.00	8.42	874
15.25		1355 1274 1280	41.6 42.5 -0.395	399	0.01	3.94	-0.02	7.97	857
16.25		1310 1252 1257	38.0 38.2 -0.158	398	0.04	3.69	-0.01	8.24	869
17.25		1305 1308 1319	44.1 44.3 0.323	395	0.01	3.00	0.00	8.30	872
18.25		1430 1373 1429	49.4 49.4 0.339	396	-0.07	2.74	-0.02	8.16	878
19.25		1510 1443 1385	50.4 52.2 -0.182	397	0.56	4.59	-0.01	7.88	884
20.25		1510 1312 1329	40.8 39.7 0.014	389	-1.38	4.49	-0.02	7.24	847
21.25		1475 1206 1310	25.9 21.6 -0.227	386	-0.09	3.09	-0.04	8.11	844
22.25		1175 1307 1384	33.6 33.6 0.124	390	0.30	3.00	-0.02	8.12	852
23.25		1215 1295 1363	34.8 34.6 0.064	392	0.09	2.41	-0.04	8.10	855
0.25		1175 1170 1319	29.2 29.1 -0.135	394	0.16	2.92	-0.03	8.03	856
1.25		1125 993 1268	19.5 18.3 -0.432	394	-0.27	3.10	-0.04	8.10	857
2.25		1065 1180 1155	27.3 28.0 0.486	392	0.01	2.82	-0.07	8.23	856
3.25		1160 1225 1220	30.9 31.2 0.074	391	0.06	2.32	-0.06	8.41	855
4.25		1195 1230 1244	31.5 31.5 0.003	393	-0.10	1.21	-0.03	8.76	853
5.25		1280 1230 1246	31.5 31.5 0.000	397	0.20	1.40	-0.02	8.53	863
6.25		1460 1404 1284	54.9 42.6 0.845	396	0.23	2.91	-0.05	8.14	868
7.25		1450 1421 1344	47.6 49.7 -0.546	398	0.07	3.43	-0.18	8.82	868
0.00 - 7.30									
MAX		1460. 1774. 1627.	66.5 66.2 1.984	401.	0.45	4.19	0.01	9.02	875.
MIN		1065. 993. 1139.	18.8 18.3 -0.679	378.	-0.60	0.29	-0.20	7.81	847.
MEAN	7.50 5.04	1228. 1242. 1278.	32.8 32.8 0.098	395.	0.02	2.34	-0.06	8.35	860.
ACCM	44.46 16.30	1253. 1278.	0.098	395.	0.02		-0.06	62.66	860.
0.00 - 0.00									
MAX		1510. 1484. 1510.	62.4 61.1 0.802	408.	0.82	5.96	0.01	8.98	889.
MIN		1170. 1046. 1136.	19.5 17.8 -1.061	382.	-1.47	1.61	-0.18	7.15	825.
MEAN	24.02 10.56	1295. 1294. 1304.	42.9 42.9 -0.008	398.	-0.01	3.15	-0.03	8.34	865.
ACCM	36.94 11.26	1280. 1304.	-0.008	398.	-0.01		-0.03	200.13	865.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL .... COAL HEAT VALUE
% MOISTURE IN COAL..... ....
NET HEAT CONSUMP. .... SHORT TONS CLINKER
HEAT CONSUMPTION .... LB COAL / SH.T
W1/ COAL TO KILN .... MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION ..... W1/ LITER WEIGHT
W1/ KILN FEED ..... COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.25	100.0	60.8 1459	8.23 735	749 20.0	2.93 9588	66.0	0 26.30	1295
8.25	100.2	60.9 1462	8.45 753	768 20.0	2.93 9585	66.1	0 27.06	1340
9.25	100.1	60.8 1460	8.56 763	778 20.0	2.93 9585	66.0	0 27.25	1170
10.25	99.4	60.4 1451	8.68 779	795 20.0	2.93 9585	65.6	0 27.91	1170
11.25	99.9	60.7 1457	8.52 762	776 20.0	2.93 9585	65.9	0 27.44	1170
12.25	99.9	60.7 1458	8.38 749	763 20.0	2.93 9585	65.9	0 26.75	1325
13.25	99.5	60.5 1452	8.46 760	775 20.5	3.81 9588	65.6	0 27.05	1285
14.25	99.6	60.5 1453	8.42 755	783 20.5	3.81 9423	65.7	0 26.76	1190
15.25	99.9	60.7 1458	7.97 713	739 20.5	3.81 9423	65.9	0 25.18	1355
16.25	98.7	60.0 1441	8.24 745	773 20.5	3.81 9423	65.1	0 26.28	1310
17.25	99.6	60.5 1454	8.30 744	772 20.5	3.81 9423	65.7	0 26.07	1305
18.25	98.7	60.0 1441	8.16 738	766 20.5	3.81 9423	65.1	0 25.74	1430
19.25	100.5	61.1 1467	7.88 700	726 20.5	3.81 9423	66.3	0 24.66	1510
20.25	99.4	60.4 1451	7.24 650	674 20.5	3.81 9423	65.6	0 23.02	1510
21.25	100.1	60.9 1461	8.11 724	751 20.5	3.81 9423	66.1	0 25.44	1475
22.25	100.5	61.1 1466	8.12 721	749 20.5	3.81 9423	66.3	0 25.52	1175
23.25	100.1	60.8 1461	8.10 723	750 20.5	3.81 9423	66.0	0 25.59	1215
0.25	99.4	60.4 1450	8.03 721	748 20.5	3.81 9423	65.6	0 25.46	1175
1.25	99.5	60.5 1452	8.10 726	753 20.5	3.81 9423	65.6	0 25.68	1125
2.25	99.9	60.7 1458	8.23 735	763 20.5	3.81 9420	65.9	0 25.79	1065
3.25	99.8	60.6 1456	8.41 753	781 20.5	3.81 9423	65.8	0 26.53	1160
4.25	98.8	60.0 1441	8.76 792	821 20.5	3.81 9423	65.2	0 27.75	1195
5.25	100.0	60.8 1459	8.53 762	790 20.5	3.81 9423	66.0	0 26.81	1280
6.25	99.1	60.2 1446	8.14 733	761 20.5	3.81 9423	65.4	0 25.94	1460
7.25	101.4	61.6 1479	8.82 777	806 20.5	3.81 9420	66.9	0 27.28	1450
0.00 - 7.30								
MAX	102.0	62.0 1488.	9.02 813.	843. 20.5	3.81 9424.	67.3	0. 28.66	1460.
MIN	97.9	59.5 1428.	7.81 697.	723. 20.5	3.81 9421.	64.6	0. 24.58	1065.
MEAN	99.9	60.7 1457.	8.35 747.	775. 20.5	3.81 9423.	65.9	0. 26.34	1229. 7.52
ACCM	750.1	456.1	62.75 747.	775. 20.5	3.81		0. 26.34	1253. 44.48
0.00 - 0.00								
MAX	105.4	64.1 1537.	8.98 810.	826. 20.5	3.81 9589.	69.5	0. 29.05	1510.
MIN	96.1	58.5 1404.	7.15 611.	634. 20.0	2.93 9421.	63.5	0. 21.53	1170.
MEAN	99.8	60.7 1457.	8.34 746.	766. 20.2	3.32 9512.	65.9	0. 26.56	1295. 24.02
ACCM	2395.9	1456.7	200.13 746.	767. 20.2	3.32		0. 26.55	1280. 36.94

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HD10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLD FCAO	CL-LS CL-MS	KCONTRL KM2F1%		
	T/H	T/H	T/H KC/KG			%	% GR/L	DEG.C %		H H
7.25	100.5	61.1	8.14 723	126.0 1.020	2.870	83.6	34.7 1460	220 0.24	0.930	3.020
8.25	101.7	61.8	9.05 795	119.3 0.950	2.880	67.5	34.7 1260	271 0.24	0.930	3.020
9.25	101.1	61.4	9.24 816	119.3 0.950	2.880	67.5	34.7 1255	251 0.24	0.930	3.020
10.25	47.0	28.5	4.08 775	119.3 0.950	2.880	67.5	34.7 1255	227 0.24	0.930	3.020
11.25	45.2	27.4	2.16 427	119.3 0.950	2.880	67.5	34.7 1255	169 0.24	0.930	3.020
12.25	--	--	-- --	119.3 0.950	2.880	67.5	34.7 1255	-- 0.24	0.930	3.020
13.25	--	-2.7	0.01 -28	119.3 0.950	2.880	67.5	34.7 1255	48 0.24	0.930	3.020
14.25	--	--	-- --	118.7 0.960	2.900	67.7	35.2 1255	-- 0.59	0.940	3.040
15.25	--	-2.8	0.03 -60	118.7 0.960	2.900	67.7	35.2 1255	48 0.59	0.940	3.040
16.25	--	-2.9	0.04 -81	118.7 0.960	2.900	67.7	35.2 1255	71 0.59	0.940	3.040
17.25	--	-2.8	0.03 -66	118.7 0.960	2.900	67.7	35.2 1255	27 0.59	0.940	3.040
18.25	--	-2.8	0.06 -122	118.7 0.960	2.900	67.7	35.2 1255	41 0.59	0.940	3.040
19.25	--	-2.8	0.01 -25	118.7 0.960	2.900	67.7	35.2 1255	30 0.59	0.940	3.040
20.25	--	-2.7	0.07 -139	118.7 0.960	2.900	67.7	35.2 1255	47 0.59	0.940	3.040
21.25	--	-2.8	0.05 -113	118.7 0.960	2.900	67.7	35.2 1255	35 0.59	0.940	3.040
22.25	--	-3.0	0.04 -77	118.7 0.960	2.900	67.7	35.2 1255	41 0.59	0.940	3.040
23.25	--	-2.6	0.02 -60	118.7 0.960	2.900	67.7	35.2 1255	27 0.59	0.940	3.040
0.25	--	-2.9	0.06 -114	118.7 0.960	2.900	67.7	35.2 1255	27 0.59	0.940	3.040
1.25	--	-2.8	0.03 -58	118.7 0.960	2.900	67.7	35.2 1255	18 0.59	0.940	3.040
2.25	--	-2.8	0.05 -96	118.7 0.960	2.900	67.7	35.2 1255	26 0.59	0.940	3.040
3.25	--	-3.1	0.05 -97	118.7 0.960	2.900	67.7	35.2 1255	23 0.59	0.940	3.040
4.25	--	-2.7	0.06 -123	118.7 0.960	2.900	67.7	35.2 1255	13 0.59	0.940	3.040
5.25	--	-3.1	0.05 -91	118.7 0.960	2.900	67.7	35.2 1255	13 0.59	0.940	3.040
6.25	--	-2.5	0.02 -43	118.7 0.960	2.900	67.7	35.2 1255	13 0.59	0.940	3.040
7.25	--	--	-- --	118.7 0.960	2.900	67.7	35.2 1255	-- 0.59	0.940	3.040
0.00 - 7.37										
MAX		-2.2	0.11 63.	118.7 0.960	2.900	67.7	35.2 1255.	47. 0.59	0.940	3.040
MIN		-3.5	-0.03 -213.	118.7 0.960	2.900	67.7	35.2 1255.	1. 0.59	0.940	3.040
MEAN		-2.9	0.04 -84.	118.7 0.960	2.900	67.7	35.2 1255.	18. 0.59	0.940	3.040 7.02 7.34
ACCM	0.0	-21.2	0.33 -84.	118.7 0.960	2.900	67.7	35.2 1255.	18. 0.59	0.940	3.040 31.97 66.42
0.00 - 0.00										
MAX	103.1	62.7	9.27 15478.	126.0 1.020	2.900	83.6	35.2 1460.	284. 0.59	0.940	3.040
MIN	-4.6	-3.4	-0.03-473235	118.7 0.950	2.870	67.6	34.7 1065.	15. 0.24	0.930	3.020
MEAN	92.2	27.6	4.01 306.	121.3 0.978	2.884	73.0	35.0 1254.	141. 0.39	0.934	3.028 13.65 22.11
ACCM	1057.9	610.3	88.53 788.	121.3 0.978	2.886	73.0	35.0 1263.	141. 0.40	0.935	3.029 24.93 59.10

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 .....
W1/ GAS TEMP A53 .....
W1/ PRESSURE A54 .....
W1/ TEMP CYCL A54 .....
W1/ %O2 KILN OUTL .....
W1/ PRES EXIT KILN.....
W1/ KILN TORQUE .....
W1/ KILN ROT SPEED .....

.....W1/ GAS TEMP A52
.....W1/ GAS TEMP A51
.....W1/ GAS TEMP A61
.....W1/ T EXIT PREHEAT
.....W1/ PRESS EX PREH
.....
W1/ %CO EX PREHEAT
J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	1.9	29.7	112	3.02	804	161	780	341	621	390	379	395	624	-0.15	867
8.25	1.9	30.4	121	3.76	806	195	783	331	622	390	379	393	636	-0.03	883
9.25	1.9	31.5	147	3.57	804	230	784	363	634	399	387	405	656	-0.05	874
10.25	1.0	23.0	11	5.07	784	62	757	93	621	411	407	411	190	-0.17	551
11.25	0.8	9.5	5	10.49	753	51	727	73	608	407	413	414	135	-0.14	505
12.25	--	--	--	--	--	--	--	--	--	--	--	397	--	--	--
13.25	--	--	-9	10.53	668	-6	679	-17	582	374	384	362	-21	-0.16	187
14.25	--	--	--	--	--	--	--	--	--	--	--	339	--	--	--
15.25	--	--	-9	10.55	611	-3	635	-17	549	341	355	322	-21	-0.18	187
16.25	--	--	-9	10.57	585	-3	616	-22	533	329	341	311	-22	-0.17	184
17.25	--	--	-10	10.52	560	-4	599	-13	520	320	334	302	-25	-0.18	182
18.25	--	--	-9	10.61	537	-1	585	-19	506	306	321	291	-19	-0.17	183
19.25	--	--	-10	10.56	516	-4	565	-19	486	278	317	285	-15	-0.17	183
20.25	--	--	-9	10.55	494	-4	549	-18	476	267	310	277	-17	-0.17	184
21.25	--	--	-10	10.49	475	-3	534	-18	465	259	302	268	-18	-0.18	184
22.25	--	--	-9	10.45	457	-4	519	-16	451	252	293	261	-24	-0.18	186
23.25	--	--	-10	10.48	441	-3	504	-14	437	242	287	250	-41	-0.17	183
0.25	--	--	-10	10.44	423	-3	490	-18	424	230	277	242	-37	-0.18	183
1.25	--	--	-9	10.49	410	-2	477	-13	414	226	272	233	-42	-0.18	183
2.25	--	--	-10	10.47	397	-3	465	-19	408	220	262	226	-36	-0.18	182
3.25	--	--	-10	10.40	386	-1	450	-14	400	216	254	219	-37	-0.17	183
4.25	--	--	-10	10.40	371	-6	438	-15	387	210	246	211	-39	-0.18	183
5.25	--	--	-9	10.42	361	-2	426	-11	376	202	234	198	-39	-0.18	187
6.25	--	--	-10	10.42	351	-2	419	-14	372	197	227	191	-43	-0.18	183
7.25	--	--	--	--	--	--	--	--	--	--	--	182	--	--	--
0.00 - 7.38															
MAX			-9.	10.58	432.	2.	501.	-1.	436.	237.	285.	249.	-29.	-0.16	191.
MIN			-12.	10.29	340.	-8.	403.	-28.	356.	188.	216.	179.	-51.	-0.20	176.
MEAN			-10.	10.44	383.	-3.	450.	-15.	394.	213.	251.	214.	-39.	-0.18	184.
ACCM	0.0	0.0	-10.		383.	-3.	450.	-15.	394.	213.	251.	214.	-39.	-0.18	184.
0.00 - 0.00															
MAX	2.0	32.1	164.	10.69	814.	264.	797.	376.	673.	481.	472.	467.	684.	0.01	891.
MIN	0.4	9.5	-12.	0.29	429.	-11.	492.	-31.	426.	234.	281.	245.	-51.	-0.21	176.
MEAN	1.8	27.0	54.	6.81	673.	97.	684.	149.	564.	347.	355.	351.	276.	-0.12	510.
ACCM	1.8	27.0	54.		673.	97.	684.	149.	564.	347.	355.	351.	276.	-0.12	510.

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ %O2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ %CO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1#	KCONTRL	KALARM	LTWT	ESTLTW	LTWGTSP	NOXST	NOXLT	NOXALT	A50T1	A50ALT	OA15X1	KM2F1 OA1X2CO	OA2V1
	H	H	H	GR/L	GR/L	GR/L	%	%	%	DEG.C		%	%	T/H	RPM
7.25				1460	1633	1350	58.0	57.2	-0.121	395	-0.21	3.02	-0.15	8.14	867
8.25				1260	1362	1325	44.4	43.9	-0.090	393	-0.18	3.76	-0.03	9.05	883
9.25				1255	1217	1305	32.4	31.0	-0.594	405	0.27	3.57	-0.05	9.24	874
10.25				1255	1572	1305	78.2	69.1	0.638	411	3.04	5.07	-0.17	4.08	551
11.25				1255	1109	1305	21.2	19.5	-1.540	414	3.06	10.49	-0.14	2.16	505
12.25				1255	865	1305	-6.1	-6.6	-0.732	397	-1.82	--	--	--	--
13.25				1255	770	1305	-16.6	-16.8	-0.289	362	-0.99	10.53	-0.16	0.01	187
14.25				1255	736	1305	-20.4	-20.5	-0.100	339	-0.84	--	--	--	--
15.25				1255	729	1305	-21.1	-21.2	-0.009	322	-0.66	10.55	-0.18	0.03	187
16.25				1255	735	1305	-20.6	-20.6	0.024	311	-0.86	10.57	-0.17	0.04	184
17.25				1255	745	1305	-19.6	-19.5	0.036	302	-0.21	10.52	-0.18	0.03	182
18.25				1255	756	1305	-18.3	-18.3	0.043	291	-0.47	10.61	-0.17	0.06	183
19.25				1255	770	1305	-16.8	-16.8	0.050	285	-0.38	10.56	-0.17	0.01	183
20.25				1255	784	1305	-15.3	-15.3	0.050	277	-0.24	10.55	-0.17	0.07	184
21.25				1255	798	1305	-13.8	-13.8	0.050	268	-0.26	10.49	-0.18	0.05	184
22.25				1255	812	1305	-12.3	-12.3	0.050	261	-0.12	10.45	-0.18	0.04	186
23.25				1255	826	1305	-10.8	-10.8	0.050	250	-0.09	10.48	-0.17	0.02	183
0.25				1255	840	1305	-9.3	-9.3	0.050	242	-0.60	10.44	-0.18	0.06	183
1.25				1255	854	1305	-7.8	-7.8	0.050	233	-0.46	10.49	-0.18	0.03	183
2.25				1255	868	1305	-6.3	-6.3	0.050	226	-0.26	10.47	-0.18	0.05	182
3.25				1255	883	1305	-4.7	-4.7	0.050	219	-0.23	10.48	-0.17	0.05	183
4.25				1255	897	1305	-3.2	-3.2	0.050	211	-0.16	10.48	-0.18	0.06	183
5.25				1255	911	1305	-1.7	-1.7	0.050	198	-0.44	10.42	-0.18	0.05	187
6.25				1255	925	1305	-0.2	-0.2	0.050	191	-0.23	10.42	-0.18	0.02	183
7.25				1255	929	1305	0.1	0.2	0.004	182	-0.22	--	--	--	--
0.00 - 7.40															
MAX				1255.	930.	1306.	0.2	0.2	0.050	249.	-0.02	10.58	-0.16	0.11	191.
MIN				1255.	836.	1306.	-9.8	-9.8	0.000	178.	-0.72	10.29	-0.20	-0.03	176.
MEAN	7.34	7.02		1255.	889.	1306.	-4.2	-4.2	0.046	214.	-0.29	10.44	-0.18	0.04	184.
ACCM	66.42	31.97		1255.		1306.			0.046	214.	-0.29		-0.18	0.33	184.
0.00 - 0.00															
MAX				1460.	1774.	1627.	79.4	77.5	2.041	467.	5.43	10.69	0.01	9.27	891.
MIN				1065.	729.	1139.	-21.2	-21.3	-2.319	245.	-6.11	0.29	-0.21	-0.03	176.
MEAN	22.11	13.65		1254.	1023.	1298.	9.8	9.8	-0.058	351.	-0.20	6.81	-0.12	4.01	510.
ACCM	59.10	24.93		1263.		1298.			-0.058	351.	-0.20		-0.12	88.53	510.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL .....COAL HEAT VALUE
% MOISTURE IN COAL.....
NET HEAT CONSUMP. .....SHORT TONS CLINKER
HEAT CONSUMPTION .....LB COAL / SH.T
W1/ COAL TO KILN .....MBTU' PER SH.T
KILN PRODUC. RATE .....
KILN PRODUCTION W1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HOIOF1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H	T/H T	T/H	KC/KG KC/KG	% %	T/H		GR/L H
7.25	100.5	61.1 1467	8.14	723 750	20.5 3.81	9420	66.3 0	25.41 1460
8.25	101.7	61.8 1484	9.05	795 824	20.5 3.81	9420	67.1 0	27.92 1260
9.25	101.1	61.4 1475	9.24	816 847	20.5 3.81	9420	66.7 0	28.78 1255
10.25	47.0	28.5 685	4.08	775 804	20.5 3.81	9420	31.0 0	27.43 1255
11.25	45.2	27.4 659	2.16	427 443	20.5 3.81	9420	29.8 0	14.63 1255
12.25	--	-- -69	--	-- --	20.5 3.81	9423	-3.1 --	-- 1255
13.25	--	-2.7 -67	0.01	-28 -29	20.5 3.81	9423	-3.0 0	-0.86 1255
14.25	--	-- -67	--	-- --	21.2 4.35	9268	-3.0 --	-- 1255
15.25	--	-2.8 -69	0.03	-60 -64	21.2 4.35	9271	-3.1 0	-1.87 1255
16.25	--	-2.9 -71	0.04	-81 -86	21.2 4.35	9271	-3.2 0	-3.21 1255
17.25	--	-2.8 -67	0.03	-66 -70	21.2 4.35	9271	-3.0 0	-2.59 1255
18.25	--	-2.8 -68	0.06	-122 -129	21.2 4.35	9271	-3.1 0	-3.96 1255
19.25	--	-2.8 -67	0.01	-25 -26	21.2 4.35	9271	-3.0 0	-0.21 1255
20.25	--	-2.7 -65	0.07	-139 -147	21.2 4.35	9271	-2.9 0	-3.39 1255
21.25	--	-2.8 -67	0.05	-113 -119	21.2 4.35	9271	-3.0 0	-3.19 1255
22.25	--	-3.0 -72	0.04	-77 -81	21.2 4.35	9268	-3.2 0	-3.30 1255
23.25	--	-2.6 -63	0.02	-60 -63	21.2 4.35	9271	-2.8 0	-1.97 1255
0.25	--	-2.9 -70	0.06	-114 -120	21.2 4.35	9271	-3.2 0	-4.20 1255
1.25	--	-2.8 -67	0.03	-58 -61	21.2 4.35	9271	-3.0 0	-0.95 1255
2.25	--	-2.8 -67	0.05	-96 -101	21.2 4.35	9271	-3.0 0	-3.58 1255
3.25	--	-3.1 -74	0.05	-97 -102	21.2 4.35	9271	-3.3 0	-3.09 1255
4.25	--	-2.7 -66	0.06	-123 -130	21.2 4.35	9271	-3.0 0	-3.66 1255
5.25	--	-3.1 -75	0.05	-91 -96	21.2 4.35	9271	-3.3 0	-3.66 1255
6.25	--	-2.5 -60	0.02	-43 -46	21.2 4.35	9271	-2.7 0	-2.52 1255
7.25	--	-- -76	--	-- --	21.2 4.35	9271	-3.4 --	-- 1255
0.00 - 7.40								
MAX		-2.2 -53.	0.11	63. 66.	21.2 4.36	9271.	-2.4 0.	2.17 1255.
MIN		-3.5 -85.	-0.03	-213. -225.	21.2 4.36	9271.	-3.8 -0.	-7.40 1255.
MEAN		-2.9 -69.	0.04	-84. -89.	21.2 4.36	9272.	-3.1 -0.	-2.92 1255. 7.34
ACCM	0.0	-21.2	0.33	-84. -89.	21.2 4.36		-0.	-2.92 1255. 66.42
0.00 - 0.00								
MAX	103.1	62.7 1505.	9.27	15478. 16058.	21.2 4.36	9424.	68.1 6.	545.38 1460.
MIN	-4.6	-3.4 -81.	-0.03	-473235 -490970	20.5 3.81	9268.	-3.7 -177.	-16675. 1065.
MEAN	92.2	27.6 608.	4.01	306. 317.	20.8 4.05	9358.	27.5 0.	10.78 1254. 22.11
ACCM	1057.9	610.3	88.53	788. 320.	20.8 4.05		0.	10.68 1263. 59.10

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-0-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR ..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF	KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1%		
	T/H	T/H	T/H KC/KG		%	%	GR/L DEG.C	%		H	H
7.25	--	-2.7	0.05 -101	118.7	0.960	2.900	67.7	35.2	1255 7	0.59	0.940 3.040
8.25	--	--	-- --	118.7	0.960	2.900	67.7	35.2	1255 --	0.59	0.940 3.040
9.25	--	-2.9	0.06 -116	118.7	0.960	2.900	67.7	35.2	1255 12	0.59	0.940 3.040
10.25	--	-3.1	0.08 -155	118.7	0.960	2.900	67.7	35.2	1 16	0.59	0.940 3.040
11.25	--	-3.0	0.39 -713	118.7	0.960	2.900	67.7	35.2	0 16	0.59	0.940 3.040
12.25	--	-3.0	0.23 -411	118.7	0.960	2.900	67.7	35.2	0 19	0.59	0.940 3.040
13.25	--	-2.7	4.89 -9780	117.1	0.930	2.960	61.2	35.1	0 23	0.24	0.920 3.020
14.25	--	-2.9	0.02 -40	117.1	0.930	2.960	61.2	35.1	0 23	0.24	0.920 3.020
15.25	--	-3.0	0.13 -245	117.1	0.930	2.960	61.2	35.1	0 32	0.24	0.920 3.020
16.25	--	-2.7	2.93 -5893	117.1	0.930	2.960	61.2	35.1	1260 27	0.24	0.920 3.020
17.25	--	--	-- --	117.1	0.930	2.960	61.2	35.1	0 --	0.24	0.920 3.020
18.25	--	--	-- --	117.1	0.930	2.960	61.2	35.1	0 --	0.24	0.920 3.020
19.25	--	--	-- --	117.1	0.930	2.960	61.2	35.1	0 --	0.24	0.920 3.020
20.25	--	--	-- --	117.1	0.930	2.960	61.2	35.1	1234 --	0.24	0.920 3.020
21.25	--	--	-- --	117.1	0.930	2.960	61.2	35.1	1234 --	0.24	0.920 3.020
22.25	--	--	-- --	117.1	0.930	2.960	61.2	35.1	1234 --	0.24	0.920 3.020
23.25	--	--	-- --	117.1	0.930	2.960	61.2	35.1	1234 --	0.24	0.920 3.020
0.25	--	--	-- --	117.1	0.930	2.960	61.2	35.1	1234 --	0.24	0.920 3.020
1.25	--	--	-- --	117.1	0.930	2.960	61.2	35.1	1234 --	0.24	0.920 3.020
2.25	--	--	-- --	117.1	0.930	2.960	61.2	35.1	1234 --	0.24	0.920 3.020
3.25	--	--	-- --	117.1	0.930	2.960	61.2	35.1	1234 --	0.24	0.920 3.020
4.25	--	--	-- --	117.1	0.930	2.960	61.2	35.1	1234 --	0.24	0.920 3.020
5.25	--	--	-- --	117.1	0.930	2.960	61.2	35.1	1234 --	0.24	0.920 3.020
6.25	--	--	-- --	117.1	0.930	2.960	61.2	35.1	1234 --	0.24	0.920 3.020
7.25	--	--	-- --	117.1	0.930	2.960	61.2	35.1	1234 --	0.24	0.920 3.020
0.00 - 7.26											
MAX	-4.6			117.1	0.930	2.960	61.3	35.1	1234.	0.24	0.920 3.020
MIN	-5.4			117.1	0.930	2.960	61.3	35.1	1234.	0.24	0.920 3.020
MEAN	-4.9			117.1	0.930	2.960	61.3	35.1	1234.	0.24	0.920 3.020 0.00 0.00
ACCM	-0.2	0.0	0.00 0.	117.1	0.930	2.960	61.3	35.1	1234. 0.	0.24	0.920 3.020 33.90 74.18
0.00 - 0.00											
MAX		-2.2	8.07 88.	118.7	0.960	2.960	67.7	35.2	1324. 47.	0.59	0.940 3.040
MIN		-3.7	-0.04-18001.	117.1	0.930	2.900	61.3	35.1	0. 1.	0.24	0.920 3.020
MEAN		-2.9	0.86 -1606.	118.0	0.946	2.927	64.8	35.2	772. 19.	0.43	0.931 3.032 8.95 15.19
ACCM	0.0	-44.1	13.04 -1606.	118.0	0.946	2.928	64.8	35.2	728. 19.	0.43	0.931 3.031 33.90 74.18

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 ..... W1/ GAS TEMP A52
W1/ GAS TEMP A53 ..... W1/ GAS TEMP A51
W1/ PRESSURE A54 ..... W1/ GAS TEMP A61
W1/ TEMP CYCL A54 ..... W1/ T EXIT PREHEAT
W1/ %O2 KILN OUTL ..... W1/ PRESS EX PREH
W1/ PRES EXIT KILN..... W1/ %CO EX PREHEAT
W1/ KILN TORQUE J1/ ID FAN SPEED
W1/ KILN ROT SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	--	--	-10	10.42	345	-3	409	-15	368	191	221	184	-42	-0.18	182
8.25	--	--	--	--	--	--	--	--	--	--	--	173	--	--	--
9.25	--	--	-10	10.47	322	-1	386	-11	346	202	189	165	-36	-0.18	185
10.25	--	--	-10	10.50	312	-4	374	-14	333	179	197	151	-41	-0.18	183
11.25	--	--	-9	10.54	303	-2	362	-12	328	171	196	148	-41	-0.18	183
12.25	--	--	-9	10.53	292	0	348	-10	321	166	190	143	-44	-0.17	183
13.25	--	--	-10	10.48	284	-1	340	-12	306	179	177	138	-44	-0.18	182
14.25	--	--	-10	10.56	271	0	330	-7	301	180	177	140	-37	-0.18	182
15.25	--	--	-9	10.52	199	0	273	-11	258	191	200	179	-39	-0.18	181
16.25	--	--	-9	10.59	164	1	205	-5	215	174	181	174	-41	-0.17	182
17.25	--	--	--	--	--	--	--	--	--	--	--	169	--	--	--
18.25	--	--	--	--	--	--	--	--	--	--	--	162	--	--	--
19.25	--	--	--	--	--	--	--	--	--	--	--	154	--	--	--
20.25	--	--	--	--	--	--	--	--	--	--	--	145	--	--	--
21.25	--	--	--	--	--	--	--	--	--	--	--	139	--	--	--
22.25	--	--	--	--	--	--	--	--	--	--	--	134	--	--	--
23.25	--	--	--	--	--	--	--	--	--	--	--	130	--	--	--
0.25	--	--	--	--	--	--	--	--	--	--	--	125	--	--	--
1.25	--	--	--	--	--	--	--	--	--	--	--	121	--	--	--
2.25	--	--	--	--	--	--	--	--	--	--	--	122	--	--	--
3.25	--	--	--	--	--	--	--	--	--	--	--	113	--	--	--
4.25	--	--	--	--	--	--	--	--	--	--	--	122	--	--	--
5.25	--	--	--	--	--	--	--	--	--	--	--	126	--	--	--
6.25	--	--	--	--	--	--	--	--	--	--	--	136	--	--	--
7.25	--	--	--	--	--	--	--	--	--	--	--	145	--	--	--
0.00 - 7.29															
MAX												149.			
MIN												112.			
MEAN												126.			
ACCM	0.0	0.0	0.		0.	0.	0.	0.	0.	0.	0.	126.	0.	0.00	0.
0.00 - 0.00															
MAX			-9.	10.66	1745.	6.	1305.	3.	2042.	991.	970.	867.	-27.	-0.16	192.
MIN			-12.	10.29	-3.	-8.	-89.	-28.	9.	-97.	-244.	-238.	-51.	-0.21	173.
MEAN			-10.	10.48	327.	-2.	388.	-13.	350.	198.	220.	173.	-40.	-0.18	183.
ACCM	0.0	0.0	-10.		327.	-2.	388.	-13.	350.	198.	220.	173.	-40.	-0.18	183.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ %02 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ %CO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1% KCONTRL	KALARM	ESTLTW LTWT	NOXST LTWGTSP	NOXALT NOXLT	A50ALT A50T1	OA15X1	KM2F1 OA1X2CO	OA2V1
	H	H H	GR/L	GR/L GR/L	%	% %	DEG.C	%	% T/H RPM
7.25			1255	929 1305	0.2	0.2 0.023	184	-0.21 10.42	-0.18 0.05 182
8.25			1255	929 1305	0.1	0.2 0.000	173	-0.29 --	-- -- --
9.25			1255	929 1305	0.1	0.2 0.000	165	-0.36 10.47	-0.18 0.06 185
10.25			1	929 915	0.1	0.2 0.000	151	-6.60 10.50	-0.18 0.08 183
11.25			0	929 915	0.1	0.2 0.000	148	-0.24 10.54	-0.18 0.39 183
12.25			0	929 915	0.1	0.2 0.000	143	-0.06 10.53	-0.17 0.23 183
13.25			0	929 915	0.1	0.2 0.000	138	-0.12 10.48	-0.18 4.89 182
14.25			0	929 915	0.1	0.2 0.000	140	-0.10 10.56	-0.18 0.02 182
15.25			0	929 915	0.1	0.2 0.000	179	-0.03 10.52	-0.18 0.13 181
16.25			1260	929 915	0.1	0.2 0.000	174	-0.32 10.59	-0.17 2.93 182
17.25			0	929 915	0.1	0.2 0.000	169	-0.22 --	-- -- --
18.25			0	929 915	0.1	0.2 0.000	162	-0.13 --	-- -- --
19.25			0	929 915	0.1	0.2 0.000	154	-0.13 --	-- -- --
20.25			1234	929 915	0.1	0.2 0.000	145	-0.33 --	-- -- --
21.25			1234	929 915	0.1	0.2 0.000	139	-0.29 --	-- -- --
22.25			1234	929 915	0.1	0.2 0.000	134	-0.11 --	-- -- --
23.25			1234	929 915	0.1	0.2 0.000	130	-0.13 --	-- -- --
0.25			1234	929 915	0.1	0.2 0.000	125	-0.81 --	-- -- --
1.25			1234	929 915	0.1	0.2 0.000	121	-0.14 --	-- -- --
2.25			1234	929 915	0.1	0.2 0.000	122	0.21 --	-- -- --
3.25			1234	929 915	0.1	0.2 0.000	113	-0.40 --	-- -- --
4.25			1234	929 915	0.1	0.2 0.000	122	0.29 --	-- -- --
5.25			1234	929 915	0.1	0.2 0.000	126	0.30 --	-- -- --
6.25			1234	929 915	0.1	0.2 0.000	136	0.52 --	-- -- --
7.25			1234	929 915	0.1	0.2 0.000	145	0.36 --	-- -- --
0.00 - 7.30									
MAX			1234.	930. 916.	0.2	0.2 0.000	150.	0.56	
MIN			1234.	930. 916.	0.2	0.2 0.000	112.	-0.61	
MEAN	0.00	0.00	1234.	930. 916.	0.2	0.2 0.000	126.	0.08	
ACCM	74.18	33.90	1234.	916.		0.000	126.	0.08	0.00 0.00 0.
0.00 - 0.00									
MAX			1324.	930. 1306.	0.2	0.2 0.050	867.	7.25 10.66	-0.16 8.07 192.
MIN			0.	836. 916.	-9.8	-9.8 0.000	-238.	-8.36 10.29	-0.21 -0.04 173.
MEAN	15.19	8.95	772.	917. 1076.	-1.2	-1.2 0.015	173.	-0.17 10.48	-0.18 0.86 183.
ACCM	74.18	33.90	728.	1076.		0.015	173.	-0.17	-0.18 13.04 183.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL.....
NET HEAT CONSUMP. ..... SHORT TONS CLINKER
HEAT CONSUMPTION ..... LB COAL / SH.T
W1/ COAL TO KILN ..... MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1*
	T/H	T/H T	T/H KC/KG	KC/KG	% %		T/H	GR/L H
7.25	--	-2.7 -66	0.05 -101	-107	21.2 4.35	9271	-3.0	0 -3.90	1255
8.25	--	-- -69	-- --	--	21.2 4.35	9271	-3.1	-- --	1255
9.25	--	-2.9 -70	0.06 -116	-123	21.2 4.35	9271	-3.2	0 -4.25	1255
10.25	--	-3.1 -75	0.08 -155	-163	21.2 4.35	9271	-3.3	0 -4.77	1
11.25	--	-3.0 -72	0.39 -713	-752	21.2 4.35	9271	-3.2	0 -26.33	0
12.25	--	-3.0 -73	0.23 -411	-433	21.2 4.35	9268	-3.3	0 -14.91	0
13.25	--	-2.7 -65	4.89 -9780	-10310	21.2 4.35	9271	-2.9	-3-327.48	0
14.25	--	-2.9 -70	0.02 -40	-42	21.2 4.35	9271	-3.1	0 -1.72	0
15.25	--	-3.0 -74	0.13 -245	-258	21.2 4.35	9271	-3.3	0 -7.76	0
16.25	--	-2.7 -64	2.93 -5893	-6213	21.2 4.35	9271	-2.9	-2-195.91	1260
17.25	--	-- -68	-- --	--	21.2 4.35	9271	-3.0	-- --	0
18.25	--	-- -62	-- --	--	21.2 4.35	9271	-2.8	-- --	0
19.25	--	-- -70	-- --	--	21.2 4.35	9271	-3.1	-- --	0
20.25	--	-- -64	-- --	--	21.2 4.35	9271	-2.9	-- --	1234
21.25	--	-- -67	-- --	--	21.2 4.35	9271	-3.0	-- --	1234
22.25	--	-- -70	-- --	--	21.2 4.35	9268	-3.1	-- --	1234
23.25	--	-- -62	-- --	--	21.2 4.35	9268	-2.8	-- --	1234
0.25	--	-- -62	-- --	--	21.2 4.35	9271	-2.8	-- --	1234
1.25	--	-- -71	-- --	--	21.2 4.35	9271	-3.2	-- --	1234
2.25	--	-- -69	-- --	--	21.2 4.35	9271	-3.1	-- --	1234
3.25	--	-- -73	-- --	--	21.2 4.35	9271	-3.3	-- --	1234
4.25	--	-- -67	-- --	--	21.2 4.35	9268	-3.0	-- --	1234
5.25	--	-- -72	-- --	--	21.2 4.35	9271	-3.2	-- --	1234
6.25	--	-- -73	-- --	--	21.2 4.35	9268	-3.3	-- --	1234
7.25	--	-- -79	-- --	--	21.2 4.35	9268	-3.5	-- --	1234
0.00 - 7.31									
MAX	-4.6	-58.			21.2 4.36	9271.	-2.6		1234.
MIN	-5.4	-87.			21.2 4.36	9268.	-3.9		1234.
MEAN	-4.9	-71.			21.2 4.36	9271.	-3.2		1234. 0.00
ACCM	-0.2 0.0		0.00	0. 0.	21.2 4.36			0. 0.00	1234. 74.18
0.00 - 0.00									
MAX	-2.2	-53.	8.07	88. 93.	21.2 4.36	9271.	-2.4	0. 3.04	1324.
MIN	-3.7	-88.	-0.04	-18001.-18977.	21.2 4.36	9268.	-4.0	-7.-624.19	0.
MEAN	-2.9	-70.	0.86	-1606. -1693.	21.2 4.36	9271.	-3.1	-1. -55.68	772. 15.19
ACCM	0.0 -44.1		13.84	-1606. -1693.	21.2 4.36			-1. -55.67	728. 74.18

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-0-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR ..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1	BF KCAL	KF-LS	KF-MS C3S	KF-LDI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1%		
	T/H	T/H	T/H KC/KG			%	% GR/L	DEG.C	%	H	H
7.25	--	--	-- --	117.1	0.930 2.960	61.2	35.1 1234	--	0.24 0.920 3.020		
8.25	--	--	-- --	117.1	0.930 2.960	61.2	35.1 1234	--	0.24 0.920 3.020		
9.25	--	--	-- --	117.1	0.930 2.960	61.2	35.1 1234	--	0.24 0.920 3.020		
10.25	--	--	-- --	117.1	0.930 2.960	61.2	35.1 1234	--	0.24 0.920 3.020		
11.25	--	--	-- --	117.1	0.930 2.960	61.2	35.1 1234	--	0.24 0.920 3.020		
12.25	--	--	-- --	117.1	0.930 2.960	61.2	35.1 1234	--	0.24 0.920 3.020		
13.25	--	--	-- --	117.1	0.930 2.960	61.2	35.1 1234	--	0.24 0.920 3.020		
14.25	--	--	-- --	117.1	0.930 2.960	61.2	35.1 1234	--	0.24 0.920 3.020		
15.25	--	--	-- --	117.1	0.930 2.960	61.2	35.1 1234	--	0.24 0.920 3.020		
16.25	--	--	-- --	117.1	0.930 2.960	61.2	35.1 1234	--	0.24 0.920 3.020		
17.25	--	--	-- --	117.1	0.930 2.960	61.2	35.1 1234	--	0.24 0.920 3.020		
18.25	--	--	-- --	117.1	0.930 2.960	61.2	35.1 1234	--	0.24 0.920 3.020		
19.25	--	--	-- --	117.1	0.930 2.960	61.2	35.1 1234	--	0.24 0.920 3.020		
20.25	--	--	-- --	117.1	0.930 2.960	61.2	35.1 1234	--	0.24 0.920 3.020		
21.25	--	--	-- --	117.1	0.930 2.960	61.2	35.1 1234	--	0.24 0.920 3.020		
22.25	34.0	20.6	5.43 1426	117.1	0.930 2.960	61.2	35.1 1234	58	0.24 0.920 3.020		
23.25	34.7	21.1	6.76 1740	117.1	0.930 2.960	61.2	35.1 1234	39	0.24 0.920 3.020		
0.25	41.3	25.1	6.75 1460	114.3	0.890 3.060	52.8	35.1 1234	54	0.24 0.920 3.020		
1.25	44.9	27.3	7.03 1480	114.3	0.890 3.060	52.8	35.1 1234	46	0.24 0.920 3.020		
2.25	46.2	28.1	7.34 1419	114.3	0.890 3.060	52.8	35.1 1305	63	0.24 0.920 3.020		
3.25	54.3	33.0	7.69 1264	114.3	0.890 3.060	52.8	35.1 1395	69	0.24 0.920 3.020		
4.25	66.3	40.3	7.71 1037	114.3	0.890 3.060	52.8	35.1 1495	116	0.24 0.920 3.020		
5.25	71.7	43.6	7.84 977	114.3	0.890 3.060	52.8	35.1 1405	141	0.24 0.920 3.020		
6.25	44.3	--	-- --	114.3	0.890 3.060	52.8	35.1 1405	--	0.24 0.920 3.020		
7.25	57.5	34.9	8.17 1269	119.1	0.950 2.900	66.4	35.1 1405	120	0.24 0.920 3.020		
0.00 - 8.48											
MAX	72.8	44.3	9.46 63660.	119.1	0.950 3.060	66.4	35.1 1495.	161.	0.24 0.920 3.020		
MIN	-4.7	-3.3	0.14-23666.	114.3	0.890 2.900	52.8	35.1 1234.	32.	0.24 0.920 3.020		
MEAN	54.0	33.1	7.65 1202.	115.1	0.899 3.035	54.9	35.1 1380.	91.	0.24 0.920 3.020	0.00	8.31
ACCM	461.8	275.3	63.57 1254.	114.9	0.897 3.040	54.5	35.1 1387.	91.	0.24 0.920 3.020	33.90	85.16
0.00 - 0.00											
MAX	40.0	24.4	6.85 113946	117.1	0.930 3.060	61.3	35.1 1234.	58.	0.24 0.920 3.020		
MIN	-5.4	-3.5	0.03-225330	114.3	0.890 2.960	52.8	35.1 1234.	26.	0.24 0.920 3.020		
MEAN	29.7	13.7	5.50 -543.	117.0	0.929 2.962	61.2	35.1 1234.	42.	0.24 0.920 3.021	0.00	2.80
ACCM	66.8	38.2	15.38 2187.	117.0	0.928 2.964	60.9	35.1 1234.	42.	0.24 0.920 3.020	33.90	76.95

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 .....
W1/ GAS TEMP A53 .....
W1/ PRESSURE A54 .....
W1/ TEMP CYCL A54 .....
W1/ %O2 KILN OUTL .....
W1/ PRES EXIT KILN.....
W1/ KILN TORQUE
W1/ KILN ROT SPEED

.....W1/ GAS TEMP A52
.....W1/ GAS TEMP A51
.....W1/ GAS TEMP A61
.....W1/ T EXIT PREHEAT
.....W1/ PRESS EX PREH
.....
W1/ %CO EX PREHEAT
J1/ ID FAN SPEED

HOUR	OA15V1 OA15A1		OA15P1 OA15X1		A54T1 A54P1		A53T1 A53P1		A52T1 A51T1		A61T1 A50T1		A50P1		OA1X2CO OA2V1	
	RPM	%	MMWG	%	DEG.C	MMWG	DEG.C	MMWG	DEG.C	DEG.C	DEG.C	DEG.C	MMWG		%	RPM
7.25	--	--	--	--	--	--	--	--	--	--	--	142	--		--	--
8.25	--	--	--	--	--	--	--	--	--	--	--	153	--		--	--
9.25	--	--	--	--	--	--	--	--	--	--	--	164	--		--	--
10.25	--	--	--	--	--	--	--	--	--	--	--	180	--		--	--
11.25	--	--	--	--	--	--	--	--	--	--	--	193	--		--	--
12.25	--	--	--	--	--	--	--	--	--	--	--	204	--		--	--
13.25	--	--	--	--	--	--	--	--	--	--	--	217	--		--	--
14.25	--	--	--	--	--	--	--	--	--	--	--	226	--		--	--
15.25	--	--	--	--	--	--	--	--	--	--	--	236	--		--	--
16.25	--	--	--	--	--	--	--	--	--	--	--	248	--		--	--
17.25	--	--	--	--	--	--	--	--	--	--	--	262	--		--	--
18.25	--	--	--	--	--	--	--	--	--	--	--	271	--		--	--
19.25	--	--	--	--	--	--	--	--	--	--	--	286	--		--	--
20.25	--	--	--	--	--	--	--	--	--	--	--	292	--		--	--
21.25	--	--	--	--	--	--	--	--	--	--	--	333	--		--	--
22.25	0.7	17.0	3	10.49	677	40	609	54	481	324	330	343	41		-0.18	500
23.25	0.7	13.0	42	1.54	774	89	727	125	586	403	400	392	169		-0.19	589
0.25	0.8	15.3	44	1.05	781	96	725	136	591	398	400	399	180		-0.18	591
1.25	0.9	19.2	46	1.42	785	102	743	144	599	402	404	402	193		-0.18	608
2.25	0.9	20.1	52	0.83	789	107	737	148	593	392	391	390	205		-0.18	618
3.25	1.1	19.8	54	1.47	789	118	745	164	593	385	384	385	233		-0.18	641
4.25	1.3	18.6	63	1.73	790	116	738	191	586	375	375	379	266		-0.18	656
5.25	1.4	17.3	71	2.43	792	130	753	224	611	397	394	394	352		-0.06	752
6.25	1.2	4.5	--	--	--	--	--	--	--	--	--	383	--		--	--
7.25	1.2	13.1	76	2.16	794	146	774	201	638	423	423	420	290		-0.01	703
0.00 - 8.49																
MAX	1.5	30.9	104.	10.42	825.	176.	785.	261.	679.	488.	492.	456.	393.		1.14	757.
MIN	0.0	0.1	-11.	-0.12	697.	9.	677.	9.	540.	347.	343.	360.	18.		-0.20	553.
MEAN	1.2	18.3	62.	2.06	789.	120.	747.	178.	601.	393.	393.	395.	255.		-0.12	659.
ACCM	1.2	18.3	62.		789.	120.	747.	178.	601.	393.	393.	395.	255.		-0.12	659.
0.00 - 0.00																
MAX	0.9	19.2	57.	10.60	781.	115.	735.	142.	603.	415.	417.	406.	179.		0.16	595.
MIN	-0.2	0.1	-12.	-0.11	567.	-7.	511.	-15.	421.	315.	320.	112.	-51.		-0.20	364.
MEAN	0.7	15.2	19.	6.57	716.	52.	657.	71.	533.	373.	376.	211.	75.		-0.16	518.
ACCM	0.7	15.2	19.		716.	52.	657.	71.	533.	373.	376.	211.	75.		-0.16	518.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME .....
W1/ NOX REG STIME .....
W1/ LTW FOR CONTRL.....
W1/ ESTIMATED LTW .....
U1/ LITER WEIGHT .....
KILN CON. MEASUR. .....
KILN CONTROL
COAL TO KILN

.....W1/ NOX CHANGE LT
.....W1/ T EXIT PREHEAT
.....W1/ A50T1 CHANGE
.....W1/ %O2 KILN OUTL
.....
.....W1/ %CO EX PREHEAT
W1/ COAL TO KILN
J1/ ID FAN SPEED

HOUR	KM2F1# KCONTRL	KALARM	ESTLTW LTWT		NOXST LTWGTSP		NOXALT NOXLT	A50ALT A50T1		KM2F1 OA15X1	OA1X2CO	OA2V1
	H	H H	GR/L	GR/L	GR/L	%	% %	DEG.C		%	%	T/H RPM
7.25			1234	929	915	0.1	0.2 0.000	142	0.33	--	--	-- --
8.25			1234	929	915	0.1	0.2 0.000	153	0.57	--	--	-- --
9.25			1234	929	915	0.1	0.2 0.000	164	0.54	--	--	-- --
10.25			1234	929	915	0.1	0.2 0.000	180	0.63	--	--	-- --
11.25			1234	929	915	0.1	0.2 0.000	193	0.60	--	--	-- --
12.25			1234	929	915	0.1	0.2 0.000	204	0.37	--	--	-- --
13.25			1234	929	915	0.1	0.2 0.000	217	0.36	--	--	-- --
14.25			1234	929	915	0.1	0.2 0.000	226	0.38	--	--	-- --
15.25			1234	929	915	0.1	0.2 0.000	236	0.66	--	--	-- --
16.25			1234	929	915	0.1	0.2 0.000	248	0.64	--	--	-- --
17.25			1234	929	915	0.1	0.2 0.000	262	0.61	--	--	-- --
18.25			1234	929	915	0.1	0.2 0.000	271	0.39	--	--	-- --
19.25			1234	929	915	0.1	0.2 0.000	286	0.30	--	--	-- --
20.25			1234	929	915	0.1	0.2 0.000	292	0.24	--	--	-- --
21.25			1234	929	915	0.1	0.2 0.000	333	3.62	--	--	-- --
22.25			1234	929	5330	0.1	0.2 0.000	343	-2.95	10.49	-0.18	5.43 500
23.25			1234	1085	1071	16.5	16.9 0.751	392	4.10	1.54	-0.19	6.76 589
0.25			1234	1165	1121	25.3	25.5 0.254	399	0.56	1.05	-0.18	6.75 591
1.25			1234	1195	1157	28.7	28.7 0.084	402	0.98	1.42	-0.18	7.03 608
2.25			1385	1200	1166	29.1	29.2 0.083	390	-0.21	0.83	-0.18	7.34 618
3.25			1395	1199	1166	29.1	29.2 0.000	385	0.40	1.47	-0.18	7.69 641
4.25			1495	1199	1159	29.1	29.2 0.000	379	0.87	1.73	-0.18	7.71 656
5.25			1405	1199	1151	29.1	29.2 0.000	394	3.60	2.43	-0.06	7.84 752
6.25			1405	1297	1092	40.6	39.6 0.398	383	-5.23	--	--	-- --
7.25			1405	1190	1120	28.7	28.2 0.683	420	0.31	2.16	-0.01	8.17 703
0.00 - 8.50												
MAX			1495.	1522.	5310.	58.3	63.8 2.113	456.	5.08	10.42	1.14	9.46 757.
MIN			1234.	1012.	998.	7.8	9.1 -1.872	360.	-8.15	-0.12	-0.20	0.14 553.
MEAN	8.35	0.00	1380.	1230.	1249.	32.4	32.5 0.110	395.	0.02	2.06	-0.11	7.66 659.
ACCM	85.21	33.90	1387.		1249.		0.110	395.	0.02		-0.11	63.97 659.
0.00 - 0.00												
MAX			1234.	1145.	7062.	23.0	23.3 0.811	406.	4.35	10.60	0.16	6.85 595.
MIN			1234.	930.	916.	0.2	0.2 0.000	112.	-7.15	-0.11	-0.20	0.03 364.
MEAN	2.80	0.00	1234.	937.	999.	1.0	1.0 0.027	211.	0.38	6.57	-0.16	5.50 518.
ACCM	76.95	33.90	1234.		999.		0.027	211.	0.38		-0.16	15.38 518.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL .... COAL HEAT VALUE
% MOISTURE IN COAL..... . . ..
NET HEAT CONSUMP. .... SHORT TONS CLINKER
HEAT CONSUMPTION .... LB COAL / SH.T
W1/ COAL TO KILN .... MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION . . . . . U1/ LITER WEIGHT
W1/ KILN FEED . . . . . COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H T/H	T T/H	KC/KG KC/KG	% %		T/H		GR/L H
7.25	-- --	-66 --	-- --	21.2 4.35	9271	-3.0	-- --	1234
8.25	-- --	-70 --	-- --	21.2 4.35	9268	-3.1	-- --	1234
9.25	-- --	-71 --	-- --	21.2 4.35	9271	-3.2	-- --	1234
10.25	-- --	-72 --	-- --	21.2 4.35	9271	-3.2	-- --	1234
11.25	-- --	-69 --	-- --	21.2 4.35	9271	-3.1	-- --	1234
12.25	-- --	-69 --	-- --	21.2 4.35	9271	-3.1	-- --	1234
13.25	-- --	-71 --	-- --	21.2 4.35	9271	-3.2	-- --	1234
14.25	-- --	-70 --	-- --	21.2 4.35	9271	-3.1	-- --	1234
15.25	-- --	-71 --	-- --	21.2 4.35	9271	-3.2	-- --	1234
16.25	-- --	-72 --	-- --	21.2 4.35	9271	-3.2	-- --	1234
17.25	-- --	-71 --	-- --	21.2 4.35	9271	-3.2	-- --	1234
18.25	-- --	-68 --	-- --	21.2 4.35	9271	-3.0	-- --	1234
19.25	-- --	-70 --	-- --	21.2 4.35	9271	-3.1	-- --	1234
20.25	-- --	-66 --	-- --	21.2 4.35	9271	-3.0	-- --	1234
21.25	-- --	-67 --	-- --	21.2 4.35	9268	-3.0	-- --	1234
22.25	34.0 20.6	496 5.43	1426 1504	21.2 4.35	9271	22.4	0 49.66	1234
23.25	34.7 21.1	506 6.76	1740 1835	21.2 4.35	9271	22.9	0 60.59	1234
0.25	41.3 25.1	602 6.75	1460 1539	21.2 4.35	9271	27.2	0 50.55	1234
1.25	44.9 27.3	655 7.03	1400 1475	21.2 4.35	9271	29.6	0 48.66	1234
2.25	46.2 28.1	674 7.34	1419 1496	21.2 4.35	9271	30.5	0 49.43	1305
3.25	54.3 33.0	792 7.69	1264 1332	21.2 4.35	9271	35.8	0 44.07	1395
4.25	66.3 40.3	968 7.71	1037 1094	21.2 4.35	9271	43.8	0 36.83	1495
5.25	71.7 43.6	1046 7.84	977 1030	21.2 4.35	9271	47.3	0 33.75	1405
6.25	44.3 --	646 --	-- --	21.2 4.35	9271	29.2	-- --	1405
7.25	57.5 34.9	839 8.17	1269 1337	21.2 4.35	9271	37.9	0 44.07	1405
0.00 - 8.51								
MAX	72.8 44.3	1062. 9.46	63660. 67112.	21.2 4.36	9271.	48.0	24. 2207.5	1495.
MIN	-4.7 -3.3	-88. 0.14	-23666.-24949.	21.2 4.36	9268.	-3.6	-9.-820.64	1234.
MEAN	54.1 33.2	766. 7.66	1282. 1267.	21.2 4.36	9272.	34.6	0. 41.65	1389. 8.36
ACCM	465.7 277.6		64.07 1254. 1267.	21.2 4.36			0. 41.65	1387. 85.22
0.00 - 0.00								
MAX	40.0 24.4	585. 6.85	113946 120164	21.2 4.36	9271.	26.5	43. 3949.9	1234.
MIN	-5.4 -3.5	-87. 0.03	-225330-237627	21.2 4.36	9268.	-3.9	-84.-7813.5	1234.
MEAN	29.7 13.7	-23. 5.50	-543. -573.	21.2 4.36	9270.	-1.0	-0. -18.76	1234. 2.80
ACCM	66.8 38.2		15.38 2187. -572.	21.2 4.36			1. -18.76	1234. 76.95

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR ..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1*
	T/H	T/H	T/H KC/KG		%	% GR/L	DEG.C	% H H
7.26	51.9	31.5	7.96 1368	114.3 0.890	3.060	52.8	35.1 1405	152 0.24 0.920 3.020
8.26	61.3	37.3	8.79 1279	119.1 0.950	2.900	66.4	35.1 1405	93 0.24 0.920 3.020
9.26	77.1	46.9	8.82 928	119.1 0.950	2.900	66.4	35.1 1380	116 0.24 0.920 3.020
10.26	81.1	49.3	8.30 914	119.1 0.950	2.900	66.4	35.1 1380	145 0.24 0.920 3.020
11.26	81.7	49.7	8.68 949	119.1 0.950	2.900	66.4	35.1 1160	178 0.24 0.920 3.020
12.26	81.1	49.3	8.80 968	116.3 0.920	3.020	58.9	34.9 1195	216 0.59 0.930 3.080
13.26	80.8	49.1	8.79 972	116.3 0.920	3.020	58.9	34.9 1195	208 0.59 0.930 3.080
14.26	81.4	49.5	8.78 962	116.3 0.920	3.020	58.9	34.9 1195	206 0.59 0.930 3.080
15.26	86.3	52.4	8.77 908	116.3 0.920	3.020	58.9	34.9 1320	233 0.59 0.930 3.080
16.26	81.3	49.4	8.53 936	116.3 0.920	3.020	58.9	34.9 1360	258 0.59 0.930 3.080
17.26	82.4	50.1	8.18 886	118.8 0.950	2.930	65.7	34.9 1315	252 0.59 0.930 3.080
18.26	82.5	50.1	8.15 882	118.8 0.950	2.930	65.7	34.9 1340	235 0.59 0.930 3.080
19.26	81.8	49.7	7.81 852	118.8 0.950	2.930	65.7	34.9 1380	215 0.59 0.930 3.080
20.26	87.0	52.9	8.24 845	118.8 0.950	2.930	65.7	34.9 1390	235 0.59 0.930 3.080
21.26	86.8	52.7	8.17 840	118.8 0.950	2.930	65.7	34.9 1295	232 0.59 0.930 3.080
22.26	87.1	52.9	8.14 835	118.8 0.950	2.930	65.7	34.9 1320	226 0.59 0.930 3.080
23.26	91.8	55.8	8.12 790	118.8 0.950	2.930	65.7	34.9 1365	229 0.59 0.930 3.080
0.25	96.0	58.4	8.34 776	118.8 0.950	2.930	65.7	34.9 1315	249 0.59 0.930 3.080
1.25	95.7	58.2	8.61 802	119.3 0.960	2.900	67.5	34.9 1365	246 0.59 0.930 3.080
2.25	96.3	58.5	8.61 798	119.3 0.960	2.900	67.5	34.9 1330	229 0.59 0.930 3.080
3.25	99.2	60.3	8.64 778	119.3 0.960	2.900	67.5	34.9 1330	243 0.59 0.930 3.080
4.25	99.7	60.6	8.59 769	119.3 0.960	2.900	67.5	34.9 1345	269 0.59 0.930 3.080
5.25	99.9	60.7	8.64 772	119.3 0.960	2.900	67.5	34.9 1265	272 0.59 0.930 3.080
6.25	100.0	60.8	9.11 814	119.3 0.960	2.900	67.5	34.9 1295	248 0.59 0.930 3.080
7.25	99.6	60.5	8.99 806	119.3 0.960	2.900	67.5	34.9 1290	267 0.59 0.930 3.080
0.00 - 7.27								
MAX	101.4	61.7	9.23 931.	119.3 0.960	2.930	67.5	35.0 1365.	297. 0.59 0.930 3.080
MIN	85.1	51.8	8.24 755.	118.8 0.950	2.900	65.7	35.0 1265.	222. 0.59 0.930 3.080
MEAN	97.9	59.5	8.73 797.	119.2 0.959	2.904	67.3	35.0 1322.	253. 0.59 0.930 3.080 0.14 7.46
ACCM	729.5	443.5	65.05 797.	119.3 0.960	2.900	67.5	35.0 1321.	253. 0.59 0.930 3.080 34.04 107.3
0.00 - 0.00								
MAX	95.0	57.7	9.46 63660.	119.1 0.950	3.060	66.4	35.1 1495.	266. 0.59 0.930 3.080
MIN	-4.7	-3.3	0.14-23666.	114.3 0.890	2.900	52.8	35.0 1160.	32. 0.24 0.920 3.020
MEAN	72.5	44.3	8.13 1013.	117.0 0.926	2.981	60.6	35.1 1333.	171. 0.42 0.925 3.049 0.00 23.28
ACCM	1706.1	1031.3	189.10 996.	117.0 0.926	2.982	60.6	35.0 1333.	171. 0.43 0.925 3.053 33.90 99.95

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 .....
W1/ GAS TEMP A53 .....
W1/ PRESSURE A54 .....
W1/ TEMP CYCL A54 .....
W1/ %O2 KILN OUTL .....
W1/ PRES EXIT KILN.....
W1/ KILN TORQUE
W1/ KILN ROT SPEED

.....W1/ GAS TEMP A52
.....W1/ GAS TEMP A51
.....W1/ GAS TEMP A61
.....W1/ T EXIT PREHEAT
.....W1/ PRESS EX PREH
.....
W1/ %CO EX PREHEAT
J1/ ID FAN SPEED

HOUR	OA15V1 OA15A1		OA15P1 OA15X1		A54T1 A54P1		A53T1 A53P1		A52T1 A51T1		A61T1 A50T1		A50P1		OA1X2CO OA2V1	
	RPM	%	MMWG	%	DEG.C	MMWG	DEG.C	MMWG	DEG.C	DEG.C	DEG.C	DEG.C	MMWG		%	RPM
7.26	1.1	9.6	89	2.47	794	151	763	226	618	412	412	409	350		0.00	745
8.26	1.2	23.9	80	3.13	794	134	772	226	633	412	410	412	342		-0.02	717
9.26	1.6	25.1	123	3.80	798	202	782	292	633	413	406	412	472		-0.01	800
10.26	1.6	24.3	96	3.76	796	154	778	267	624	404	399	404	457		-0.02	773
11.26	1.6	26.8	125	3.81	796	204	777	287	625	398	394	398	465		-0.02	776
12.26	1.6	25.8	111	3.40	799	180	779	298	624	401	394	398	467		-0.01	774
13.26	1.6	28.9	97	3.53	800	191	779	273	627	407	401	404	466		0.00	773
14.26	1.6	29.3	114	3.34	802	196	786	303	633	403	397	404	502		-0.01	803
15.26	1.7	35.1	129	2.68	802	212	780	311	617	393	385	395	508		0.00	799
16.26	1.6	31.0	131	3.17	801	207	781	317	629	400	392	400	517		-0.01	803
17.26	1.6	30.7	143	1.79	805	208	781	334	631	402	394	403	531		-0.01	805
18.26	1.6	31.6	112	3.03	806	199	785	300	639	406	398	406	512		0.00	800
19.26	1.6	29.3	128	3.10	802	220	775	309	618	395	386	395	515		-0.01	801
20.26	1.7	26.4	98	3.28	799	170	775	298	613	384	376	385	509		-0.01	809
21.26	1.7	24.4	136	1.91	802	224	775	316	621	394	387	393	519		-0.01	798
22.26	1.7	26.7	97	2.29	806	170	778	274	624	395	390	396	489		-0.15	801
23.26	1.8	29.7	98	2.05	806	178	778	280	617	389	384	391	502		-0.05	814
0.25	1.9	28.3	94	2.99	805	173	776	305	626	393	383	392	514		-0.07	821
1.25	1.9	28.6	104	3.02	806	197	774	305	624	394	388	394	552		-0.18	834
2.25	1.9	30.1	87	3.27	806	177	779	305	620	395	390	396	547		-0.18	831
3.25	1.9	32.1	104	2.90	806	188	777	315	621	390	385	391	566		-0.11	839
4.25	1.9	32.2	102	2.93	806	198	775	307	615	388	384	389	569		-0.17	842
5.25	1.9	33.7	91	3.12	807	202	774	301	622	394	392	398	561		-0.17	843
6.25	1.9	33.3	86	2.62	808	177	777	290	624	392	386	391	563		-0.17	837
7.25	1.9	36.1	83	2.89	808	194	777	292	616	394	388	395	558		-0.18	844
0.00 - 7.29																
MAX	2.0	40.8	126.	3.72	812.	231.	791.	339.	646.	418.	412.	414.	586.		-0.02	850.
MIN	1.8	27.5	71.	1.92	802.	124.	765.	272.	609.	383.	377.	385.	498.		-0.21	817.
MEAN	2.0	32.3	97.	2.89	807.	189.	776.	305.	621.	393.	387.	393.	556.		-0.16	836.
ACCM	2.0	32.3	97.		807.	189.	776.	305.	621.	393.	387.	393.	556.		-0.16	836.
0.00 - 0.00																
MAX	2.0	35.8	153.	10.57	825.	246.	795.	338.	679.	488.	492.	456.	546.		1.14	825.
MIN	-0.5	0.1	-11.	-0.12	697.	9.	677.	3.	548.	347.	343.	360.	-8.		-0.20	445.
MEAN	1.5	24.6	94.	2.69	797.	165.	768.	252.	617.	397.	393.	397.	407.		-0.06	745.
ACCM	1.5	24.6	94.		797.	165.	768.	252.	617.	397.	393.	397.	407.		-0.06	745.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME .... W1/ NOX CHANGE LT
W1/ NOX REG STIME .... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL..... ..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW .... W1/ ZO2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. .... W1/ ZCO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1% KCONTRL	KALARM	ESTLTW LTWT	NUXST LTWGTSP	NOXALT NOXLT	A50ALT A50T1	OA15X1	KM2F1 OA1X2CO	OA2V1
	H	H H	GR/L GR/L GR/L	% % %	DEG.C	%	%	T/H	RPM
7.26			1405 1024 4162	17.9 10.3	-1.644 409	1.73	2.47	0.00	7.96 745
8.26			1405 1413 1297	50.7 52.0	-0.222 412	0.20	3.13	-0.02	8.79 717
9.26			1390 1313 1375	43.8 44.5	-0.222 412	0.86	3.80	-0.01	8.02 800
10.26			1380 1144 3468	28.4 23.9	-0.598 404	0.16	3.76	-0.02	8.30 773
11.26			1160 1158 1164	27.8 28.8	-0.319 398	-0.11	3.81	-0.02	8.68 776
12.26			1195 1201 1199	34.2 33.7	0.228 398	0.00	3.40	-0.01	8.90 774
13.26			1195 1232 1229	38.0 37.6	0.125 404	0.46	3.53	0.00	8.79 773
14.26			1195 1262 1368	41.9 41.5	0.293 404	-0.05	3.34	-0.01	8.78 803
15.26			1320 1224 1551	35.3 36.6	-0.231 395	-1.43	2.68	0.00	8.77 799
16.26			1360 1280 1458	43.3 43.7	0.554 400	-0.02	3.17	-0.01	8.53 803
17.26			1315 1260 1260	40.0 40.3	-0.020 403	0.27	1.79	-0.01	8.18 805
18.26			1340 1341 1723	55.4 50.9	0.792 406	0.29	3.03	0.00	8.15 800
19.26			1380 1375 1378	55.4 55.5	-0.122 395	-0.42	3.10	-0.01	7.81 801
20.26			1390 1283 1282	44.3 42.5	-0.248 385	-0.15	3.28	-0.01	8.24 809
21.26			1295 1317 1315	45.1 46.1	0.220 393	0.78	1.91	-0.01	8.17 798
22.26			1320 1346 1342	49.3 49.8	0.320 396	0.16	2.29	-0.15	8.14 801
23.26			1365 1411 1410	58.7 59.5	0.158 391	-0.96	2.85	-0.05	8.12 814
0.25			1315 1313 1804	47.8 47.5	-0.212 392	0.12	2.99	-0.07	8.34 821
1.25			1365 1314 1796	42.7 42.4	-0.210 394	0.41	3.02	-0.18	8.61 834
2.25			1330 1325 1810	44.8 45.5	0.035 396	0.43	3.27	-0.18	8.61 831
3.25			1330 1321 1364	45.3 44.4	-0.093 391	0.29	2.90	-0.11	8.64 839
4.25			1345 1307 1317	39.4 40.3	-0.196 389	0.07	2.93	-0.17	8.59 842
5.25			1265 1306 1788	43.1 40.3	0.691 398	-1.40	3.12	-0.17	8.64 843
6.25			1295 1292 1293	38.5 37.7	0.076 391	-0.04	2.62	-0.17	9.11 837
7.25			1290 1282 1396	34.2 34.4	-0.143 395	0.05	2.89	-0.18	8.99 844
0.00 - 7.30									
MAX			1365. 1332. 1826.	49.8 48.3	0.876 414.	3.18	3.72	-0.02	9.23 850.
MIN			1265. 1258. 1278.	27.9 26.9	-0.815 385.	-1.72	1.92	-0.21	8.24 817.
MEAN	7.52	0.20	1322. 1307. 1491.	41.4 41.3	-0.087 393.	0.02	2.89	-0.16	8.73 836.
ACCM	107.4	34.10	1321. 1491.		-0.087 393.	0.02		-0.16	65.60 836.
0.00 - 0.00									
MAX			1495. 1522. 5310.	60.0 63.8	2.113 456.	5.08	10.57	1.14	9.46 825.
MIN			1160. 1012. 998.	7.8 9.1	-1.872 360.	-8.15	-0.12	-0.20	0.14 445.
MEAN	23.28	0.00	1333. 1259. 1350.	38.5 38.6	0.049 397.	-0.02	2.69	-0.06	8.13 745.
ACCM	99.95	33.90	1333. 1350.		0.049 397.	-0.02		-0.06	189.10 745.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL..... .....
NET HEAT CONSUMP. ....SHORT TONS CLINKER
HEAT CONSUMPTION ....LB COAL / SH.T
W1/ COAL TO KILN ....MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%
	T/H	T/H T	T/H KC/KG	KC/KG %	%	T/H		GR/L H
7.26	51.9	31.5 758	7.96 1368	1442 21.2	4.35 9271	34.2	0 48.03	1405
8.26	61.3	37.3 895	8.79 1279	1348 21.2	4.35 9271	40.5	0 44.03	1405
9.26	77.1	46.9 1126	8.82 928	979 21.2	4.35 9268	50.9	0 32.19	1380
10.26	81.1	49.3 1184	8.38 914	963 21.2	4.35 9271	53.5	0 31.92	1380
11.26	81.7	49.7 1193	8.68 949	1000 21.2	4.35 9268	53.9	0 32.86	1160
12.26	81.1	49.3 1184	8.80 968	1036 21.5	5.22 9134	53.5	0 33.01	1195
13.26	80.8	49.1 1179	8.79 972	1040 21.5	5.22 9131	53.3	0 33.29	1195
14.26	81.4	49.5 1189	8.78 962	1030 21.5	5.22 9134	53.7	0 32.93	1195
15.26	86.3	52.4 1259	8.77 908	972 21.5	5.22 9134	56.9	0 31.20	1320
16.26	81.3	49.4 1187	8.53 936	1002 21.5	5.22 9134	53.6	0 31.85	1360
17.26	82.4	50.1 1203	8.18 886	948 21.5	5.22 9134	54.4	0 30.30	1315
18.26	82.5	50.1 1203	8.15 882	944 21.5	5.22 9134	54.4	0 30.25	1340
19.26	81.8	49.7 1194	7.81 852	912 21.5	5.22 9134	54.0	0 29.26	1380
20.26	87.0	52.9 1270	8.24 845	905 21.5	5.22 9134	57.4	0 28.98	1390
21.26	86.8	52.7 1266	8.17 840	899 21.5	5.22 9134	57.3	0 28.86	1295
22.26	87.1	52.9 1271	8.14 835	893 21.5	5.22 9134	57.5	0 28.55	1320
23.26	91.8	55.8 1339	8.12 790	846 21.5	5.22 9134	60.5	0 27.03	1365
0.25	96.0	58.4 1401	8.34 776	830 21.5	5.22 9134	63.4	0 26.56	1315
1.25	95.7	58.2 1397	8.61 802	859 21.5	5.22 9134	63.2	0 27.36	1365
2.25	96.3	58.5 1405	8.61 798	854 21.5	5.22 9134	63.5	0 27.10	1330
3.25	99.2	60.3 1447	8.64 778	832 21.5	5.22 9134	65.4	0 26.58	1330
4.25	99.7	60.6 1455	8.59 769	823 21.5	5.22 9134	65.8	0 26.21	1345
5.25	99.9	60.7 1458	8.64 772	826 21.5	5.22 9134	65.9	0 26.42	1265
6.25	100.0	60.8 1459	9.11 814	871 21.5	5.22 9134	66.0	0 27.84	1295
7.25	99.6	60.5 1453	8.99 806	862 21.5	5.22 9134	65.7	0 27.62	1290
0.00 - 7.31								
MAX	101.4	61.7 1480.	9.23 931.	996. 21.5	5.22 9134.	66.9	0. 31.81	1365.
MIN	85.1	51.8 1242.	8.24 755.	808. 21.5	5.22 9131.	56.2	0. 25.80	1265.
MEAN	97.9	59.5 1429.	8.73 797.	853. 21.5	5.22 9135.	64.6	0. 27.23	1322. 7.53
ACCM	736.8	448.0	65.70 797.	853. 21.5	5.22		0. 27.23	1321. 107.4
0.00 - 0.00								
MAX	95.0	57.7 1384.	9.46 63660.	67112. 21.5	5.22 9271.	62.6	24. 2207.5	1495.
MIN	-4.7	-3.3 -80.	0.14-23666.	-24949. 21.2	4.36 9131.	-3.6	-9.-820.64	1160.
MEAN	72.5	44.3 1036.	8.13 1013.	1075. 21.3	4.79 9201.	46.9	0. 34.86	1333. 23.28
ACCM	1706.1	1031.3	189.10 996.	1076. 21.3	4.79		0. 34.83	1333. 99.95

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR ..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1*
	T/H	T/H T/H KC/KG		%	% GR/L	DEG.C %		H H
7.25	98.7	60.0 9.13 826	119.3 0.960	2.900 67.5	34.9 1295	259 0.59	0.930	3.080
8.25	100.0	60.8 9.05 809	117.6 0.950	2.790 65.6	34.9 1290	301 0.59	0.930	3.080
9.25	99.4	60.4 9.35 839	117.6 0.950	2.790 65.6	34.9 1070	312 0.59	0.930	3.080
10.25	99.5	60.5 9.35 838	117.6 0.950	2.790 65.6	34.9 1080	239 0.59	0.930	3.080
11.25	100.3	61.0 9.26 824	117.6 0.950	2.790 65.6	34.9 1080	259 0.59	0.930	3.080
12.25	99.0	60.2 9.10 820	117.6 0.950	2.790 65.6	34.9 1260	253 0.59	0.930	3.080
13.25	99.6	60.6 9.22 826	117.6 0.950	2.790 65.6	34.9 1200	270 0.59	0.930	3.080
14.25	100.6	61.1 9.22 818	115.2 0.910	2.970 56.5	34.8 1160	239 0.36	0.940	3.060
15.25	100.2	60.9 9.55 851	115.2 0.910	2.970 56.5	34.8 1185	254 0.36	0.940	3.060
16.25	96.6	58.7 9.23 853	116.4 0.920	2.910 59.6	34.8 1155	279 0.36	0.940	3.060
17.25	96.2	58.5 9.20 854	116.4 0.920	2.910 59.6	34.8 1180	280 0.36	0.940	3.060
18.25	97.4	59.2 9.26 848	116.4 0.920	2.910 59.6	34.8 1375	271 0.36	0.940	3.060
19.25	99.8	60.7 9.24 827	116.4 0.920	2.910 59.6	34.8 1390	249 0.36	0.940	3.060
20.25	99.5	60.5 9.42 845	116.4 0.920	2.910 59.6	34.8 1300	226 0.36	0.940	3.060
21.25	95.7	58.2 9.55 890	116.4 0.920	2.910 59.6	34.8 1210	228 0.36	0.940	3.060
22.25	97.1	59.0 9.47 870	116.4 0.920	2.910 59.6	34.8 1305	218 0.36	0.940	3.060
23.25	97.2	59.1 9.38 862	116.4 0.920	2.910 59.6	34.8 1365	219 0.36	0.940	3.060
0.25	97.8	59.4 9.26 845	117.5 0.940	2.870 63.5	34.8 1380	188 0.36	0.940	3.060
1.25	97.6	59.3 9.36 857	117.5 0.940	2.870 63.5	34.8 1225	250 0.36	0.940	3.060
2.25	98.5	59.9 9.36 849	117.5 0.940	2.870 63.5	34.8 1225	247 0.36	0.940	3.060
3.25	98.3	59.8 9.24 839	117.5 0.940	2.870 63.5	34.8 1295	247 0.36	0.940	3.060
4.25	97.5	59.3 8.98 822	117.5 0.940	2.870 63.5	34.8 1335	260 0.36	0.940	3.060
5.25	99.7	60.6 9.15 820	117.5 0.940	2.870 63.5	34.8 1320	261 0.36	0.940	3.060
6.25	100.1	60.8 9.02 804	117.5 0.940	2.870 63.5	34.8 1270	247 0.36	0.940	3.060
7.25	100.1	60.9 9.06 808	117.5 0.940	2.870 63.5	34.8 1270	269 0.36	0.940	3.060
0.00 - 7.26								
MAX	101.2	61.5 9.50 881.	117.5 0.940	2.870 63.5	34.8 1380.	280. 0.36	0.940	3.060
MIN	95.3	58.0 8.92 795.	117.5 0.940	2.870 63.5	34.8 1225.	177. 0.36	0.940	3.060
MEAN	98.5	59.9 9.19 834.	117.5 0.940	2.870 63.5	34.8 1295.	247. 0.36	0.940	3.060 0.00 7.45
ACCM	734.0	446.3 68.49 833.	117.5 0.940	2.870 63.5	34.8 1293.	247. 0.36	0.940	3.060 39.48 131.0
0.00 - 0.00								
MAX	102.0	62.0 9.62 931.	119.3 0.960	2.970 67.5	35.0 1390.	340. 0.59	0.940	3.080
MIN	85.1	51.8 8.24 755.	115.2 0.910	2.790 56.6	34.8 1070.	182. 0.36	0.930	3.060
MEAN	98.4	59.8 9.10 827.	117.5 0.939	2.884 63.2	34.9 1262.	256. 0.49	0.934	3.072 5.56 24.02
ACCM	2361.6	1435.9 218.50 826.	117.4 0.939	2.883 63.2	34.9 1264.	256. 0.48	0.935	3.071 39.48 123.7

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 .....
W1/ GAS TEMP A53 .....
W1/ PRESSURE A54 .....
W1/ TEMP CYCL A54 .....
W1/ %O2 KILN OUTL .....
W1/ PRES EXIT KILN.....
W1/ KILN TORQUE
W1/ KILN ROT SPEED

.....W1/ GAS TEMP A52
.....W1/ GAS TEMP A51
.....W1/ GAS TEMP A61
.....W1/ T EXIT PREHEAT
.....W1/ PRESS EX PREH
.....
W1/ %CO EX PREHEAT
J1/ ID FAN SPEED

HOUR	OA15V1 RPM	OA15A1 %	OA15P1 MMWG	OA15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	OA1X2CO %	OA2V1 RPM
7.25	1.9	37.7	84	2.84	810	187	775	303	620	392	387	394	556	-0.18	838
8.25	1.9	31.7	96	3.94	806	178	770	305	615	390	383	388	570	-0.15	844
9.25	1.9	30.4	105	3.58	805	194	773	311	618	384	379	386	588	-0.18	851
10.25	1.9	29.1	98	3.53	805	195	777	316	624	388	382	388	585	0.03	855
11.25	1.9	28.1	110	3.06	804	219	779	331	622	389	382	387	601	0.02	856
12.25	1.9	27.7	121	4.15	802	233	781	352	624	397	387	393	639	0.00	882
13.25	1.9	27.5	132	3.74	804	235	772	354	617	380	373	380	623	-0.01	865
14.25	1.9	24.0	136	2.90	803	252	770	379	617	380	373	381	649	0.00	883
15.25	1.9	26.2	142	3.36	803	275	778	390	618	386	380	387	659	0.01	885
16.25	1.9	26.6	151	3.80	803	248	780	375	632	397	390	397	638	0.00	883
17.25	1.9	25.2	142	3.18	803	231	778	358	619	386	379	388	598	0.00	886
18.25	1.9	21.3	155	3.78	801	254	781	378	627	391	381	389	648	-0.01	883
19.25	1.9	18.2	133	2.99	805	237	779	339	614	377	370	380	594	-0.01	881
20.25	1.9	18.4	122	3.54	803	223	777	365	620	387	378	386	626	0.00	877
21.25	1.9	20.6	156	3.25	804	252	781	373	626	395	387	394	615	0.00	880
22.25	1.9	23.5	149	2.86	805	249	783	360	630	393	384	393	607	0.00	884
23.25	1.9	24.1	142	3.12	805	231	777	338	628	393	383	392	607	-0.01	881
0.25	1.9	26.2	148	3.08	804	232	783	350	626	391	380	389	594	-0.02	877
1.25	1.9	27.0	157	3.50	805	247	778	354	627	388	379	386	604	-0.01	876
2.25	1.9	28.2	148	3.00	806	237	782	350	631	387	382	390	616	0.00	878
3.25	1.9	30.0	147	3.01	805	244	779	328	619	384	379	384	581	-0.01	878
4.25	1.9	28.3	131	3.18	807	224	782	330	626	388	381	389	588	-0.01	872
5.25	1.9	27.8	136	3.28	805	232	783	361	630	394	386	393	631	-0.02	876
6.25	2.0	29.5	147	3.45	804	236	780	338	623	390	385	389	605	-0.03	873
7.25	1.9	27.7	131	3.90	804	225	779	337	625	392	388	391	607	-0.04	872
0.00 - 7.28															
MAX	2.0	30.7	166.	6.32	811.	273.	791.	385.	637.	398.	393.	397.	643.	0.01	885.
MIN	2.0	25.0	112.	1.83	797.	190.	773.	290.	614.	381.	374.	382.	572.	-0.09	858.
MEAN	2.0	28.3	142.	3.20	805.	231.	783.	350.	625.	390.	383.	390.	608.	-0.02	875.
ACCM	2.0	28.3	142.		805.	231.	783.	350.	625.	390.	383.	390.	608.	-0.02	875.
0.00 - 0.00															
MAX	2.0	40.8	174.	4.78	812.	289.	791.	402.	646.	418.	412.	414.	670.	0.04	895.
MIN	1.8	17.1	71.	1.92	799.	181.	764.	272.	576.	374.	363.	377.	498.	-0.21	817.
MEAN	2.0	27.6	119.	3.29	805.	216.	778.	338.	622.	391.	383.	390.	597.	-0.07	862.
ACCM	2.0	27.6	119.		805.	216.	778.	338.	622.	391.	383.	390.	597.	-0.07	862.

W1/ NOX REG LTIME .....
W1/ NOX REG STIME .....
W1/ LTW FOR CONTRL.....
W1/ ESTIMATED LTW .....
U1/ LITER WEIGHT .....
KILN CON. MEASUR. .....
KILN CONTROL
COAL TO KILN

.....W1/ NOX CHANGE LT
.....W1/ T EXIT PREHEAT
.....W1/ A50T1 CHANGE
.....W1/ %O2 KILN OUTL
.....
.....W1/ %CO EX PREHEAT
W1/ COAL TO KILN
J1/ ID FAN SPEED

HOUR	KM2F1% KCONTRL	KALARM	ESTLTW LTWT	NOXST LTWGTSP	NOXALT NOXLT	A50ALT A50T1	OA15X1	KM2F1 OA1X2CO	OA2V1
	H	H	H GR/L	GR/L GR/L	% %	% DEG.C	%	% T/H	RPM
7.25			1295 1286	1289 36.9	36.0 -0.073	394 0.11	2.84	-0.18 9.13	838
8.25			1290 1246	1262 20.7	19.8 -0.689	388 0.13	3.94	-0.15 9.05	844
9.25			1070 1112	1626 15.2	14.5 -0.151	386 -0.05	3.58	-0.18 9.35	851
10.25			1080 1199	1188 27.9	29.6 0.230	388 -0.16	3.53	0.03 9.35	855
11.25			1080 1167	1162 25.5	24.9 -0.047	387 -0.04	3.06	0.02 9.26	856
12.25			1260 1179	1179 24.5	24.3 -0.159	393 0.41	4.15	0.00 9.10	882
13.25			1200 1184	1182 23.9	25.2 0.108	380 -0.19	3.74	-0.01 9.22	865
14.25			1160 1177	1174 24.7	24.3 0.219	381 0.11	2.90	0.00 9.22	883
15.25			1185 1111	1113 17.1	16.8 -0.293	387 0.17	3.36	0.01 9.55	885
16.25			1155 1179	1174 23.9	24.0 0.199	397 0.67	3.80	0.00 9.23	883
17.25			1180 1318	1316 39.2	39.6 0.411	388 0.16	3.18	0.00 9.20	886
18.25			1375 1323	1333 36.8	36.6 -0.187	389 0.35	3.78	-0.01 9.26	883
19.25			1390 1330	1302 34.3	34.4 -0.149	380 -0.92	2.99	-0.01 9.24	881
20.25			1300 1227	1231 26.1	25.9 -0.059	386 -0.58	3.54	0.00 9.42	877
21.25			1210 1320	1308 33.7	33.0 0.439	394 -0.13	3.25	0.00 9.55	880
22.25			1305 1404	1389 43.5	43.3 0.383	393 -0.42	2.86	0.00 9.47	884
23.25			1365 1468	1455 49.5	49.7 0.008	392 0.00	3.12	-0.01 9.38	881
0.25			1300 1363	1363 40.5	41.5 -0.356	389 -0.86	3.08	-0.02 9.26	877
1.25			1225 1336	1330 38.5	38.5 -0.066	386 -0.03	3.50	-0.01 9.36	876
2.25			1225 1366	1356 42.0	41.8 0.560	390 0.21	3.00	0.00 9.36	878
3.25			1295 1372	1377 49.1	48.3 -0.035	384 -0.11	3.01	-0.01 9.24	878
4.25			1335 1417	1418 56.5	55.9 0.588	389 0.12	3.18	-0.01 8.98	872
5.25			1320 1319	1319 41.5	39.8 -0.734	393 0.23	3.28	-0.02 9.15	876
6.25			1270 1344	1323 52.4	52.3 0.210	389 -0.50	3.45	-0.03 9.02	873
7.25			1270 1381	1280 43.6	44.8 -0.337	391 0.61	3.90	-0.04 9.06	872
0.00 - 7.29									
MAX			1380. 1447.	1442. 57.8	58.6 0.766	397. 0.97	6.32	0.01 9.50	885.
MIN			1225. 1258.	1256. 28.9	29.6 -0.842	382. -0.71	1.83	-0.09 8.92	858.
MEAN	7.49	0.00	1295. 1362.	1363. 45.7	45.7 -0.000	390. -0.01	3.20	-0.02 9.19	875.
ACCM	131.1	39.48	1293.	1363.	-0.000	390. -0.01		-0.02 68.88	875.
0.00 - 0.00									
MAX			1390. 1487.	1826. 52.7	51.6 0.976	414. 3.18	4.78	0.04 9.62	895.
MIN			1070. 1110.	1071. 14.1	14.2 -0.853	377. -1.72	1.92	-0.21 8.24	817.
MEAN	24.02	5.56	1262. 1269.	1342. 33.3	33.2 -0.010	390. 0.00	3.29	-0.07 9.10	862.
ACCM	123.7	39.48	1264.	1342.	-0.010	390. 0.00		-0.07 218.50	862.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL..... .....
NET HEAT CONSUMP. ....SHORT TONS CLINKER
HEAT CONSUMPTION ....LB COAL / SH.T
W1/ COAL TO KILN ....MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HOIOF1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH		C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1%	
	T/H	T/H T	T/H	KC/KG	KC/KG	%	%	T/H		GR/L H
7.25	98.7	60.0 1441	9.13	826	883	21.5	5.22 9134	65.1	0 28.20	1295
8.25	100.0	60.8 1459	9.05	809	866	21.5	5.22 9131	66.0	0 27.59	1290
9.25	99.4	60.4 1451	9.35	839	898	21.5	5.22 9131	65.6	0 28.74	1070
10.25	99.5	60.5 1453	9.35	838	897	21.5	5.22 9134	65.7	0 28.60	1080
11.25	100.3	61.0 1464	9.26	824	882	21.5	5.22 9134	66.2	0 28.16	1080
12.25	99.0	60.2 1446	9.10	820	877	21.5	5.22 9134	65.4	0 27.88	1260
13.25	99.6	60.6 1454	9.22	826	884	21.5	5.22 9134	65.7	0 28.08	1200
14.25	100.6	61.1 1468	9.22	818	875	20.5	6.27 9142	66.4	0 27.94	1160
15.25	100.2	60.9 1463	9.55	851	909	20.5	6.27 9142	66.1	0 29.22	1185
16.25	96.6	58.7 1410	9.23	853	912	20.5	6.27 9142	63.7	0 29.25	1155
17.25	96.2	58.5 1404	9.20	854	913	20.5	6.27 9142	63.5	0 29.23	1180
18.25	97.4	59.2 1422	9.26	848	907	20.5	6.27 9142	64.3	0 28.95	1375
19.25	99.8	60.7 1457	9.24	827	884	20.5	6.27 9142	65.9	0 28.26	1390
20.25	99.5	60.5 1452	9.42	845	904	20.5	6.27 9142	65.6	0 28.94	1300
21.25	95.7	58.2 1397	9.55	890	952	20.5	6.27 9142	63.2	0 30.43	1210
22.25	97.1	59.0 1418	9.47	870	930	20.5	6.27 9142	64.1	0 29.76	1305
23.25	97.2	59.1 1418	9.38	862	922	20.5	6.27 9142	64.1	0 29.50	1365
0.25	97.8	59.4 1427	9.26	845	903	20.5	6.27 9142	64.5	0 28.95	1380
1.25	97.6	59.3 1424	9.36	857	916	20.5	6.27 9139	64.4	0 29.36	1225
2.25	98.5	59.9 1438	9.36	849	907	20.5	6.27 9142	65.0	0 29.18	1225
3.25	98.3	59.8 1435	9.24	839	897	20.5	6.27 9142	64.9	0 28.73	1295
4.25	97.5	59.3 1423	8.98	822	878	20.5	6.27 9142	64.3	0 28.07	1335
5.25	99.7	60.6 1455	9.15	820	876	20.5	6.27 9142	65.8	0 28.61	1320
6.25	100.1	60.8 1461	9.02	804	860	20.5	6.27 9142	66.0	0 27.64	1270
7.25	100.1	60.9 1461	9.06	808	863	20.5	6.27 9142	66.1	0 27.58	1270
0.00 - 7.30										
MAX	101.2	61.5 1477.	9.50	881.	942.	20.5	6.27 9143.	66.8	0. 30.12	1380.
MIN	95.3	58.0 1392.	8.92	795.	850.	20.5	6.27 9140.	62.9	0. 27.20	1225.
MEAN	98.6	59.9 1438.	9.19	834.	891.	20.5	6.27 9143.	65.0	0. 28.50	1295. 7.51
ACCM	739.4	449.6	68.98	833.	891.	20.5	6.27		0. 28.50	1293. 131.1
0.00 - 0.00										
MAX	102.0	62.0 1489.	9.62	931.	996.	21.5	6.27 9143.	67.4	0. 31.81	1390.
MIN	85.1	51.8 1242.	8.24	755.	808.	20.5	5.22 9014.	56.2	0. 25.80	1070.
MEAN	98.4	59.8 1436.	9.10	827.	884.	21.1	5.68 9137.	64.9	0. 28.26	1262. 24.02
ACCM	2361.6	1435.9	218.50	826.	884.	21.1	5.68		0. 28.25	1264. 123.7

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HG10F1 PROD	KM2F1	BF KCAL	KF-LS	KF-MS C3S	KF-LOI	KLO LTWT	FCAO	CL-LS	CL-MS	KCONTRL KM2F1*		
	T/H	T/H	T/H KC/KG				Z	Z	GR/L	DEG.C	Z	H	H
7.25	0.0	0.0	0.00 0	0.0	0.000	0.000	0.0	0.0	0	0	0.00	0.000	0.000
8.25	0.0	0.0	0.00 0	0.0	0.000	0.000	0.0	0.0	0	0	0.00	0.000	0.000
9.25	0.0	0.0	0.00 0	0.0	0.000	0.000	0.0	0.0	0	0	0.00	0.000	0.000
10.25	0.0	0.0	0.00 0	0.0	0.000	0.000	0.0	0.0	0	0	0.00	0.000	0.000
11.25	0.0	0.0	0.00 0	0.0	0.000	0.000	0.0	0.0	0	0	0.00	0.000	0.000
12.25	0.0	0.0	0.00 0	0.0	0.000	0.000	0.0	0.0	0	0	0.00	0.000	0.000
13.25	0.0	0.0	0.00 0	0.0	0.000	0.000	0.0	0.0	0	0	0.00	0.000	0.000
14.25	0.0	0.0	0.00 0	0.0	0.000	0.000	0.0	0.0	0	0	0.00	0.000	0.000
15.25	0.0	0.0	0.00 0	0.0	0.000	0.000	0.0	0.0	0	0	0.00	0.000	0.000
16.25	0.0	0.0	0.00 0	0.0	0.000	0.000	0.0	0.0	0	0	0.00	0.000	0.000
17.25	0.0	0.0	0.00 0	0.0	0.000	0.000	0.0	0.0	0	0	0.00	0.000	0.000
18.25	0.0	0.0	0.00 0	0.0	0.000	0.000	0.0	0.0	0	0	0.00	0.000	0.000
19.25	99.9	60.7	8.71 778	0.0	0.000	0.000	0.0	0.0	1355	276	0.00	0.000	0.000
20.25	100.2	60.9	8.80 784	0.0	0.000	0.000	0.0	0.0	1325	288	0.00	0.000	0.000
21.25	99.9	60.7	8.90 795	0.0	0.000	0.000	0.0	0.0	1285	288	0.00	0.000	0.000
22.25	100.0	60.8	8.88 793	0.0	0.000	0.000	0.0	0.0	1290	278	0.00	0.000	0.000
23.25	99.4	60.4	8.90 799	0.0	0.000	0.000	0.0	0.0	1265	291	0.00	0.000	0.000
0.25	98.9	60.1	8.95 808	0.0	0.000	0.000	0.0	0.0	1285	304	0.00	0.000	0.000
1.25	100.3	61.0	8.94 795	115.5	0.910	2.910	57.5	0.0	1265	276	0.00	0.000	0.000
2.25	99.1	60.2	8.87 799	115.5	0.910	2.910	57.5	0.0	1310	271	0.00	0.000	0.000
3.25	99.8	60.7	8.67 775	115.5	0.910	2.910	57.5	0.0	1310	291	0.00	0.000	0.000
4.25	99.5	60.5	8.91 799	115.5	0.910	2.910	57.5	0.0	1295	265	0.00	0.000	0.000
5.25	99.4	60.4	8.72 783	115.5	0.910	2.910	57.5	0.0	1300	274	0.00	0.000	0.000
6.25	98.7	60.0	8.56 774	115.5	0.910	2.910	57.5	0.0	1300	298	0.00	0.000	0.000
7.25	99.8	60.6	8.82 789	115.5	0.910	2.910	57.5	0.0	1285	305	0.00	0.000	0.000
0.00 - 7.26													
MAX	101.2	61.5	9.05 816.	115.5	0.910	2.910	57.6	0.0	1310.	316.	0.00	0.000	0.000
MIN	97.1	59.0	8.38 749.	0.0	0.000	0.000	0.0	0.0	1265.	224.	0.00	0.000	0.000
MEAN	99.7	60.6	8.81 789.	95.8	0.756	2.415	47.9	0.0	1294.	284.	0.00	0.000	0.000 5.30 7.45
ACCM	743.1	451.8	65.60 789.	99.0	0.780	2.494	49.3	0.0	1295.	284.	0.00	0.000	0.000 5.35 12.78
0.00 - 0.00													
MAX	100.9	61.4	8.97 807.	0.0	0.000	0.000	0.0	0.0	1355.	312.	0.00	0.000	0.000
MIN	40.9	28.6	3.63 770.	0.0	0.000	0.000	0.0	0.0	0.	116.	0.00	0.000	0.000
MEAN	99.6	60.5	8.81 790.	0.0	0.000	0.000	0.0	0.0	1177.	285.	0.00	0.000	0.000 0.05 5.33
ACCM	530.8	322.8	46.96 790.	0.0	0.000	0.000	0.0	0.0	1987.	285.	0.00	0.000	0.000 0.05 5.33

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 .....
W1/ GAS TEMP A53 .....
W1/ PRESSURE A54 .....
W1/ TEMP CYCL A54 .....
W1/ ZO2 KILN OUTL .....
W1/ PRES EXIT KILN.....
W1/ KILN TORQUE
W1/ KILN ROT SPEED

.....W1/ GAS TEMP A52
.....W1/ GAS TEMP A51
.....W1/ GAS TEMP A61
.....W1/ T EXIT PREHEAT
.....W1/ PRESS EX PREH
.....
W1/ ZCO EX PREHEAT
J1/ ID FAN SPEED

HOUR	0A15V1 RPM	0A15A1 %	0A15P1 MMWG	0A15X1 %	A54T1 DEG.C	A54P1 MMWG	A53T1 DEG.C	A53P1 MMWG	A52T1 DEG.C	A51T1 DEG.C	A61T1 DEG.C	A50T1 DEG.C	A50P1 MMWG	0A1X2C0 %	0A2V1 RPM
7.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0	0	0.00	0
8.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0	0	0.00	0
9.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0	0	0.00	0
10.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0	0	0.00	0
11.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0	0	0.00	0
12.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0	0	0.00	0
13.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0	0	0.00	0
14.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0	0	0.00	0
15.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0	0	0.00	0
16.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0	0	0.00	0
17.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0	0	0.00	0
18.25	0.0	0.0	0	0.00	0	0	0	0	0	0	0	0	0	0.00	0
19.25	1.9	32.8	138	4.29	809	208	790	359	631	389	380	388	619	-0.01	861
20.25	1.9	31.7	150	4.41	808	238	788	366	632	393	384	393	622	-0.02	864
21.25	1.9	30.7	125	3.67	811	211	791	351	639	394	384	394	614	-0.07	862
22.25	1.9	32.4	139	3.33	809	230	788	351	632	394	385	392	616	-0.02	865
23.25	1.9	32.3	135	2.89	802	212	779	357	624	387	379	388	611	-0.15	862
0.25	1.9	31.8	142	3.09	805	234	784	354	625	392	382	389	630	-0.17	871
1.25	1.9	32.8	158	2.36	806	251	785	366	627	390	382	388	633	-0.18	871
2.25	1.9	32.7	136	2.19	806	233	783	361	624	392	382	391	627	-0.05	871
3.25	1.9	32.1	146	2.91	805	234	783	359	631	391	384	389	628	-0.16	874
4.25	1.9	32.1	135	2.74	803	225	778	352	627	384	378	387	610	-0.09	879
5.25	1.9	32.3	133	3.45	805	236	784	371	625	392	385	391	638	-0.18	883
6.25	1.9	31.4	136	3.27	804	236	778	347	616	384	376	385	609	-0.18	874
7.25	1.9	28.4	126	1.91	805	213	780	327	610	376	369	376	573	-0.07	858
0.00 - 7.28															
MAX	2.0	34.1	168.	4.23	811.	273.	796.	389.	637.	398.	392.	396.	659.	-0.01	891.
MIN	2.0	28.1	113.	1.90	798.	184.	771.	303.	605.	371.	366.	374.	554.	-0.21	851.
MEAN	2.0	32.0	141.	2.84	805.	233.	783.	359.	625.	389.	381.	389.	623.	-0.16	875.
ACCM	2.0	32.0	141.		805.	233.	783.	359.	625.	389.	381.	389.	623.	-0.16	875.
0.00 - 0.00															
MAX	2.0	33.9	167.	5.05	813.	266.	799.	381.	641.	399.	391.	398.	640.	0.00	878.
MIN	1.9	13.3	117.	1.32	784.	194.	767.	334.	613.	380.	371.	359.	477.	-0.20	833.
MEAN	1.9	32.1	141.	3.85	808.	232.	788.	358.	631.	392.	383.	392.	619.	-0.05	866.
ACCM	1.9	32.1	141.		808.	232.	788.	358.	631.	392.	383.	392.	619.	-0.05	866.

W1/ NOX REG LTIME .... W1/ NOX CHANGE LT
W1/ NOX REG STIME .... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL..... ..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW .... W1/ %O2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ....W1/ %CO EX PREHEAT
KILN CONTROL ..... W1/ COAL TO KILN
COAL TO KILN ..... J1/ ID FAN SPEED

HOUR	KM2F1%	KALARM	KCONTRL	ESTLTW	LTWT	NOXST	LTWGTSP	NOXALT	NOXLT	A50ALT	A50T1	OA15X1	KM2F1 OA1X2CO	OA2V1
	H	H	H	GR/L	GR/L	GR/L	%	%	%	DEG.C		%	%	T/H	RPM
7.25				0	0	0	0.0	0.0	0.000	0	0.00	0.00	0.00	0.00	0
8.25				0	0	0	0.0	0.0	0.000	0	0.00	0.00	0.00	0.00	0
9.25				0	0	0	0.0	0.0	0.000	0	0.00	0.00	0.00	0.00	0
10.25				0	0	0	0.0	0.0	0.000	0	0.00	0.00	0.00	0.00	0
11.25				0	0	0	0.0	0.0	0.000	0	0.00	0.00	0.00	0.00	0
12.25				0	0	0	0.0	0.0	0.000	0	0.00	0.00	0.00	0.00	0
13.25				0	0	0	0.0	0.0	0.000	0	0.00	0.00	0.00	0.00	0
14.25				0	0	0	0.0	0.0	0.000	0	0.00	0.00	0.00	0.00	0
15.25				0	0	0	0.0	0.0	0.000	0	0.00	0.00	0.00	0.00	0
16.25				0	0	0	0.0	0.0	0.000	0	0.00	0.00	0.00	0.00	0
17.25				0	0	0	0.0	0.0	0.000	0	0.00	0.00	0.00	0.00	0
18.25				0	0	0	0.0	0.0	0.000	0	0.00	0.00	0.00	0.00	0
19.25				1355	1561	724	52.0	66.0	3.715	388	0.13	4.29	-0.01	8.71	861
20.25				1325	1294	777	42.1	41.9	-0.500	393	0.07	4.41	-0.02	8.80	864
21.25				1285	1294	948	43.6	43.2	0.018	394	-0.02	3.67	-0.07	8.90	862
22.25				1290	1289	1289	42.4	42.6	-0.110	392	-0.06	3.33	-0.02	8.88	865
23.25				1265	1297	1297	46.3	46.4	0.305	388	-0.53	2.89	-0.15	8.90	862
0.25				1285	1279	1279	42.1	40.7	-0.184	389	0.16	3.09	-0.17	8.95	871
1.25				1265	1297	1172	47.3	46.4	0.145	388	0.13	2.36	-0.18	8.94	871
2.25				1310	1313	1312	51.3	51.1	0.133	391	-0.07	2.19	-0.05	8.87	871
3.25				1310	1316	1329	50.8	52.5	-0.073	389	0.16	2.91	-0.16	8.67	874
4.25				1295	1300	1299	48.4	48.3	0.107	387	0.27	2.74	-0.09	8.91	879
5.25				1300	1298	1298	48.1	47.7	-0.140	391	0.04	3.45	-0.18	8.72	883
6.25				1300	1285	1286	43.2	42.7	-0.071	385	-0.32	3.27	-0.18	8.56	874
7.25				1285	1274	1267	41.3	41.2	-0.030	376	-0.53	1.91	-0.07	8.82	858
0.00 - 7.29															
MAX				1310.	1323.	1338.	54.1	54.3	0.215	396.	0.89	4.23	-0.01	9.05	891.
MIN				1265.	1274.	1150.	40.2	40.6	-0.437	374.	-0.66	1.90	-0.21	8.38	851.
MEAN	7.50	5.34		1294.	1297.	1264.	46.7	46.7	-0.014	389.	-0.05	2.84	-0.16	8.81	875.
ACCM	12.82	5.40		1295.		1264.			-0.014	389.	-0.05		-0.16	65.98	875.
0.00 - 0.00															
MAX				1355.	1564.	1299.	63.9	66.4	3.856	398.	49.46	5.05	0.00	8.97	878.
MIN				0.	0.	0.	0.0	0.0	-0.589	359.	-0.67	1.32	-0.20	3.63	833.
MEAN	5.33	0.05		1177.	1265.	922.	42.9	42.9	0.279	392.	0.68	3.85	-0.05	8.81	866.
ACCM	5.33	0.05		1087.		922.			0.279	392.	0.68		-0.05	46.96	866.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL..... .....
NET HEAT CONSUMP. ....SHORT TONS CLINKER
HEAT CONSUMPTION ....LB COAL / SH.T
W1/ COAL TO KILN ....MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD T/H	PRODR KM2F1 T/H	KCAL T	C-MOIST NKCAL T/H	C-HEAT KC/KG	STONS C-ASH KC/KG	BTU %	%	LB.COAL T/H		LTWT GR/L	KM2F1% H
7.25	0.0	0.0	0	0.00	0	0	0.0	0.00	0	0.0	0	0.00	0
8.25	0.0	0.0	0	0.00	0	0	0.0	0.00	0	0.0	0	0.00	0
9.25	0.0	0.0	0	0.00	0	0	0.0	0.00	0	0.0	0	0.00	0
10.25	0.0	0.0	0	0.00	0	0	0.0	0.00	0	0.0	0	0.00	0
11.25	0.0	0.0	0	0.00	0	0	0.0	0.00	0	0.0	0	0.00	0
12.25	0.0	0.0	0	0.00	0	0	0.0	0.00	0	0.0	0	0.00	0
13.25	0.0	0.0	0	0.00	0	0	0.0	0.00	0	0.0	0	0.00	0
14.25	0.0	0.0	0	0.00	0	0	0.0	0.00	0	0.0	0	0.00	0
15.25	0.0	0.0	0	0.00	0	0	0.0	0.00	0	0.0	0	0.00	0
16.25	0.0	0.0	0	0.00	0	0	0.0	0.00	0	0.0	0	0.00	0
17.25	0.0	0.0	0	0.00	0	0	0.0	0.00	0	0.0	0	0.00	0
18.25	0.0	0.0	0	0.00	0	0	0.0	0.00	0	0.0	0	0.00	0
19.25	99.9	60.7	1459	8.71	778	609	0.0	0.00	12498	65.9	0	36.59	1355
20.25	100.2	60.9	1462	8.80	784	614	0.0	0.00	12498	66.1	0	36.84	1325
21.25	99.9	60.7	1458	8.90	795	622	0.0	0.00	12498	65.9	0	37.03	1285
22.25	100.0	60.8	1459	8.88	793	621	0.0	0.00	12498	66.0	0	37.04	1290
23.25	99.4	60.4	1450	8.90	799	625	0.0	0.00	12498	65.6	0	37.33	1265
0.25	98.9	60.1	1444	8.95	808	632	0.0	0.00	12498	65.3	0	37.60	1285
1.25	100.3	61.0	1464	8.94	795	622	0.0	0.00	12498	66.2	0	37.38	1265
2.25	99.1	60.2	1446	8.87	799	625	0.0	0.00	12498	65.4	0	37.76	1310
3.25	99.8	60.7	1457	8.67	775	607	0.0	0.00	12498	65.9	0	36.26	1310
4.25	99.5	60.5	1453	8.91	799	626	0.0	0.00	12498	65.7	0	37.38	1295
5.25	99.4	60.4	1451	8.72	783	613	0.0	0.00	12498	65.6	0	36.47	1300
6.25	98.7	60.0	1440	8.56	774	606	0.0	0.00	12498	65.1	0	36.14	1300
7.25	99.8	60.6	1456	8.82	789	618	0.0	0.00	12498	65.8	0	36.85	1285
0.00 - 7.31													
MAX	101.2	61.5	1476.	9.05	816.	638.	0.0	0.00	12498.	66.8	0.	38.11	1310.
MIN	97.1	59.8	1417.	8.38	749.	586.	0.0	0.00	12487.	64.1	0.	34.98	1265.
MEAN	99.7	60.6	1456.	8.81	789.	617.	0.0	0.00	12498.	65.8	0.	36.84	1294. 7.53
ACCM	750.3	456.2		66.24	789.	617.	0.0	0.00			0.	36.84	1295. 12.85
0.00 - 0.00													
MAX	100.9	61.4	1473.	8.97	807.*******		0.0	0.00	12498.	66.6	0.	37.72	1355.
MIN	40.9	28.6	686.	3.63	770.	603.	0.0	0.00	12487.	31.8	0.	0.00	0.
MEAN	99.6	60.5	1453.	8.81	790.*******		0.0	0.00	12498.	65.7	0.	36.91	1177. 5.33
ACCM	530.8	322.8		46.96	790.	619.	0.0	0.00			0.	36.90	1087. 5.33

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR ..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF	KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1%		
	T/H	T/H	T/H	KC/KG		%	%	GR/L	DEG.C	%	H	H
7.25	99.5	60.5	8.68	779	115.5	0.910	2.910	57.5	0.0	1300	312	0.00	0.000	0.000
8.25	99.5	60.5	8.93	801	115.5	0.910	2.910	57.5	0.0	1285	292	0.00	0.000	0.000
9.25	99.6	60.6	9.10	815	119.1	0.960	2.820	68.7	0.0	1290	309	0.00	0.000	0.000
10.25	99.2	60.3	9.07	816	119.1	0.960	2.820	68.7	0.0	1240	261	0.00	0.000	0.000
11.25	99.9	60.7	8.79	786	119.1	0.960	2.820	68.7	0.0	1345	289	0.00	0.000	0.000
12.25	99.6	60.5	8.93	801	119.1	0.960	2.820	68.7	0.0	1355	284	0.00	0.000	0.000
13.25	99.5	60.5	9.02	809	114.1	0.900	2.890	53.3	34.8	1200	301	0.36	0.950	3.000
14.25	99.4	60.4	9.06	814	114.1	0.900	2.890	53.3	34.8	1120	308	0.36	0.950	3.000
15.25	96.3	58.5	9.06	840	120.7	0.970	2.880	71.5	34.8	1240	263	0.36	0.950	3.000
16.25	95.6	58.1	8.91	832	120.7	0.970	2.880	71.5	34.8	1270	271	0.36	0.950	3.000
17.25	96.6	58.7	8.94	826	120.7	0.970	2.880	71.5	34.8	1310	289	0.36	0.950	3.000
18.25	95.8	58.2	9.13	851	120.7	0.970	2.880	71.5	34.8	1300	294	0.36	0.950	3.000
19.25	95.7	58.2	9.28	866	120.7	0.970	2.880	71.5	34.8	1300	292	0.36	0.950	3.000
20.25	95.9	58.3	9.33	868	120.7	0.970	2.880	71.5	34.8	1250	277	0.36	0.950	3.000
21.25	98.9	60.1	9.32	841	120.7	0.970	2.880	71.5	34.8	1350	277	0.36	0.950	3.000
22.25	96.3	58.6	9.32	863	120.7	0.970	2.880	71.5	34.8	1240	262	0.36	0.950	3.000
23.25	95.4	58.0	9.26	867	120.7	0.970	2.880	71.5	34.8	1295	253	0.36	0.950	3.000
0.25	96.3	58.5	9.30	862	119.5	0.960	2.860	67.9	34.8	1355	276	0.36	0.950	3.000
1.25	95.4	58.0	8.97	839	119.5	0.960	2.860	67.9	34.8	1385	265	0.36	0.950	3.000
2.25	99.0	60.2	9.05	816	119.5	0.960	2.860	67.9	34.8	1405	256	0.36	0.950	3.000
3.25	97.5	59.3	9.49	868	119.5	0.960	2.860	67.9	34.8	1225	264	0.36	0.950	3.000
4.25	97.5	59.2	9.35	857	119.5	0.960	2.860	67.9	34.8	1215	243	0.36	0.950	3.000
5.25	97.0	58.9	8.99	828	119.5	0.960	2.860	67.9	34.8	1345	260	0.36	0.950	3.000
6.25	97.3	59.1	9.02	827	119.5	0.960	2.860	67.9	34.8	1350	272	0.36	0.950	3.000
7.25	97.0	59.0	9.55	879	119.5	0.960	2.860	67.9	34.8	1190	270	0.36	0.950	3.000
0.00 - 7.27														
MAX	101.0	61.4	9.74	895.	119.5	0.960	2.860	67.9	34.9	1405.	293.	0.36	0.950	3.000		
MIN	94.8	57.6	8.71	781.	119.5	0.960	2.860	67.9	34.9	1190.	206.	0.36	0.950	3.000		
MEAN	97.4	59.2	9.16	840.	119.5	0.960	2.860	67.9	34.9	1321.	265.	0.36	0.950	3.000	7.18	7.46
ACCM	726.6	441.7	68.32	840.	119.5	0.960	2.860	67.9	34.9	1321.	265.	0.36	0.950	3.000	14.19	36.83
0.00 - 0.00														
MAX	101.3	61.6	9.42	883.	120.7	0.970	2.910	71.6	34.9	1355.	320.	0.36	0.950	3.000		
MIN	94.6	57.5	8.38	749.	0.0	0.000	0.000	0.0	0.0	1120.	207.	0.00	0.000	0.000		
MEAN	98.6	59.9	8.99	815.	111.8	0.892	2.729	61.1	16.1	1280.	283.	0.17	0.438	1.382	6.96	24.02
ACCM	2365.3	1438.1	215.77	815.	113.0	0.901	2.759	61.6	17.4	1280.	283.	0.18	0.475	1.500	7.02	29.36

W1/ PRESSURE A53 ..... W1/ GAS TEMP A52
W1/ GAS TEMP A53 ..... W1/ GAS TEMP A51
W1/ PRESSURE A54 ..... W1/ GAS TEMP A61
W1/ TEMP CYCL A54 ..... W1/ T EXIT PREHEAT
W1/ ZO2 KILN OUTL ..... W1/ PRESS EX PREH
W1/ PRES EXIT KILN..... .....
W1/ KILN TORQUE W1/ ZCO EX PREHEAT
W1/ KILN ROT SPEED J1/ ID FAN SPEED

HOUR	OA15V1	OA15A1	OA15P1	OA15X1	A54T1	A54P1	A53T1	A53P1	A52T1	A51T1	A61T1	A50T1	A50P1	OA1X2CO	OA2V1
	RPM	%	MMWG	%	DEG.C	MMWG	DEG.C	MMWG	DEG.C	DEG.C	DEG.C	DEG.C	MMWG	%	RPM
7.25	1.9	28.6	132	2.39	802	226	779	356	616	377	373	380	599	-0.18	859
8.25	1.9	30.2	134	3.60	807	240	785	360	629	393	384	388	634	-0.17	877
9.25	1.9	30.4	133	3.69	808	229	791	356	635	396	390	397	638	-0.17	878
10.25	1.9	33.4	130	3.14	807	215	783	354	631	393	387	393	620	-0.16	877
11.25	1.9	32.2	132	3.25	806	229	790	356	629	393	387	393	645	-0.16	876
12.25	1.9	31.1	130	3.62	805	221	786	348	636	393	388	397	638	-0.12	876
13.25	1.9	31.8	133	3.37	805	231	787	355	637	395	388	396	631	-0.17	879
14.25	1.9	29.3	135	3.28	806	235	789	356	636	396	387	396	628	-0.09	876
15.25	1.9	31.8	130	3.38	805	209	782	358	628	393	386	392	627	-0.15	877
16.25	1.9	33.2	133	3.14	805	212	782	354	629	390	384	391	612	-0.15	861
17.25	1.9	31.6	134	3.39	804	217	779	339	623	392	383	390	578	-0.17	863
18.25	1.9	29.9	128	3.84	804	214	784	350	626	393	385	391	611	-0.18	862
19.25	1.9	31.2	147	3.45	804	231	783	353	629	392	384	394	619	-0.17	863
20.25	1.9	30.5	122	3.13	808	208	789	354	630	394	389	394	603	-0.17	866
21.25	1.9	31.1	136	3.85	805	229	782	355	628	392	383	391	635	-0.18	870
22.25	1.9	30.4	130	3.21	809	228	787	359	634	396	389	396	620	-0.18	865
23.25	1.9	33.4	121	2.92	810	194	788	370	637	396	386	396	618	-0.19	869
0.25	1.9	32.6	125	2.84	810	232	790	361	636	394	386	394	618	-0.17	869
1.25	1.9	30.9	121	3.26	809	212	790	356	630	398	390	395	615	-0.17	866
2.25	1.9	30.2	120	4.07	805	223	784	320	628	392	385	391	621	-0.17	866
3.25	1.9	28.8	132	2.37	809	232	787	355	636	396	389	394	632	-0.17	870
4.25	1.9	33.2	132	2.19	809	229	783	361	633	394	387	393	636	-0.17	872
5.25	1.9	32.7	125	3.24	810	239	786	366	628	394	386	392	648	-0.19	873
6.25	1.9	30.9	129	3.82	807	228	786	315	634	393	386	394	615	-0.17	857
7.25	1.9	29.4	118	3.43	808	220	788	274	633	391	385	392	615	-0.18	860
0.00 - 7.28															
MAX	2.0	33.6	140.	4.64	813.	270.	794.	398.	642.	403.	394.	400.	658.	-0.07	887.
MIN	2.0	28.3	110.	1.57	804.	188.	775.	263.	621.	386.	380.	387.	597.	-0.21	854.
MEAN	2.0	31.0	128.	3.21	809.	225.	786.	352.	633.	394.	387.	394.	628.	-0.18	869.
ACCM	2.0	31.0	128.		809.	225.	786.	352.	633.	394.	387.	394.	628.	-0.18	869.
0.00 - 0.00															
MAX	2.0	34.1	168.	4.49	813.	273.	798.	389.	645.	402.	394.	400.	659.	-0.01	891.
MIN	2.0	27.8	105.	1.47	798.	170.	757.	287.	605.	370.	365.	373.	554.	-0.21	850.
MEAN	2.0	31.6	134.	3.15	806.	228.	785.	354.	629.	392.	384.	392.	621.	-0.15	872.
ACCM	2.0	31.6	134.		806.	228.	785.	354.	629.	392.	384.	392.	621.	-0.15	872.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME .....
W1/ NOX REG STIME .....
W1/ LTW FOR CONTRL.....
W1/ ESTIMATED LTW .....
U1/ LITER WEIGHT .....
KILN CON. MEASUR. .....
KILN CONTROL
COAL TO KILN

.....W1/ NOX CHANGE LT
.....W1/ T EXIT PREHEAT
.....W1/ A50T1 CHANGE
.....W1/ %O2 KILN OUTL
.....
.....W1/ %CO EX PREHEAT
W1/ COAL TO KILN
J1/ ID FAN SPEED

HOUR	KM2F1* KCONTRL	KALARM	ESTLTW LTWT	NOXST LTWGTSP	NOXALT NOXLT	A50ALT A50T1	OA15X1	KM2F1 OA1X2CO	OA2V1
	H	H H	GR/L GR/L GR/L	% % %	DEG.C	%	%	T/H	RPM
7.25			1300 1281 1282	42.1 41.4 -0.099	388 -0.19	2.39	-0.18	8.68	859
8.25			1285 1262 1262	36.3 38.1 -0.219	388 1.03	3.60	-0.17	8.93	877
9.25			1290 1273 1272	32.3 31.2 -0.298	397 0.27	3.69	-0.17	9.10	878
10.25			1240 1285 1276	43.7 43.7 0.480	393 -0.04	3.14	-0.16	9.07	877
11.25			1345 1309 1518	48.9 50.2 0.303	393 -0.16	3.25	-0.16	8.79	876
12.25			1355 1264 1307	33.5 31.9 -0.322	397 -0.07	3.62	-0.12	8.93	876
13.25			1200 1209 1643	28.2 27.5 -0.203	396 0.00	3.37	-0.17	9.02	879
14.25			1120 1240 1729	33.9 36.2 0.279	396 0.81	3.28	-0.09	9.06	876
15.25			1240 1240 1240	36.5 35.7 -0.199	392 0.64	3.38	-0.15	9.06	877
16.25			1270 1326 1303	43.3 44.1 0.219	391 0.13	3.14	-0.15	8.91	861
17.25			1310 1268 1272	38.3 38.2 -0.249	390 0.16	3.39	-0.17	8.94	863
18.25			1300 1252 1257	37.6 37.4 -0.047	391 0.03	3.84	-0.18	9.13	862
19.25			1300 1247 1248	36.8 36.4 0.181	394 -0.03	3.45	-0.17	9.28	863
20.25			1250 1306 1303	43.1 42.0 0.153	394 0.06	3.13	-0.17	9.33	866
21.25			1350 1188 1198	33.5 31.5 -0.623	391 -0.12	3.85	-0.18	9.32	870
22.25			1240 1330 1310	43.4 43.4 0.409	396 0.06	3.21	-0.18	9.32	865
23.25			1295 1343 1338	48.0 47.9 0.293	396 -0.28	2.92	-0.19	9.26	869
0.25			1355 1379 1375	52.7 53.3 0.280	394 0.06	2.84	-0.17	9.30	869
1.25			1385 1372 1373	51.5 51.6 -0.104	395 0.00	3.26	-0.17	8.97	866
2.25			1405 1255 1268	34.5 34.4 -0.547	391 -0.25	4.07	-0.17	9.05	866
3.25			1225 1275 1783	38.9 38.2 0.255	394 0.63	2.37	-0.17	9.49	870
4.25			1215 1361 1287	50.4 49.1 0.450	393 -0.18	2.19	-0.17	9.35	872
5.25			1345 1359 1352	48.5 48.9 -0.301	392 0.05	3.24	-0.19	8.99	873
6.25			1350 1206 1220	33.7 31.4 -0.475	394 -0.33	3.82	-0.17	9.02	857
7.25			1190 1193 1192	31.9 33.1 -0.018	392 -0.04	3.43	-0.18	9.55	860
0.00 - 7.29									
MAX			1405. 1412. 1864.	54.3 55.0 0.567	400. 0.63	4.64	-0.07	9.74	887.
MIN			1190. 1184. 1185.	31.8 31.1 -0.800	387. -0.48	1.57	-0.21	8.71	854.
MEAN	7.50	7.22	1320. 1308. 1372.	42.9 43.0 -0.067	394. -0.01	3.22	-0.18	9.16	869.
ACCM	36.88	14.23	1321. 1372.	-0.067	394. -0.01		-0.18	68.73	869.
0.00 - 0.00									
MAX			1355. 1360. 1806.	54.1 54.3 0.520	400. 1.03	4.49	-0.01	9.42	891.
MIN			1120. 1173. 1150.	28.0 27.5 -0.805	373. -0.94	1.47	-0.21	8.38	850.
MEAN	24.02	6.96	1280. 1281. 1328.	41.2 41.2 0.002	392. 0.01	3.15	-0.15	8.99	872.
ACCM	29.36	7.02	1280. 1328.	0.002	392. 0.01		-0.15	215.77	872.

PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

Z ASH IN COAL ..... COAL HEAT VALUE
Z MOISTURE IN COAL..... .....
NET HEAT CONSUMP. ....SHORT TONS CLINKER
HEAT CONSUMPTION ....LB COAL / SH.T
W1/ COAL TO KILN ....MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

HOUR	HOIOF1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH	C-HEAT	STONS LB.COAL	BTU	LTWT KM2F1*
	T/H	T/H T	T/H KC/KG	KC/KG Z	Z	T/H		GR/L H
7.25	99.5	60.5 1453	8.68 779	609 0.0	0.00 12490	65.7	0 36.62	1300
8.25	99.5	60.5 1453	8.93 801	627 0.0	0.00 12490	65.7	0 37.63	1285
9.25	99.6	60.6 1454	9.10 815	638 0.0	0.00 12490	65.7	0 38.05	1290
10.25	99.2	60.3 1447	9.07 816	639 0.0	0.00 12490	65.4	0 38.13	1240
11.25	99.9	60.7 1457	8.79 786	615 0.0	0.00 12490	65.9	0 36.74	1345
12.25	99.6	60.5 1453	8.93 801	627 0.0	0.00 12490	65.7	0 37.39	1355
13.25	99.5	60.5 1453	9.02 809	848 19.9	5.34 9325	65.7	0 28.06	1200
14.25	99.4	60.4 1451	9.06 814	853 19.9	5.34 9325	65.6	0 28.39	1120
15.25	96.3	58.5 1406	9.06 840	880 19.9	5.34 9325	63.6	0 29.32	1240
16.25	95.6	58.1 1395	8.91 832	872 19.9	5.34 9325	63.1	0 29.07	1270
17.25	96.6	58.7 1410	8.94 826	866 19.9	5.34 9325	63.7	0 28.75	1310
18.25	95.8	58.2 1398	9.13 851	892 19.9	5.34 9325	63.2	0 29.63	1300
19.25	95.7	58.2 1397	9.28 866	907 19.9	5.34 9325	63.2	0 30.16	1300
20.25	95.9	58.3 1400	9.33 868	910 19.9	5.34 9325	63.3	0 30.40	1250
21.25	98.9	60.1 1443	9.32 841	882 19.9	5.34 9325	65.2	0 29.39	1350
22.25	96.3	58.6 1406	9.32 863	905 19.9	5.34 9325	63.6	0 30.20	1240
23.25	95.4	58.0 1392	9.26 867	908 19.9	5.34 9325	62.9	0 30.21	1295
0.25	96.3	58.5 1406	9.30 862	903 19.9	5.34 9322	63.5	0 30.28	1355
1.25	95.4	58.0 1393	8.97 839	880 19.9	5.34 9325	63.0	0 29.34	1385
2.25	99.0	60.2 1445	9.05 816	855 19.9	5.34 9325	65.3	0 28.36	1405
3.25	97.5	59.3 1423	9.49 868	910 19.9	5.34 9325	64.4	0 30.50	1225
4.25	97.5	59.2 1422	9.35 857	898 19.9	5.34 9325	64.3	0 29.71	1215
5.25	97.0	58.9 1415	8.99 828	868 19.9	5.34 9325	64.0	0 28.72	1345
6.25	97.3	59.1 1420	9.02 827	867 19.9	5.34 9325	64.2	0 28.81	1350
7.25	97.0	59.0 1416	9.55 879	921 19.9	5.34 9325	64.0	0 30.54	1190
0.00 - 7.30								
MAX	101.0	61.4 1473.	9.74 895.	938. 19.9	5.34 9326.	66.6	0. 31.23	1405.
MIN	94.8	57.6 1383.	8.71 781.	818. 19.9	5.34 9323.	62.6	0. 27.24	1190.
MEAN	97.4	59.2 1422.	9.16 840.	881. 19.9	5.34 9326.	64.3	0. 29.31	1320. 7.51
ACCM	731.9	444.9	68.83 840.	881. 19.9	5.34		0. 29.31	1321. 36.89
0.00 - 0.00								
MAX	101.3	61.6 1478.	9.42 883.	925. 19.9	5.34 12490.	66.9	0. 38.94	1355.
MIN	94.6	57.5 1381.	8.38 749.	586. 0.0	0.00 9323.	62.5	0. 27.28	1120.
MEAN	98.6	59.9 1438.	8.99 815.	741. 9.2	2.46 11030.	65.0	0. 33.51	1280. 24.02
ACCM	2365.3	1438.1	215.77 815.	722. 9.2	2.46		0. 33.63	1280. 29.36

PLANT REPORT 1 KILN PRODUCTION REPORT PLANT REPORT

W1/ KILN FEED C3S ..... W1/ FEED LOSS-O-IG
W1/ KILN FEED MS ..... U1/ LITER WEIGHT
W1/ KILN FEED LSF ..... U1/ CLINKER TEMP
W1/ BURNING FACTOR ..... U1/ FREE LIME
HEAT CONSUMPTION ..... U1/ CLINKER LSF
W1/ COAL TO KILN ..... U1/ CLINKER MS
KILN PRODUCTION KILN CONTROL
W1/ KILN FEED COAL TO KILN

HOUR	HO10F1 PROD	KM2F1 KCAL	BF KF-LS	KF-MS C3S	KF-LOI LTWT	KLO FCAO	CL-LS CL-MS	KCONTRL KM2F1*		
	T/H	T/H	T/H	KC/KG						
7.25	96.7	58.8	9.12	842	119.5	0.960	2.860	67.9	34.8	1350	283	0.36	0.950	3.000		
8.25	97.4	59.2	9.70	889	119.5	0.960	2.860	67.9	34.8	1230	247	0.36	0.950	3.000		
9.25	99.8	60.7	9.62	861	117.9	0.940	2.900	63.8	34.8	1290	242	0.36	0.950	3.000		
10.25	99.3	60.4	9.81	882	117.9	0.940	2.900	63.8	34.8	1275	258	0.36	0.950	3.000		
11.25	99.9	60.7	9.63	860	117.9	0.940	2.900	63.8	34.8	1280	251	0.36	0.950	3.000		
12.25	--	--	--	--	117.9	0.940	2.900	63.8	34.8	1350	--	0.36	0.950	3.000		
13.25	93.3	56.7	9.74	932	117.9	0.940	2.900	63.8	34.8	1350	193	0.36	0.950	3.000		
14.25	93.4	56.7	9.76	934	117.3	0.940	2.880	62.4	35.1	1135	227	0.24	0.960	3.020		
15.25	97.7	59.4	9.84	899	117.3	0.940	2.880	62.4	35.1	1290	230	0.24	0.960	3.020		
16.25	100.1	60.8	9.79	873	117.3	0.940	2.880	62.4	35.1	1330	254	0.24	0.960	3.020		
17.25	100.5	61.1	9.65	857	122.1	0.980	2.910	73.4	35.1	1375	285	0.24	0.960	3.020		
18.25	100.4	61.0	9.71	864	122.1	0.980	2.910	73.4	35.1	1330	272	0.24	0.960	3.020		
19.25	100.7	61.2	10.00	886	122.1	0.980	2.910	73.4	35.1	1280	285	0.24	0.960	3.020		
20.25	99.9	60.7	9.98	892	122.1	0.980	2.910	73.4	35.1	1150	246	0.24	0.960	3.020		
21.25	99.3	60.3	9.97	897	122.1	0.980	2.910	73.4	35.1	1245	261	0.24	0.960	3.020		
22.25	99.3	60.4	10.01	900	122.1	0.980	2.910	73.4	35.1	1265	271	0.24	0.960	3.020		
23.25	99.1	60.2	10.02	903	124.4	1.010	2.840	79.5	35.1	1275	270	0.24	0.960	3.020		
0.25	99.2	60.3	9.94	895	124.4	1.010	2.840	79.5	35.1	1315	261	0.24	0.960	3.020		
1.25	99.2	60.3	9.74	877	124.4	1.010	2.840	79.5	35.1	1285	270	0.24	0.960	3.020		
2.25	99.1	60.2	10.06	907	124.4	1.010	2.840	79.5	35.1	1285	280	0.24	0.960	3.020		
3.25	99.9	60.7	9.95	889	124.4	1.010	2.840	79.5	35.1	1215	263	0.24	0.960	3.020		
4.25	99.5	60.4	10.10	907	124.4	1.010	2.840	79.5	35.1	1280	279	0.24	0.960	3.020		
5.25	98.7	60.0	9.99	904	124.4	1.010	2.840	79.5	35.1	1255	263	0.24	0.960	3.020		
6.25	99.4	60.4	9.72	873	124.4	1.010	2.840	79.5	35.1	1340	274	0.24	0.960	3.020		
7.25	91.0	55.3	10.38	1019	124.4	1.010	2.840	79.5	35.1	1240	270	0.24	0.960	3.020		
0.00 - 7.27																
MAX	100.9	61.3	10.44	1023.	124.4	1.010	2.840	79.5	35.2	1340.	299.	0.24	0.960	3.020		
MIN	90.4	55.0	9.57	855.	124.4	1.010	2.840	79.5	35.2	1215.	233.	0.24	0.960	3.020		
MEAN	99.0	60.2	9.96	899.	124.4	1.010	2.840	79.5	35.2	1282.	271.	0.24	0.960	3.020	6.87	7.46
ACCM	738.1	448.7	74.29	899.	124.4	1.010	2.840	79.5	35.2	1286.	271.	0.24	0.960	3.020	26.11	60.52
0.00 - 0.00																
MAX	101.7	61.8	10.13	9104.	124.4	1.010	2.910	79.5	35.2	1405.	306.	0.36	0.960	3.020		
MIN	-4.7	-2.9	1.43	-769987	117.3	0.940	2.840	62.4	34.9	1135.	140.	0.24	0.950	3.000		
MEAN	97.5	59.2	9.52	827.	119.7	0.960	2.883	68.3	35.0	1291.	258.	0.31	0.955	3.010	12.20	23.64
ACCM	2303.2	1399.2	224.98	873.	119.9	0.961	2.885	68.5	35.0	1297.	258.	0.30	0.955	3.009	19.22	53.04

PLANT REPORT 3 KILN / PREHEATER PLANT REPORT

W1/ PRESSURE A53 .....
W1/ GAS TEMP A53 .....
W1/ PRESSURE A54 .....
W1/ TEMP CYCL A54 .....
W1/ %02 KILN OUTL .....
W1/ PRES EXIT KILN.....
W1/ KILN TORQUE
W1/ KILN ROT SPEED
.....W1/ GAS TEMP A52
.....W1/ GAS TEMP A51
.....W1/ GAS TEMP A61
.....W1/ T EXIT PREHEAT
.....W1/ PRESS EX PREH
.....
W1/ %CO EX PREHEAT
J1/ ID FAN SPEED

HOUR	OA15V1	OA15A1	OA15P1	OA15X1	A54T1	A54P1	A53T1	A53P1	A52T1	A51T1	A61T1	A50T1	A50P1	OA1X2CO	OA2V1
	RPM	%	MMWG	%	DEG.C	MMWG	DEG.C	MMWG	DEG.C	DEG.C	DEG.C	DEG.C	MMWG	%	RPM
7.25	1.9	29.3	123	3.85	806	214	789	359	628	393	388	393	621	-0.18	856
8.25	1.9	31.1	113	3.46	813	191	790	343	638	394	386	393	614	-0.16	860
9.25	1.9	33.8	125	3.61	812	229	787	358	636	395	388	394	644	-0.18	879
10.25	1.9	33.5	122	3.05	813	207	794	356	635	395	386	393	634	-0.18	875
11.25	1.9	34.2	129	3.52	812	238	789	358	636	394	386	392	646	-0.18	884
12.25	--	--	--	--	--	--	--	--	--	--	--	372	--	--	--
13.25	1.9	28.8	119	3.31	807	214	785	265	635	396	391	396	566	-0.01	845
14.25	1.9	29.2	127	3.00	810	210	793	336	640	396	391	398	612	-0.04	868
15.25	1.9	31.6	122	2.62	811	225	783	355	636	394	387	395	623	-0.04	870
16.25	1.9	33.8	119	2.20	810	223	788	364	631	387	384	387	642	-0.07	875
17.25	1.9	33.3	143	2.79	809	244	787	351	626	387	390	384	628	-0.18	878
18.25	1.9	31.6	118	5.22	804	207	783	308	629	386	382	387	645	-0.18	877
19.25	1.9	28.1	135	2.74	807	217	784	352	626	386	383	387	640	-0.18	880
20.25	1.9	31.8	124	2.59	810	208	790	300	631	386	379	386	638	-0.16	878
21.25	1.9	34.2	125	2.83	810	220	789	326	637	392	384	388	646	-0.17	879
22.25	1.9	32.9	150	2.58	811	242	789	353	631	385	381	387	640	-0.18	879
23.25	1.9	33.3	129	3.36	813	220	792	349	629	391	386	390	640	-0.18	883
0.25	1.9	34.4	147	3.66	813	233	787	344	630	391	385	389	644	-0.17	867
1.25	1.9	33.3	121	4.34	812	222	791	300	629	393	385	390	632	-0.18	877
2.25	1.9	31.1	145	3.42	814	252	789	343	631	389	384	390	634	-0.18	873
3.25	1.9	34.8	142	3.36	811	215	787	359	629	387	385	389	637	-0.17	873
4.25	1.9	34.0	146	3.06	815	235	793	350	630	389	385	390	630	-0.18	873
5.25	1.9	35.1	133	3.59	815	222	789	354	635	391	384	390	636	-0.17	874
6.25	1.9	36.6	154	2.96	814	241	791	361	627	391	387	390	646	-0.18	874
7.25	1.9	31.3	111	4.86	811	206	793	337	644	396	394	398	607	-0.16	864
0.00 - 7.28															
MAX	2.0	39.1	164.	5.30	819.	268.	800.	374.	647.	403.	398.	399.	654.	-0.12	887.
MIN	1.9	30.6	100.	2.44	807.	192.	780.	252.	623.	385.	379.	385.	585.	-0.21	861.
MEAN	2.0	33.9	133.	3.44	813.	224.	790.	346.	633.	391.	386.	391.	631.	-0.18	875.
ACCM	2.0	33.9	133.		813.	224.	790.	346.	633.	391.	386.	391.	631.	-0.18	875.
0.00 - 0.00															
MAX	2.0	36.3	160.	10.50	817.	270.	799.	398.	665.	438.	436.	427.	659.	1.38	890.
MIN	0.4	0.1	-10.	0.04	771.	0.	745.	-20.	593.	365.	363.	367.	-40.	-0.21	476.
MEAN	2.0	31.6	126.	3.08	810.	222.	787.	344.	631.	392.	386.	392.	622.	-0.16	868.
ACCM	2.0	31.6	126.		810.	222.	787.	344.	631.	392.	386.	392.	622.	-0.16	868.

PLANT REPORT 6 KILN CONTROL PLANT REPORT

W1/ NOX REG LTIME ..... W1/ NOX CHANGE LT
W1/ NOX REG STIME ..... W1/ T EXIT PREHEAT
W1/ LTW FOR CONTRL..... W1/ A50T1 CHANGE
W1/ ESTIMATED LTW ..... W1/ ZO2 KILN OUTL
U1/ LITER WEIGHT ....
KILN CON. MEASUR. ..... W1/ ZCO EX PREHEAT
KILN CONTROL W1/ COAL TO KILN
COAL TO KILN J1/ ID FAN SPEED

HOUR	KM2F1% KCONTRL	KALARM	ESTLTW LTWT	NOXST LTWGTSP	NOXALT NOXLT	A50ALT A50T1	OA15X1	KM2F1 OA1X2CO	OA2V1
	H	H H	GR/L GR/L GR/L	% %	% DEG.C		%	% T/H	RPM
7.25			1350 1227 1238	34.7 33.6	-0.004 393	0.11	3.85	-0.18 9.12	856
8.25			1230 1245 1244	35.8 37.0	0.143 393	0.13	3.46	-0.16 9.78	860
9.25			1290 1275 1275	40.6 40.2	-0.274 394	0.20	3.61	-0.18 9.62	879
10.25			1275 1294 1293	41.9 42.2	0.247 393	0.18	3.85	-0.18 9.81	875
11.25			1280 1335 1332	45.0 46.6	-0.001 392	0.15	3.52	-0.18 9.63	884
12.25			1350 1289 1295	42.3 42.2	-0.097 372	-3.24	--	-- --	--
13.25			1350 1311 1311	33.9 44.7	0.594 396	2.56	3.31	-0.01 9.74	845
14.25			1135 1334 1333	44.2 47.3	0.772 398	0.73	3.00	-0.04 9.76	868
15.25			1290 1317 1316	45.3 46.1	0.066 395	0.13	2.62	-0.04 9.84	870
16.25			1330 1360 1356	51.2 50.9	0.168 387	0.10	2.20	-0.07 9.79	875
17.25			1375 1373 1373	52.6 52.5	0.054 384	0.10	2.79	-0.18 9.65	878
18.25			1330 1322 1323	45.5 48.0	-0.162 387	0.09	5.22	-0.18 9.71	877
19.25			1280 1264 1267	37.9 37.0	0.173 387	-0.05	2.74	-0.18 10.00	880
20.25			1150 1268 1268	40.9 41.7	0.043 386	0.01	2.59	-0.16 9.98	878
21.25			1245 1273 1245	42.4 42.3	0.042 388	-0.10	2.83	-0.17 9.97	879
22.25			1265 1308 1265	46.2 46.3	0.175 387	-0.05	2.58	-0.18 10.01	879
23.25			1275 1331 1330	48.8 48.9	-0.101 390	0.30	3.36	-0.18 10.02	883
0.25			1315 1303 1306	46.7 46.2	-0.126 389	-0.18	3.66	-0.17 9.94	867
1.25			1285 1282 1282	43.7 44.3	-0.280 390	0.07	4.34	-0.18 9.74	877
2.25			1285 1271 1275	44.9 44.2	0.022 390	0.45	3.42	-0.18 10.06	873
3.25			1215 1250 1243	44.7 42.9	-0.381 389	-0.15	3.36	-0.17 9.95	873
4.25			1280 1295 1292	47.6 47.9	-0.010 390	0.22	3.06	-0.18 10.10	873
5.25			1255 1317 1302	50.8 51.4	0.146 390	0.00	3.59	-0.17 9.99	874
6.25			1340 1301 1315	48.6 48.6	-0.151 390	-0.13	2.96	-0.18 9.72	874
7.25			1240 1195 1191	35.9 35.7	-0.932 398	0.39	4.86	-0.16 10.38	864
0.00 - 7.29									
MAX			1340. 1341. 1340.	52.3 51.6	0.390 400.	0.98	5.30	-0.12 10.45	887.
MIN			1215. 1173. 1168.	34.2 32.5	-1.022 385.	-0.50	2.44	-0.21 9.57	861.
MEAN	7.50	6.87	1282. 1296. 1293.	47.2 47.3	-0.030 391.	0.01	3.44	-0.18 9.97	875.
ACCM	60.56	26.11	1286. 1293.		-0.030 391.	0.01		-0.18 74.74	875.
0.00 - 0.00									
MAX			1405. 1412. 1864.	57.4 55.0	1.370 427.	7.27	10.50	1.38 10.13	890.
MIN			1135. 1121. 1122.	21.8 22.8	-1.463 367.	-6.15	0.04	-0.21 1.43	476.
MEAN	23.64	12.20	1291. 1299. 1315.	43.2 43.2	0.000 392.	-0.00	3.08	-0.16 9.52	868.
ACCM	53.04	19.22	1297. 1315.		0.000 392.	-0.00		-0.16 224.98	868.

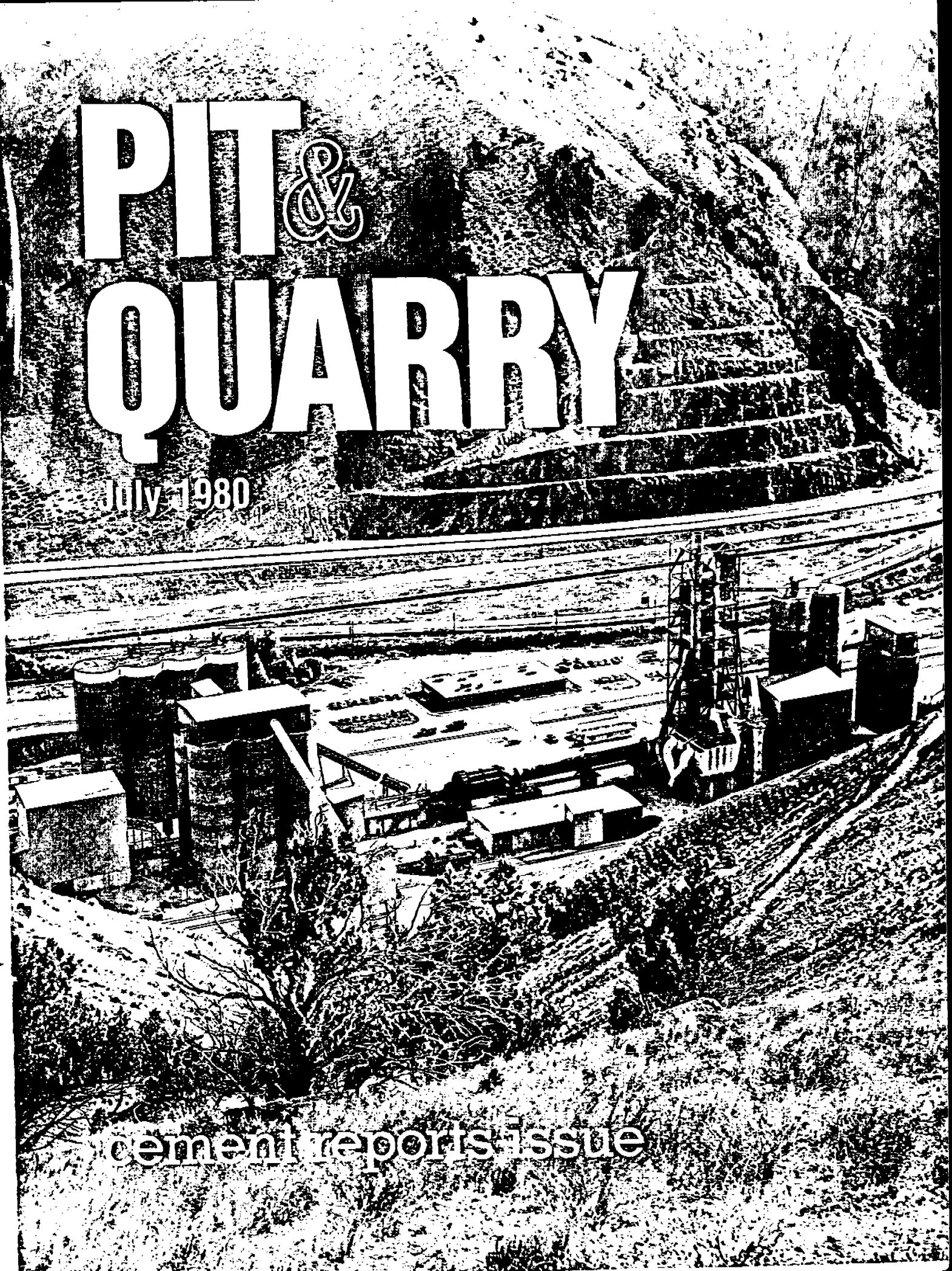
PLANT REPORT 7 PRODUCTION REPORT PLANT REPORT

% ASH IN COAL ..... COAL HEAT VALUE
% MOISTURE IN COAL..... .....
NET HEAT CONSUMP. ..... SHORT TONS CLINKER
HEAT CONSUMPTION ..... LB COAL / SH.T
W1/ COAL TO KILN ..... MBTU' PER SH.T
KILN PRODUC. RATE ....
KILN PRODUCTION U1/ LITER WEIGHT
W1/ KILN FEED COAL TO KILN

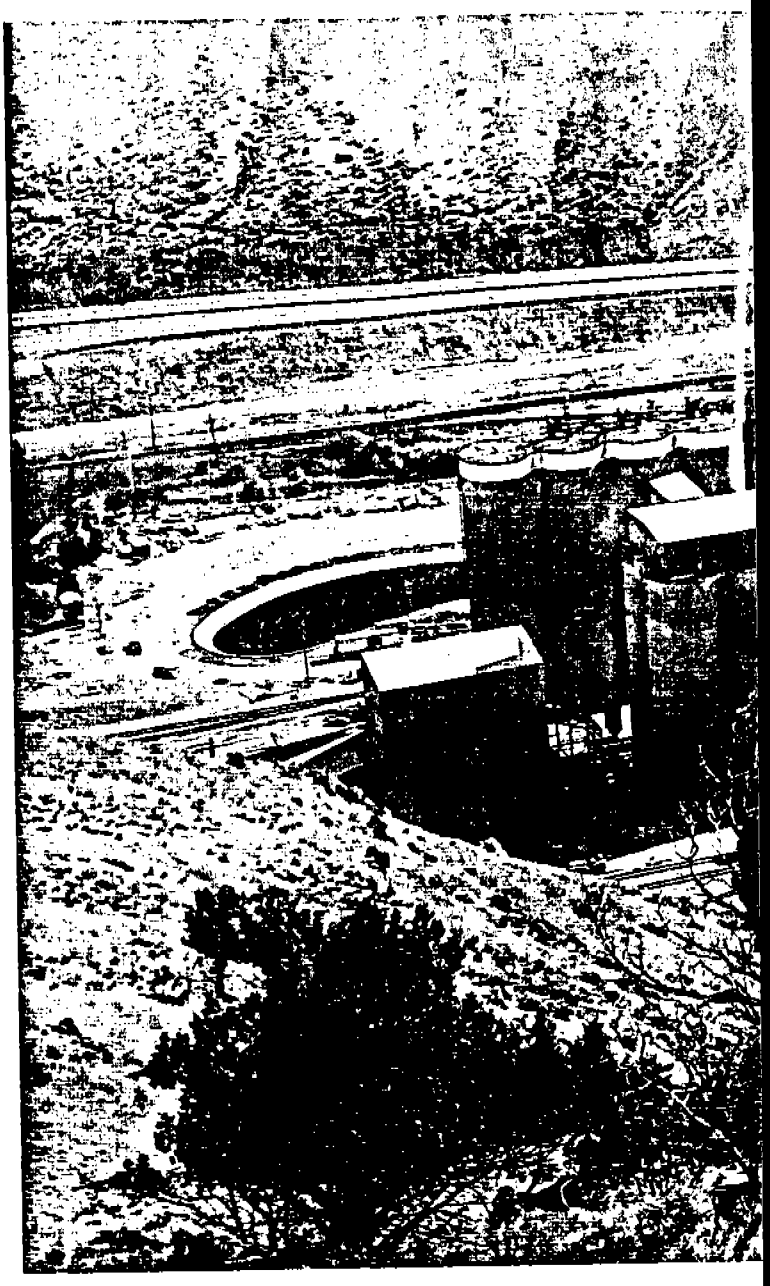
HOUR	HO10F1 PROD	PRODR KM2F1	KCAL NKCAL	C-MOIST C-ASH			C-HEAT	STONS LB.COAL	BTU		LTWT KM2F1*
	T/H	T/H T	T/H	KC/KG	KC/KG	%	%		T/H		GR/L H
7.25	96.7	58.8 1411	9.12	842	883	19.9	5.34	9325	63.8	0 29.52	1350
8.25	97.4	59.2 1422	9.70	889	932	19.9	5.34	9325	64.3	0 31.15	1230
9.25	99.8	60.7 1457	9.62	861	902	19.9	5.34	9325	65.9	0 30.00	1290
10.25	99.3	60.4 1449	9.81	882	924	19.9	5.34	9325	65.5	0 30.84	1275
11.25	99.9	60.7 1459	9.63	860	901	19.9	5.34	9325	65.9	0 29.84	1280
12.25	--	-- -62	--	--	--	19.9	5.34	9322	-2.8	-- --	1350
13.25	93.3	56.7 1361	9.74	932	978	19.9	5.34	9325	61.5	0 32.54	1350
14.25	93.4	56.7 1363	9.76	934	979	20.5	4.64	9324	61.6	0 32.51	1135
15.25	97.7	59.4 1426	9.84	899	943	20.5	4.64	9324	64.5	0 31.62	1290
16.25	100.1	60.8 1461	9.79	873	915	20.5	4.64	9324	66.1	0 30.56	1330
17.25	100.5	61.1 1467	9.65	857	898	20.5	4.64	9327	66.3	0 29.89	1375
18.25	100.4	61.0 1465	9.71	864	905	20.5	4.64	9324	66.2	0 30.10	1330
19.25	100.7	61.2 1470	10.00	886	929	20.5	4.64	9324	66.5	0 30.93	1280
20.25	99.9	60.7 1459	9.98	892	934	20.5	4.64	9324	65.9	0 31.03	1150
21.25	99.3	60.3 1449	9.97	897	939	20.5	4.64	9327	65.5	0 31.16	1245
22.25	99.3	60.4 1449	10.01	900	943	20.5	4.64	9327	65.5	0 31.42	1265
23.25	99.1	60.2 1446	10.02	903	946	20.5	4.64	9327	65.4	0 31.38	1275
0.25	99.2	60.3 1447	9.94	895	938	20.5	4.64	9327	65.4	0 31.18	1315
1.25	99.2	60.3 1447	9.74	877	919	20.5	4.64	9327	65.4	0 30.57	1285
2.25	99.1	60.2 1446	10.06	907	950	20.5	4.64	9327	65.4	0 31.44	1285
3.25	99.9	60.7 1458	9.95	889	932	20.5	4.64	9327	65.9	0 30.96	1215
4.25	99.5	60.4 1451	10.10	907	950	20.5	4.64	9327	65.6	0 31.57	1280
5.25	98.7	60.0 1440	9.99	904	947	20.5	4.64	9327	65.1	0 31.68	1255
6.25	99.4	60.4 1451	9.72	873	914	20.5	4.64	9327	65.6	0 30.46	1340
7.25	91.0	55.3 1328	10.38	1019	1067	20.5	4.64	9327	60.0	0 35.40	1240
0.00 - 7.30											
MAX	100.9	61.3 1472.	10.45	1029.	1079.	20.5	4.65	9328.	66.6	0. 35.92	1340.
MIN	90.2	54.9 1316.	9.57	855.	896.	20.5	4.65	9328.	59.5	0. 29.84	1215.
MEAN	98.9	60.1 1444.	9.97	900.	943.	20.5	4.65	9328.	65.3	0. 31.41	1282. 7.51
ACCM	743.0	451.7	74.86	900.	943.	20.5	4.65			0. 31.41	1286. 60.57
0.00 - 0.00											
MAX	101.7	61.8 1484.	10.13	9104.	9545.	20.5	5.34	9405.	67.1	3. 317.45	1405.
MIN	-4.7	-2.9 -77.	1.43	-769987	-807245	19.9	4.65	9323.	-3.5	-288.-26849.	1135.
MEAN	97.5	59.2 1400.	9.52	827.	867.	20.2	5.05	9324.	63.3	0. 28.84	1291. 23.64
ACCM	2303.2	1399.2	224.98	873.	867.	20.2	5.05			0. 28.83	1297. 53.84

PIT & QUARRY

July 1980



cement report issue



Oregon Portland Cement's new preheater-equipped plant in eastern Oregon is a dry process installation rated at 500,000 tpy.

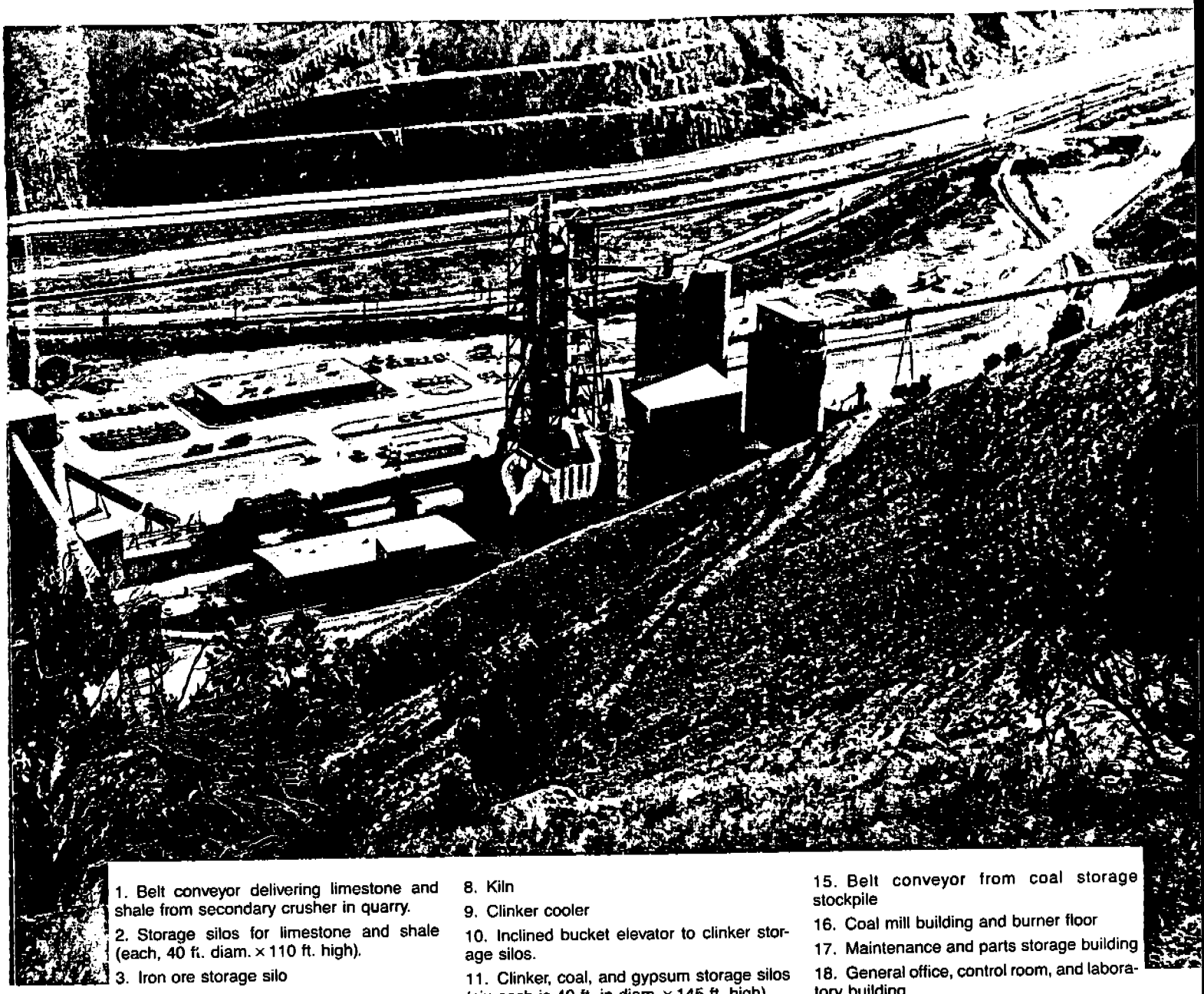
Eastern Oregon plant boosts Pacific Northwest's cement supply

Oregon Portland Cement's new dry process plant rated at 1,500 tpd

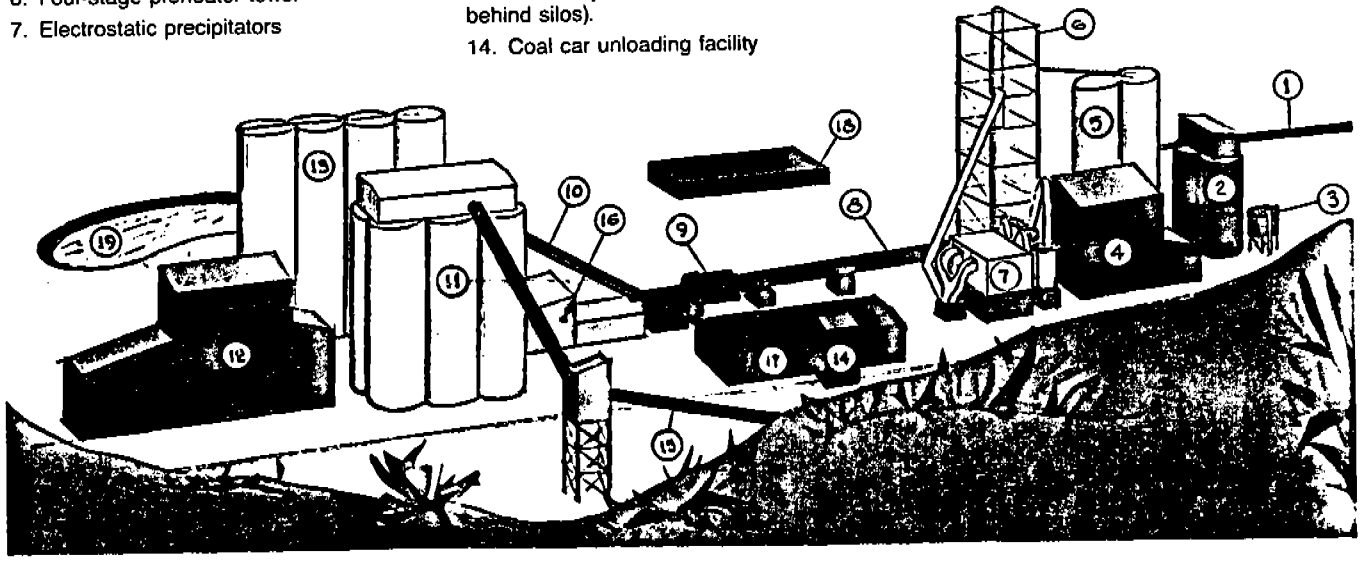
BY SID LEVINE

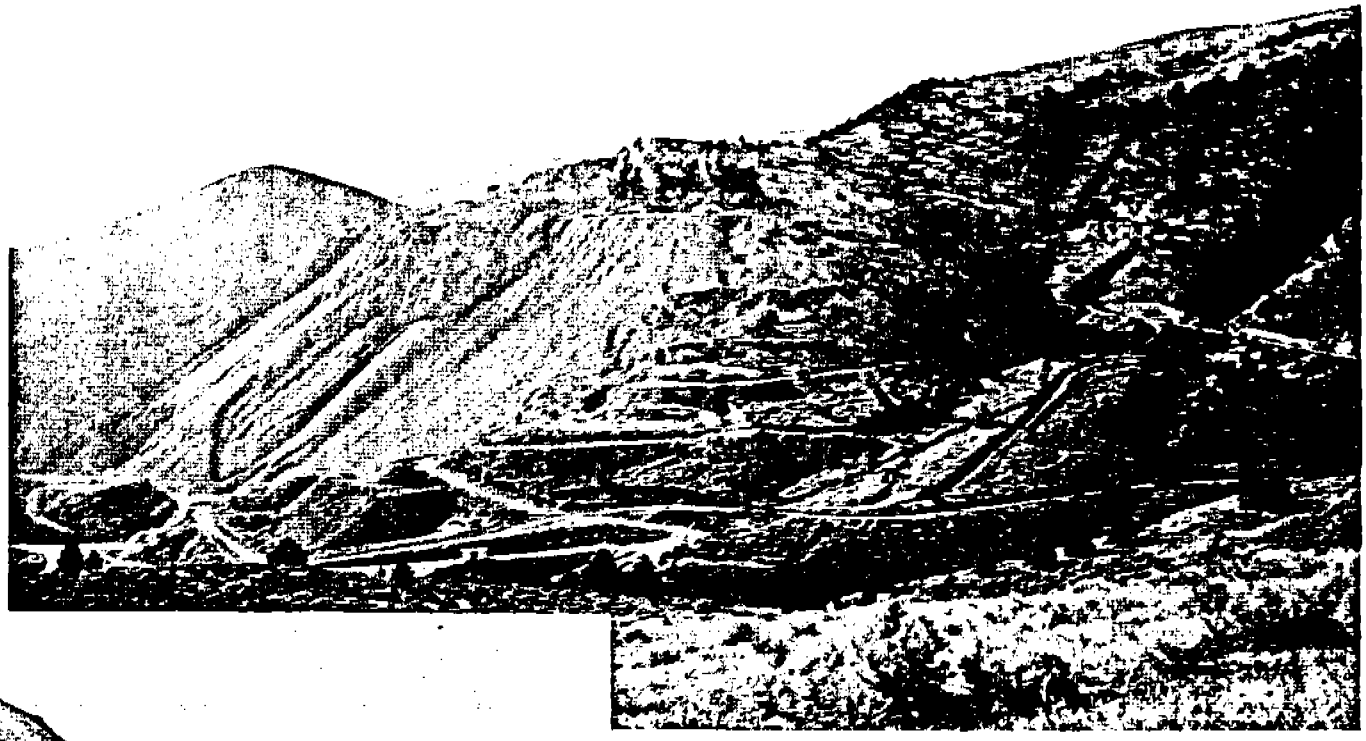
The first cement plant constructed in the Northwest since 1967 went into operation last fall. Oregon Portland Cement Co.'s new 1,500-tpd plant, located in Durkee in eastern Oregon (110 miles northwest of Boise, Idaho), also is the first dry-process cement plant equipped with a preheater kiln in the Pacific Northwest.

The 500,000-tpy plant will replace the company's 200,000-tpy wet plant at Lime, Oreg., located 13 miles southeast of Durkee. In addition to serving the markets currently supplied by Lime, the Durkee plant will permit expansion of the southeast Washington

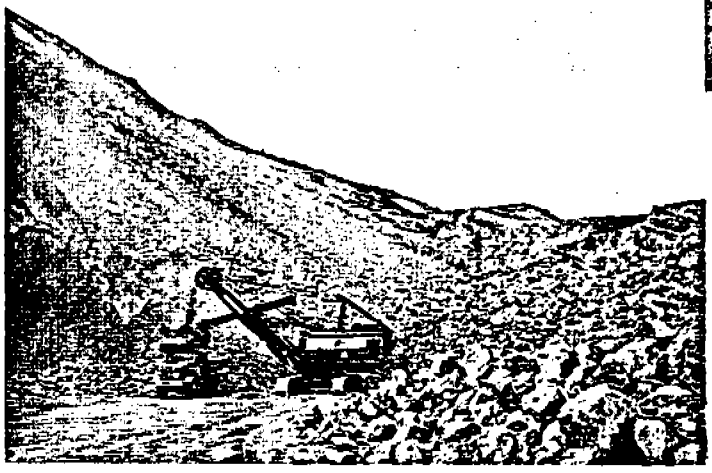


1. Belt conveyor delivering limestone and shale from secondary crusher in quarry.
2. Storage silos for limestone and shale (each, 40 ft. diam. × 110 ft. high).
3. Iron ore storage silo
4. Raw grind department
5. Homogenizing and storage silos for raw meal (each, 40 ft. diam. × 180 ft. high).
6. Four-stage preheater tower
7. Electrostatic precipitators
8. Kiln
9. Clinker cooler
10. Inclined bucket elevator to clinker storage silos.
11. Clinker, coal, and gypsum storage silos (six-each is 40 ft. in diam. × 145 ft. high).
12. Finish mill
13. Bulk cement storage silos (bulk cement loadout facility to trucks and railcar is located behind silos).
14. Coal car unloading facility
15. Belt conveyor from coal storage stockpile
16. Coal mill building and burner floor
17. Maintenance and parts storage building
18. General office, control room, and laboratory building
19. Water cooling and reclaiming pond



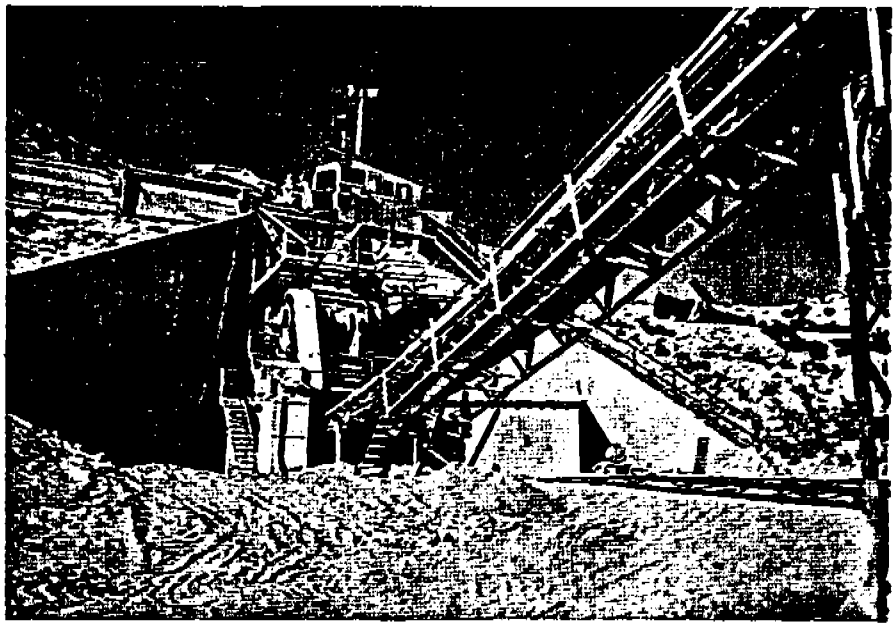


To stabilize the quarry's 600 ft. high face, the company is establishing 13 working benches.



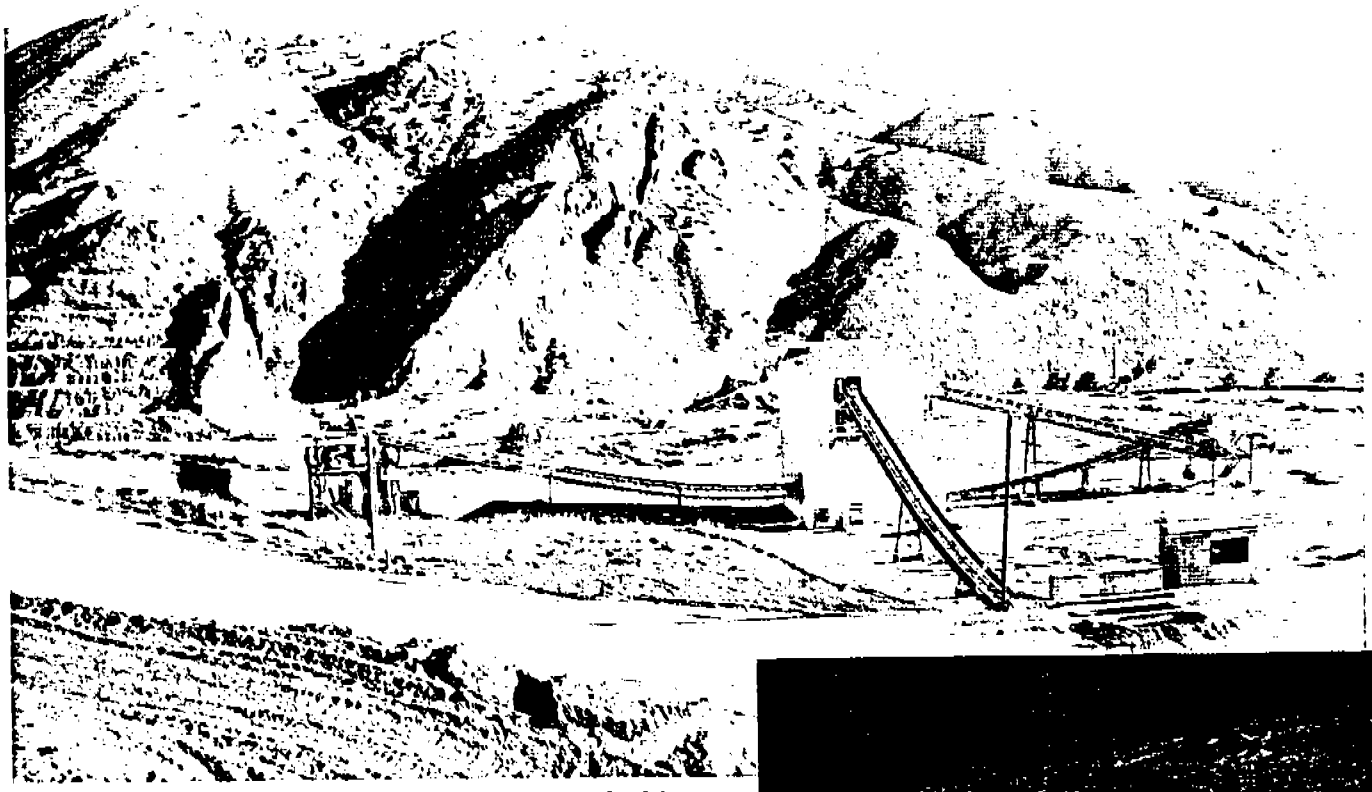
Northwest shovel loads stone into Euclid trucks for haul to primary crusher.

Primary crusher is a 36 in. × 48 in. Lippman jaw unit.



and northern Idaho markets and will supplement Oregon Portland Cement's Lake Oswego and Inkom plants. Lake Oswego supplies western Oregon and southwestern Washington and Inkom supplies eastern Idaho, northern Utah, and western Wyoming.

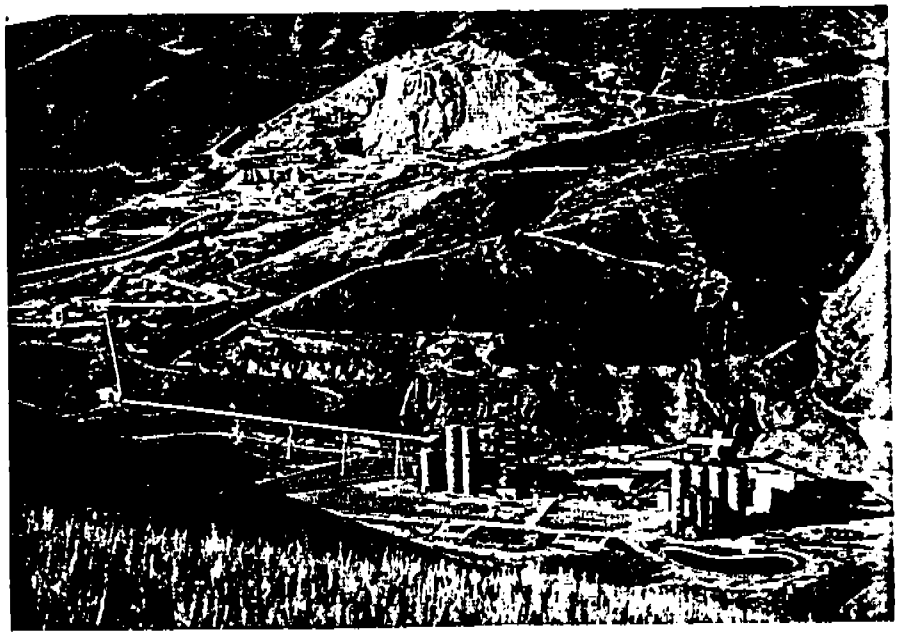
The 14-ft., 3¼-in. x 216-ft., 6-in. rotary kiln is an F.L. Smidth unit equipped with Unax satellite coolers and a single-string four-stage preheater. Heat consumption is just under 3 million Btu per short ton of clinker when the kiln operates at its 1,500-tpd design capacity. Coal for firing the kiln is prepared in a 7-ft. 2-in. x 21-ft. FLS Tirax air-swept coal mill for drying and grinding.



Secondary crusher, a Pennsylvania Crusher unit with a 700 hp drive, breaks material into minus 1-in. size.

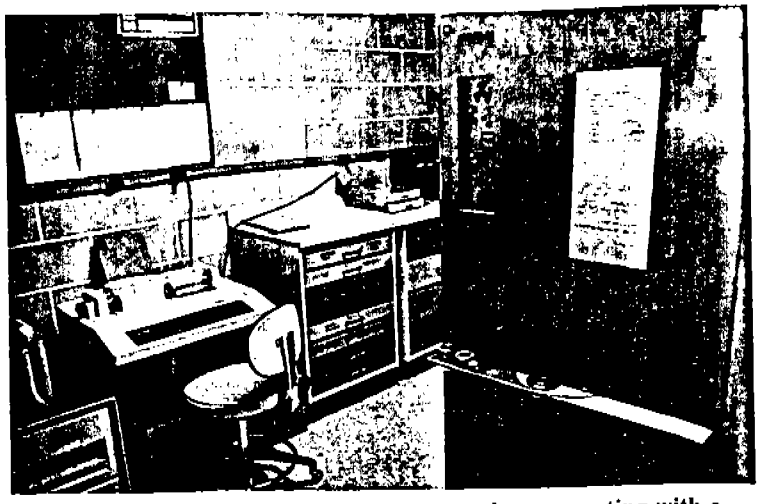
Shale from company pit is reduced to 7 in. minus size via a 30 in. × 42 in. Lippmann jaw crusher.

Enclosed belt conveyor carries crushed material 2,000 ft. to 4,000 ton capacity silo in the plant.

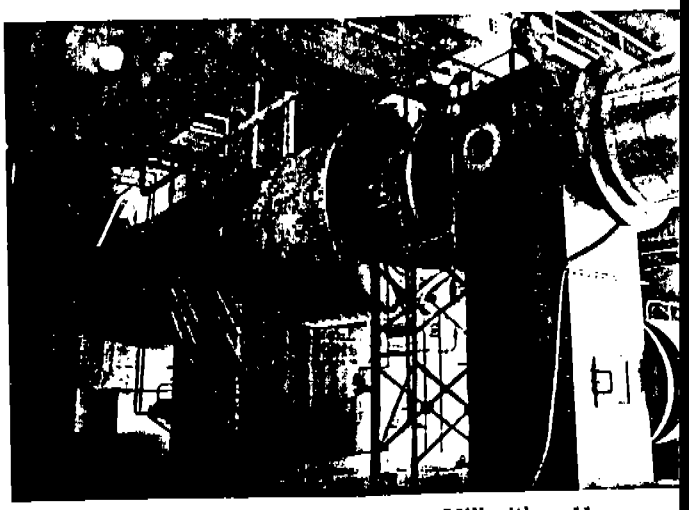


Oregon Portland Cement's new plant is located near the company's existing chemical-grade limestone quarry at Lime. This quarry was mined for 20 years to supply rock to the Lime cement plant and to beet sugar plants. The mining procedure left the quarry with a 600-ft. face on a 40-degree slope from the horizontal.

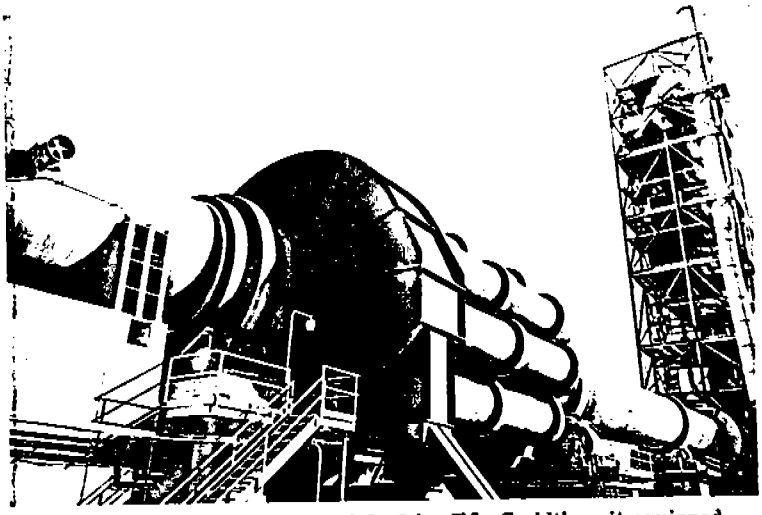
To stabilize the quarry's high face, the company is establishing 13 working benches. Bench faces are maintained as close to vertical as practical, forming a 75-degree angle from the horizontal plane. Bench widths are maintained at 35 ft. from toe line to crest line, with vertical intervals at 45 ft. This bench pattern is designed to give an overall



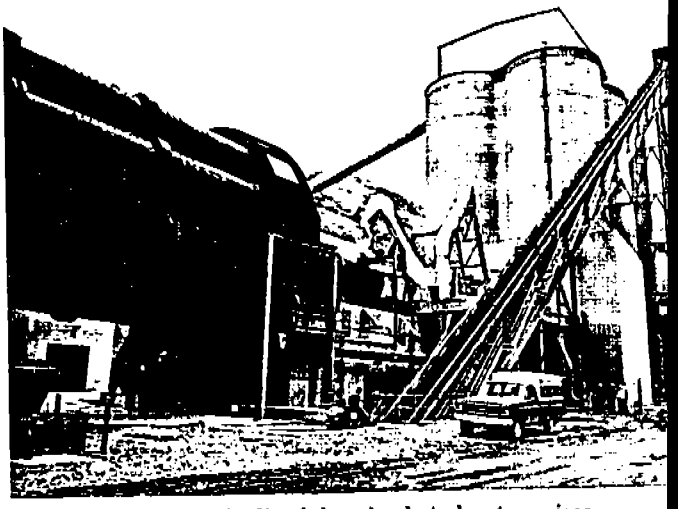
Raw meal is analyzed by a Siemens X-ray analyzer operating with a Digital PDP-11 computer.



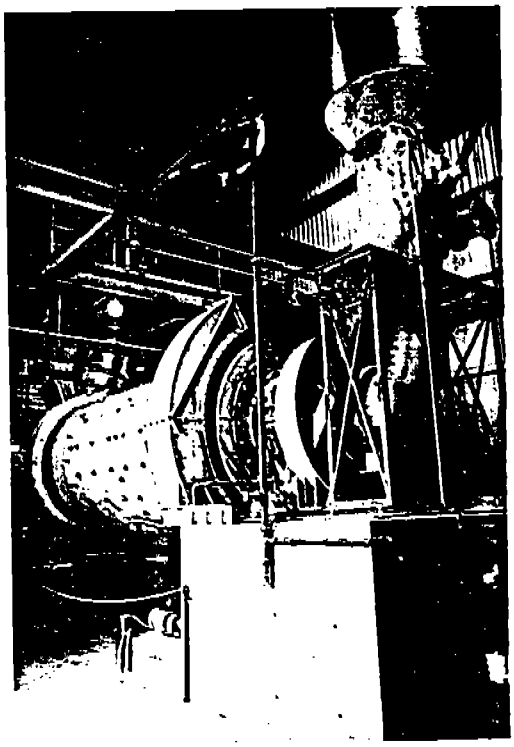
A 13 ft. × 22 ft. 9 in. F.L. Smidth Unidan Mill with an 11 ft. 2 in. × 11 ft. overhung drying chamber grinds raw meal to 90% passing 200 mesh size.

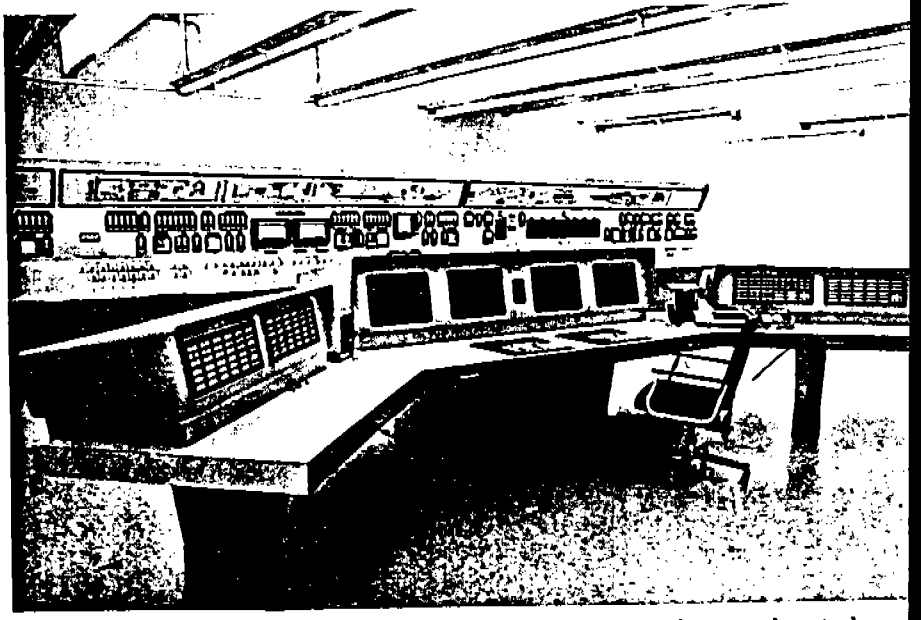


Rotary kiln is a 14 ft. 3¼ in. × 216 ft. 6 in. F.L. Smidth unit equipped with satellite coolers and a single-string 4-stage preheater.



An 18 in. × 300 ft. inclined deep-bucket elevator raises clinker to top of clinker storage silos.





Process equipment and operating conditions are monitored in the central control room by a Honeywell TDC 2000 control system.

Coal is dried and ground in an FLS Tirax air-swept coal mill.

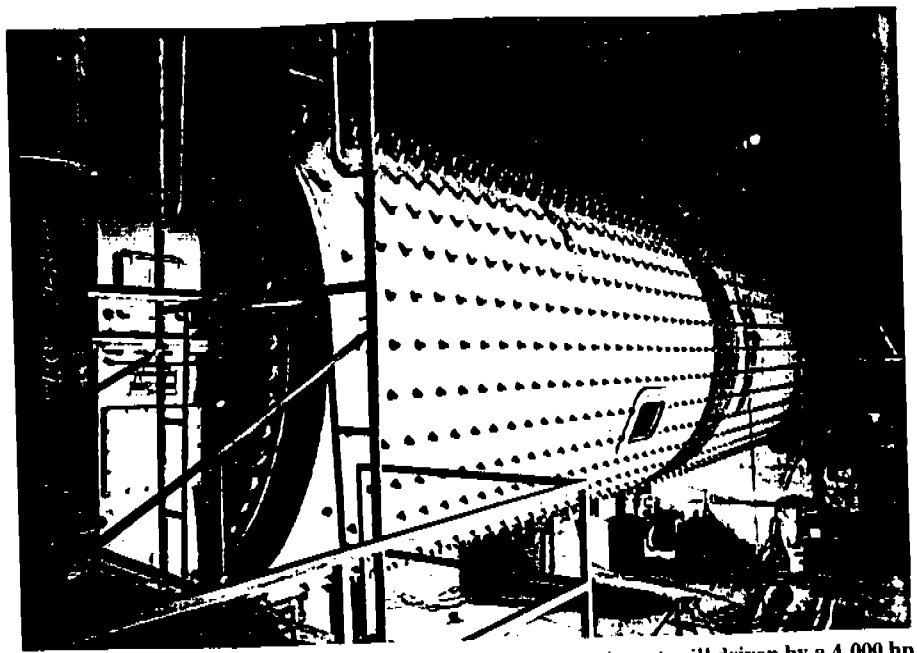
backslope of 44 degrees which is considered adequate to stabilize the face.

A Gardner-Denver 6D-25C drill is used to provide 7¼-in. x 48-ft. blastholes, and ANFO prills are used for blasting. The quarry is shot every two weeks, providing about 60,000 tons per blast. Broken material is dozed over the benching to the quarry floor. A 180-D Northwest shovel loads the stone into Euclid trucks for haul to a 36-in. x 48-in. Lippman (primary) jaw crusher.

Crusher product is screened to give a 2½-in. x 4½-in. limestone which is stockpiled for shipment to two sugar beet factories in the area. The remaining stone is stockpiled for trucking to the plant's secondary crusher. The crusher, a Pennsylvania Crusher unit with a 700-hp drive, breaks the stock to a minus 1-in. size. The crushed material is transported 2,000 feet via an enclosed conveyor belt to a 4,000-ton capacity silo in the plant.

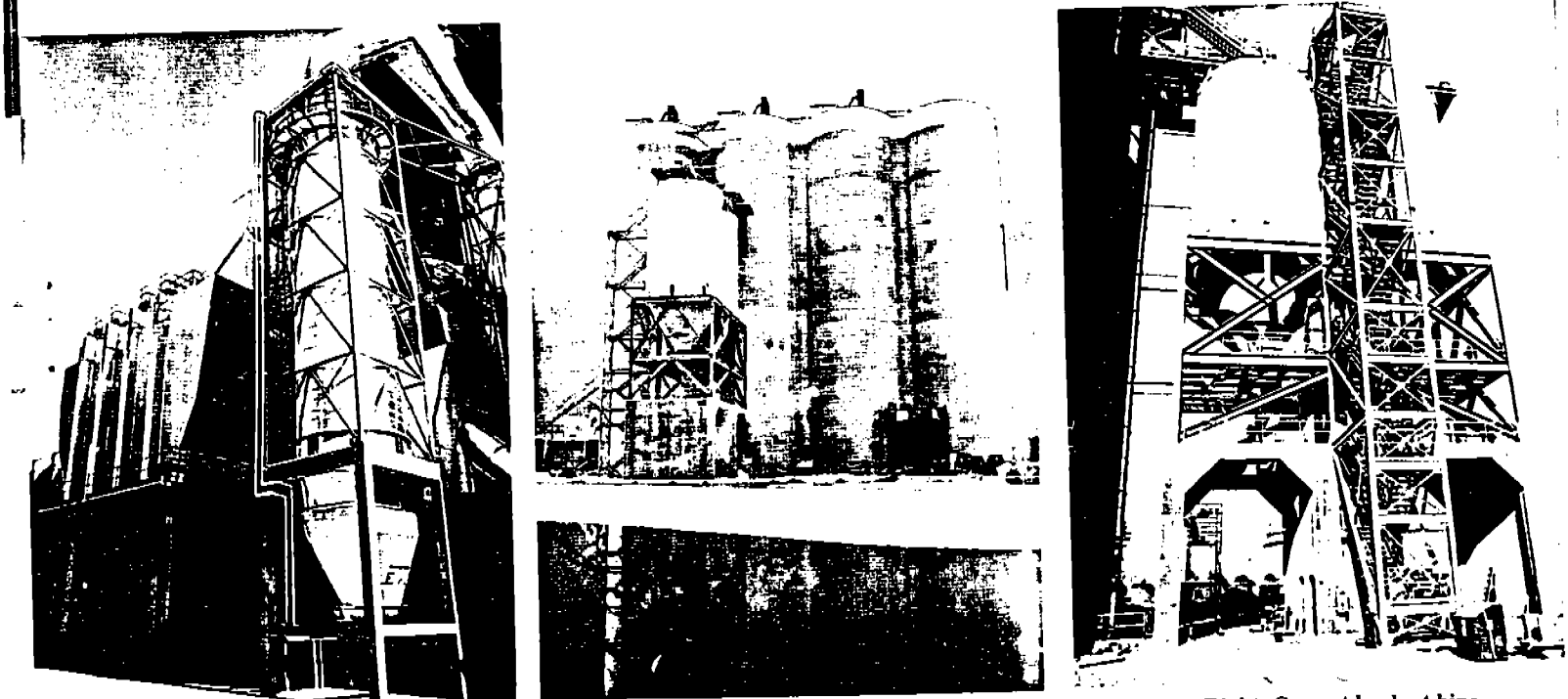
Shale is obtained from a pit adjacent to the secondary crusher. The shale is ripped from the pit by a Caterpillar D-9 tractor and fed to a 30-in. x 42-in. Lippman jaw crusher with a Cat 988 front end loader. The crusher reduces the material to 7-in. minus size and the shale is then crushed in the secondary crusher. The enclosed belt conveyor moves the shale to a 1,500-ton capacity interstice section in the raw material silo facility in the plant.

Sections also are available in the silo facility for clay and hi-mag stone which are excavated from the area adjacent to the crushers.



Finish mill is a 13 ft. × 47 ft. 3 in. FLS Unidan two-compartment mill driven by a 4,000 hp motor.

Raw materials are proportioned to the raw mill via Merrick digital weigh feeders. The raw mill is an F.L. Smidth Tirax Unidan mill, 13-ft. x 22-ft., 9-in. with an 11-ft., 2-in. x 11-ft. over-hung drying chamber. It is arranged for central drive via an FLS Symetro reducer and 2,100-hp Westinghouse motor. The raw meal is ground to at least 90% passing



Left: Sonic cooling tower and FLS electrostatic precipitator handle kiln exhaust gases. Center: Finished cement is pumped to four storage silos via a Fuller pump. Right: Cement loadout bins are located over rail and truck scales.

200 mesh. Separation takes place in a 20-ft. diameter Sturtevant rotary air separator.

The raw meal is sampled hourly and analyzed with a Siemens MRS 301, nine-channel X-ray analyzer tied in with a Digital PDP-11 computer. X-ray results are converted into new feeder settings by the computer. Process data is entered into the computer each hour. All chemical and process data are stored, and daily, weekly, and monthly reports are made.

Raw mill product is elevated to the top of two homogenizing silos by a Claudius Peters airlift. Each blending silo is located on top of one of the two storage silos. A fluidizing-type conveyor brings the material across the two blending silos and an automatically controlled diverter valve distributes the raw mix between the two blending silos.

The kiln feed discharged from the bottom of the storage silos also is raised by fluidized air conveyor to the Schenck flow meter kiln feeder, located on top of the preheater tower. Overflow from the kiln feeder is returned to the blending silos together with the raw mill feed. Homogenization takes place by a gravity flow effect (the F.L. Smidth "Funnel Flow" system) in the silos.

Clinker is conveyed to one of five clinker silos by an arrangement consisting of a drag conveyor, Rexnord 18-in. x 300-ft. inclined deep bucket elevator, and drag conveyors. Clinker and gypsum are withdrawn from the storage silos and carried to the finish mill by belt conveyors.

The finish mill is a 13-ft. x 47-ft., 3-in. FLS Unidan mill with two compartments. The mill, rated at 80 tph at 3,500 Blaine, is driven by a 4,000-hp Westinghouse motor through an F.L. Smidth Symetro gear reducer.

Finished cement is pumped to one of four finished cement silos by a Fuller 8-in. pump. The cement silos have a specially designed fluidized-air conveyor system that feeds the cement, via screw conveyor and elevator, to loading bins situated over rail and truck scales. All cement from the Durkee plant is shipped in bulk.

Kiln preheater exhaust gases are split for drying the raw materials in the raw mill. Gases not cooled in the raw mill are conditioned in a Sonic cooler tower. The combined gases then go to an F.L. Smidth electrostatic precipitator. Dust is collected from other points via I.C.A. fabric pulse-jet-type dust collectors.

The status of each major piece of process equipment and operating conditions are monitored in the central control room by two identical Honeywell TDC 2000 control systems operating in parallel. Each station is independent of the other and is composed of a color CRT television-type display.

By using a combination of analog and digital methods, the CRT units provide a variety of displays including overview, group, and single loop displays. The TDC 2000 links controllers and displays through a coaxial cable. This system is based on a microprocessor ("computer on a chip") which performs all arithmetic, logic, and decision-making operations without the aid of a conventional computer software program.

Each operating station has a keyboard with dedicated-function pushbuttons. After one operator station is configured, a cassette recording of the configuration can be taken and the other station configured identically. The inside of the kiln and the raw mill and finish mills are monitored with color TV cameras. Electric motors are interlocked with an Allen-Bradley programmable controller. The controller is programmed for group start and stop as well as for interlocking. Programmable controllers are installed for the raw mill, kiln, and finish mill departments.

Key personnel at the Durkee plant are: Richard E. Cooke, plant manager; Arthur L. Heward, business manager; Jack E. Yeates, plant superintendent; David J. Beedle, plant engineer; Richard A. Cartwright, quarry maintenance superintendent; Arthur G. Obendorf, chief chemist; Francis L. Garhart, quality control chemist; Douglas Y. Hale, safety and environmental director; Percy L. Raney, general foreman. ●