TEST #2 1/3 damper full open/balanced

~~higher flows w/ 1/3 dampers~~
~~is this better than 2/3's~~

open OFA inlet dampers
open 1/3 OFA dampers (higher velocities
(same test conditions) SB between tests

	SE	SW	NE	NW
	CCS / PI			
1/3 @100% ccs	99	96	99	89
OFA 11.08%	218.5	207.1	192.5 low	195.4

(CCS + PI swapped around)

Balance out - lower south / front wall

OFA 10.5%	CCS 55 / PI 55.4	55 / 55.4	99 / 99.1	89 / 89.3
NOx .53→.440	203.1	198.8	184.1	193.3

(Start 1015 to 1130)

SB to make temps

OFA 10.5%

grid 3.6 O2 / 24-44 CO / NOx .53→.44

FAN A Bias -4% (from -8%)

IP7_037993

	@1030 am		@1125	
	1003		999	
	76	RH PSH	75	
	997/994	70% / 100	1008/1005	60/100
tph	346		340	
airflow	85.9 / set 61.0		85.6 / 61.0	
	2.7/3.2		2.6/3.3	
	78.2/79.3		77.7/78.3	
NOx	0.438 / 252.8		0.436	
SO2 in	376		SO2	
OFA	10.8%		10.6	
FD fan Disc	10.5/9.9			
SA Duct F/W	5.0/5.2			

Test GRID 1048

	E/W	
CO	63/58	46/47
O_2	3.9	3.3
CO_2	14.66	14.30
NO_x	314.8	249.6

Stack CO ~ 28 @1140

Test 2
lost job prints
cyan drum fail?

IP7_037994

Printed out for: UNIT1OP - 06-Sep-03 10:34:33

0 Messages O2 Data O2 Unit Comparisons 06-Sep-03 10:34:33

Data		Unit 1	Unit 2
Meas'd Load	MW	954.75	902.25
East Probe 1	% O2	3.97	1.88
Probe 2	% O2	3.25	1.67
Probe 3	% O2	2.25	2.60
Probe 4	% O2	2.77	2.49
Average	% O2	2.80	1.93
West Probe 5	% O2	3.42	2.26
Probe 6	% O2	4.32	3.92
Probe 7	% O2	2.00	2.21
Probe 8	% O2	3.16	3.12
Average	% O2	3.23	2.75
Econ O2 Out Average	% O2	3.01	2.35
Econ O2 Out Setpoint	O2	3.07	3.15
O2 Trim Setpoint		61.0	50.2
Total Air %		86.5	78.8
Coal Flow	TPH	345.7	331.0
# of Pulv In-service		7.	7.
Main Steam Pressure		2396.4	2235.0
Stack NOx	PPM	253.	238.
Scrubber NOx	PPM	276.	260.
Stack Converted NOx	LB/MBTU	0.438	0.409
Target NOx	LB/MBTU	0.381	0.417
Scrubber Inlet SO2	PPM	375.9	494.7

PSH/RH Bias Dmpr Pos Bad / 70. 92./100.

MS/RH Temps 1001.7/ 997.2 1005.8/ 996.5

U1	
OFA	
%	10.8
Inlets	
SW	100.
SE	99.
NW	98.
NE	99.
1/3	
SW	55.
SE	55.
NW	89.
NE	99.
2/3	
SW	0.
SE	0.
NW	0.
NE	0.
Flow	
SW	203.
SE	199.
NW	199.
NE	193.
	794.

SA Damper	Unit 1	Unit 2
A Pulv	63.	66.
B Pulv	69.	68.
C Pulv	70.	68.
D Pulv	69.	68.
E Pulv	69.	64.
F Pulv	10.	68.
G Pulv	68.	68.
H Pulv	69.	69.

Coal Bias	Unit 1	Unit 2
A Pulv	-4.0	-1.7
B Pulv	0.0	0.0
C Pulv	0.0	0.0
D Pulv	0.0	0.0
E Pulv	0.0	-3.2
F Pulv	0.0	0.0
G Pulv	0.0	0.0
H Pulv	0.0	0.0

PA Bias	Unit 1	Unit 2
A Pulv	0.0	8.4
B Pulv	0.0	0.0
C Pulv	0.0	0.0
D Pulv	0.0	5.1
E Pulv	0.0	8.2
F Pulv	0.0	0.0
G Pulv	0.0	0.0
H Pulv	0.3	0.0

EndTim= 06-Sep-03 10:34:33 /EvalTim= 06-Sep-03 10:34:33 /PanRate= 0

IP7_037995

Printed out for: UNIT1OP - 06-Sep-03 10:33:43

0 Messages 1SGAclean U1 BOILER SOOTBLOWING CLEANLINESS 06-Sep-03 10:33:43

Fouled: <.7 Dirty: 0.7-0.80 Clean: >.80

Cleanliness Factors:	0.0 .8
WATERWALLS	0.81
SUPERHEATER	
SH Primary Bank	0.92
SSH Platen Bank	0.69
SSH Intrmed Bank	0.70
SSH Outlet Bank	0.75
REHEATER	
RH Primary Bank	0.68
RH Outlet Banks	1.01
ECONOMIZER	0.88

Key Parameters:	CCS	PMAX
Main Stm Temp (DegF)	1003.	
Main Stm Spry (KPPH)	75.	93.
RH Stm Temp (DegF)	997.	
RH Stm Spry (KPPH)	0.	0.
Fuel Flow (TPH)	346.	
Coal Flow (TPH)	345.	337.
Air Flow (%)	86.1	
OFA % 10.8	EAST	WEST
Secondary Air Flow (%)	78.3	79.1
O2 (%)	2.8	3.0
Air Htr Gas In Tmp (DegF	756.	759.

SB TARGET GAS TEMPS

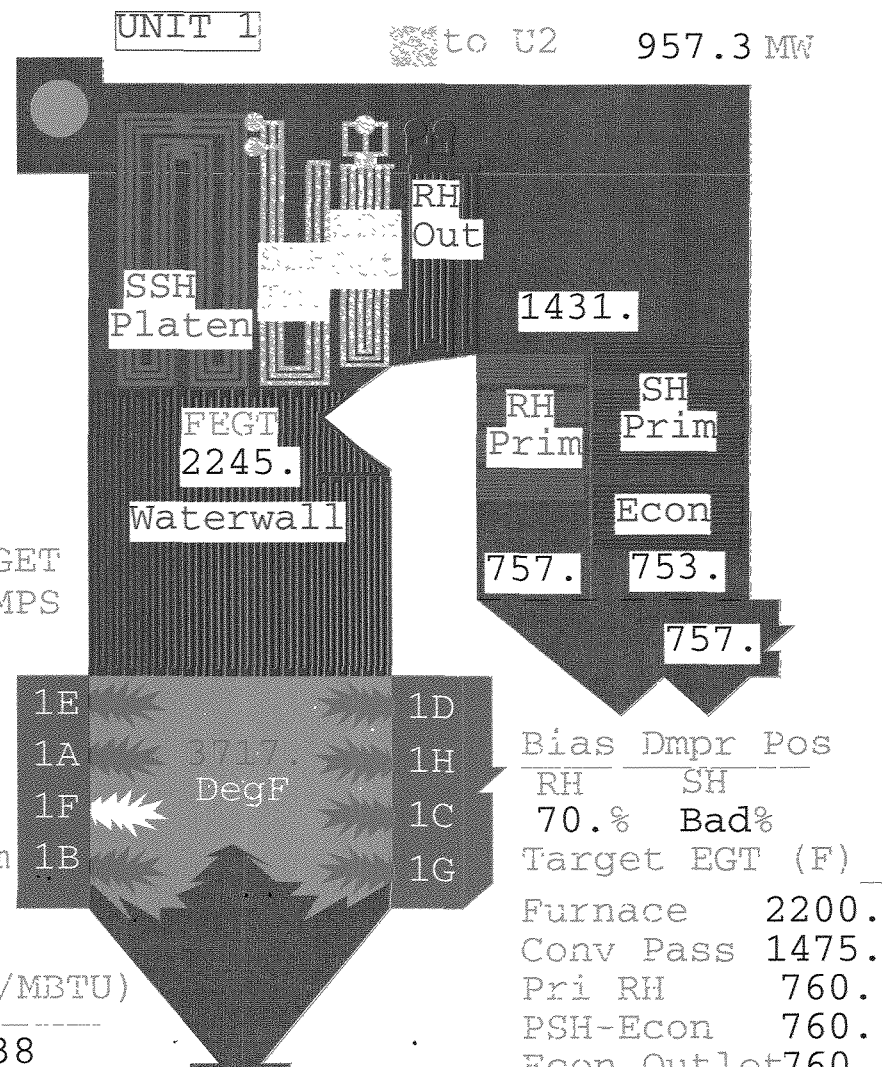
DRAFT PROFILE

O2 Trim

61.0

NOx(#/MBTU)

0.438



Bias Dmpr Pos

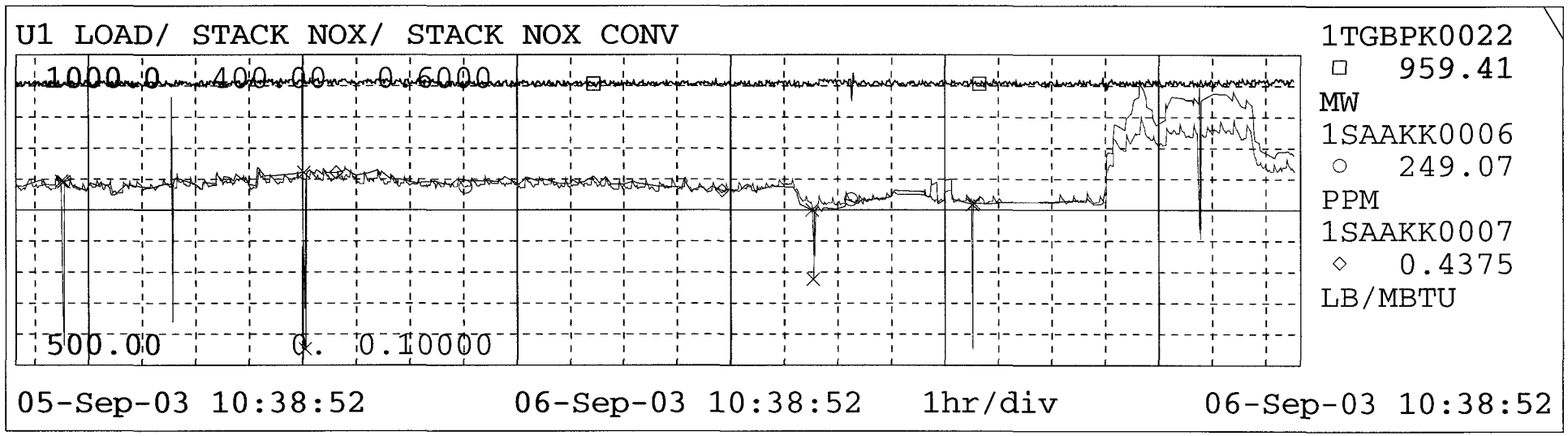
RH	SH
70.%	Bad%

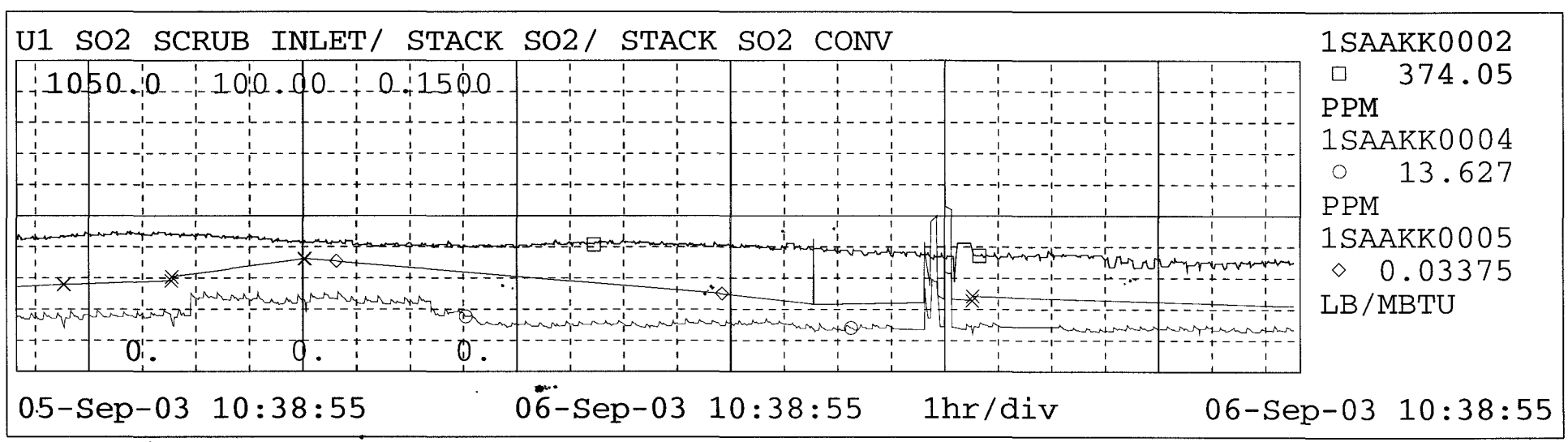
Target EGT (F)	
Furnace	2200.
Conv Pass	1475.
Pri RH	760.
PSH-Econ	760.
Econ Outlet	760.

EndTim= 06-Sep-03 10:33:43 /EvalTim= 06-Sep-03 10:33:43 /PanRate= 0

IP7_037996

Printed out for: UNIT1OP - 06-Sep-03 10:31:45
0 Messages Coal Comp1U1 Coal Comparisons 06-Sep-03 10:31:45

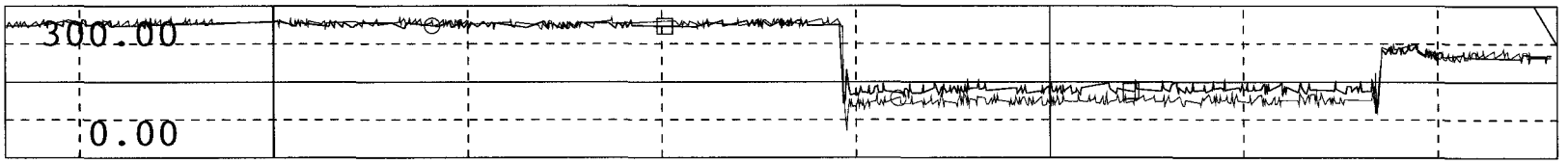




IP7_037997

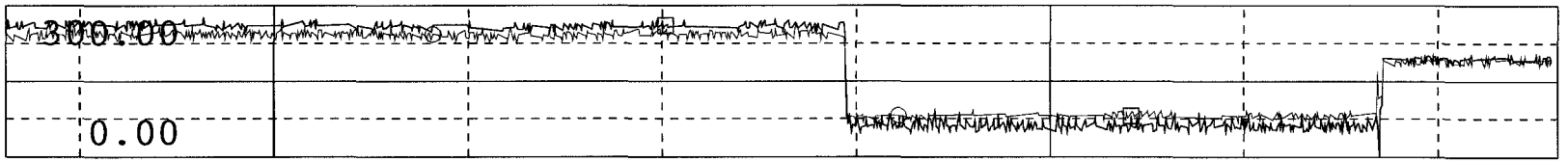
Printed out for: UNIT1OP - 06-Sep-03 10:35:13
0 Messages 1-OFA VIEWU1 OFA FLOW, NOX, O2, MW 06-Sep-03 10:35:13

SOUTH OFA FLOWS



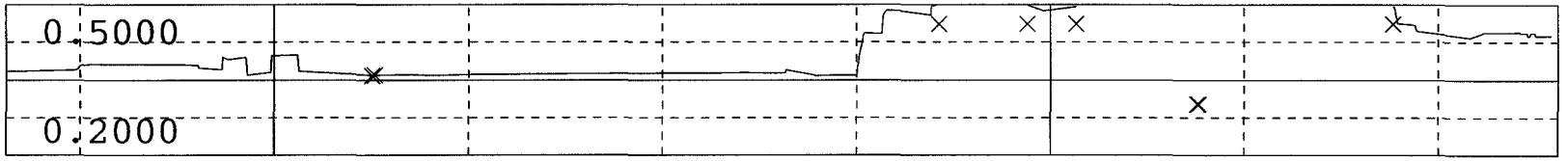
1SGBFT0155
□ 202.50
KPPH
1SGBFT0156
○ 198.90

NORTH OFA FLOWS



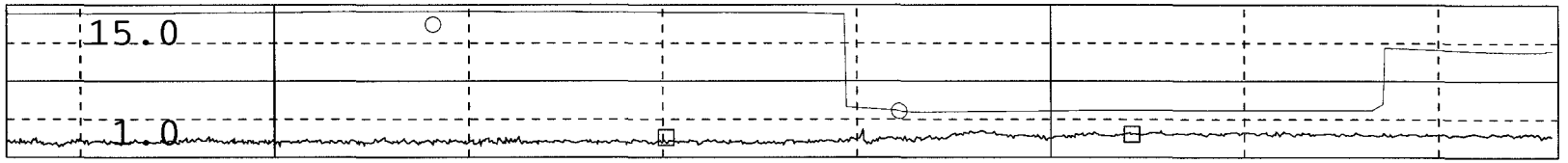
1SGBFT0157
□ 186.60
KPPH
1SGBFT0158
○ 194.80

NOX



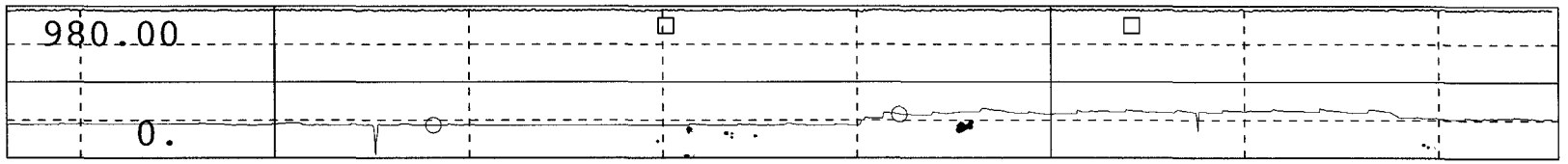
1SAAKK0007
□ 0.4375
LB/MBTU

02 & OFA/TOTAL AIR



1COAXI187A
□ 2.9
%
1COAXI172B
○ 10.800

LOAD & NOX (PPM)



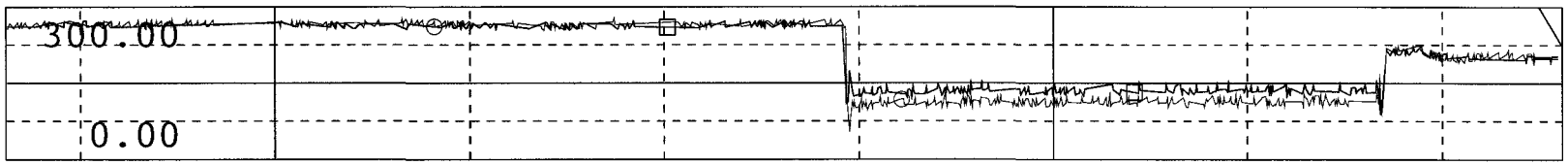
1TGBPK0022
□ 958.35
MW
1SAAKK0006
○ 252.81

06-Sep-03 02:37:07 06-Sep-03 10:37:07 1hr/div 06-Sep-03 10:37:07

IP7_037998

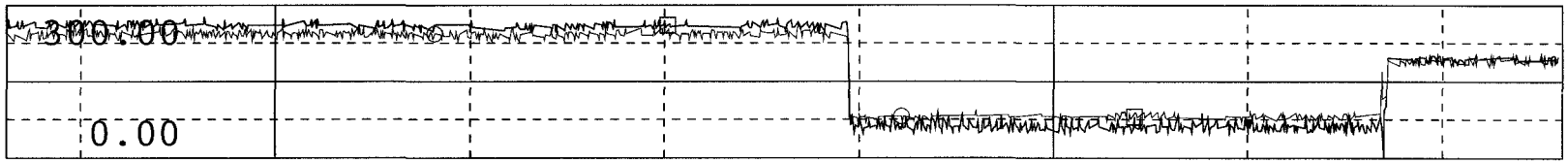
Printed out for: UNIT1OP - 06-Sep-03 10:35:59
0 Messages 1-OFA VIEWU1 OFA FLOW, NOX, O2, MW 06-Sep-03 10:35:59

SOUTH OFA FLOWS



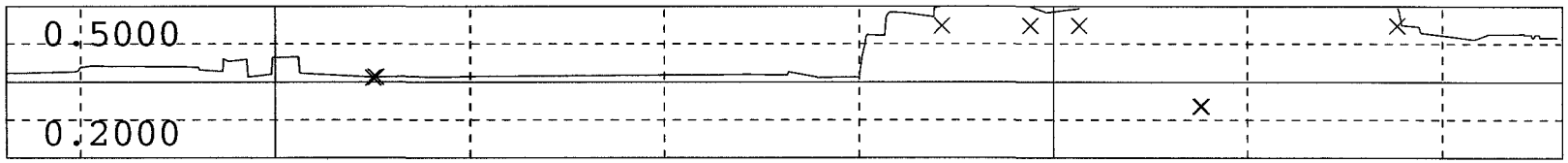
1SGBFT0155
□ 202.50
KPPH
1SGBFT0156
○ 198.90

NORTH OFA FLOWS



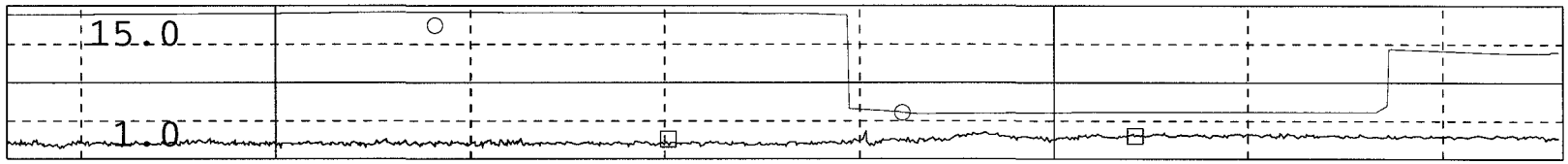
1SGBFT0157
□ 186.90
KPPH
1SGBFT0158
○ 194.40

NOX



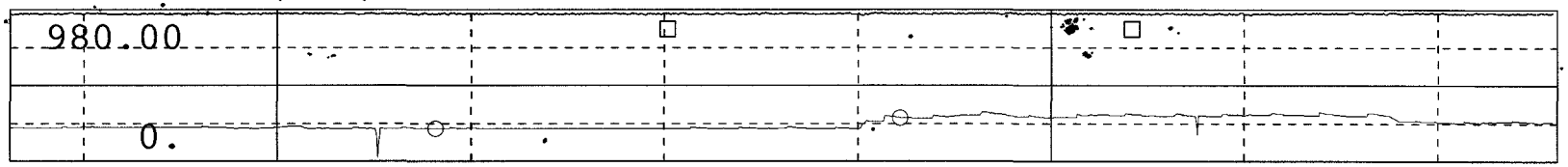
1SAAKK0007
□ 0.4375
LB/MBTU

02 & OFA/TOTAL AIR



1COAXI187A
□ 2.9
%
1COAXI172B
○ 10.800

LOAD & NOX (PPM)



1TGBPK0022
□ 958.35
MW
1SAAKK0006
○ 252.81

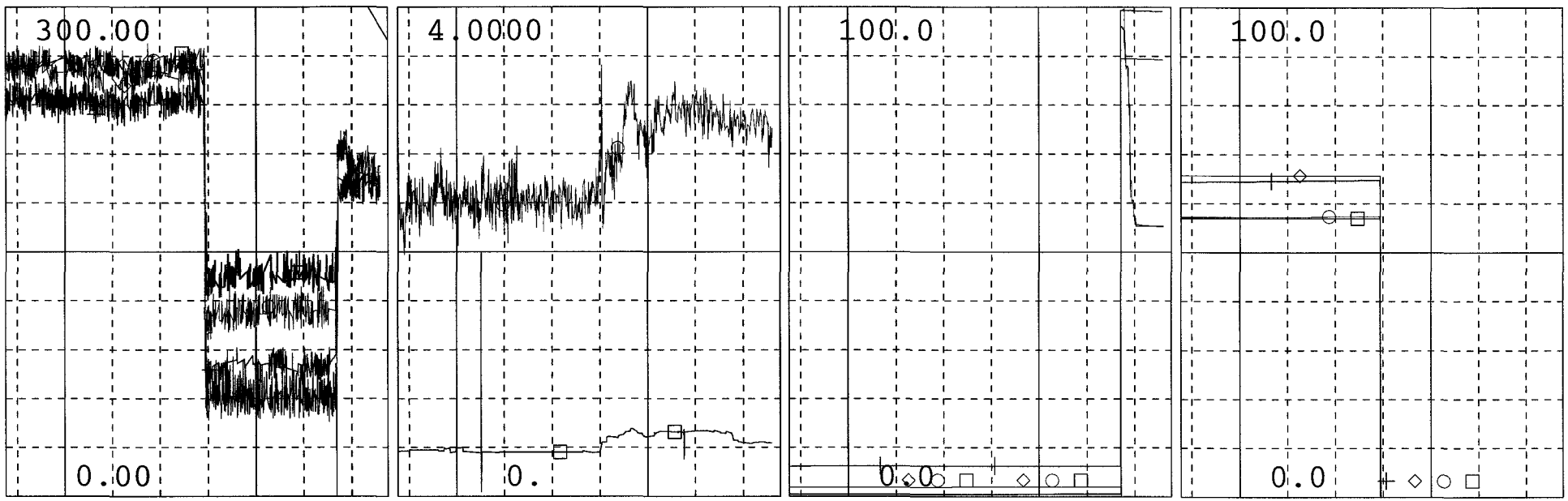
06-Sep-03 02:37:07 06-Sep-03 10:37:07 1hr/div 06-Sep-03 10:37:07

IP7_037999

Printed out for: UNIT1OP - 06-Sep-03 10:36:15

0 Messages 1-OFA FLOWU1 OFA FLOW 7 DMPR POS TREND 06-Sep-03 10:36:15

OFA FLOWS | NOX & O2 | 1/3 DAMPER POSITIO | 2/3 DAMPER POSITIO



1SGBFT0155	1SAAKK0007	1SGBKS164B	1SGBKS165B
□ 202.50	□ 0.4375	□ 55.3	□ 0.0
KPPH	LB/MBTU	%	%
1SGBFT0156	1COAXI187A	1SGBKS166B	1SGBKS167B
○ 198.90	○ 3.0	○ 55.1	○ 0.0
1SGBFT0157		1SGBKS168B	1SGBKS169B
◇ 186.90		◇ 89.2	◇ 0.0
1SGBFT0158		1SGBKS170B	1SGBKS171B
+ 194.40		+ 99.1	+ 0.0

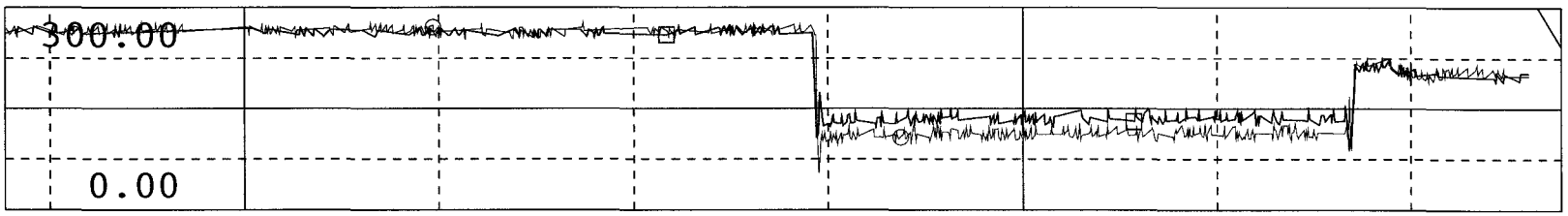
06-Sep-03 02:46:02 06-Sep-03 10:46:02 1hr/div 06-Sep-03 10:46:02

IP7_038000

Printed out for: UNIT1OP - 06-Sep-03 10:36:46

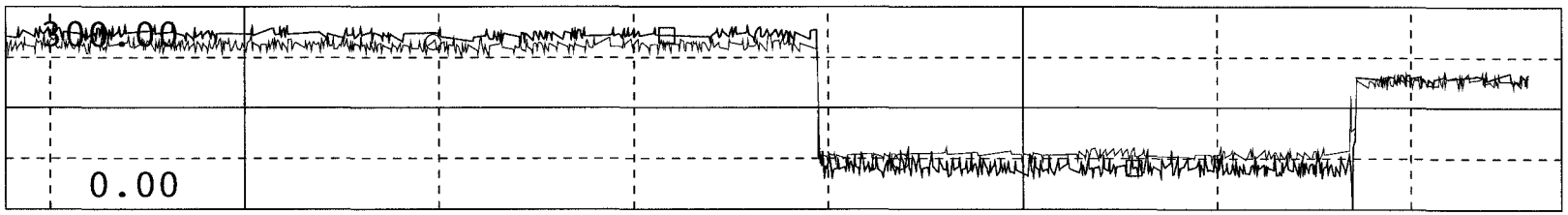
0 Messages 1-OFA/TA OFA comparison to Total Air 06-Sep-03 10:36:46

South OFA Inlet Flows



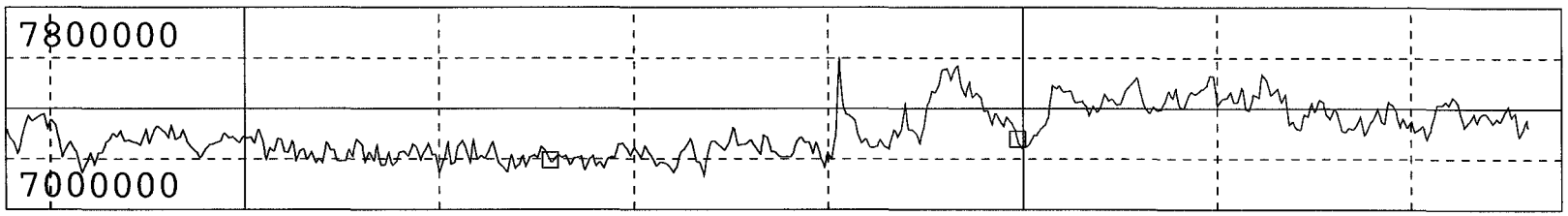
1SGBFT0155
□ 202.50
KPPH
1SGBFT0156
○ 198.90

North OFA Inlet Flows



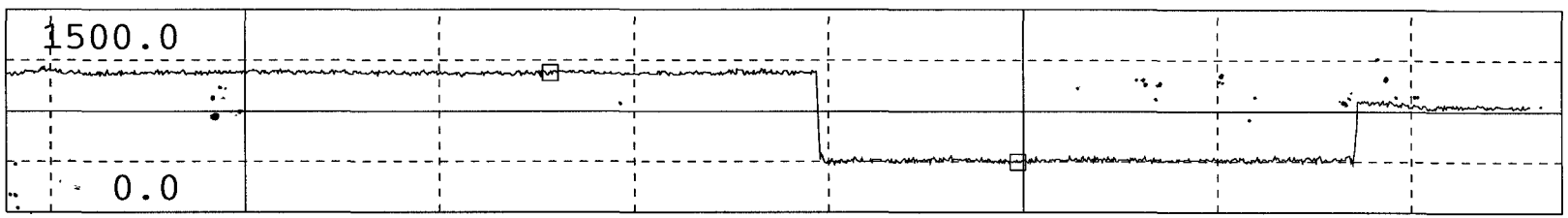
1SGBFT0157
□ 188.80
KPPH
1SGBFT0158
○ 194.40

Total Air



1SGAPX3522
□ 7325254
LB/HR

Total Over Fire Air



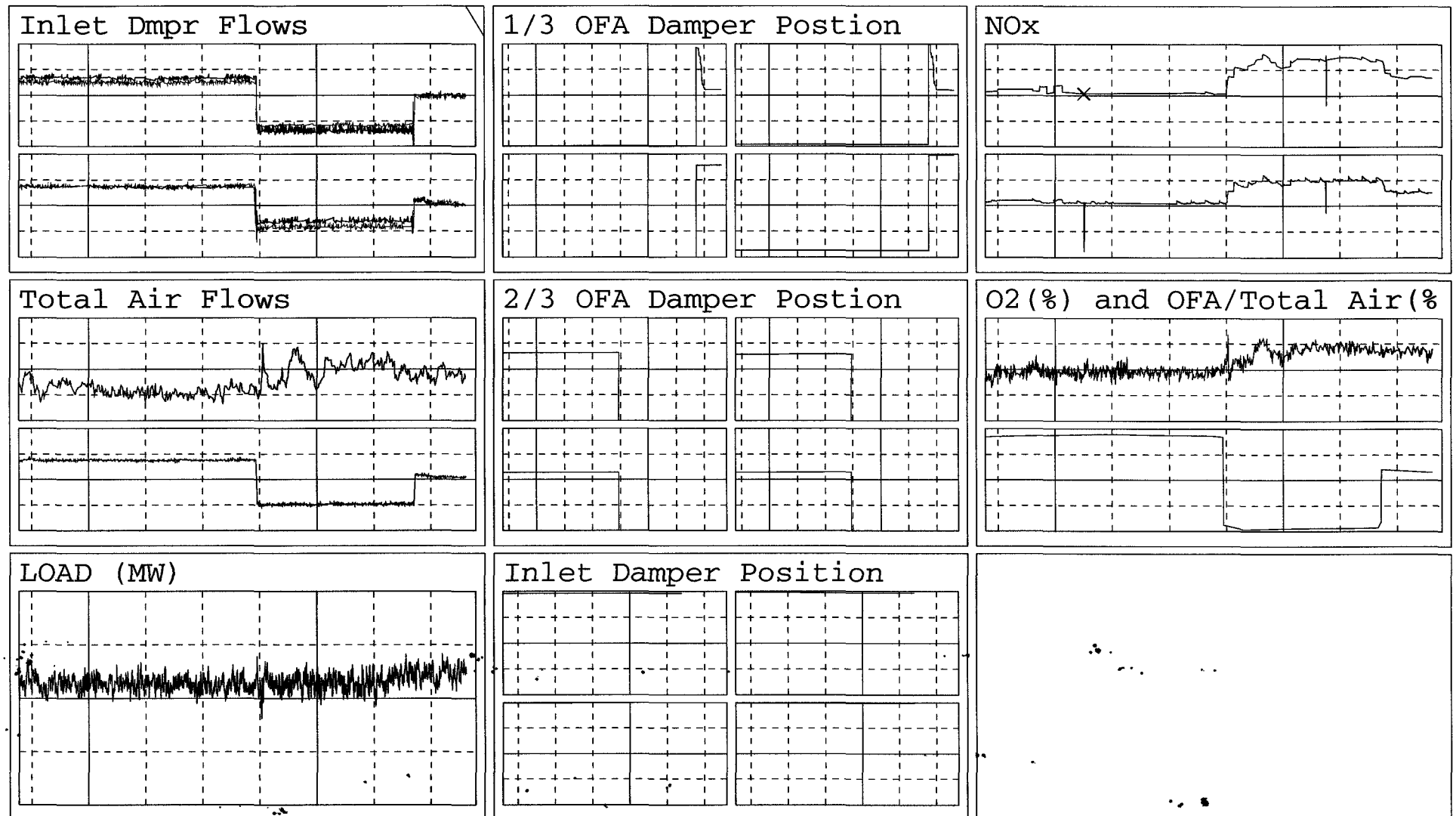
1COAXI172C
□ 784.6
KPPH

06-Sep-03 02:46:20 06-Sep-03 10:46:20 1hr/div 06-Sep-03 10:46:20

IP7_038001

Printed out for: UNIT1OP - 06-Sep-03 10:37:07

0 Messages 1OFA SumVwU1 OFA Overview 06-Sep-03 10:37:07



IP7_038002

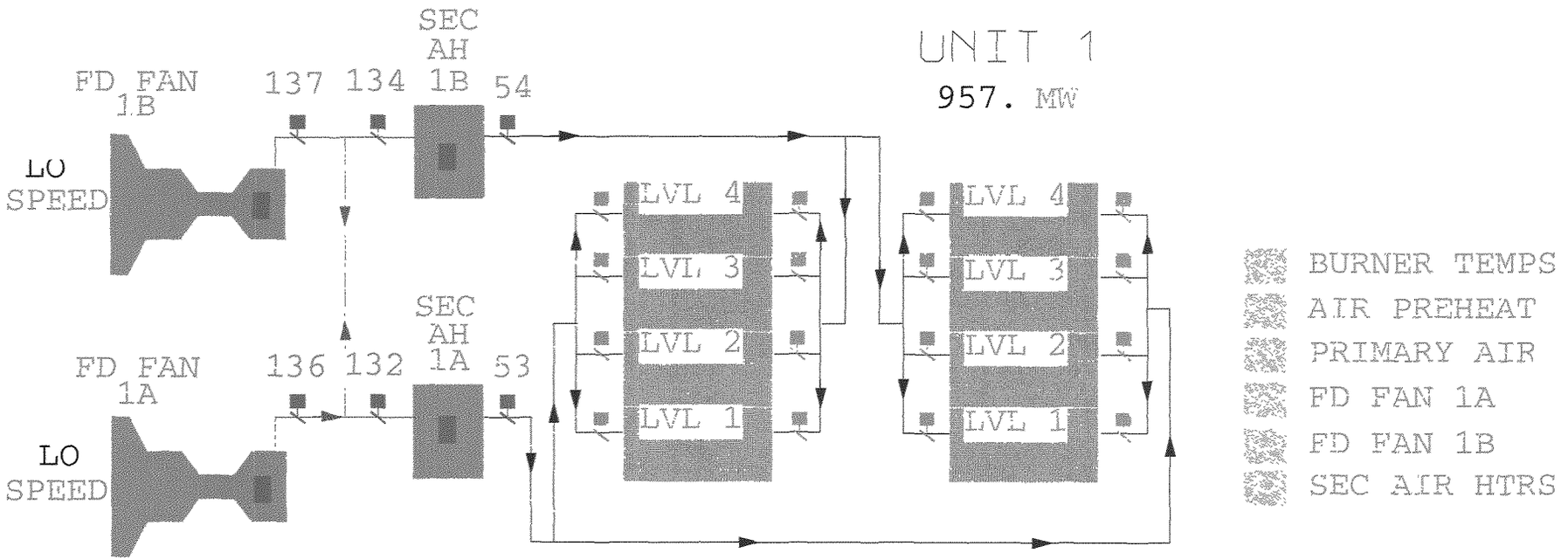
Printed out for: UNIT1OP - 06-Sep-03 10:37:25
0 Messages U1 Pulv U1 Pulv Operating data 06-Sep-03 10:37:25

Unit 1 950.5 MW	Pulv A	Pulv B	Pulv C	Pulv D	Pulv E	Pulv F	Pulv G	Pulv H
Coal Flow343.7TPH	46.1	50.0	49.5	49.0	49.4	Bad	49.1	50.0
Feeder Speed	67.8	73.5	72.7	72.0	72.3	Calc	72.2	73.5
Amps (Duct Pr44.7)	74.4	57.4	63.4	61.7	65.4	0.0	64.7	61.5
Coal Pipe Vel	3694.	3901.	3894.	3881.	3876.	0.	3914.	3905.
PA Flow %	83.9	88.6	87.2	88.1	87.4	0.0	88.7	88.7
PA Damper Pos	69.2	80.7	71.3	69.7	81.8	1.2	72.5	78.6
Pulv Pitot DP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PA Mass Flow	3316.	3495.	3485.	3472.	3472.	0.	3508.	3502.
Pulv DP (NOx 0.44)	10.5	15.3	12.8	15.6	18.6	0.0	10.0	17.7
Air to Fuel Ratio	2.16	2.07	2.11	2.08	2.10	Calc	2.16	2.06
Pulv Inlet Temp	265.4	281.4	267.1	277.9	275.0	94.3	277.2	289.3
Pulv Outlet Temp	150.1	151.1	151.1	152.0	151.3	89.6	150.8	150.4
Coal Bias	-4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Air Bias	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Hyd Skid Pr Fdbk	2336.	2177.	2285.	2252.	2081.	3.	2105.	2206.
Hyd Skid Pr Setpt	2092.	2237.	2218.	2204.	2192.	1149.	2204.	2238.

EndTim= 06-Sep-03 10:37:25 /EvalTim= 06-Sep-03 10:37:25 /PanRate= 0

IP7_038003

Printed out for: UNIT1OP - 06-Sep-03 10:38:00
0 Messages 1SGBG01 COMBUSTION AIR 06-Sep-03 10:38:00



FAN ROOM TEMP	
72.	

	FD FANS 1A	FD FANS 1B		SEC AIR HTRS 1A	SEC AIR HTRS 1B		SEC AIR WINDBOX DUCT PRESS REAR NORTH INWC	DUCT PRESS FRONT SOUTH INWC	DAMPER POS REAR NORTH %	DAMPER POS FRONT SOUTH %
						LVL 4	2.7	2.7	69.	69.
KLBH	786.	798.	FLOW %	79.	79.	LVL 3	2.5	2.7	69.	63.
D/P	12.2	12.1	OT F	681.	689.	LVL 2	2.9	0.0	70.	10.
AMPS	224.	235.	IN F	78.	79.	LVL 1	2.3	2.4	69.	69.

EndTim= 06-Sep-03 10:38:00 /EvalTim= 06-Sep-03 10:38:00 /PanRate= 0

IP7_038004

Printed out for: UNIT1OP - 06-Sep-03 10:38:35
0 Messages 1STICEM U1 CEM SYSTEM DATA 06-Sep-03 10:38:35

UNIT #1 CEM DATA

POINT ID	VALUE	TIMESTAMP
1SAAKK0001	0.0	06-Sep-03 10:29:18
1SAAKK0002	375.9	06-Sep-03 10:33:08
1SAAKK0003	0.8	06-Sep-03 10:37:03
1SAAKK0010	276.1	06-Sep-03 10:32:57
1SAAKK0011	0.4	06-Sep-03 10:33:08
1SAAKK0012	13.4	06-Sep-03 10:33:08
1SAAKK0008	0.0	06-Sep-03 10:29:18
1SAAKK0004	14.4	06-Sep-03 10:38:02
1SAAKK0005	0.0	06-Sep-03 10:31:32
1SAAKK0006	265.0	06-Sep-03 10:38:18
1SAAKK0007	0.4	06-Sep-03 10:38:07
1SAAKK0013	312.5	06-Sep-03 10:38:02
1SAAKK0014	998.8	06-Sep-03 10:38:18
1SAAKK0015	12.8	06-Sep-03 10:38:13
1SAAKK0016	136.5	06-Sep-03 10:38:18

INTERMOUNTAIN POWER

EndTim= 06-Sep-03 10:38:35 /EvalTim= 06-Sep-03 10:38:35 /PanRate= 0

IP7_038005

Printed out for: UNIT1OP - 06-Sep-03 11:27:03

0 Messages 1SGAclean U1 BOILER SOOTBLOWING CLEANLINESS 06-Sep-03 11:27:03

Fouled: <.7 Dirty: 0.7-0.80 Clean: >.80

Cleanliness Factors:	0.0 .8
WATERWALLS	0.81
SUPERHEATER	
SH Primary Bank	0.91
SSH Platen Bank	0.64
SSH Intrmed Bank	0.68
SSH Outlet Bank	0.72
REHEATER	
RH Primary Bank	0.64
RH Outlet Banks	0.99
ECONOMIZER	0.87

Key Parameters:	CCS	PMAX
Main Stm Temp (DegF)	998.	
Main Stm Spry (KPPH)	55.	78.
RH Stm Temp (DegF)	1007.	
RH Stm Spry (KPPH)	0.	0.
Fuel Flow (TPH)	346.	
Coal Flow (TPH)	342.	336.
Air Flow (%)	85.8	
OFA % 10.6	EAST	WEST
Secondary Air Flow (%)	77.4	79.2
O2 (%)	2.7	3.1
Air Htr Gas In Tmp (DegF	759.	762.

SB TARGET GAS TEMPS

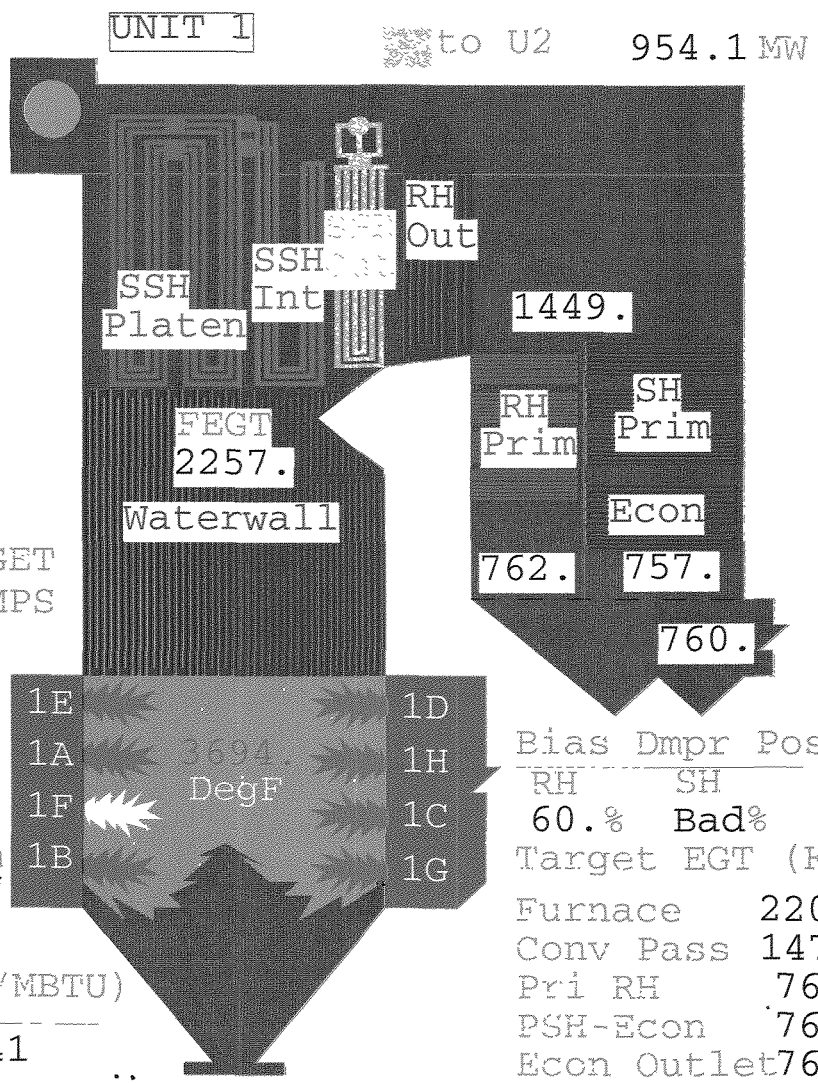
DRAFT PROFILE

O2 Trim

61.0

NOx(#/MBTU)

0.441



Bias Dmpr Pos

RH	SH
60.%	Bad%

Target EGT (F)

Furnace	2200.
Conv Pass	1475.
Pri RH	760.
PSH-Econ	760.
Econ Outlet	760.

EndTim= 06-Sep-03 11:27:03 /EvalTim= 06-Sep-03 11:27:03 /PanRate= 0

IP7_038006

Printed out for: UNIT1OP - 06-Sep-03 11:28:53

0 Messages O2 Data O2 Unit Comparisons 06-Sep-03 11:28:53

Data		Unit 1	Unit 2
Meas'd Load	MW	954.75	901.75
East Probe 1	% O2	3.56	1.74
Probe 2	% O2	2.92	1.63
Probe 3	% O2	2.20	2.54
Probe 4	% O2	2.73	2.35
Average	% O2	2.62	1.90
West Probe 5	% O2	3.68	2.15
Probe 6	% O2	4.32	3.78
Probe 7	% O2	1.93	2.05
Probe 8	% O2	3.14	3.03
Average	% O2	3.27	2.66
Econ O2 Out Average	% O2	2.93	2.23
Econ O2 Out Setpoint	O2	3.08	3.16
O2 Trim Setpoint		61.0	50.2
Total Air %		85.8	78.6
Coal Flow	TPH	344.3	329.7
# of Pulv In-service		7.	7.
Main Steam Pressure		2400.6	2238.6
Stack NOx	PPM	253.	236.
Scrubber NOx	PPM	276.	258.
Stack Converted NOx	LB/MBTU	0.436	0.412
Target NOx	LB/MBTU	0.382	0.417
Scrubber Inlet SO2	PPM	371.3	488.4
PSH/RH Bias Dmpr Pos		Bad / 60.	92./100.
MS/RH Temps		999.6/1007.1	1003.3/1003.3

U1
OFA
% 10.6
Inlets
SW 100.
SE 99.
NW 98.
NE 99.
1/3
SW 55.
SE 55.
NW 89.
NE 99.
2/3
SW 0.
SE 0.
NW 0.
NE 0.
Flow
SW 200.
SE 202.
NW 190.
NE 188.
780.

SA Damper	Unit 1	Unit 2
A Pulv	62.	66.
B Pulv	68.	68.
C Pulv	69.	68.
D Pulv	68.	68.
E Pulv	68.	64.
F Pulv	10.	68.
G Pulv	68.	68.
H Pulv	69.	69.

Coal Bias	Unit 1	Unit 2
A Pulv	-4.0	-1.7
B Pulv	0.0	0.0
C Pulv	0.0	0.0
D Pulv	0.0	0.0
E Pulv	0.0	-3.2
F Pulv	0.0	0.0
G Pulv	0.0	0.0
H Pulv	0.0	0.0

PA Bias	Unit 1	Unit 2
A Pulv	0.0	8.4
B Pulv	0.0	0.0
C Pulv	0.0	0.0
D Pulv	0.0	5.1
E Pulv	0.0	8.2
F Pulv	0.0	0.0
G Pulv	0.0	0.0
H Pulv	0.3	0.0

EndTim= 06-Sep-03 11:28:53 /EvalTim= 06-Sep-03 11:28:53 /PanRate= 0

IP7_038007

Printed out for: UNIT1OP - 06-Sep-03 11:29:16
0 Messages U1 Pulv U1 Pulv Operating data 06-Sep-03 11:29:16

Unit 1 953.0 MW	Pulv A	Pulv B	Pulv C	Pulv D	Pulv E	Pulv F	Pulv G	Pulv H
Coal Flow344.1TPH	45.4	50.3	49.9	49.3	48.3	Bad	48.4	50.2
Feeder Speed	66.7	74.3	72.0	72.5	71.1	Calc	71.2	75.0
Amps (Duct Pr44.8)	74.5	59.0	67.0	60.2	66.4	0.0	59.5	61.4
Coal Pipe Vel	3677.	3888.	3847.	3919.	3887.	0.	3910.	3899.
PA Flow %	83.9	88.1	87.2	88.0	87.3	0.0	88.7	88.1
PA Damper Pos	68.9	80.5	71.1	69.1	81.4	1.2	72.2	78.4
Pulv Pitot DP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PA Mass Flow	3301.	3484.	3446.	3467.	3455.	0.	3506.	3497.
Pulv DP (NOx 0.44)	11.3	15.4	12.4	14.5	19.1	0.0	10.0	17.6
Air to Fuel Ratio	2.18	2.07	2.11	2.10	2.14	Calc	2.16	2.06
Pulv Inlet Temp	266.6	279.8	272.1	280.5	274.3	95.2	276.2	289.6
Pulv Outlet Temp	149.7	150.9	151.3	152.3	149.7	89.9	150.9	150.8
Coal Bias	-4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Air Bias	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Hyd Skid Pr Fdbk	2340.	2176.	2283.	2248.	2069.	4.	2109.	2205.
Hyd Skid Pr Setpt	2067.	2247.	2234.	2202.	2159.	1149.	2181.	2244.

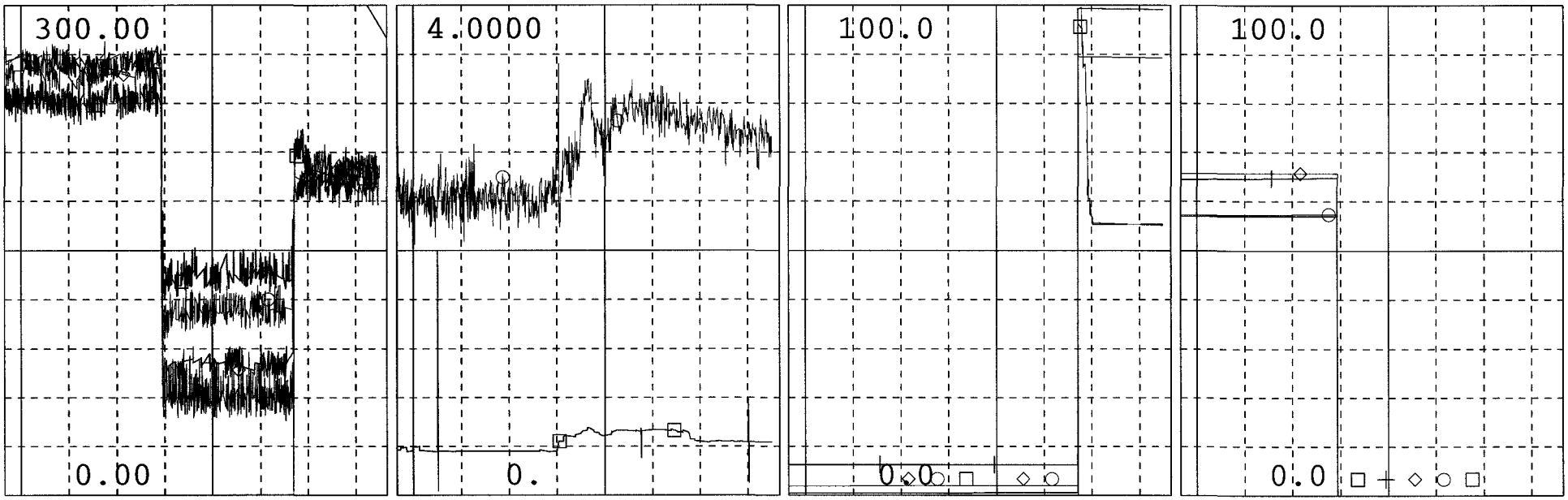
EndTim= 06-Sep-03 11:29:16 /EvalTim= 06-Sep-03 11:29:16 /PanRate= 0

IP7_038008

Printed out for: UNIT1OP - 06-Sep-03 11:29:41

0 Messages 1-OFA FLOWU1 OFA FLOW 7 DMPR POS TREND 06-Sep-03 11:29:41

OFA FLOWS | NOX & O2 | 1/3 DAMPER POSITIO | 2/3 DAMPER POSITIO

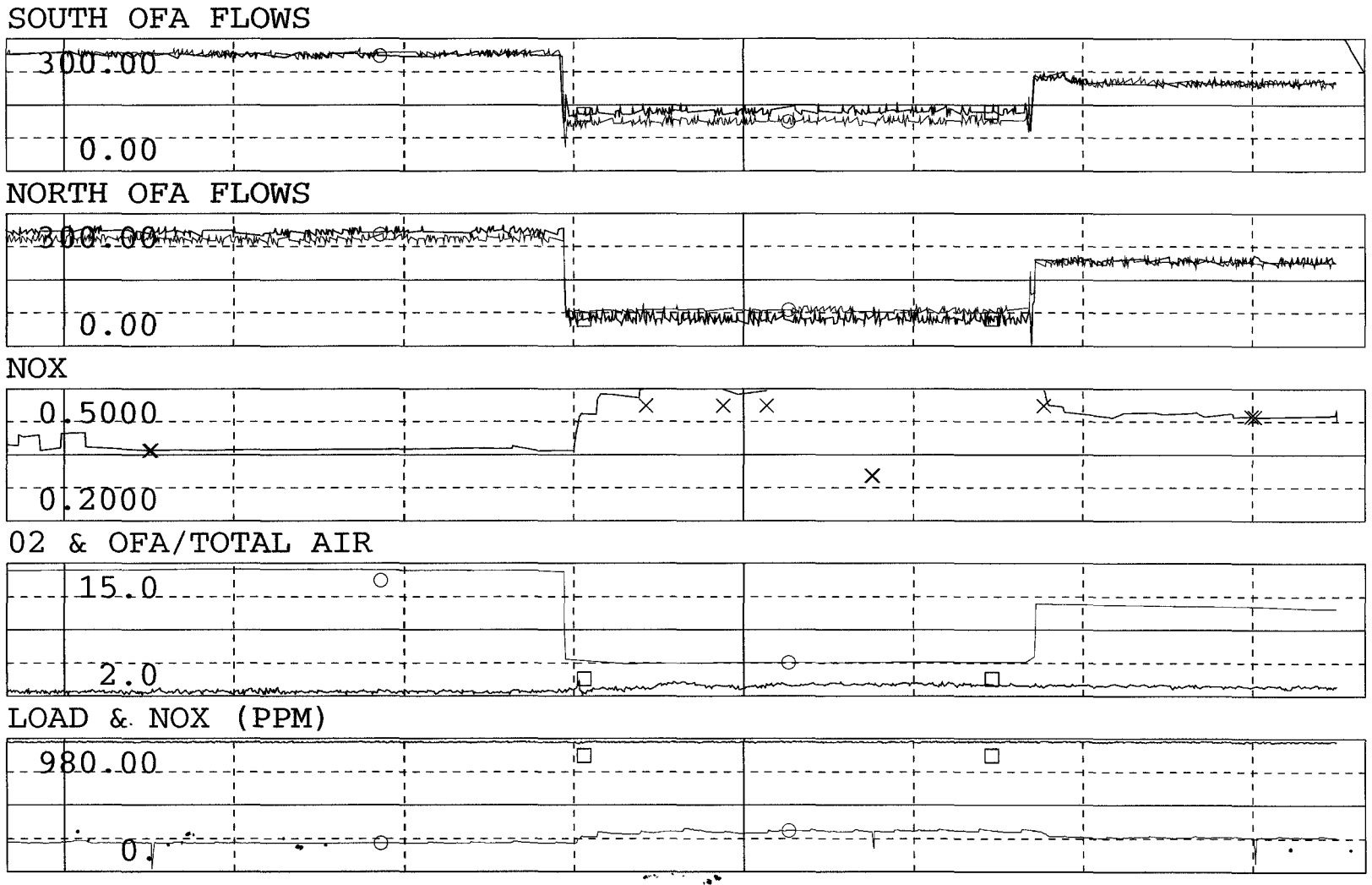


1SGBFT0155	1SAAKK0007	1SGBKS164B	1SGBKS165B
□ 200.00	□ 0.4263	□ 55.4	□ 0.0
KPPH	LB/MBTU	%	%
1SGBFT0156	1COAXI187A	1SGBKS166B	1SGBKS167B
○ 201.90	○ 3.0	○ 55.1	○ 0.0
1SGBFT0157		1SGBKS168B	1SGBKS169B
◇ 188.40		◇ 89.2	◇ 0.1
1SGBFT0158		1SGBKS170B	1SGBKS171B
+ 187.60		+ 99.1	+ 0.0

06-Sep-03 03:39:31 06-Sep-03 11:39:31 1hr/div 06-Sep-03 11:39:31

IP7_038009

Printed out for: UNIT1OP - 06-Sep-03 11:29:53
0 Messages 1-OFA VIEWU1 OFA FLOW, NOX, O2, MW 06-Sep-03 11:29:53



1SGBFT0155
□ 200.00
KPPH
1SGBFT0156
○ 201.90
1SGBFT0157
□ 199.10
KPPH
1SGBFT0158
○ 187.60
1SAAKK0007
□ 0.4037
LB/MBTU
1COAXI187A
□ 3.0
%
1COAXI172B
○ 10.578
1TGBPK0022
□ 954.49
MW
1SAAKK0006
○ 232.80

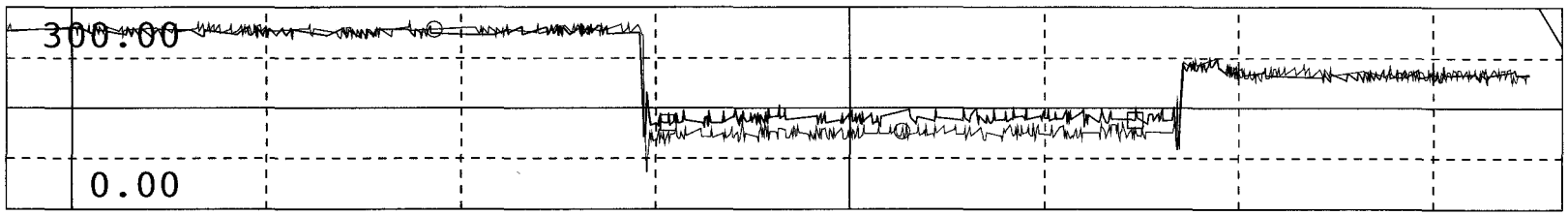
06-Sep-03 03:39:45 06-Sep-03 11:39:45 1hr/div 06-Sep-03 11:39:45

IP7_038010

Printed out for: UNIT1OP - 06-Sep-03 11:30:03

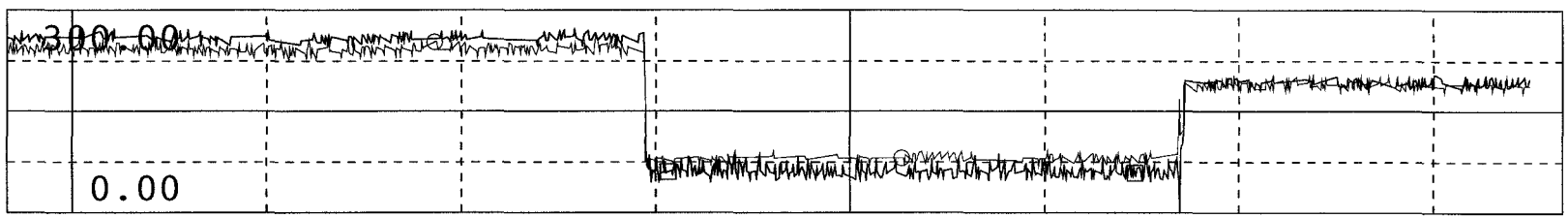
0 Messages 1-OFA/TA OFA comparison to Total Air 06-Sep-03 11:30:03

South OFA Inlet Flows



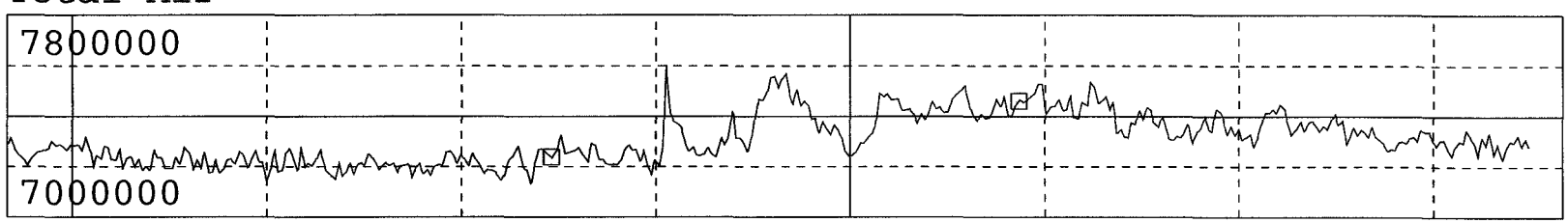
1SGBFT0155 □ 200.00 KPPH
1SGBFT0156 ○ 201.90

North OFA Inlet Flows



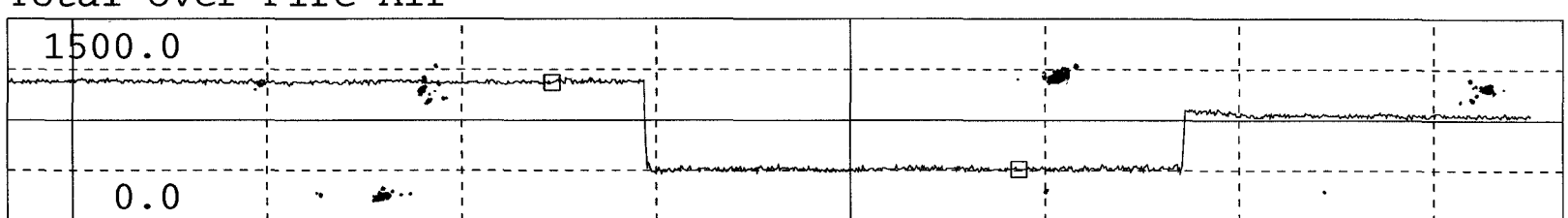
1SGBFT0157 □ 199.10 KPPH
1SGBFT0158 ○ 187.60

Total Air



1SGAPX3522 □ 7281283 LB/HR

Total Over Fire Air



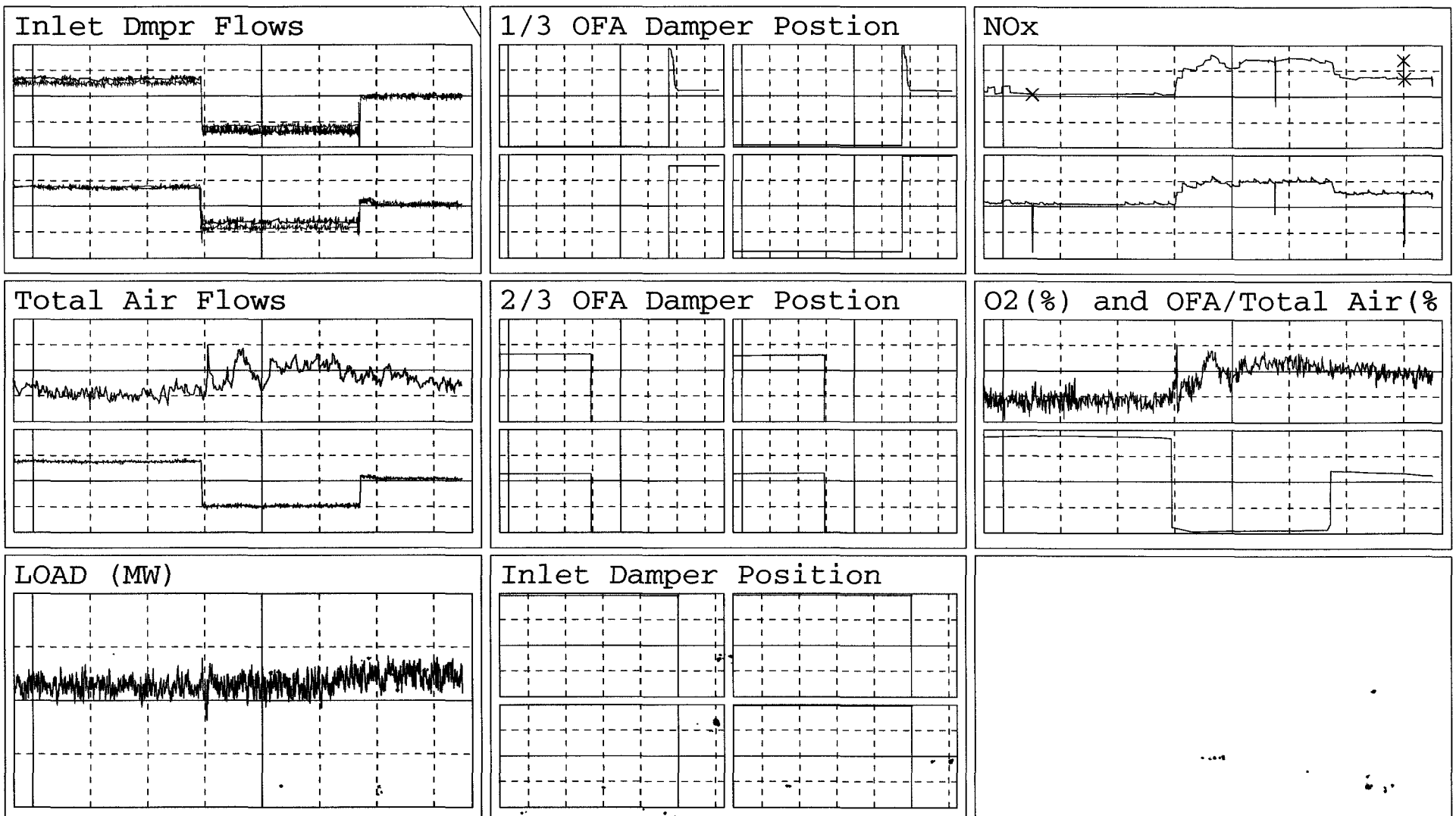
1COAXI172C □ 788.6 KPPH

06-Sep-03 03:39:56 06-Sep-03 11:39:56 1hr/div 06-Sep-03 11:39:56

IP7_038011

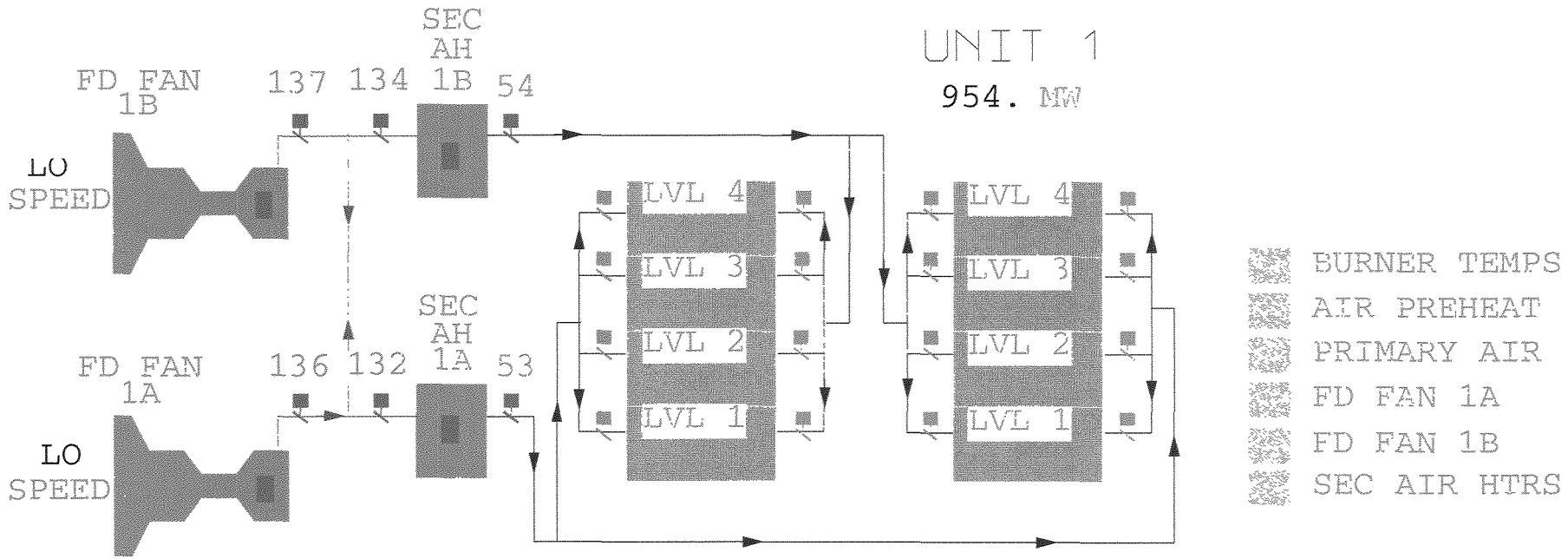
Printed out for: UNIT1OP - 06-Sep-03 11:30:15

0 Messages 1OFA SumVwU1 OFA Overview 06-Sep-03 11:30:15



IP7_038012

Printed out for: UNIT1OP - 06-Sep-03 11:30:35
0 Messages 1SGBG01 COMBUSTION AIR 06-Sep-03 11:30:35



FAN ROOM TEMP	
72.	

FD FANS			SEC AIR HTRS			SEC AIR WINDBOX DUCT PRESS REAR NORTH	DUCT PRESS FRONT SOUTH	DAMPER POS REAR NORTH	DAMPER POS FRONT SOUTH
	1A	1B		1A	1B	INWC	INWC	%	%
KLBH	777.	790.	FLOW %	78.	79.	LVL 4 2.3	2.3	69.	68.
D/P	11.8	12.1	OT F	684.	693.	LVL 3 2.1	2.3	69.	63.
AMPS	221.	231.	IN F	79.	80.	LVL 2 2.5	0.0	70.	10.
						LVL 1 1.9	2.1	68.	68.

EndTim= 06-Sep-03 11:30:35 /EvalTim= 06-Sep-03 11:30:35 /PanRate= 0

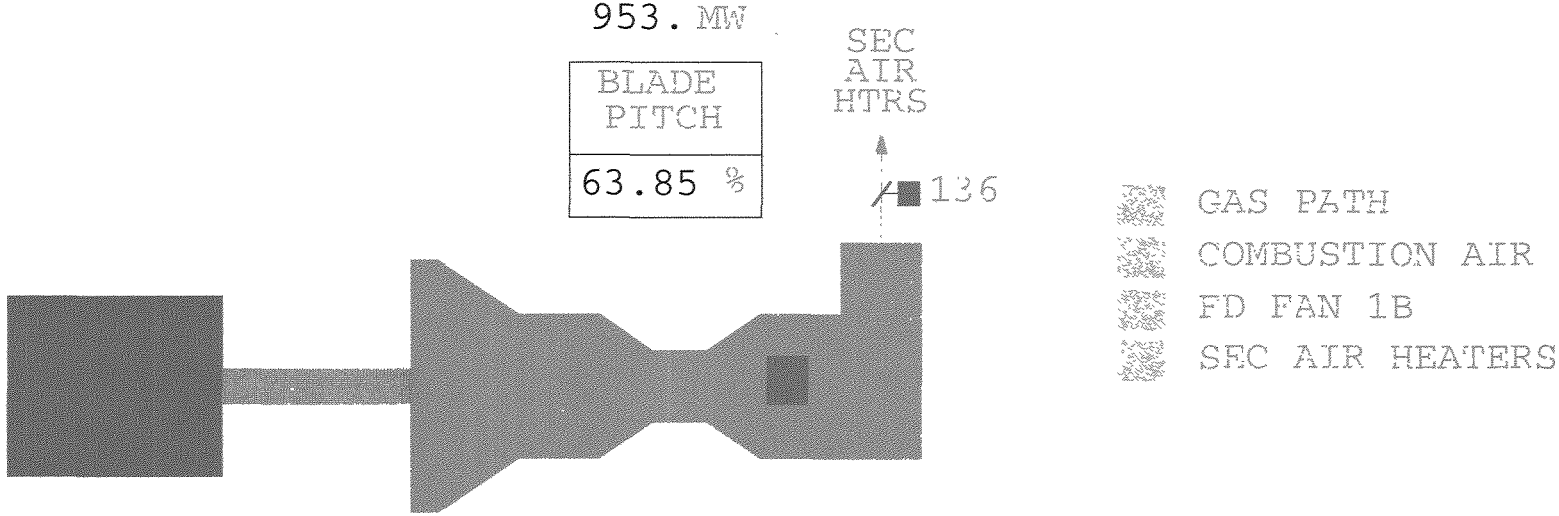
IP7_038013

Printed out for: UNIT1OP - 06-Sep-03 11:30:47
0 Messages 1SGBG02 FORCED DRAFT FAN 1A 06-Sep-03 11:30:47

UNIT 1

953. MW

BLADE PITCH
63.85 %



FD FAN 1A at LOW SPEED
FAN STALL STATUS: [redacted]

FD FAN 1A				
MOTOR		FAN	IN BRD	OT BRD
IN F	129.	UPR METAL F	126.5	118.9
OT F	110.	LWR METAL F	125.5	116.1
C	42.0	VIBS M	0.4	
AMPS	221.	D/P INWC	11.8	
		KCFM	875.4	

AMP LIMIT VALUES		
FD FAN SPEED	LOW	HIGH
NAMEPLATE RATING	275	508
SERVICE FACTOR RATING	316	584
RELAY PROTECTION ALARM	384	640

EndTim= 06-Sep-03 11:30:47 /EvalTim= 06-Sep-03 11:30:47 /PanRate= 0

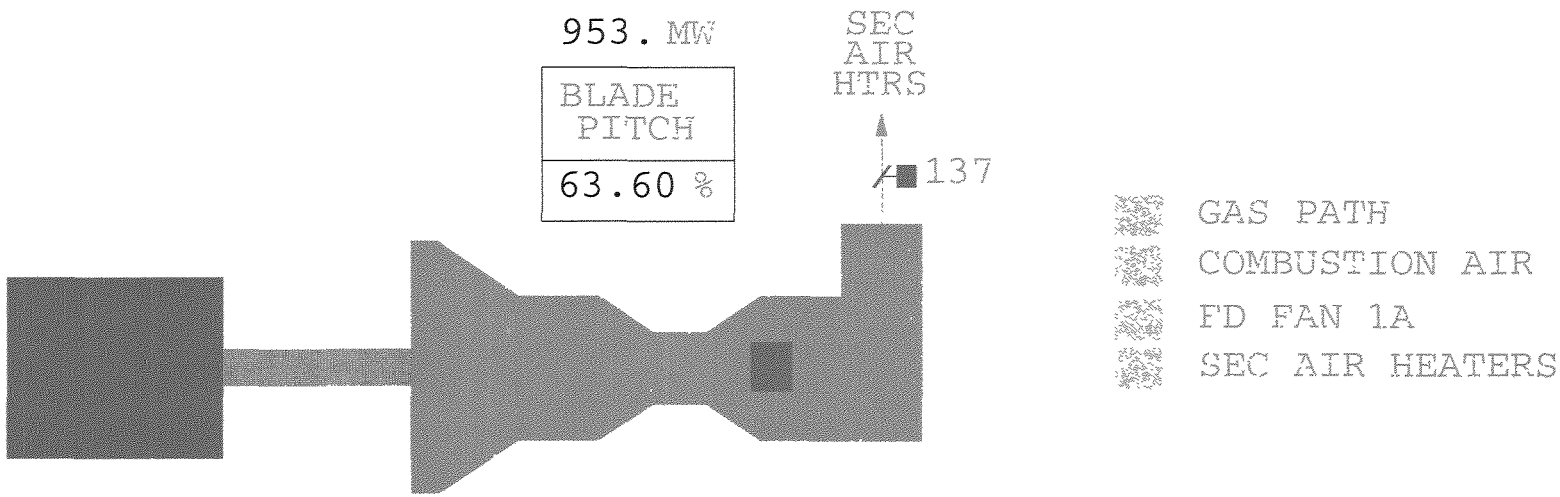
IP7_038014

Printed out for: UNIT1OP - 06-Sep-03 11:30:58
0 Messages 1SGBG03 FORCED DRAFT FAN 1B 06-Sep-03 11:30:58

UNIT 1

953. MW

BLADE PITCH
63.60 %



FD FAN 1B at: LOW SPEED

FAN STALL STATUS: FD FAN OK

FD FAN 1B				
MOTOR		FAN	IN BRD	OT BRD
IN F	131.	UPR METAL F	115.	115.
OT F	129.	LWR METAL F	112.	115.
C	50.8	VIBS M	0.5	
AMPS	231.	D/P INWC	12.1	
		KCFM	890.	

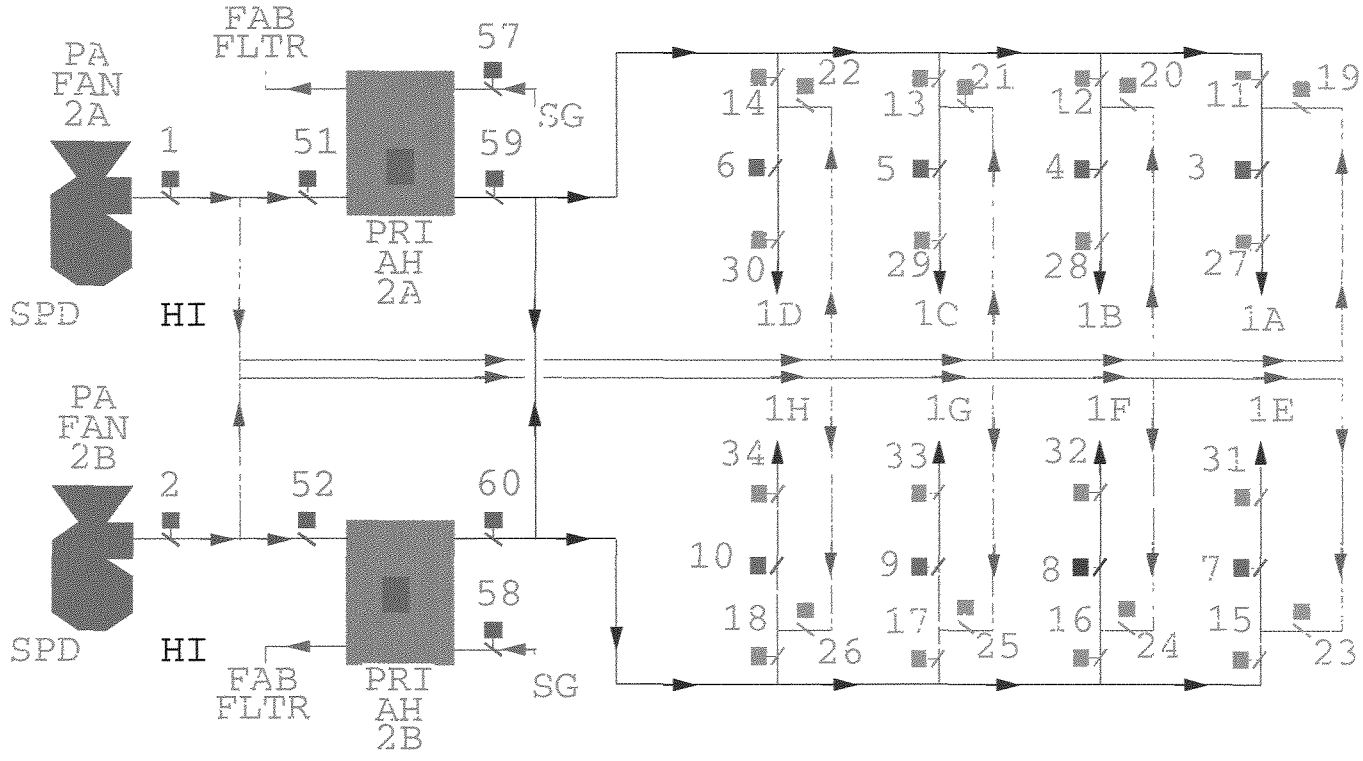
AMP LIMIT VALUES		
FD FAN SPEED	LOW	HIGH
NAMEPLATE RATING	275	508
SERVICE FACTOR RATING	316	584
RELAY PROTECTION ALARM	384	640

EndTim= 06-Sep-03 11:30:58 /EvalTim= 06-Sep-03 11:30:58 /PanRate= 0

IP7_038015

Printed out for: UNIT1OP - 06-Sep-03 11:31:13
0 Messages 1SGBG05 PRIMARY AIR 06-Sep-03 11:31:13

UNIT 1
957. MW



PRI AIR FANS
PRI AIR HTRS

PA DUCT PRESS	
INWC	44.3

PULVERIZERS	FLOW %	TARGET % +BIAS	INLET F
1A	83.4	86.1	266.
1B	88.1	89.3	286.
1C	87.5	88.1	277.
1D	87.9	88.0	284.
1E	87.8	87.7	276.
1F	0.0	69.0	94.
1G	88.3	87.9	278.
1H	88.2	90.0	293.

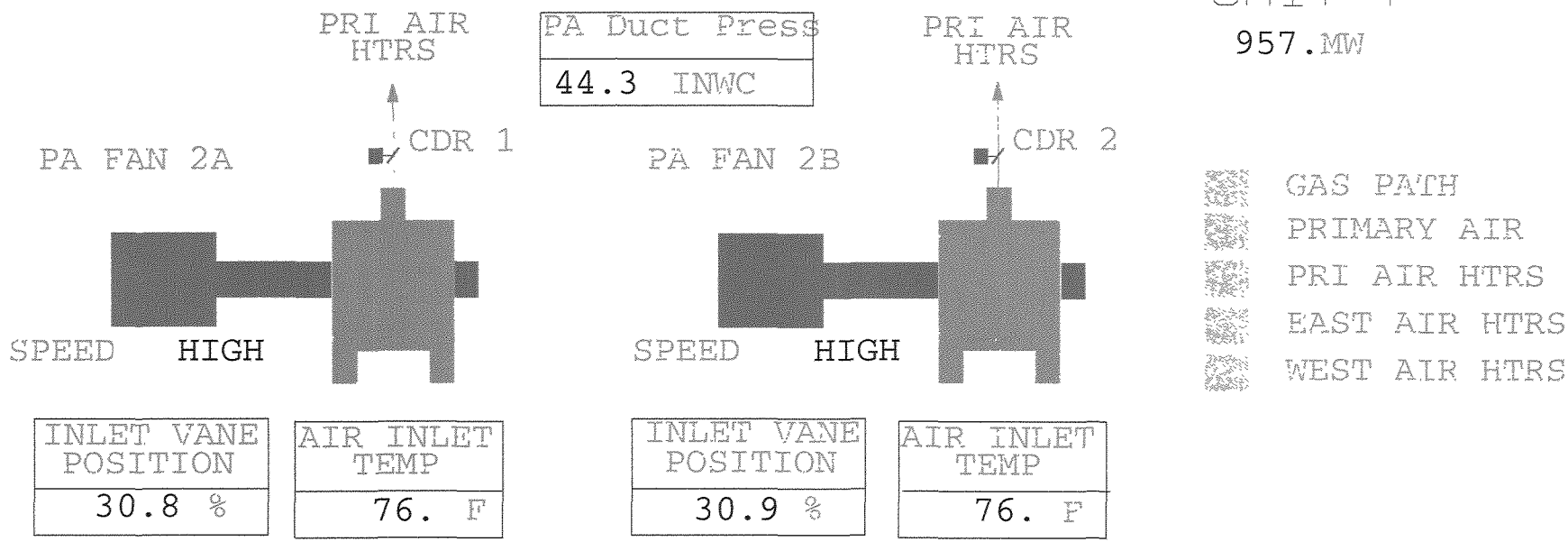
PRI AIR HTRS	2A	2B	PRI AIR FANS	2A	2B
FLU GAS OT	289.	310.	FLW %	31.6	31.9
AIR IN	120.	119.	AIR IN F	76.	76.
AIR OT	524.	511.	MTR AMPS	307.	315.

EndTim= 06-Sep-03 11:31:13 /EvalTim= 06-Sep-03 11:31:13 /PanRate= 0

IP7_038016

Printed out for: UNIT1OP - 06-Sep-03 11:31:24
0 Messages 1SGBG09 PRIMARY AIR FANS 06-Sep-03 11:31:24

UNIT 1
957.MW



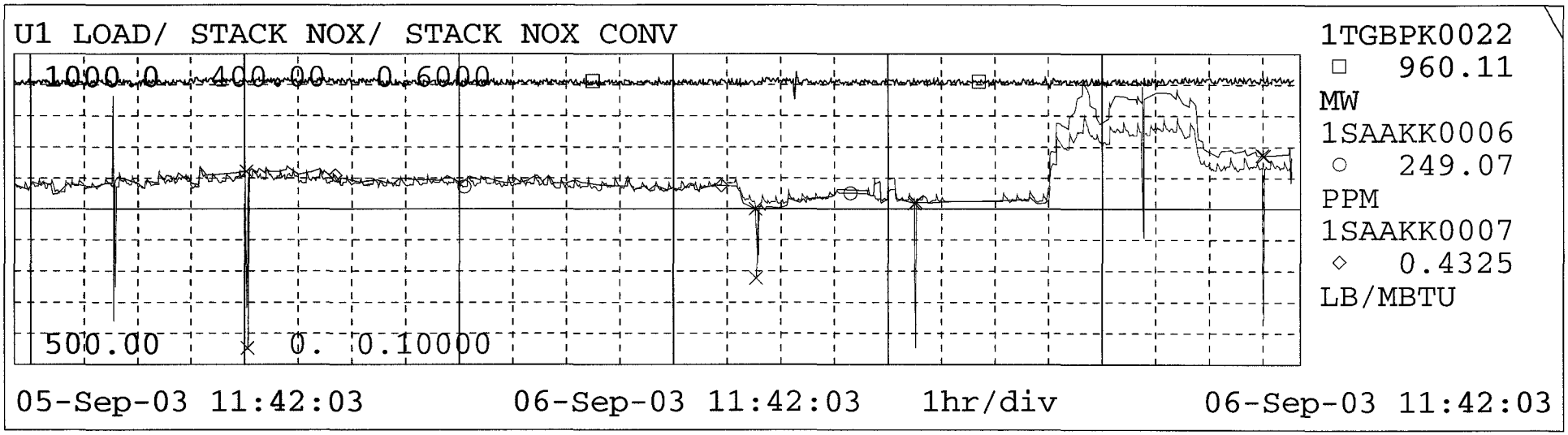
	2A		2B	
	MOTOR	FAN	MOTOR	FAN
INBD F	127.	148.	132.	151.
OTBD F	143.	139.	144.	163.
INBD MIL		0.7		1.3
OTBD MIL		0.6		2.2
C	59.		63.	
AMPS	307.		315.	

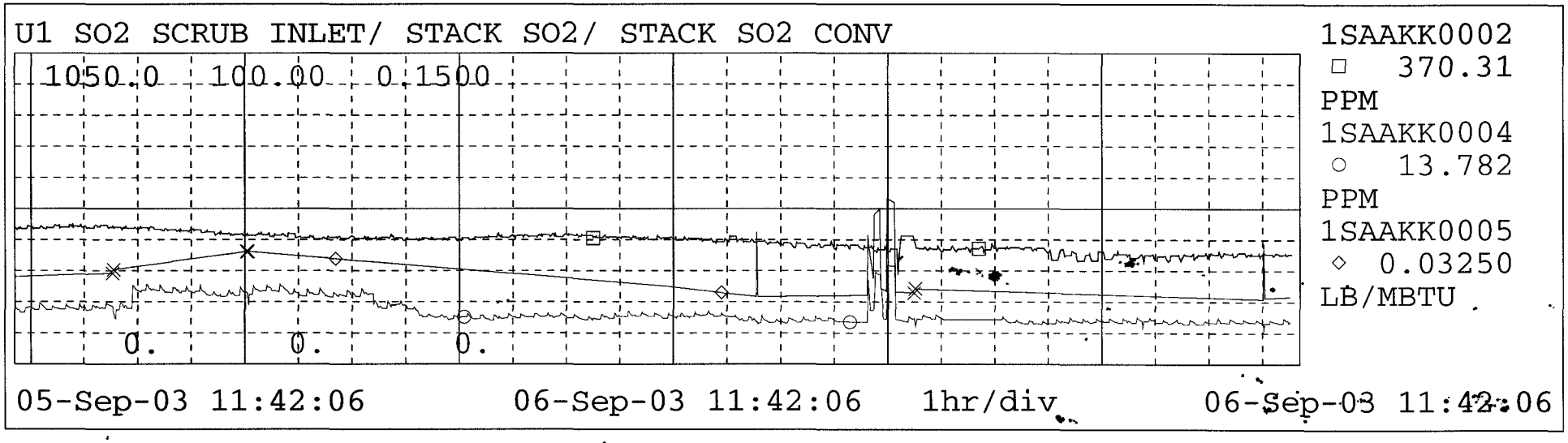
AMP LIMIT VALUES		
PA FAN SPEED	LOW	HIGH
NAMEPLATE RATING	265	380
SERVICE FACTOR RATING	304	437
RELAY PROTECTION ALARM	328	440

EndTim= 06-Sep-03 11:31:24 /EvalTim= 06-Sep-03 11:31:24 /PanRate= 0

IP7_038017

Printed out for: UNIT1OP - 06-Sep-03 11:32:14
0 Messages Coal Comp1U1 Coal Comparisons 06-Sep-03 11:32:14





IP7_038018

Printed out for: UNIT1OP - 06-Sep-03 11:32:38

0 Messages U1bnr Air Cooling Air Requirements 06-Sep-03 11:32:38

Unit 1

Max temp 1200 F/Ave temp 1125 F

Pulv on/off	SA Damper Position	Ave Burner BP Temp
E ON	68.7 %	949. F
A ON	62.9 %	916. F
F OFF	10.0 %	1087. F
B ON	68.2 %	833. F
D ON	68.7 %	920. F
H ON	68.9 %	906. F
C ON	69.7 %	852. F
G ON	68.2 %	926. F

1E6	1E5	1E4	1E3	1E2	1E1
964.	908.	1046.	1028.	887.	858.
1A6	1A5	1A4	1A3	1A2	1A1
867.	980.	1009.	840.	916.	886.
1F6	1F5	1F4	1F3	1F2	1F1
1031.	1075.	1069.	1118.	1158.	1074.
1B6	1B5	1B4	1B3	1B2	1B1
873.	784.	860.	825.	885.	772.

FRONT WALL (looking North)

1D6	1D5	1D4	1D3	1D2	1D1
786.	918.	901.	931.	1047.	937.
1H6	1H5	1H4	1H3	1H2	1H1
892.	938.	826.	905.	1009.	866.
1C6	1C5	1C4	1C3	1C2	1C1
877.	858.	817.	860.	864.	832.
1G6	1G5	1G4	1G3	1G2	1G1
903.	925.	830.	1040.	955.	900.

REAR WALL (looking North)

NOx 0.43 lb/mBtu Sec Air Windbox tem 684. E/ 693. W Load 956. MW

EndTim= 06-Sep-03 11:32:38 /EvalTim= 06-Sep-03 11:32:38 /PanRate= 0

IP7_038019

Printed out for: UNIT1OP - 06-Sep-03 11:33:00

0 Messages U1TestHR Summary of Test Conditions 06-Sep-03 11:33:00

Data		Test	Corrected	Expected
Meas'd Load	KW	954491.	939005.	
Throttle Flow	KPPH	6895.00	6692.54	
Throttle Press	PSIA	2408.39		2412.59
Throttle Temp	DEG F	996.45		1000.00
Hot Reheat Temp	DEG F	1007.10		1000.00
Exhaust Press A	INHG	3.64		4.18
Exhaust Press B	INHG	2.96		3.47
Exhaust Press C	INHG	2.56		2.87
Power Factor		0.99		
H2 Pressure	PSIG	64.10		63.00
CV Position	PCT	87.88		
1st Stage Press	PSIA	2302.19	2309.96	
4th Stg Shell Press	PSIA	1052.44	1098.87	
HP Exhaust Press	PSIA	612.84	631.79	
IP Inlet Press	PSIA	574.22	589.83	
IP Exhaust Press	PSIA	140.56	140.52	
HP Turbine Eff	PCT	89.58		
IP Turbine Eff	PCT	93.22		
Meas'd GTHR	BTU/KW-HR	7783.	7862.	
RH Press Drop	PCT	6.40		
HP Turb Press Ratio		3.81		
IP Turb Press Ratio		4.03		
Net Unit Heat Rate	BTU/KW-HR	9325.	9314.	9427.

EndTim= 06-Sep-03 11:33:00 /EvalTim= 06-Sep-03 11:33:00 /PanRate= 0

IP7_038020

Printed out for: UNIT1OP - 06-Sep-03 11:33:27

0 Messages UNITCOMP UNIT COMPARISONS 06-Sep-03 11:33:27

Data		UNIT 1	UNIT 2
Meas'd Load	KW	954491.	901413.
Throttle Flow	KPPH	6790.00	6273.75
Throttle Press	PSIA	2409.59	2254.18
Throttle Temp	DEG F	996.90	1004.10
Hot Reheat Temp	DEG F	1006.95	1001.03
Exhaust Press A	INHG	3.65	3.58
Exhaust Press B	INHG	2.95	2.86
Exhaust Press C	INHG	2.56	2.50
Power Factor		0.99	0.98
H2 Pressure	PSIG	64.10	63.10
CV Position	PCT	87.88	39.68
1st Stage Press	PSIA	2297.39	2146.18
4th Stg Shell Press	PSIA	1049.69	988.32
HP Exhaust Press	PSIA	610.59	578.33
IP Inlet Press	PSIA	570.97	539.33
IP Exhaust Press	PSIA	139.62	127.76
HP Turbine Eff	PCT	89.35	89.76
IP Turbine Eff	PCT	93.11	91.72
Meas'd GTHR	BTU/KW-HR	7755.	7903.
RH Press Drop	PCT	6.40	6.80
HP Turb Press Ratio		3.82	3.77
IP Turb Press Ratio		4.05	4.17
Blr HL Eff	PCT	89.87	89.77
Blr Input/Output Eff	PCT	89.22	90.49
Coal Flow	TONS/HR	345.	329.

Data	UNIT 1	UNIT 2
Aux Pwr MW	54.60	47.70
Final FW Flow	6735.75	6133.75
SH Sprays	55.25	143.75
Calc'd Sprays	95.28	151.71
Throttle Flow	7099.93	6753.17
Dea Drain Flc	6814.32	6355.12
BBFP Disch FI	6845.00	6420.00
BFP Disch Flc	6622.63	6284.76
Cond Flow	5029.50	4777.50
Calc'd Cond FL	5269.27	4977.95
GTHR PMAX	7755.	7903.
GTHR PI	7796.	7955.
GTHR CORR	7862.	7993.
NTHR PMAX	8279.	8349.
NTHR PI	8270.	8400.
GUHR PMAX	8629.	8804.
GUHR PI	8675.	8862.
GUHR CORR	8748.	8929.
GUHR ACCOUNT	8806.	8944.
NUHR CURVE	9427.	9339.
NUHR PMAX	9271.	9300.
NUHR PI	9225.	9357.
NUHR CORR	9270.	9425.
NUHR ACCOUNT	9409.	9444.

EndTim= 06-Sep-03 11:33:27 /EvalTim= 06-Sep-03 11:33:27 /PanRate= 0

IP7_038021

Printed out for: UNIT1OP - 06-Sep-03 11:33:56

0 Messages Fans PA, FD, ID FAN DATA 06-Sep-03 11:33:56

UNIT 1

950.5 MW	FD 1A	FD 1B	PA 2A	PA 2B		ID 1A	ID 1B	ID 1C	ID 1D
Speed	Low	Low	High	High	Fox	807.5	808.1	818.1	808.1
					CCS	805.1	808.1	823.1	815.5
Amps	224.0	233.3	307.5	316.6	Lnk 1_1	341.3	341.3	356.3	352.5
					Lnk 1_2	337.5	348.8	356.3	352.5
Inlet Pr						-22.4	-22.4	-22.4	-22.4
Outlet Pr			44.3	44.3		5.37	5.04	5.08	5.09
Blade Pos	63.8	63.6	31.1	31.2					

UNIT 2

900.3 MW	FD 1A	FD 1B	PA 2A	PA 2B		ID 1A	ID 1B	ID 1C	ID 1D
Speed	Low	Low	High	High	Fox	769.4	698.8	668.1	697.2
					CCS	761.6	767.9	760.8	761.8
Amps	210.7	208.0	309.1	302.5	Lnk 1_1	363.8	382.5	322.5	326.3
					Lnk 1_2	352.5	393.8	322.5	330.0
Inlet Pr						-20.2	-20.2	-20.2	-20.2
Outlet Pr			44.1	44.1		4.24	4.16	4.47	4.43
Blade Pos	53.5	55.5	31.3	31.6					

EndTim= 06-Sep-03 11:33:56 /EvalTim= 06-Sep-03 11:33:56 /PanRate= 0

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Printed out for: UNIT1OP - 06-Sep-03 11:34:10

0 Messages U1Auxpwr Unit 1 Aux Power 06-Sep-03 11:34:10

Load 952.5 mw Aux Power 54.6 mw Ambient Temp 68.7 deg F

SWGR 1A1	9.0 mw	SWGR 1A2		17.4 mw	SWGR 1B2		19.2 mw
CCCW Pmp 1A	35.9 amps	ID Fan 1A	1A1	330.0 amps	ID Fan 1C	1C1	356.3 amps
Air CPRSR 1A	50.2 amps		1A2	330.0 amps		1C2	348.8 amps
Pulv 1A	77.4 amps	ID Fan 1B	1B1	345.0 amps	ID Fan 1D	1D1	363.8 amps
Pulv 1B	57.5 amps		1B2	348.8 amps		1D2	371.3 amps
Pulv 1C	66.9 amps	FD Fan 1A		221.3 amps	FD Fan 1B		230.7 amps
Pulv 1D	61.9 amps	PA Fan 2A		305.8 amps	PA Fan 2B		314.1 amps
		CNDS P 1A		0.0 amps	CNDS P 1B		122.0 amps
SUMMATION	346.3 amps	CNDS P 1C		118.0 amps	CWP 1A		183.5 amps
		CWP 1B		182.0 amps			
		Turb LO Flush P			CWP 1C		157.5 amps
		Flyash CPSR 1A		START	Flyash CPSR 1B		START
SWGR 1B1	9.0 mw	Belt CNVR 18A		NO	Flyash CPSR 1C		START
CCCW Pmp 1B	0.0 amps	BBFP 2B		41.4 amps	BBFP 2A		0.0 amps
Air CPRSR 1B	53.2 amps	Stby BFP 1C		0.0 amps	BBFP 2C		42.7 amps
Pulv 1E	64.7 amps						
Pulv 1F	0.0 amps	SUMMATION		2230.4 amps	SUMMATION		2479.4 amps
Pulv 1G	62.7 amps						
Pulv 1H	58.7 amps						

Total Pulv Amps	446.1 amps
Total ID Fan Amps	2786.3 amps
Total FD Fan Amps	453.3 amps
Total PA Fan Amps	621.6 amps
Total CCCW P Amps	35.9 amps
Total Cnd P Amps	241.6 amps
Total CWP Amps	523.0 amps
Total BBFP Amps	84.0 amps

Coal yard	
Scrubber	
SUMMATION	239.0 amps

EndTim= 06-Sep-03 11:34:10 /EvalTim= 06-Sep-03 11:34:10 /PanRate= 0

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Printed out for: UNIT1OP - 06-Sep-03 11:34:27

0 Messages FLOW COMP Flow Comparisons for both units 06-Sep-03 11:34:27

Data		UNIT 1	UNIT 2
Meas'd Load	KW	952015.	900166.
Cond Flow	KPPH	5214.00	4773.00
Calc'd Cond Flow	KPPH	5175.14	4935.14
Dea Drain Flow	KPPH	6880.07	6277.67
BBFP Disch Flow	KPPH	6943.75	6420.00
BFP Disch Flow	KPPH	6704.69	6270.08
SH Sprays (CCS)	KPPH	53.50	143.38
Calc'd Sprays	KPPH	90.39	153.96
Final FW Flow (CCS)	KPPH	6877.50	6116.25
Final FW Flow (Fox1A)	KPPH	7000.00	6597.99
Calc'd Final FW Flow	KPPH	6827.07	6133.42
Throttle Flow (CCS)	KPPH	6930.00	6256.25
Throttle Flow (Fox1A)	KPPH	7092.67	6756.17
Turbine Steam Flow	KPPH	6830.25	6345.50
Cold RH Flow calc'd	LB/HR	5626730.	5329537.
Coal Flow (CCS)	TONS/HR	340.50	333.35
Coal TPH Indiv Sum A's	TONS/HR	343.35	335.02
Coal TPH Indiv Sum B's	TONS/HR	342.48	332.61
Fuel Flow (CCS)	TONS/HR	344.10	329.30
Coal Flow Back calc'd	TONS/HR	339.95	323.04
Coal Flow Expected	TONS/HR	345.07	325.02

Data	UNIT 1	UNIT 2
Aux Pwr MW	54.60	47.70
Blr HL Eff	89.91	89.76
GTHR PMAX	7966.	7892.
GTHR PI	7954.	7954.
GTHR CORR	7930.	7975.
NTHR PMAX	8363.	8330.
NTHR PI	8433.	8390.
GUHR PMAX	8861.	8792.
GUHR PI	8850.	8861.
GUHR CORR	8824.	8892.
GUHR ACCOUNT	8806.	8968.
NUHR CURVE	9425.	9339.
NUHR PMAX	9302.	9281.
NUHR PI	9384.	9346.
NUHR CORR	9382.	9376.
NUHR ACCOUNT	9398.	9459.

EndTim= 06-Sep-03 11:34:27 /EvalTim= 06-Sep-03 11:34:27 /PanRate= 0

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