



# **ASSESSMENT OF ERROR DUE TO ORIFICE DIAMETER MIS-MEASUREMENT AT BLACKROD**

A Report for

**National Grid  
Brick Kiln Street  
HINCKLEY  
Leicestershire  
LE10 0NA**

REPORT NO: 2010/32 (Rev. 2)

PROJECT NO: NGR009

DATE: 1 JUNE 2010



**This report is issued as part of the contract under which the work has been carried out for the client.**

## **NOTES**

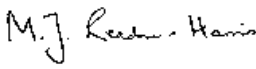
- 1** This report may be published in full by the client unless it includes information supplied in confidence by TUV NEL Ltd or any third party. Such information, if included within the report, shall be identified as confidential by TUV NEL Ltd.
- 2a** The prior written consent of TUV NEL Ltd shall be obtained by the client before publication by them of any extract from, or abridgement of, this report.
- 2b** The prior written consent of TUV NEL Ltd shall be obtained by the client before publication:
- Where such publication is made in connection with any public enquiry, legal proceedings or arbitration.
  - Where such publication is made in connection with any company prospectus or similar document.
  - Where the client has notice that TUV NEL Ltd is seeking or intends to seek patent or like protection for any intellectual property produced in the course of rendering the services.

TUV NEL Ltd  
East Kilbride  
GLASGOW G75 0QF  
UK  
Tel: +44 (0)1355 220222  
Fax: +44 (0)1355 272999  
[www.tuvnel.com](http://www.tuvnel.com)

## Assessment of Error Due to Orifice Diameter Mis-Measurement at Blackrod

A Report for

**National Grid  
Brick Kiln Street  
HINCKLEY  
Leicestershire  
LE10 0NA**

Prepared by: 

Date: 1 June 2010

Dr M J Reader-Harris

Approved by: 

Date: 1 June 2010

J M McNaught

for M Valente  
Managing Director

**CONTENTS**

	<b>Page No</b>
1 INTRODUCTION .....	3
2 ORIFICE DIAMETERS .....	3
3 CORRECTING THE FLOWRATE .....	5
4 CORRECTIONS ON A DAILY BASIS .....	7
5 CONCLUSIONS .....	7
APPENDIX A ORIFICE PLATE CALIBRATION CERTIFICATES .....	8
APPENDIX B CONFIGURATION DATA REPORTS .....	22
APPENDIX C CORRECTED DAILY VOLUME FLOWS .....	182

## 1 INTRODUCTION

Owing to a mis-measurement of orifice diameters flows have been mis-measured at affected offtakes connected to the National Transmission System. This project has been undertaken to resolve these errors. This report covers the flows through Blackrod in the period of the error. The Joint Office Error Codes are NW001 and NW002 for meter tubes MTA and MTB.

## 2 ORIFICE DIAMETERS

The calibrations of the orifice plates in question gave the measured diameters shown in Table 1. The diameters at 20 °C have been calculated. The effective bores include the effect of a drain hole to BS ISO/TR 15377:1998.

**TABLE 1**  
**ORIFICE DIAMETERS**

Calibration Reference	Plate serial no	Declared certificate date	Measured values			Values at 20 °C	
			Orifice bore (mm)	Effective bore (mm)	Temperature	Orifice bore (mm)	Effective bore (mm)
3112	226	27/07/03	366.5015		21	366.4956	
3113	225	27/07/03	366.843		21	366.8371	
4124	225	05/08/04	366.8525	367.0033	21	366.8466	366.9975
4125	226	05/08/04	364.5075	364.6598	21	364.5017	364.654
4185	225-1	04/01/05	366.4775		21	366.4716	
50164	225-1	27/07/05	366.4845		21	366.4786	
50165	226-1	27/07/05	366.578		21	366.5721	
50199	226	29/06/06	366.499	366.6505	21	366.4931	366.6447
50200	225	10/07/06	366.846	366.9971	21	366.8401	366.9913
60147	226-1	07/12/06	366.25		21	366.2441	
60148	225-1	06/12/06	366.156		21	366.1501	
70077	225	16/07/07	366.524	366.6744	20	366.524	366.6744
70096	226	27/09/07	366.1955	366.3466	20	366.1955	366.3466
80017	225-2	14/05/08	366.488	366.6384	19	366.4939	366.6442
80075	225	31/10/08	366.8515	367.0034	20.2	366.8503	367.0023
80076	225-1	07/11/08	366.4895		20.3	366.4877	

Figure 1 shows the data from Table 1 for the orifice bores at 20°C (omitting 4125, which is outside the period under consideration and is an error for which a correction has previously been made). This figure shows that there is a reduction in measured diameter followed by a recovery. The deduction from this graph is that for a period of time in late 2006 and 2007 the plates were mis-measured.

The calibration certificates for the orifice plates are given as Appendix A. The Flow Computer configurations are given as Appendix B.

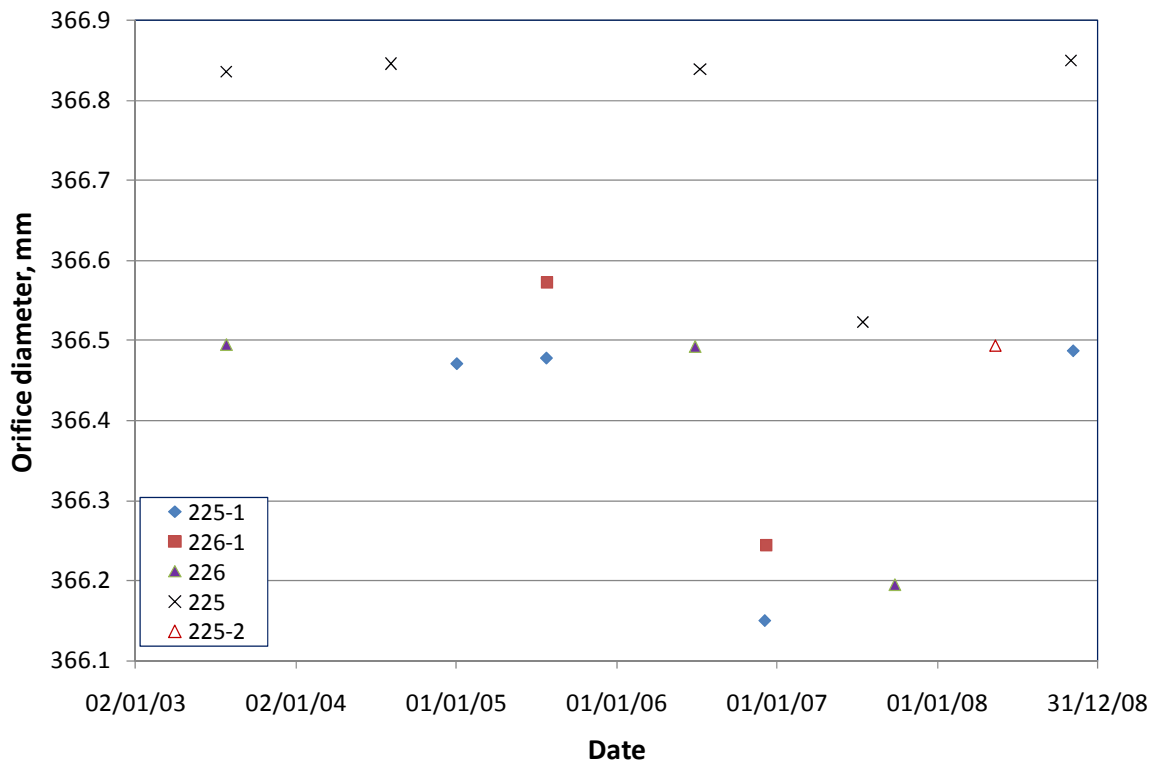


Figure 1 Orifice Diameters at 20 °C

The plates actually used in each of the two meter tubes MTA and MTB can be determined from Table 2 in conjunction with Table 1.

TABLE 2  
PLATES USED IN EACH LINE AS CONFIGURED BY FLOW COMPUTER

	Before 16/07/2007	16/07/2007	18/07/2007	15/07/2008	02/07/2009
MTA					
Orifice plate bore diameter (mm)	366.846	366.156	366.156	366.3466	367.0034
Expansion coefficient of the plate (/°C)	0.000016	0.000016	0.000016	0.000016	0.000016
Orifice plate calibration temperature	21	21	21	20	20.2
Meter tube diameter (mm)	730.1738	730.1738	730.1738	730.1738	730.1738
Expansion coefficient of the meter tube (/°C)	0.000011	0.000011	0.000011	0.000011	0.000011
Meter tube calibration temperature	20	20	20	20	20
Isentropic Exponent	1.3256	1.3256	1.3257	1.328646	1.328626
Dynamic Viscosity (Pa.s)	0.0000118	0.0000118	0.0000119	0.0000117	0.0000117
Orifice plate certificate number	OP50200	OP60148	OP60148	OP70096	OP80075
Orifice plate serial number	225	225-1	225-1	226	225
Error in orifice diameter?	No	Yes	Yes	Yes	No
MTB					
Orifice plate bore diameter (mm)	366.499	366.499	366.6744	366.6384	366.4895
Expansion coefficient of the plate (/°C)	0.000016	0.000016	0.000016	0.000016	0.000016
Orifice plate calibration temperature	21	21	20	19	20.3
Meter tube diameter (mm)	730.2849	730.2849	730.2849	730.2849	730.2849
Expansion coefficient of the meter tube (/°C)	0.000011	0.000011	0.000011	0.000011	0.000011
Meter tube calibration temperature	20	20	20	20	20
Isentropic Exponent	1.3256	1.3256	1.3257	1.328646	1.328626
Dynamic Viscosity (Pa.s)	0.0000118	0.0000118	0.0000119	0.0000117	0.0000117
Orifice plate certificate number	OP50199	OP50199	OP70077	OP80017	OP80076
Orifice plate serial number	226	226	225	225-2	225-1
Error in orifice diameter?	No	No	Yes	No	No

On MTA before 16/07/2007 and on MTB both before 16/07/2007 and on 16/07/2007 the orifice diameters in the flow computer did not include the effect of the drain hole; however, the effect on the error due to mis-measurement of the orifice diameters (as distinct from failure to include the effect of the drain hole in the flow computer) is negligible (of the order of 0.00001%).

### 3 CORRECTING THE FLOWRATE

To correct the measured flowrate by replacing an incorrect diameter with the correct diameter might appear to be fairly straightforward. However, the data supplied only give time to the nearest minute and at four-minute intervals. This is inadequate for very accurate calculation. It is possible to calculate the flow over each time interval and to add the values over a day; this method can be used to check that the calculations are being done correctly, but the differences between the summed figures and the ones already given in the spreadsheet are too large to enable the correction to be calculated in this way. An alternative method has therefore been used.

The mass flowrate  $q_m$  is given by

$$q_m = \frac{\pi d^2 C \varepsilon \sqrt{2 \rho \Delta p}}{4 \sqrt{1 - \beta^4}}$$

where  $d$  is the orifice diameter,  $C$  is the discharge coefficient,  $\varepsilon$  is the expansibility,  $\rho$  is the density,  $\Delta p$  is the differential pressure, and  $\beta$  is the diameter ratio.

If the corrected and original data are described with subscripts  $c$  and  $o$ , then the following correction factor is obtained:

$$\frac{q_{m,c}}{q_{m,o}} = \left( \frac{d_c}{d_o} \right)^2 \frac{C_c \varepsilon_c \sqrt{1 - \beta_o^4}}{C_o \varepsilon_o \sqrt{1 - \beta_c^4}}$$

The correct effective diameter is taken as the average of the measurements shown in Table 1 for that plate excluding the erroneous measurement. 3112, 3113 and 4125 are excluded because in the case of 3112 and 3113 the effective bore is different from later values since no drain hole is included and 4125, as stated earlier, is in error. It is then necessary to calculate  $C$  and  $\varepsilon$  in each case, and they were determined from the equations in ISO 5167-1:1991. A change of 0.2% in Reynolds number causes such a small change in  $C$  that iteration is not required. Neglecting iteration causes a change of less than 0.000001% in  $C$ .  $C$  is a function of  $\beta$  and  $Re_D$ ; so there is a change in  $C$  due to  $\beta$ , but the change varies with Reynolds number. A differential pressure of 10 mbar gives a pipe Reynolds number of around  $3 \times 10^6$  in each tube; a differential pressure of 500 mbar gives a pipe Reynolds number of around  $2 \times 10^7$ . Throughout the calculations the upstream pressure  $p_1$  is taken as 53 bar a; the change in  $q_{m,c}/q_{m,o}$  due to changing the static pressure by 10 bar is around 0.00001% at maximum.

Over the period from 16/07/2007 to 15/07/2008 the correction on MTA can be calculated as in Table 3. Throughout this calculation the meter tube diameter  $D$  is 730.1738 mm and the isentropic exponent  $\kappa$  is 1.3257.

TABLE 3

THE CORRECTION ON MTA FROM 16/07/2007 TO 15/07/2008

	$d$ mm	$\beta$	$\varepsilon$	$\left(\frac{d_c}{d_o}\right)^2 \frac{\varepsilon_c}{\varepsilon_o} \sqrt{\frac{1-\beta_o^4}{1-\beta_c^4}}$	$Re_D$	$C$	$\frac{q_{m,c}}{q_{m,o}}$
Original: $\Delta p=10$ mbar	366.1501	0.501456	0.999938		$3.000 \times 10^6$	0.602777	
Corrected $\Delta p=10$ mbar	366.4793	0.501907	0.999938	1.00192075	$3.006 \times 10^6$	0.602786	1.0019359
Original $\Delta p=500$ mbar	366.1501	0.501456	0.996925		$2.000 \times 10^7$	0.602605	
Corrected $\Delta p=500$ mbar	366.4793	0.501907	0.996924	1.00192019	$2.004 \times 10^7$	0.602614	1.0019351

So  $q_{m,c}/q_{m,o}$  is 1.001936.

Over the period from 18/07/2007 to 15/07/2008 the correction on MTB can be calculated as in Table 4; throughout this calculation  $D = 730.2849$  mm and  $\kappa = 1.3257$ .

TABLE 4

THE CORRECTION ON MTB FROM 18/07/2007 TO 15/07/2008

	$d$ mm	$\beta$	$\varepsilon$	$\left(\frac{d_c}{d_o}\right)^2 \frac{\varepsilon_c}{\varepsilon_o} \sqrt{\frac{1-\beta_o^4}{1-\beta_c^4}}$	$Re_D$	$C$	$\frac{q_{m,c}}{q_{m,o}}$
Original: $\Delta p=10$ mbar	366.6744	0.502098	0.999938		$3.000 \times 10^6$	0.602790	
Corrected $\Delta p=10$ mbar	366.997	0.502539	0.999938	1.00188017	$3.006 \times 10^6$	0.602799	1.0018950
Original $\Delta p=500$ mbar	366.6744	0.502098	0.996924		$2.000 \times 10^7$	0.602618	
Corrected $\Delta p=500$ mbar	366.997	0.502539	0.996923	1.00187962	$2.004 \times 10^7$	0.602626	1.0018942

So  $q_{m,c}/q_{m,o}$  is 1.001895.

Over the period from 15/07/2008 to 02/07/2009 the correction on MTA can be calculated as in Table 5; throughout this calculation  $D = 730.1738$  mm and  $\kappa = 1.328646$ .

TABLE 5

THE CORRECTION ON MTA FROM 15/07/2008 TO 02/07/2009

	$d$ mm	$\beta$	$\varepsilon$	$\left(\frac{d_c}{d_o}\right)^2 \frac{\varepsilon_c}{\varepsilon_o} \sqrt{\frac{1-\beta_o^4}{1-\beta_c^4}}$	$Re_D$	$C$	$\frac{q_{m,c}}{q_{m,o}}$
Original: $\Delta p=10$ mbar	366.3466	0.501725	0.999939		$3.000 \times 10^6$	0.602782	
Corrected $\Delta p=10$ mbar	366.6447	0.502133	0.999939	1.00173851	$3.005 \times 10^6$	0.602790	1.0017522
Original $\Delta p=500$ mbar	366.3466	0.501725	0.996931		$2.000 \times 10^7$	0.602610	
Corrected $\Delta p=500$ mbar	366.6447	0.502133	0.996931	1.001738	$2.003 \times 10^7$	0.602618	1.0017515

So  $q_{m,c}/q_{m,o}$  is 1.001752.



#### 4 CORRECTIONS ON A DAILY BASIS

Each (approximately four-minute) interval was considered and the flow (here and throughout this paragraph flow refers to standard volume flow) was calculated in each tube; the flowrate during the interval was taken as the average of that at the beginning and that at the end of the interval. The interval is only known to the nearest minute; so the flow in MTA during the interval was calculated by taking the product of the total flow (supplied by National Grid) during that interval and the ratio of the calculated flow in MTA to the sum of the calculated flows in the tubes. Intervals in which the calculated flow in both MTA and MTB is zero have been disregarded. Then on taking account of the effects at the beginning and end of each day the sum of the daily flow in MTA (obtained by summing the flows in each interval) and that in MTB (obtained the same way) should be equal to the total flow in that day. To ensure that the sum of the daily flows is exactly equal to the total daily flow the individual totals were scaled. Then the increase in daily flow was calculated for each of the two daily flows by using the percentage increase for each tube given above. Finally the total increase in the daily flow is the sum of the increases for the two tubes. The results are given in Table C.1 of Appendix C. The data for one day (20<sup>th</sup> October 2008, chosen because it has flows in both tubes but one of the tubes does not run throughout the day) have been supplied separately on a spreadsheet for checking purposes.

#### 5 CONCLUSIONS

Correction factors should be applied as shown in Table 6.

**TABLE 6**  
**CORRECTION FACTORS**

Meter tube	Date	Correction factor $q_{m,c}/q_{m,o}$
MTA	16/07/2007 to 15/07/2008	1.001936
MTB	18/07/2007 to 15/07/2008	1.001895
MTA	15/07/2008 to 02/07/2009	1.001752

These correction factors apply to both measured volume and measured energy.

On applying these corrections the corrected volumes are as shown in Appendix C.

APPENDIX A ORIFICE PLATE CALIBRATION CERTIFICATES

**TRANSCO ORIFICE PLATE CALIBRATION**

**DATE:** 05-08-04

**REF NO:** OP4124

**TEMPERATURE:** 21 degsC

**MEASURED ORIFICE BORE:** 366.8525mm

PLATE DETAILS

PLATE SERIAL.	225	PLATE O.D	774.722mm		
MANUFACTURER:		PIPE I.D:	730.275mm	SITE:	BLACKROD
MATERIAL CERT.No.		DESIGN BORE:	366.496mm	FLOW:	1.359 x 10E7 M <sup>3</sup> /day

TEST EQUIPMENT

MANUFACTURER & TYPE: KEMCO 700 MANUAL 3-DIMENSIONAL MEASURING MACHINE -ASSET NO OP-A02  
 CALIBRATED BY: QUALITY CONTROL TECHNOLOGY, CERT:- 3858 NEXT CAL DUE:- 17/10/04

UPSTREAM FACE INSPECTION RESULTS (ISO 5167)

STATIONS:-	1	2	3	4	5	6	7	8
FLATNESS %	0.025	0.019	0.020	0.012	0.023	0.018	0.028	0.021
'E' mm	12.470	12.527	12.552	12.546	12.504	12.457	12.452	12.455
'e' mm								
EDGE SHARPNESS mm	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125
CONCENTRICITY	0.110mm							
SURFACE FINISH (Ra)	5 microns							
DOWNSTREAM FACE/EDGE VISUAL INSPECTION :- PASS								
ROUNDNESS: 0.018mm	TAPER: 0 degs							
BEVEL ANGLE:	DEGS							
DRAIN HOLE BORE	10.030mm				CENTRE DISTANCE		479.886mm	

COMMENTS:

INSPECTED BY  G. WARDLE

**TRANSCO ORIFICE PLATE CALIBRATION**

**DATE:** 05-08-04

**REF NO:** OP4125

**TEMPERATURE:** 21 degsC

**MEASURED ORIFICE BORE:** 364.5075mm

PLATE DETAILS

PLATE SERIAL.	226	PLATE O.D	774.787mm		
MANUFACTURER:		PIPE I.D:	730.326mm	SITE:	BLACKROD
MATERIAL CERT.No.		DESIGN BORE:	366.572mm	FLOW:	1.359

TEST EQUIPMENT

MANUFACTURER & TYPE: KEMCO 700 MANUAL 3-DIMENSIONAL MEASURING MACHINE -ASSET NO OP-A02  
 CALIBRATED BY: QUALITY CONTROL TECHNOLOGY, CERT:- 3858 NEXT CAL DUE:- 17/10/04

UPSTREAM FACE INSPECTION RESULTS (ISO 5167)

STATIONS:-	1	2	3	4	5	6	7	8
FLATNESS %	0.124	0.048	0.136	0.151	0.102	0.110	0.165	0.118
'E' mm	12.664	12.671	12.654	12.636	12.659	12.661	12.645	12.641
'e' mm								
EDGE SHARPNESS mm	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
CONCENTRICITY	0.068mm							
SURFACE FINISH (Ra)	2.5 microns							
DOWNSTREAM FACE/EDGE VISUAL INSPECTION :-	PASS							
ROUNDNESS: 0.015mm	TAPER: .73 degs							
BEVEL ANGLE:	DEGS							
DRAIN HOLE BORE	10.047mm			CENTRE DISTANCE			512.789mm	

COMMENTS:

INSPECTED BY *G. Wardle* G. WARDLE

**TRANSCO ORIFICE PLATE CALIBRATION**

**DATE:** 4-01-05  
**REF NO:** OP4185  
**TEMPERATURE:** 21 degsC  
**MEASURED ORIFICE BORE:** 366.4775mm

=====

PLATE DETAILS

PLATE SERIAL. 225-1 PLATE O.D 774.749mm  
 MANUFACTURER: PIPE I.D: 730.275mm SITE: BLACKROD  
 MATERIAL CERT.No. DESIGN BORE: 366.496mm FLOW:

=====

TEST EQUIPMENT

MANUFACTURER & TYPE: KEMCO 700 MANUAL 3-DIMENSIONAL MEASURING MACHINE -ASSET NO OP-A02  
 CALIBRATED BY: QUALITY CONTROL TECHNOLOGY, CERT:- 4820 NEXT CAL DUE:- 15/10/05

=====

UPSTREAM FACE INSPECTION RESULTS (ISO 5167)

STATIONS:-	1	2	3	4	5	6	7	8
FLATNESS %	0.165	0.150	0.159	0.167	0.189	0.174	0.191	0.158
'E' mm	12.797	12.819	12.824	12.798	12.802	12.760	12.761	12.770
'e' mm								
EDGE SHARPNESS mm	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
BEVEL ANGLE:	DEGS							
CONCENTRICITY	0.070mm							
SURFACE FINISH (Ra)	2 microns							
DOWNSTREAM FACE/EDGE VISUAL INSPECTION :- PASS								
ROUNDNESS :	0.016mm	TAPER:		0 degs				

COMMENTS:

INSPECTED BY.....  ..... G. WARDLE

VERIFIED BY.....  ..... P. KENNERSON

**TRANSCO ORIFICE PLATE CALIBRATION**

**DATE:** 27-07-05  
**REF NO:** OP50164  
**TEMPERATURE:** 21 degsC  
**MEASURED ORIFICE BORE:** 366.4845mm

PLATE DETAILS

PLATE SERIAL. 225-1 PLATE O.D 774.759mm  
 MANUFACTURER: PIPE I.D: 730.326mm SITE: BLACKROD  
 MATERIAL CERT.No. DESIGN BORE: 366.572mm FLOW:

TEST EQUIPMENT

MANUFACTURER & TYPE: KEMCO 700 MANUAL 3-DIMENSIONAL MEASURING MACHINE -ASSET NO OP-A02  
 CALIBRATED BY: QUALITY CONTROL TECHNOLOGY, CERT:- 4820 NEXT CAL DUE:- 15/10/05

UPSTREAM FACE INSPECTION RESULTS (ISO 5167)

STATIONS:-	1	2	3	4	5	6	7	8
FLATNESS $\mu$	0.169	0.167	0.163	0.171	0.167	0.155	0.169	0.166
'E' mm	12.784	12.805	12.819	12.799	12.790	12.783	12.756	12.757
'e' mm								
EDGE SHARPNESS mm	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
BEVEL ANGLE:	DEGS							
CONCENTRICITY	0.079mm							
SURFACE FINISH (Ra)	0.4 microns							
DOWNSTREAM FACE/EDGE VISUAL INSPECTION :- PASS								
ROUNDNESS :	0.011mm	TAPER:		0 degs				

COMMENTS:

INSPECTED BY:  G. WARDLE

VERIFIED BY:  P. KENNERSON

**TRANSCO ORIFICE PLATE CALIBRATION**

**DATE:** 27-07-05  
**REF NO:** OP50165  
**TEMPERATURE:** 21 degsC  
**MEASURED ORIFICE BORE:** 366.578mm

PLATE DETAILS

PLATE SERIAL. 226-1 PLATE O.D 774.831mm  
 MANUFACTURER: PIPE I.D: 730.275mm SITE: BLACKROD  
 MATERIAL CERT.No. DESIGN BORE: 366.496mm FLOW:

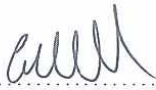

TEST EQUIPMENT

MANUFACTURER & TYPE: KEMCO 700 MANUAL 3-DIMENSIONAL MEASURING MACHINE -ASSET NO OP-A02  
 CALIBRATED BY: QUALITY CONTROL TECHNOLOGY, CERT:- 4820 NEXT CAL DUE:- 15/10/05

UPSTREAM FACE INSPECTION RESULTS (ISO 5167)

STATIONS:-	1	2	3	4	5	6	7	8
FLATNESS %	0.167	0.172	0.160	0.148	0.150	0.159	0.187	0.160
'E' mm	12.774	12.784	12.795	12.798	12.789	12.792	12.772	12.755
'e' mm								
EDGE SHARPNESS mm	0.025	0.0375	0.0375	0.0375	0.025	0.05	0.025	0.025
BEVEL ANGLE:	DEGS							
CONCENTRICITY	0.095mm							
SURFACE FINISH (Ra)	1.4 microns							
DOWNSTREAM FACE/EDGE VISUAL INSPECTION :- PASS								
ROUNDNESS :	0.006mm	TAPER:		0 degs				

COMMENTS:

INSPECTED BY.....  G.WARDLE  
 VERIFIED BY.....  P.KENNERSON

**NATIONAL GRID ORIFICE PLATE CALIBRATION**

**DATE:** 29-06-06  
**REF NO:** OP50199  
**TEMPERATURE:** 21 degsC  
**MEASURED ORIFICE BORE:** 366.499mm

PLATE DETAILS

PLATE SERIAL. 226 PLATE O.D 774.764mm  
 MANUFACTURER: PIPE I.D: 730.326mm SITE: BLACKROD  
 MATERIAL CERT.No. DESIGN BORE: 366.572mm FLOW:

TEST EQUIPMENT

MANUFACTURER & TYPE: KEMCO 700 MANUAL 3-DIMENSIONAL MEASURING MACHINE -ASSET NO OP-A02  
 CALIBRATED BY: QUALITY CONTROL TECHNOLOGY, CERT:- 4820 NEXT CAL DUE:- 14/10/06

UPSTREAM FACE INSPECTION RESULTS (ISO 5167)

STATIONS:-	1	2	3	4	5	6	7	8
FLATNESS %	0.107	0.035	0.121	0.129	0.111	0.069	0.140	0.091
'E' mm	12.671	12.685	12.660	12.643	12.649	12.663	12.648	12.653
'e' mm								
EDGE SHARPNESS mm	0.0125	0.0125	0.025	0.0125	0.0125	0.025	0.0125	0.0125
BEVEL ANGLE:	DEGS							
CONCENTRICITY	0.053mm							
SURFACE FINISH (Ra)	1.5 microns							
DOWNSTREAM FACE/EDGE VISUAL INSPECTION :- PASS								
ROUNDNESS :	0.013mm	TAPER:		0 degs				
DRAIN HOLE BORE	10.049mm			CENTRE DISTANCE			506.492mm	

COMMENTS:

INSPECTED BY:  P. KENNERSON  J. CHANTANA



NATIONAL GRID ORIFICE PLATE CALIBRATION

DATE: 10-07-06  
 REF NO: OP50200  
 TEMPERATURE: 21 degsC

MEASURED ORIFICE BORE: 366.846mm

PLATE DETAILS

PLATE SERIAL. 225 PLATE O.D 774.725mm  
 MANUFACTURER: PIPE I.D: 730.275mm SITE: BLACKROD  
 MATERIAL CERT.No. DESIGN BORE: 366.496mm FLOW:


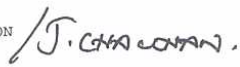
TEST EQUIPMENT

MANUFACTURER & TYPE: KEMCO 700 MANUAL 3-DIMENSIONAL MEASURING MACHINE -ASSET NO OP-A02  
 CALIBRATED BY: QUALITY CONTROL TECHNOLOGY, CERT:- 4820 NEXT CAL DUE:- 14/10/06

UPSTREAM FACE INSPECTION RESULTS (ISO 5167)

STATIONS:-	1	2	3	4	5	6	7	8
FLATNESS %	0.013	0.018	0.017	0.012	0.023	0.019	0.019	0.017
'E' mm	12.479	12.511	12.545	12.552	12.521	12.475	12.457	12.455
'e' mm								
EDGE SHARPNESS mm	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125
BEVEL ANGLE:	DEGS							
CONCENTRICITY	0.092mm							
SURFACE FINISH (Ra)	4.6 microns							
DOWNSTREAM FACE/EDGE VISUAL INSPECTION :- PASS								
ROUNDNESS :	0.006mm	TAPER:		0 degs				
DRAIN HOLE BORE	10.040mm			CENTRE DISTANCE			510.360mm	

COMMENTS:

INSPECTED BY.....  P. KENNERSON /  J. CHAKRABORTY.



NATIONAL GRID ORIFICE PLATE CALIBRATION

DATE: 07-12-06  
 REF NO: OP60147  
 TEMPERATURE: 21 degsC

MEASURED ORIFICE BORE: 366.25mm

PLATE DETAILS

PLATE SERIAL. 226-1 PLATE O.D 774.160mm  
 MANUFACTURER: PIPE I.D: 730.275mm SITE: BLACKROD  
 MATERIAL CERT.No. DESIGN BORE: 366.496mm FLOW:

TEST EQUIPMENT

MANUFACTURER & TYPE: KEMCO 700 MANUAL 3-DIMENSIONAL MEASURING MACHINE -ASSET NO OP-A02  
 CALIBRATED BY: QUALITY CONTROL TECHNOLOGY, CERT:- 4820 NEXT CAL DUE:- 13/10/07

UPSTREAM FACE INSPECTION RESULTS (ISO 5167)

STATIONS:-	1	2	3	4	5	6	7	8
FLATNESS %	0.158	0.171	0.148	0.139	0.135	0.151	0.176	0.143
'E' mm	12.847	12.863	12.792	12.796	12.835	12.835	12.781	12.759
'e' mm								
EDGE SHARPNESS mm	0.025	0.0375	0.025	0.025	0.0125	0.0375	0.025	0.025
BEVEL ANGLE:	DEGS							
CONCENTRICITY	0.156mm							
SURFACE FINISH (Ra)	1.9 microns							
DOWNSTREAM FACE/EDGE VISUAL INSPECTION :- PASS								
ROUNDNESS :	0.368mm	TAPER: 0 degs						

COMMENTS:

INSPECTED BY:  P.KENNERSON

**NATIONAL GRID ORIFICE PLATE CALIBRATION**

**DATE:** 06-12-06  
**REF NO:** OP60148  
**TEMPERATURE:** 21 degsC

**MEASURED ORIFICE BORE:** 366.156mm

PLATE DETAILS

PLATE SERIAL. 225-1 PLATE O.D 774.126mm  
 MANUFACTURER: PIPE I.D: 730.326mm SITE: BLACKROD  
 MATERIAL CERT.No. DESIGN BORE: 366.522mm FLOW:


TEST EQUIPMENT

MANUFACTURER & TYPE: KEMCO 700 MANUAL 3-DIMENSIONAL MEASURING MACHINE -ASSET NO OP-A02  
 CALIBRATED BY: QUALITY CONTROL TECHNOLOGY, CERT:- 4820 NEXT CAL DUE:- 13/10/07

UPSTREAM FACE INSPECTION RESULTS (ISO 5167)

STATIONS:-	1	2	3	4	5	6	7	8
FLATNESS %	0.169	0.167	0.172	0.159	0.162	0.162	0.151	0.162
'E' mm	12.871	12.889	12.786	12.785	12.830	12.811	12.740	12.744
'e' mm								
EDGE SHARPNESS mm	0.025	0.025	0.025	0.025	0.0375	0.025	0.025	0.025
BEVEL ANGLE:	DEGS							
CONCENTRICITY	0.042mm							
SURFACE FINISH (Ra)	1.1 microns							
DOWNSTREAM FACE/EDGE VISUAL INSPECTION :- PASS								
ROUNDNESS :	0.363mm	TAPER:		0 degs				

COMMENTS:

INSPECTED BY:  P. KENNERSON

NATIONAL GRID ORIFICE PLATE CALIBRATION

DATE: 16-JULY-2007  
 REF NO: OP70077  
 TEMPERATURE: 20 degsC  
 MEASURED ORIFICE BORE: 366.524mm

PLATE DETAILS

PLATE SERIAL. 225 PLATE O.D 773.880mm  
 MANUFACTURER: HEBCO PIPE I.D: 730.2849mm SITE: BLACKROD  
 MATERIAL CERT.No. DESIGN BORE: 366.496mmmm FLOW:

TEST EQUIPMENT

MANUFACTURER & TYPE: KEMCO 700 MANUAL 3-DIMENSIONAL MEASURING MACHINE -ASSET NO OP-A02  
 CALIBRATED BY: QUALITY CONTROL TECHNOLOGY, CERT:- 4820 NEXT CAL DUE:- 13/10/07

UPSTREAM FACE INSPECTION RESULTS (ISO 5167)

STATIONS: -	1	2	3	4	5	6	7	8
FLATNESS %	0.023	0.020	0.018	0.009	0.019	0.034	0.015	0.031
'E' mm	12.562	12.591	12.545	12.509	12.531	12.502	12.432	12.444
'e' mm								
EDGE SHARPNESS mm	0.0125	SQUARE	0.025	SQUARE	SQUARE	0.0125	0.0125	0.0125
BEVEL ANGLE:	DEGS							
CONCENTRICITY	0.063mm							
SURFACE FINISH (Ra)	3.6 microns							
DOWNSTREAM FACE/EDGE VISUAL INSPECTION :- PASS								
ROUNDNESS :	0.323mm	TAPER:		0 degs				

DRAIN HOLE BORE 10.012mm CENTRE DISTANCE 394.487mm

COMMENTS:

INSPECTED BY:  M.Livingstone

**NATIONAL GRID ORIFICE PLATE CALIBRATION**

**DATE:** 27-SEPT-2007  
**REF NO:** OP70096  
**TEMPERATURE:** 20 degsC

**MEASURED ORIFICE BORE:** 366.1955mm

=====

PLATE DETAILS

PLATE SERIAL. 226 PLATE O.D 774.187mm  
 MANUFACTURER: PIPE I.D: mm SITE: BLACKROD  
 MATERIAL CERT.No. DESIGN BORE: mm FLOW:

=====

TEST EQUIPMENT


MANUFACTURER & TYPE: KEMCO 700 MANUAL 3-DIMENSIONAL MEASURING MACHINE -ASSET NO OP-A02  
 CALIBRATED BY: QUALITY CONTROL TECHNOLOGY, CERT:- 4820 NEXT CAL DUE:- 13/10/07

=====

UPSTREAM FACE INSPECTION RESULTS (ISO 5167)

STATIONS:-	1	2	3	4	5	6	7	8
FLATNESS %	0.119	0.068	0.124	0.122	0.096	0.077	0.160	0.101
'E' mm	12.701	12.726	12.643	12.636	12.701	12.706	12.638	12.639
'e' mm								
EDGE SHARPNESS mm	SQUARE	0.025	0.025	0.0125	SQUARE	0.025	SQUARE	SQUARE
BEVEL ANGLE:	DEGS							
CONCENTRICITY	0.192mm							
SURFACE FINISH (Ra)	0.5 microns							
DOWNSTREAM FACE/EDGE VISUAL INSPECTION :- PASS								
ROUNDNESS :	0.313mm	TAPER:		0 degs				
DRAIN HOLE BORE	10.030mm			CENTRE DISTANCE			499.142mm	

COMMENTS:

INSPECTED BY:  M LIVINGSTONE

NATIONAL GRID ORIFICE PLATE CALIBRATION

DATE: 14-MAY-2008

REF NO: OP80017

TEMPERATURE: 19 degsC

MEASURED ORIFICE BORE: 366.488mm

PLATE DETAILS

PLATE SERIAL. 225-2 PLATE O.D 774.931mm  
 MANUFACTURER: ANT PIPE I.D: 730.1738mm SITE: BLACKROD  
 MATERIAL CERT.No. ANT21286 DESIGN BORE: mm FLOW: M<sup>3</sup>/DAY

TEST EQUIPMENT

MANUFACTURER & TYPE: KEMCO 700 MANUAL 3-DIMENSIONAL MEASURING MACHINE -ASSET NO OP-A02  
 CALIBRATED BY: QUALITY CONTROL TECHNOLOGY, CERT:- 6292 NEXT CAL DUE:- 05-OCTOBER-2008

UPSTREAM FACE INSPECTION RESULTS (ISO 5167)

STATIONS:-	1	2	3	4	5	6	7	8
FLATNESS %	0.081	0.135	0.035	0.055	0.055	0.108	0.055	0.041
'E' mm	12.573	12.552	12.587	12.577	12.550	12.576	12.568	12.571
'e' mm								
EDGE SHARPNESS mm	0.0375	0.0375	0.0375	0.0375	0.0375	0.0375	0.0375	0.0375
BEVEL ANGLE:	DEGS							
CONCENTRICITY	0.024mm							
SURFACE FINISH (Ra)	1 microns							

DOWNSTREAM FACE/EDGE VISUAL INSPECTION :- PASS

ROUNDNESS : 0.006mm TAPER: 0 degs

DRAIN HOLE BORE 10.010mm CENTRE DISTANCE 439.594mm

COMMENTS:

INSPECTED BY:  M Livingstone.

**NATIONAL GRID ORIFICE PLATE CALIBRATION**

**DATE:** 31-OCT-2008

**REF NO:** OP80075

**TEMPERATURE:** 20.2 degsC

**MEASURED ORIFICE BORE:** 366.8515mm

PLATE DETAILS

PLATE SERIAL. 225 PLATE O.D 774.739mm  
 MANUFACTURER: PIPE I.D: 730.1738mm SITE: BLACKROD  
 MATERIAL CERT.No. DESIGN BORE: 366.496mm FLOW: M<sup>3</sup>/DAY

TEST EQUIPMENT

MANUFACTURER & TYPE: KEMCO 700 MANUAL 3-DIMENSIONAL MEASURING MACHINE -ASSET NO OP-A02  
 CALIBRATED BY: QUALITY CONTROL TECHNOLOGY, UKAS CERT:- 6822. NEXT CAL DUE:- 03-OCTOBER-2009

UPSTREAM FACE INSPECTION RESULTS (ISO 5167)

STATIONS:-	1	2	3	4	5	6	7	8
FLATNESS %	0.015	0.007	0.015	0.002	0.017	0.015	0.012	0.009
'E' mm	12.455	12.475	12.547	12.556	12.509	12.463	12.455	12.456
'e' mm								
EDGE SHARPNESS mm	0.0125	0.0125	0.0125	0.025	0.0125	0.0125	0.0125	0.0125
BEVEL ANGLE:	DEGS							
CONCENTRICITY	0.084mm							
SURFACE FINISH (Ra)	4.5 microns							
DOWNSTREAM FACE/EDGE VISUAL INSPECTION :- PASS								
ROUNDNESS :	0.008mm	TAPER:		0 degs				
DRAIN HOLE BORE	10.067mm			CENTRE DISTANCE			510.627mm	

DRAINHOLE PRESENT ? (YES/NO): Yes

COMMENTS: SOME GREASE TO UPSTREAM FACE RIM

INSPECTED BY:  M Livingstone.

**NATIONAL GRID ORIFICE PLATE CALIBRATION**

**DATE:** 7-NOV-2008  
**REF NO:** OP80076  
**TEMPERATURE:** 20.3 degsC  
**MEASURED ORIFICE BORE:** 366.4895mm

PLATE DETAILS

PLATE SERIAL. 225-1 PLATE O.D 774.741mm  
 MANUFACTURER: PIPE I.D: 730.1738mm SITE: BLACKROD  
 MATERIAL CERT.No. DESIGN BORE: 366.522mm FLOW: M<sup>3</sup>/DAY

TEST EQUIPMENT

MANUFACTURER & TYPE: KEMCO 700 MANUAL 3-DIMENSIONAL MEASURING MACHINE -ASSET NO OP-A02  
 CALIBRATED BY: QUALITY CONTROL TECHNOLOGY, UKAS CERT:- 6822. NEXT CAL DUE:- 03-OCTOBER-2009

UPSTREAM FACE INSPECTION RESULTS (ISO 5167)

STATIONS:-	1	2	3	4	5	6	7	8
FLATNESS %	0.155	0.165	0.162	0.153	0.163	0.168	0.150	0.147
'E' mm	12.807	12.813	12.805	12.787	12.789	12.772	12.761	12.772
'e' mm								
EDGE SHARPNESS mm	0.025	0.025	0.0125	0.025	0.025	0.025	0.025	0.025
BEVEL ANGLE:	DEGS							
CONCENTRICITY	0.095mm							
SURFACE FINISH (Ra)	1.0 microns							
DOWNSTREAM FACE/EDGE VISUAL INSPECTION :- PASS								
ROUNDNESS :	0.008mm	TAPER:		0 degs				

DRAINHOLE PRESENT ? (YES/NO): No

COMMENTS:

INSPECTED BY..... M Livingstone.

APPENDIX B CONFIGURATION DATA REPORTS

TABLE B.1 CONFIGURATION DATA REPORT 25/07/2006

```

=====
CONFIGURATION DATA REPORT : [ BLAL0725.OMI ]

COMPANY NAME : TRANSCO part of Lattice Group plc
LOCATION      : Sunny Blackrod
COMPUTER ID  : 62823

CURRENT DATE : 3-31-2010  TIME : 11:50a
CONFIGURATION FILE : LAST MODIFIED
=====

----- CHECK I/O MODULE CONFIG
OMNI Flow Computer Model Number..... OMNI 6000
Number of TYPE A Modules Installed..... 3
Number of TYPE B Modules Installed..... 0
Number of TYPE C Modules Installed..... 0
Number of TYPE E Modules Installed..... 0
Number of TYPE E/D Modules Installed..... 0
Number of TYPE H Modules Installed..... 0
Number of DIGITAL Modules Installed..... 1
Number of SERIAL Modules Installed..... 2

----- FLOW COMPUTER TIME & DATE
OMNI Time..... 12:07:12
OMNI Date..... 25/07/06
Select Date Type..... dd/mm/yy

----- CONFIG STATION DATA
Station Totals and Flows Defined As:..... 1+2
Reference Gravity.I/O Pnt#..... 0
Tag.....
Type..... 4-20 mA
Nitrogen % I/O Pnt#..... 0
Tag.....
Carbon Dioxide I/O Pnt#..... 0
Tag.....
Heating Value I/O Pnt#..... 0
Tag.....
Auxiliary Input #1 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd
Auxiliary Input #2 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd
Auxiliary Input #3 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd
Auxiliary Input #4 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd

----- CONFIG METER RUNS
Meter #1 Select Turbine Y/N..... NO
DP Low Range I/O Pnt#..... 3
Tag..... DPLR-1

```





























----- MODBUS PEER/PEER COMMUNICATIONS                    (Cont'd)

	Dest. Point #.....	0
Transaction #8	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #9	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #10	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #11	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #12	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #13	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #14	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #15	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #16	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0

----- CUSTOM MODBUS PACKET(ADDR:001)

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0

----- CUSTOM MODBUS PACKET(ADDR:001)                    (Cont'd)

	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Packet #17	Pnt.#.....	0
	# of Points.....	0
Packet #18	Pnt.#.....	0
	# of Points.....	0
Packet #19	Pnt.#.....	0
	# of Points.....	0
Packet #20	Pnt.#.....	0
	# of Points.....	0

----- CUSTOM MODBUS PACKET(ADDR:201)

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0

----- CUSTOM MODBUS PACKET(ADDR:401)

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Packet #17	Pnt.#.....	0
	# of Points.....	0
Packet #18	Pnt.#.....	0
	# of Points.....	0
Packet #19	Pnt.#.....	0
	# of Points.....	0
Packet #20	Pnt.#.....	0
	# of Points.....	0

----- ARCHIVE 701 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0

```

----- ARCHIVE 701 - RECORD DEFINITION                    (Cont'd)
      Packet #06 Pnt.#..... 0
                   # of Points..... 0
      Packet #07 Pnt.#..... 0
                   # of Points..... 0
      Packet #08 Pnt.#..... 0
                   # of Points..... 0
      Packet #09 Pnt.#..... 0
                   # of Points..... 0
      Packet #10 Pnt.#..... 0
                   # of Points..... 0
      Packet #11 Pnt.#..... 0
                   # of Points..... 0
      Packet #12 Pnt.#..... 0
                   # of Points..... 0
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
                   # of Points..... 0
      Packet #15 Pnt.#..... 0
                   # of Points..... 0
      Packet #16 Pnt.#..... 0
                   # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0
  
```

```

----- ARCHIVE 702 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
                   # of Points..... 0
      Packet #02 Pnt.#..... 0
                   # of Points..... 0
      Packet #03 Pnt.#..... 0
                   # of Points..... 0
      Packet #04 Pnt.#..... 0
                   # of Points..... 0
      Packet #05 Pnt.#..... 0
                   # of Points..... 0
      Packet #06 Pnt.#..... 0
                   # of Points..... 0
      Packet #07 Pnt.#..... 0
                   # of Points..... 0
      Packet #08 Pnt.#..... 0
                   # of Points..... 0
      Packet #09 Pnt.#..... 0
                   # of Points..... 0
      Packet #10 Pnt.#..... 0
                   # of Points..... 0
      Packet #11 Pnt.#..... 0
                   # of Points..... 0
      Packet #12 Pnt.#..... 0
                   # of Points..... 0
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
  
```



```
----- ARCHIVE 702 - RECORD DEFINITION                    (Cont'd)
      # of Points..... 0
    Packet #15 Pnt.#..... 0
      # of Points..... 0
    Packet #16 Pnt.#..... 0
      # of Points..... 0
    Max Records..... 0
    Archive Boolean Trigger..... 0

----- ARCHIVE 703 - RECORD DEFINITION
    Packet #01 Pnt.#..... 0
      # of Points..... 0
    Packet #02 Pnt.#..... 0
      # of Points..... 0
    Packet #03 Pnt.#..... 0
      # of Points..... 0
    Packet #04 Pnt.#..... 0
      # of Points..... 0
    Packet #05 Pnt.#..... 0
      # of Points..... 0
    Packet #06 Pnt.#..... 0
      # of Points..... 0
    Packet #07 Pnt.#..... 0
      # of Points..... 0
    Packet #08 Pnt.#..... 0
      # of Points..... 0
    Packet #09 Pnt.#..... 0
      # of Points..... 0
    Packet #10 Pnt.#..... 0
      # of Points..... 0
    Packet #11 Pnt.#..... 0
      # of Points..... 0
    Packet #12 Pnt.#..... 0
      # of Points..... 0
    Packet #13 Pnt.#..... 0
      # of Points..... 0
    Packet #14 Pnt.#..... 0
      # of Points..... 0
    Packet #15 Pnt.#..... 0
      # of Points..... 0
    Packet #16 Pnt.#..... 0
      # of Points..... 0
    Max Records..... 0
    Archive Boolean Trigger..... 0

----- ARCHIVE 704 - RECORD DEFINITION
    Packet #01 Pnt.#..... 0
      # of Points..... 0
    Packet #02 Pnt.#..... 0
      # of Points..... 0
    Packet #03 Pnt.#..... 0
      # of Points..... 0
    Packet #04 Pnt.#..... 0
```

----- ARCHIVE 704 - RECORD DEFINITION                    (Cont'd)

	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Max Records.....		0
Archive Boolean Trigger.....		0

----- ARCHIVE 705 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0

```
----- ARCHIVE 705 - RECORD DEFINITION                    (Cont'd)
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
                   # of Points..... 0
      Packet #15 Pnt.#..... 0
                   # of Points..... 0
      Packet #16 Pnt.#..... 0
                   # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0

----- ARCHIVE 706 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
                   # of Points..... 0
      Packet #02 Pnt.#..... 0
                   # of Points..... 0
      Packet #03 Pnt.#..... 0
                   # of Points..... 0
      Packet #04 Pnt.#..... 0
                   # of Points..... 0
      Packet #05 Pnt.#..... 0
                   # of Points..... 0
      Packet #06 Pnt.#..... 0
                   # of Points..... 0
      Packet #07 Pnt.#..... 0
                   # of Points..... 0
      Packet #08 Pnt.#..... 0
                   # of Points..... 0
      Packet #09 Pnt.#..... 0
                   # of Points..... 0
      Packet #10 Pnt.#..... 0
                   # of Points..... 0
      Packet #11 Pnt.#..... 0
                   # of Points..... 0
      Packet #12 Pnt.#..... 0
                   # of Points..... 0
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
                   # of Points..... 0
      Packet #15 Pnt.#..... 0
                   # of Points..... 0
      Packet #16 Pnt.#..... 0
                   # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0

----- ARCHIVE 707 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
                   # of Points..... 0
      Packet #02 Pnt.#..... 0
                   # of Points..... 0
```

----- ARCHIVE 707 - RECORD DEFINITION                    (Cont'd)

Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Max Records.....		0
Archive Boolean Trigger.....		0

----- ARCHIVE 708 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0

----- ARCHIVE 708 - RECORD DEFINITION                    (Cont'd)

	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Max Records.....		0
Archive Boolean Trigger.....		0

----- ARCHIVE 709 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Max Records.....		0
Archive Boolean Trigger.....		0

```

----- ARCHIVE 710 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
                   # of Points..... 0
      Packet #02 Pnt.#..... 0
                   # of Points..... 0
      Packet #03 Pnt.#..... 0
                   # of Points..... 0
      Packet #04 Pnt.#..... 0
                   # of Points..... 0
      Packet #05 Pnt.#..... 0
                   # of Points..... 0
      Packet #06 Pnt.#..... 0
                   # of Points..... 0
      Packet #07 Pnt.#..... 0
                   # of Points..... 0
      Packet #08 Pnt.#..... 0
                   # of Points..... 0
      Packet #09 Pnt.#..... 0
                   # of Points..... 0
      Packet #10 Pnt.#..... 0
                   # of Points..... 0
      Packet #11 Pnt.#..... 0
                   # of Points..... 0
      Packet #12 Pnt.#..... 0
                   # of Points..... 0
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
                   # of Points..... 0
      Packet #15 Pnt.#..... 0
                   # of Points..... 0
      Packet #16 Pnt.#..... 0
                   # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0
  
```

```

----- CONFIG AB PLC BLOCK#1 READ
      Start Address of Data Block #1..... 9
      Item #1 Source Point #..... 8
                   # of Points..... 10
      Item #2 Source Point #..... 11
                   # of Points..... 2
      Item #3 Source Point #..... 0
                   # of Points..... 0
      Item #4 Source Point #..... 0
                   # of Points..... 0
      Item #5 Source Point #..... 0
                   # of Points..... 3
      Item #6 Source Point #..... 4
                   # of Points..... 6
      Item #7 Source Point #..... 7
                   # of Points..... 1
      Item #8 Source Point #..... 0
  
```



----- CONFIG AB PLC BLOCK#3 READ  
Start Address of Data Block #3..... 0  
Item #1 Source Point #..... 0  
      # of Points..... 0  
Item #2 Source Point #..... 0  
      # of Points..... 0  
Item #3 Source Point #..... 0  
      # of Points..... 0  
Item #4 Source Point #..... 0  
      # of Points..... 0  
Item #5 Source Point #..... 0  
      # of Points..... 0  
Item #6 Source Point #..... 0  
      # of Points..... 0  
Item #7 Source Point #..... 0  
      # of Points..... 0  
Item #8 Source Point #..... 0  
      # of Points..... 0  
Item #9 Source Point #..... 0  
      # of Points..... 0  
Item #10 Source Point #..... 0  
      # of Points..... 0  
Item #11 Source Point #..... 0  
      # of Points..... 0  
Item #12 Source Point #..... 0  
      # of Points..... 0  
Item #13 Source Point #..... 0  
      # of Points..... 0  
Item #14 Source Point #..... 0  
      # of Points..... 0  
Item #15 Source Point #..... 0  
      # of Points..... 0  
Item #16 Source Point #..... 0  
      # of Points..... 0

----- CONFIG AB PLC COMMAND BLOCK  
Start Address of Command Block ..... 0  
Item #1 Dest. Point #..... 0  
      # of Points..... 0  
Item #2 Dest. Point #..... 0  
      # of Points..... 0  
Item #3 Dest. Point #..... 0  
      # of Points..... 0  
Item #4 Dest. Point #..... 0  
      # of Points..... 0  
Item #5 Dest. Point #..... 0  
      # of Points..... 0  
Item #6 Dest. Point #..... 0  
      # of Points..... 0



=====  
CONFIGURATION DATA REPORT                    COMPUTER ID : 62823                    PAGE : 26  
=====

----- CONFIG AB PLC SETPOINT BLOCK  
Start Address of Command Block..... 0  
Item #1 Dest. Point #..... 0  
      # of Points..... 0  
Item #2 Dest. Point #..... 0  
      # of Points..... 0  
Item #3 Dest. Point #..... 0  
      # of Points..... 0  
Item #4 Dest. Point #..... 0  
      # of Points..... 0  
Item #5 Dest. Point #..... 0  
      # of Points..... 0  
Item #6 Dest. Point #..... 0  
      # of Points..... 0

=====  
 CONFIGURATION DATA REPORT                    COMPUTER ID : 62823                    PAGE : 27  
 =====

----- PRINTER SETUP

Computer ID..... 62823  
 Print Interval in Minutes..... 0  
 Print Interval Start Time..... 18:00:00  
 Daily Report Time..... 06:00:00  
 Disable Daily Report..... YES  
 Day Light Savings Start..... 00/00/00  
 Day Light Savings End..... 00/00/00  
 Clear Daily Totals at Batch End..... YES  
 Auto Hourly Batch Select..... NO  
 Auto Weekly Batch Select..... No Batch End  
 Auto Monthly Batch Select..... 0  
 Print Priority..... 0  
 Number of Nulls..... 0  
 Use Default Report Template..... NO  
 Printer Condensed Mode String.....  
 Printer Normal Mode String.....  
 Company Name  
     TRANSCO part of Lattice Group plc  
 Location  
     Sunny Blackrod

----- ANALYSER SETUP

Analyser ID Number..... 1  
 Analyser Type..... DANALYZER  
 Results Interval (Minutes)..... 4  
 Listen Only Mode (Y or N)..... NO  
 GC Fail Code..... Always use  
 GC Comp. # for Methane (CH4)..... 0  
 GC Comp. # for Nitrogen (N2)..... 0  
 GC Comp. # for Carbon Dioxide (CO2)..... 0  
 GC Comp. # for Ethane (C2H6)..... 0  
 GC Comp. # for Propane (C3H8)..... 0  
 GC Comp. # for Water (H2O)..... 0  
 GC Comp. # for Hydrogen Sulfide (H2S)..... 0  
 GC Comp. # for Hydrogen (H2)..... 0  
 GC Comp. # for Carbon Monoxide (CO)..... 0  
 GC Comp. # for Oxygen (O2)..... 0  
 GC Comp. # for i-Butane (iC4H10)..... 0  
 GC Comp. # for n-Butane (nC4H10)..... 0  
 GC Comp. # for i-Pentane (iC5H12)..... 0  
 GC Comp. # for n-Pentane (nC5H12)..... 0  
 GC Comp. # for n-Hexane (C6H14)..... 0  
 GC Comp. # for n-Heptane (C7H16)..... 0  
 GC Comp. # for n-Octane (C8H16)..... 0  
 GC Comp. # for n-Nonane..... 0  
 GC Comp. # for n-Decane..... 0  
 GC Comp. # for Helium (He)..... 0  
 GC Comp. # for Argon (Ar)..... 0  
 GC Comp. # for Heating Value..... 0  
 GC Comp. # for Specific Gravity..... 0

```

----- PID CONTROL SETUP
Loop #1 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
            High Limit..... 0
            Zero Value..... 0
            Full Scale Value..... 0
      Secondary Var Zero Value..... 0
            Full Scale Value..... 0
Loop #2 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
            High Limit..... 0
            Zero Value..... 0
            Full Scale Value..... 0
      Secondary Var Zero Value..... 0
            Full Scale Value..... 0
Loop #3 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
            High Limit..... 0
            Zero Value..... 0
            Full Scale Value..... 0
      Secondary Var Zero Value..... 0
            Full Scale Value..... 0
Loop #4 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
  
```

```

----- PID CONTROL SETUP (Cont'd)
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
                           High Limit..... 0
                           Zero Value..... 0
                           Full Scale Value..... 0
      Secondary Var Zero Value..... 0
                           Full Scale Value..... 0
  
```

----- GRAV/DENSITY SETUP

```

----- TEMP/PRESS SETUP
      Temp #1 Low Alarm Limit..... -10
              Hi Alarm Limit..... 40
              Override Value..... 15
              Override Code..... Avg on fail
      Temp #2 Low Alarm Limit..... -10
              Hi Alarm Limit..... 40
              Override Value..... 15
              Override Code..... Avg on fail
      Press #1 Low Alarm Limit..... 35
              Hi Alarm Limit..... 80
              Override Value..... 50
              Override Code..... Avg on fail
              at 4mA..... 0
              at 20mA..... 80
              Damping Code..... 0.0 Seconds
      Press #2 Low Alarm Limit..... 30
              Hi Alarm Limit..... 80
              Override Value..... 50
              Override Code..... Avg on fail
              at 4mA..... 0
              at 20mA..... 80
              Damping Code..... 0.0 Seconds
  
```

----- DIFF. PRESSURE SETUP

```

Diff Pressure #1 Low Alarm Limit..... -2.5
                 Hi Alarm Limit..... 502.5
                 Override Value..... 0
                 Override Code..... Avg on fail
                 Low DP at 4mA..... 0
                 Low DP at 20mA..... 50
                 Damping Code..... 0.0 Seconds
                 High DP at 4mA..... 0
                 High DP at 20mA..... 500
                 Damping Code..... 0.0 Seconds
                 High DP Select %..... 95
                 Low DP Select %..... 9
Diff Pressure #2 Low Alarm Limit..... -2.5
                 Hi Alarm Limit..... 502.5
                 Override Value..... 0
                 Override Code..... Avg on fail
  
```

```

----- DIFF. PRESSURE SETUP (Cont'd)
      Low DP at 4mA..... 0
      Low DP at 20mA..... 50
      Damping Code..... 0.0 Seconds
      High DP at 4mA..... 0
      High DP at 20mA..... 500
      Damping Code..... 0.0 Seconds
      High DP Select %..... 95
      Low DP Select %..... 9
Diff Pressure #3 Low Alarm Limit..... -2.5
      Hi Alarm Limit..... 502.5
      Override Value..... 0
      Override Code..... Avg on fail
      Low DP at 4mA..... 0
      Low DP at 20mA..... 500
      Damping Code..... 0.0 Seconds
      High DP at 4mA..... 0
      High DP at 20mA..... 500
      Damping Code..... 0.0 Seconds
      High DP Select %..... 0
      Low DP Select %..... 0
  
```

```

----- STATION SG/N2 ETC SETUP
Station ID..... Blackrod
Flow Low Limit (Tons/Hr)..... 0
Flow High Limit (Tons/Hr)..... 871.4241
Gross Flowrate Full Scale..... 0
Mass Flowrate Full Scale..... 0
Run Switch Mode..... Manual
Run Switch Time..... 0
Run Switch Threshold Low %DP..... 0
Run Switch Threshold High %DP..... 0
  
```

```

----- METER RUN SETUP
Meter #1 Meter ID..... 9741/MTA
      Analysis Selected..... Product #1
      Analyzer Stream Number..... 3
      Flow Low Limit..... 0
      Flow High Limit..... 435.712
      Gross Flow Full Scale..... 0
      Mass Flow Full Scale..... 0
      Low Flow Cutoff..... .45
      Orifice Measured Dia..... 366.846
      Orifice Reference Temp..... 21
      Orifice Expansion Coef..... 1.600000E-005
      Pipe Measured Dia..... 730.1738
      Pipe Reference Temp..... 20
      Pipe Expansion Coef..... 1.100000E-005
      Use Downstream Pressure?..... NO
      Use Upstream Temperature?..... NO
      Orifice Plate Taps..... Flange Taps
      Transducer Density (Y/N)..... NO
Meter #2 Meter ID..... 8171/MTB
  
```

----- METER RUN SETUP (Cont'd)

	Analysis Selected.....	Product #1
	Analyzer Stream Number.....	1
	Flow Low Limit.....	0
	Flow High Limit.....	435.712
	Gross Flow Full Scale.....	0
	Mass Flow Full Scale.....	0
	Low Flow Cutoff.....	.45
	Orifice Measured Dia.....	366.499
	Orifice Reference Temp.....	21
	Orifice Expansion Coef.....	1.600000E-005
	Pipe Measured Dia.....	730.2849
	Pipe Reference Temp.....	20
	Pipe Expansion Coef.....	1.100000E-005
	Use Downstream Pressure?.....	NO
	Use Upstream Temperature?.....	NO
	Orifice Plate Taps.....	Flange Taps
	Transducer Density (Y/N).....	NO
Meter #3	Meter ID.....	
	Analysis Selected.....	Product #1
	Analyzer Stream Number.....	0
	Flow Low Limit.....	0
	Flow High Limit.....	0
	Gross Flow Full Scale.....	0
	Mass Flow Full Scale.....	0
	Low Flow Cutoff.....	0
	Orifice Measured Dia.....	0
	Orifice Reference Temp.....	0
	Orifice Expansion Coef.....	0.000000E+000
	Pipe Measured Dia.....	0
	Pipe Reference Temp.....	0
	Pipe Expansion Coef.....	0.000000E+000
	Use Downstream Pressure?.....	NO
	Use Upstream Temperature?.....	YES
	Orifice Plate Taps.....	Flange Taps
	Transducer Density (Y/N).....	NO

----- FACTOR SETUP & SYS CONSTANTS

	Atmospheric Pressure (absolute).....	1.01325
	Base Pressure (absolute).....	1.01325
	Base Temperature.....	15
	Density of Air.....	1.225410
	Flow Average Factor.....	0
	Alarm Deadband %.....	2.00
	Roll All Totalizers.....	9 Digits
	Gross Totalizer Decimal Places.....	0
	Net Totalizer Decimal Places.....	0
	Mass Totalizer Decimal Places.....	0
	Energy Totalizer Decimal Places.....	0
	Select Averaging Method.....	Flow Weighted
	Select Pressure Units.....	Bar
	Select DP Units.....	Milli Bar

----- FLUID DATA & ANALYSIS

Prod #1	Fluid Name.....	
	Fluid Type Select (F1=Help).....	Natural Gas
	Viscosity in pa.s.....	.0000116
	Isentropic Exponent.....	1.3215
	AGA-8 Method (F1=Help).....	94 Detailed
	Heating Value Method (F1=Help).....	ISO 6976
	Heating Value MJ/NM3.....	39.92
	Specific Gravity.....	0.6410
	1994-01 % Methane (CH4).....	87.9129
	1994-02 % Nitrogen (N2).....	0.9419
	1994-03 % Carbon Dioxide (CO2).....	2.4474
	1994-04 % Ethane (C2H6).....	6.1555
	1994-05 % Propane (C3H8).....	1.9367
	1994-06 % Water (H2O).....	0.0000
	1994-07 % Hydrogen Sulfide (H2S).....	0.0000
	1994-08 % Hydrogen (H2).....	0.0000
	1994-09 % Carbon Monoxide (CO).....	0.0000
	1994-10 % Oxygen (O2).....	0.0000
	1994-11 % i-Butane (iC4H10).....	0.1755
	1994-12 % n-Butane (nC4H10).....	0.3017
	1994-13 % i-Pentane (iC5H12).....	0.0464
	1994-14 % n-Pentane (nC5H12).....	0.0480
	1994-15 % n-Hexane (C6H14).....	0.0339
	1994-16 % n-Heptane (C7H16).....	0.0000
	1994-17 % n-Octane (C8H16).....	0.0000
	1994-18 % n-Nonane.....	0.0000
	1994-19 % n-Decane.....	0.0000
	1994-20 % Helium (He).....	0.0000
	1994-21 % Argon (Ar).....	0.0000
Prod #2	Fluid Name.....	
	Fluid Type Select (F1=Help).....	None Selected
	Reference Density KG/M3.....	0
	Viscosity in pa.s.....	0
	Isentropic Exponent.....	0
	Heating Value MJ/NM3.....	39.92
Prod #3	Fluid Name.....	
	Fluid Type Select (F1=Help).....	None Selected
	Reference Density KG/M3.....	0
	Viscosity in pa.s.....	0
	Isentropic Exponent.....	0
	Heating Value MJ/NM3.....	0
Prod #4	Fluid Name.....	
	Fluid Type Select (F1=Help).....	None Selected
	Reference Density Lb/Ft3.....	0
	Viscosity in Centipoise.....	0
	Isentropic Exponent.....	0
	Heating Value Btu/Scf.....	0

**TABLE B.2 CONFIGURATION DATA REPORT 16/07/2007**

```

=====
CONFIGURATION DATA REPORT : [ BLAL0802.OMI ]

COMPANY NAME : TRANSCO part of Lattice Group plc
LOCATION      : Sunny Blackrod
COMPUTER ID  : 62823

CURRENT DATE : 3-31-2010  TIME : 11:42a
CONFIGURATION FILE : LAST MODIFIED
=====

----- CHECK I/O MODULE CONFIG
OMNI Flow Computer Model Number..... OMNI 6000
Number of TYPE A Modules Installed..... 3
Number of TYPE B Modules Installed..... 0
Number of TYPE C Modules Installed..... 0
Number of TYPE E Modules Installed..... 0
Number of TYPE E/D Modules Installed..... 0
Number of TYPE H Modules Installed..... 0
Number of DIGITAL Modules Installed..... 1
Number of SERIAL Modules Installed..... 2

----- FLOW COMPUTER TIME & DATE
OMNI Time..... 11:11:01
OMNI Date..... 16/07/07
Select Date Type..... dd/mm/yy

----- CONFIG STATION DATA
Station Totals and Flows Defined As:..... 1+2
Reference Gravity.I/O Pnt#..... 0
Tag.....
Type..... 4-20 mA
Nitrogen % I/O Pnt#..... 0
Tag.....
Carbon Dioxide I/O Pnt#..... 0
Tag.....
Heating Value I/O Pnt#..... 0
Tag.....
Auxiliary Input #1 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd
Auxiliary Input #2 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd
Auxiliary Input #3 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd
Auxiliary Input #4 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd

----- CONFIG METER RUNS
Meter #1 Select Turbine Y/N..... NO
DP Low Range I/O Pnt#..... 3
Tag..... DPLR-1

```









----- CONFIGURE BOOLEAN STATEMENTS                    (Cont'd)

```

Boolean #1029 =..... 1129+1130
Remarks..... 1. L/H P alarm
Boolean #1030 =..... 1141+1142
Remarks..... 1. L/H DP alarm
Boolean #1031 =..... 1341+1342
Remarks..... 1. L/H STBY alarm
Boolean #1032 =..... 7035&1152
Remarks..... 1. LDP OutOfTol
Boolean #1033 =..... 7036&1153
Remarks..... 1. HDP OutOfTol
Boolean #1034 =..... 7048+7049
Remarks..... 1. Density alarm
Boolean #1035 =.....
Remarks.....
Boolean #1036 =..... 1225+1226
Remarks..... 2. L/H T alarm
Boolean #1037 =..... 1229+1230
Remarks..... 2. L/H P alarm
Boolean #1038 =..... 1241+1242
Remarks..... 2. L/H DP alarm
Boolean #1039 =..... 1341+1342
Remarks..... 2. L/H STDP alarm
Boolean #1040 =..... 7041&1252
Remarks..... 2. LDP OutOfTol
Boolean #1041 =..... 7042&1253
Remarks..... 2. HDP OutOfTol
Boolean #1042 =..... 7051+7052
Remarks..... 2. Density
Boolean #1043 =.....
Remarks.....
Boolean #1044 =..... 1025+1026+1027
Remarks..... General
Boolean #1045 =..... 1028+1029+1030
Remarks..... 1.
Boolean #1046 =..... 1031+1032+1033
Remarks..... 1.
Boolean #1047 =..... 1034
Remarks..... 1.
Boolean #1048 =..... 1036+1037+1038
Remarks..... 2.
Boolean #1049 =..... 1039+1040+1041
Remarks..... 2.
Boolean #1050 =..... 1042
Remarks..... 2.
Boolean #1051 =..... 1045+1046+1047
Remarks..... 1. Combined
Boolean #1052 =..... 1048+1049+1050
Remarks..... 2. Combined
Boolean #1053 =..... 1051&1105
Remarks..... 1. in use?
Boolean #1054 =..... 1052&1205
Remarks..... 2. in use?
Boolean #1055 =..... 1044+1053+1054
Remarks..... Meter Suspect
  
```





----- CONFIGURE VARIABLE STATEMENTS                    (Cont'd)

	Remarks.....	Set odour flow
Statement #7045 =.....		1069)7044=7085
	Remarks.....	LGT-low flow
Statement #7046 =.....		1055)7044=7086
	Remarks.....	LGT-Met Susp
Statement #7047 =.....		7025)7044=7087
	Remarks.....	LGT-fix flow
Statement #7048 =.....		7107-#80
	Remarks.....	1. Hi den?
Statement #7049 =.....		#24-7107
	Remarks.....	1. Low den?
Statement #7050 =.....		
	Remarks.....	
Statement #7051 =.....		7207-#80
	Remarks.....	2. Hi den?
Statement #7052 =.....		#24-7207
	Remarks.....	2. Low den?
Statement #7053 =.....		
	Remarks.....	
Statement #7054 =.....		7141-#0.7
	Remarks.....	RD hi?
Statement #7055 =.....		#0.5-7141
	Remarks.....	RD low?
Statement #7056 =.....		
	Remarks.....	
Statement #7057 =.....		
	Remarks.....	
Statement #7058 =.....		7854=7138*17002
	Remarks.....	St mass fl limit
Statement #7059 =.....		7854=7854/#1000
	Remarks.....	Convert to ton/h
Statement #7060 =.....		7162=7854/#2
	Remarks.....	1. Mass flow lim
Statement #7061 =.....		7262=7854/#2
	Remarks.....	2. Mass flow lim
Statement #7062 =.....		7151=#.0009*7158
	Remarks.....	1.Set DP cutoff
Statement #7063 =.....		7251=#.0009*7258
	Remarks.....	2.Set DP cutoff
Statement #7064 =.....		
	Remarks.....	
Statement #7065 =.....		
	Remarks.....	
Statement #7066 =.....		
	Remarks.....	
Statement #7067 =.....		7802*#0.000024
	Remarks.....	St vol MSCM/D
Statement #7068 =.....		7804*#0.024
	Remarks.....	St. energy MMJ/D
Statement #7069 =.....		7802/17002*#100
	Remarks.....	%Max flow
Statement #7070 =.....		17002*#0.000024
	Remarks.....	Max vol MSCM/D
Statement #7071 =.....		7070*#44











```

----- CONFIG SERIAL I/O (Cont'd)
          Protocol Type..... Modbus ASCII
          Modbus ID..... 1
          Modicon Compatible..... YES
          CRC Enabled..... YES
Serial I/O #4 Baud Rate..... 9600
              Stop Bits..... 1 Bit
              Data Bits..... 8
              Parity..... None
              Xmit Key Delay..... 0ms
              Protocol Type..... Modbus RTU
              Modbus ID..... 0
              Modicon Compatible..... YES
              CRC Enabled..... YES
  
```

```

----- MODBUS PEER/PEER COMMUNICATIONS
          Activate Redundancy Mode..... NO
          Next Master in Sequence..... 0
          Last Master in Sequence..... 0
          Retry Timer (50 mS Ticks)..... 0
Transaction #1 Target Slave ID..... 0
              Read/Write ?..... Read
              Source Index #..... 0
              # of Points..... 0
              Dest. Point #..... 0
Transaction #2 Target Slave ID..... 0
              Read/Write ?..... Read
              Source Index #..... 0
              # of Points..... 0
              Dest. Point #..... 0
Transaction #3 Target Slave ID..... 0
              Read/Write ?..... Read
              Source Index #..... 0
              # of Points..... 0
              Dest. Point #..... 0
Transaction #4 Target Slave ID..... 0
              Read/Write ?..... Read
              Source Index #..... 0
              # of Points..... 0
              Dest. Point #..... 0
Transaction #5 Target Slave ID..... 0
              Read/Write ?..... Read
              Source Index #..... 0
              # of Points..... 0
              Dest. Point #..... 0
Transaction #6 Target Slave ID..... 0
              Read/Write ?..... Read
              Source Index #..... 0
              # of Points..... 0
              Dest. Point #..... 0
Transaction #7 Target Slave ID..... 0
              Read/Write ?..... Read
              Source Index #..... 0
              # of Points..... 0
  
```

----- MODBUS PEER/PEER COMMUNICATIONS                    (Cont'd)

	Dest. Point #.....	0
Transaction #8	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #9	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #10	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #11	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #12	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #13	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #14	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #15	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #16	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0

----- CUSTOM MODBUS PACKET(ADDR:001)

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0

----- CUSTOM MODBUS PACKET(ADDR:001)                    (Cont'd)

	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Packet #17	Pnt.#.....	0
	# of Points.....	0
Packet #18	Pnt.#.....	0
	# of Points.....	0
Packet #19	Pnt.#.....	0
	# of Points.....	0
Packet #20	Pnt.#.....	0
	# of Points.....	0

----- CUSTOM MODBUS PACKET(ADDR:201)

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0

----- CUSTOM MODBUS PACKET(ADDR:401)

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Packet #17	Pnt.#.....	0
	# of Points.....	0
Packet #18	Pnt.#.....	0
	# of Points.....	0
Packet #19	Pnt.#.....	0
	# of Points.....	0
Packet #20	Pnt.#.....	0
	# of Points.....	0

----- ARCHIVE 701 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0

----- ARCHIVE 701 - RECORD DEFINITION                    (Cont'd)

Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Max Records.....		0
Archive Boolean Trigger.....		0

----- ARCHIVE 702 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0



```
----- ARCHIVE 702 - RECORD DEFINITION                    (Cont'd)
      # of Points..... 0
    Packet #15 Pnt.#..... 0
      # of Points..... 0
    Packet #16 Pnt.#..... 0
      # of Points..... 0
    Max Records..... 0
    Archive Boolean Trigger..... 0

----- ARCHIVE 703 - RECORD DEFINITION
    Packet #01 Pnt.#..... 0
      # of Points..... 0
    Packet #02 Pnt.#..... 0
      # of Points..... 0
    Packet #03 Pnt.#..... 0
      # of Points..... 0
    Packet #04 Pnt.#..... 0
      # of Points..... 0
    Packet #05 Pnt.#..... 0
      # of Points..... 0
    Packet #06 Pnt.#..... 0
      # of Points..... 0
    Packet #07 Pnt.#..... 0
      # of Points..... 0
    Packet #08 Pnt.#..... 0
      # of Points..... 0
    Packet #09 Pnt.#..... 0
      # of Points..... 0
    Packet #10 Pnt.#..... 0
      # of Points..... 0
    Packet #11 Pnt.#..... 0
      # of Points..... 0
    Packet #12 Pnt.#..... 0
      # of Points..... 0
    Packet #13 Pnt.#..... 0
      # of Points..... 0
    Packet #14 Pnt.#..... 0
      # of Points..... 0
    Packet #15 Pnt.#..... 0
      # of Points..... 0
    Packet #16 Pnt.#..... 0
      # of Points..... 0
    Max Records..... 0
    Archive Boolean Trigger..... 0

----- ARCHIVE 704 - RECORD DEFINITION
    Packet #01 Pnt.#..... 0
      # of Points..... 0
    Packet #02 Pnt.#..... 0
      # of Points..... 0
    Packet #03 Pnt.#..... 0
      # of Points..... 0
    Packet #04 Pnt.#..... 0
```

=====  
 CONFIGURATION DATA REPORT                    COMPUTER ID : 62823                    PAGE : 19  
 =====

```

----- ARCHIVE 704 - RECORD DEFINITION                    (Cont'd)
      # of Points..... 0
    Packet #05 Pnt.#..... 0
      # of Points..... 0
    Packet #06 Pnt.#..... 0
      # of Points..... 0
    Packet #07 Pnt.#..... 0
      # of Points..... 0
    Packet #08 Pnt.#..... 0
      # of Points..... 0
    Packet #09 Pnt.#..... 0
      # of Points..... 0
    Packet #10 Pnt.#..... 0
      # of Points..... 0
    Packet #11 Pnt.#..... 0
      # of Points..... 0
    Packet #12 Pnt.#..... 0
      # of Points..... 0
    Packet #13 Pnt.#..... 0
      # of Points..... 0
    Packet #14 Pnt.#..... 0
      # of Points..... 0
    Packet #15 Pnt.#..... 0
      # of Points..... 0
    Packet #16 Pnt.#..... 0
      # of Points..... 0
    Max Records..... 0
    Archive Boolean Trigger..... 0
  
```

```

----- ARCHIVE 705 - RECORD DEFINITION
    Packet #01 Pnt.#..... 0
      # of Points..... 0
    Packet #02 Pnt.#..... 0
      # of Points..... 0
    Packet #03 Pnt.#..... 0
      # of Points..... 0
    Packet #04 Pnt.#..... 0
      # of Points..... 0
    Packet #05 Pnt.#..... 0
      # of Points..... 0
    Packet #06 Pnt.#..... 0
      # of Points..... 0
    Packet #07 Pnt.#..... 0
      # of Points..... 0
    Packet #08 Pnt.#..... 0
      # of Points..... 0
    Packet #09 Pnt.#..... 0
      # of Points..... 0
    Packet #10 Pnt.#..... 0
      # of Points..... 0
    Packet #11 Pnt.#..... 0
      # of Points..... 0
    Packet #12 Pnt.#..... 0
      # of Points..... 0
  
```

```
----- ARCHIVE 705 - RECORD DEFINITION                    (Cont'd)
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
                   # of Points..... 0
      Packet #15 Pnt.#..... 0
                   # of Points..... 0
      Packet #16 Pnt.#..... 0
                   # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0

----- ARCHIVE 706 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
                   # of Points..... 0
      Packet #02 Pnt.#..... 0
                   # of Points..... 0
      Packet #03 Pnt.#..... 0
                   # of Points..... 0
      Packet #04 Pnt.#..... 0
                   # of Points..... 0
      Packet #05 Pnt.#..... 0
                   # of Points..... 0
      Packet #06 Pnt.#..... 0
                   # of Points..... 0
      Packet #07 Pnt.#..... 0
                   # of Points..... 0
      Packet #08 Pnt.#..... 0
                   # of Points..... 0
      Packet #09 Pnt.#..... 0
                   # of Points..... 0
      Packet #10 Pnt.#..... 0
                   # of Points..... 0
      Packet #11 Pnt.#..... 0
                   # of Points..... 0
      Packet #12 Pnt.#..... 0
                   # of Points..... 0
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
                   # of Points..... 0
      Packet #15 Pnt.#..... 0
                   # of Points..... 0
      Packet #16 Pnt.#..... 0
                   # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0

----- ARCHIVE 707 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
                   # of Points..... 0
      Packet #02 Pnt.#..... 0
                   # of Points..... 0
```

----- ARCHIVE 707 - RECORD DEFINITION                    (Cont'd)

Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Max Records.....		0
Archive Boolean Trigger.....		0

----- ARCHIVE 708 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0

```
----- ARCHIVE 708 - RECORD DEFINITION                    (Cont'd)
      # of Points..... 0
Packet #12 Pnt.#..... 0
      # of Points..... 0
Packet #13 Pnt.#..... 0
      # of Points..... 0
Packet #14 Pnt.#..... 0
      # of Points..... 0
Packet #15 Pnt.#..... 0
      # of Points..... 0
Packet #16 Pnt.#..... 0
      # of Points..... 0
Max Records..... 0
Archive Boolean Trigger..... 0

----- ARCHIVE 709 - RECORD DEFINITION
Packet #01 Pnt.#..... 0
      # of Points..... 0
Packet #02 Pnt.#..... 0
      # of Points..... 0
Packet #03 Pnt.#..... 0
      # of Points..... 0
Packet #04 Pnt.#..... 0
      # of Points..... 0
Packet #05 Pnt.#..... 0
      # of Points..... 0
Packet #06 Pnt.#..... 0
      # of Points..... 0
Packet #07 Pnt.#..... 0
      # of Points..... 0
Packet #08 Pnt.#..... 0
      # of Points..... 0
Packet #09 Pnt.#..... 0
      # of Points..... 0
Packet #10 Pnt.#..... 0
      # of Points..... 0
Packet #11 Pnt.#..... 0
      # of Points..... 0
Packet #12 Pnt.#..... 0
      # of Points..... 0
Packet #13 Pnt.#..... 0
      # of Points..... 0
Packet #14 Pnt.#..... 0
      # of Points..... 0
Packet #15 Pnt.#..... 0
      # of Points..... 0
Packet #16 Pnt.#..... 0
      # of Points..... 0
Max Records..... 0
Archive Boolean Trigger..... 0
```

```

----- ARCHIVE 710 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
                   # of Points..... 0
      Packet #02 Pnt.#..... 0
                   # of Points..... 0
      Packet #03 Pnt.#..... 0
                   # of Points..... 0
      Packet #04 Pnt.#..... 0
                   # of Points..... 0
      Packet #05 Pnt.#..... 0
                   # of Points..... 0
      Packet #06 Pnt.#..... 0
                   # of Points..... 0
      Packet #07 Pnt.#..... 0
                   # of Points..... 0
      Packet #08 Pnt.#..... 0
                   # of Points..... 0
      Packet #09 Pnt.#..... 0
                   # of Points..... 0
      Packet #10 Pnt.#..... 0
                   # of Points..... 0
      Packet #11 Pnt.#..... 0
                   # of Points..... 0
      Packet #12 Pnt.#..... 0
                   # of Points..... 0
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
                   # of Points..... 0
      Packet #15 Pnt.#..... 0
                   # of Points..... 0
      Packet #16 Pnt.#..... 0
                   # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0
  
```

```

----- CONFIG AB PLC BLOCK#1 READ
      Start Address of Data Block #1..... 9
      Item #1 Source Point #..... 8
                   # of Points..... 10
      Item #2 Source Point #..... 11
                   # of Points..... 2
      Item #3 Source Point #..... 0
                   # of Points..... 0
      Item #4 Source Point #..... 0
                   # of Points..... 0
      Item #5 Source Point #..... 0
                   # of Points..... 3
      Item #6 Source Point #..... 4
                   # of Points..... 6
      Item #7 Source Point #..... 7
                   # of Points..... 1
      Item #8 Source Point #..... 0
  
```



----- CONFIG AB PLC BLOCK#3 READ  
Start Address of Data Block #3..... 0  
Item #1 Source Point #..... 0  
      # of Points..... 0  
Item #2 Source Point #..... 0  
      # of Points..... 0  
Item #3 Source Point #..... 0  
      # of Points..... 0  
Item #4 Source Point #..... 0  
      # of Points..... 0  
Item #5 Source Point #..... 0  
      # of Points..... 0  
Item #6 Source Point #..... 0  
      # of Points..... 0  
Item #7 Source Point #..... 0  
      # of Points..... 0  
Item #8 Source Point #..... 0  
      # of Points..... 0  
Item #9 Source Point #..... 0  
      # of Points..... 0  
Item #10 Source Point #..... 0  
      # of Points..... 0  
Item #11 Source Point #..... 0  
      # of Points..... 0  
Item #12 Source Point #..... 0  
      # of Points..... 0  
Item #13 Source Point #..... 0  
      # of Points..... 0  
Item #14 Source Point #..... 0  
      # of Points..... 0  
Item #15 Source Point #..... 0  
      # of Points..... 0  
Item #16 Source Point #..... 0  
      # of Points..... 0

----- CONFIG AB PLC COMMAND BLOCK  
Start Address of Command Block ..... 0  
Item #1 Dest. Point #..... 0  
      # of Points..... 0  
Item #2 Dest. Point #..... 0  
      # of Points..... 0  
Item #3 Dest. Point #..... 0  
      # of Points..... 0  
Item #4 Dest. Point #..... 0  
      # of Points..... 0  
Item #5 Dest. Point #..... 0  
      # of Points..... 0  
Item #6 Dest. Point #..... 0  
      # of Points..... 0



=====  
CONFIGURATION DATA REPORT                    COMPUTER ID : 62823                    PAGE : 26  
=====

----- CONFIG AB PLC SETPOINT BLOCK  
Start Address of Command Block..... 0  
Item #1 Dest. Point #..... 0  
      # of Points..... 0  
Item #2 Dest. Point #..... 0  
      # of Points..... 0  
Item #3 Dest. Point #..... 0  
      # of Points..... 0  
Item #4 Dest. Point #..... 0  
      # of Points..... 0  
Item #5 Dest. Point #..... 0  
      # of Points..... 0  
Item #6 Dest. Point #..... 0  
      # of Points..... 0

----- PRINTER SETUP

Computer ID..... 62823  
 Print Interval in Minutes..... 0  
 Print Interval Start Time..... 18:00:00  
 Daily Report Time..... 06:00:00  
 Disable Daily Report..... YES  
 Day Light Savings Start..... 00/00/00  
 Day Light Savings End..... 00/00/00  
 Clear Daily Totals at Batch End..... YES  
 Auto Hourly Batch Select..... NO  
 Auto Weekly Batch Select..... No Batch End  
 Auto Monthly Batch Select..... 0  
 Print Priority..... 0  
 Number of Nulls..... 0  
 Use Default Report Template..... NO  
 Printer Condensed Mode String.....  
 Printer Normal Mode String.....  
 Company Name  
     TRANSCO part of Lattice Group plc  
 Location  
     Sunny Blackrod

----- ANALYSER SETUP

Analyser ID Number..... 1  
 Analyser Type..... DANALYZER  
 Results Interval (Minutes)..... 4  
 Listen Only Mode (Y or N)..... NO  
 GC Fail Code..... Always use  
 GC Comp. # for Methane (CH4)..... 0  
 GC Comp. # for Nitrogen (N2)..... 0  
 GC Comp. # for Carbon Dioxide (CO2)..... 0  
 GC Comp. # for Ethane (C2H6)..... 0  
 GC Comp. # for Propane (C3H8)..... 0  
 GC Comp. # for Water (H2O)..... 0  
 GC Comp. # for Hydrogen Sulfide (H2S)..... 0  
 GC Comp. # for Hydrogen (H2)..... 0  
 GC Comp. # for Carbon Monoxide (CO)..... 0  
 GC Comp. # for Oxygen (O2)..... 0  
 GC Comp. # for i-Butane (iC4H10)..... 0  
 GC Comp. # for n-Butane (nC4H10)..... 0  
 GC Comp. # for i-Pentane (iC5H12)..... 0  
 GC Comp. # for n-Pentane (nC5H12)..... 0  
 GC Comp. # for n-Hexane (C6H14)..... 0  
 GC Comp. # for n-Heptane (C7H16)..... 0  
 GC Comp. # for n-Octane (C8H16)..... 0  
 GC Comp. # for n-Nonane..... 0  
 GC Comp. # for n-Decane..... 0  
 GC Comp. # for Helium (He)..... 0  
 GC Comp. # for Argon (Ar)..... 0  
 GC Comp. # for Heating Value..... 0  
 GC Comp. # for Specific Gravity..... 0

```

----- PID CONTROL SETUP
Loop #1 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
            High Limit..... 0
            Zero Value..... 0
            Full Scale Value..... 0
      Secondary Var Zero Value..... 0
            Full Scale Value..... 0
Loop #2 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
            High Limit..... 0
            Zero Value..... 0
            Full Scale Value..... 0
      Secondary Var Zero Value..... 0
            Full Scale Value..... 0
Loop #3 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
            High Limit..... 0
            Zero Value..... 0
            Full Scale Value..... 0
      Secondary Var Zero Value..... 0
            Full Scale Value..... 0
Loop #4 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
  
```

```

----- PID CONTROL SETUP (Cont'd)
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
                           High Limit..... 0
                           Zero Value..... 0
                           Full Scale Value..... 0
      Secondary Var Zero Value..... 0
                           Full Scale Value..... 0

----- GRAV/DENSITY SETUP

----- TEMP/PRESS SETUP
      Temp #1 Low Alarm Limit..... -10
                Hi Alarm Limit..... 40
                Override Value..... 15
                Override Code..... Avg on fail
      Temp #2 Low Alarm Limit..... -10
                Hi Alarm Limit..... 40
                Override Value..... 15
                Override Code..... Avg on fail
      Press #1 Low Alarm Limit..... 35
                Hi Alarm Limit..... 80
                Override Value..... 50
                Override Code..... Avg on fail
                at 4mA..... 0
                at 20mA..... 80
                Damping Code..... 0.0 Seconds
      Press #2 Low Alarm Limit..... 30
                Hi Alarm Limit..... 80
                Override Value..... 50
                Override Code..... Avg on fail
                at 4mA..... 0
                at 20mA..... 80
                Damping Code..... 0.0 Seconds

----- DIFF. PRESSURE SETUP
      Diff Pressure #1 Low Alarm Limit..... -2.5
                Hi Alarm Limit..... 502.5
                Override Value..... 0
                Override Code..... Avg on fail
                Low DP at 4mA..... 0
                Low DP at 20mA..... 50
                Damping Code..... 0.0 Seconds
                High DP at 4mA..... 0
                High DP at 20mA..... 500
                Damping Code..... 0.0 Seconds
                High DP Select %..... 95
                Low DP Select %..... 9
      Diff Pressure #2 Low Alarm Limit..... -2.5
                Hi Alarm Limit..... 502.5
                Override Value..... 0
                Override Code..... Avg on fail
  
```



----- METER RUN SETUP (Cont'd)

	Analysis Selected.....	Product #1
	Analyzer Stream Number.....	1
	Flow Low Limit.....	0
	Flow High Limit.....	431.2258
	Gross Flow Full Scale.....	0
	Mass Flow Full Scale.....	0
	Low Flow Cutoff.....	.45
	Orifice Measured Dia.....	366.499
	Orifice Reference Temp.....	21
	Orifice Expansion Coef.....	1.600000E-005
	Pipe Measured Dia.....	730.2849
	Pipe Reference Temp.....	20
	Pipe Expansion Coef.....	1.100000E-005
	Use Downstream Pressure?.....	NO
	Use Upstream Temperature?.....	NO
	Orifice Plate Taps.....	Flange Taps
	Transducer Density (Y/N).....	NO
Meter #3	Meter ID.....	
	Analysis Selected.....	Product #1
	Analyzer Stream Number.....	0
	Flow Low Limit.....	0
	Flow High Limit.....	0
	Gross Flow Full Scale.....	0
	Mass Flow Full Scale.....	0
	Low Flow Cutoff.....	0
	Orifice Measured Dia.....	0
	Orifice Reference Temp.....	0
	Orifice Expansion Coef.....	0.000000E+000
	Pipe Measured Dia.....	0
	Pipe Reference Temp.....	0
	Pipe Expansion Coef.....	0.000000E+000
	Use Downstream Pressure?.....	NO
	Use Upstream Temperature?.....	YES
	Orifice Plate Taps.....	Flange Taps
	Transducer Density (Y/N).....	NO

----- FACTOR SETUP & SYS CONSTANTS

	Atmospheric Pressure (absolute).....	1.01325
	Base Pressure (absolute).....	1.01325
	Base Temperature.....	15
	Density of Air.....	1.225410
	Flow Average Factor.....	0
	Alarm Deadband %.....	2.00
	Roll All Totalizers.....	9 Digits
	Gross Totalizer Decimal Places.....	0
	Net Totalizer Decimal Places.....	0
	Mass Totalizer Decimal Places.....	0
	Energy Totalizer Decimal Places.....	0
	Select Averaging Method.....	Flow Weighted
	Select Pressure Units.....	Bar
	Select DP Units.....	Milli Bar

----- FLUID DATA & ANALYSIS

Prod #1	Fluid Name.....	
	Fluid Type Select (F1=Help).....	Natural Gas
	Viscosity in pa.s.....	.0000118
	Isentropic Exponent.....	1.3256
	AGA-8 Method (F1=Help).....	94 Detailed
	Heating Value Method (F1=Help).....	ISO 6976
	Heating Value MJ/NM3.....	38.97
	Specific Gravity.....	0.6344
	1994-01 % Methane (CH4).....	87.8198
	1994-02 % Nitrogen (N2).....	3.0957
	1994-03 % Carbon Dioxide (CO2).....	1.6276
	1994-04 % Ethane (C2H6).....	5.3777
	1994-05 % Propane (C3H8).....	1.4294
	1994-06 % Water (H2O).....	0.0000
	1994-07 % Hydrogen Sulfide (H2S).....	0.0000
	1994-08 % Hydrogen (H2).....	0.0000
	1994-09 % Carbon Monoxide (CO).....	0.0000
	1994-10 % Oxygen (O2).....	0.0000
	1994-11 % i-Butane (iC4H10).....	0.1687
	1994-12 % n-Butane (nC4H10).....	0.2719
	1994-13 % i-Pentane (iC5H12).....	0.0755
	1994-14 % n-Pentane (nC5H12).....	0.0684
	1994-15 % n-Hexane (C6H14).....	0.0654
	1994-16 % n-Heptane (C7H16).....	0.0000
	1994-17 % n-Octane (C8H16).....	0.0000
	1994-18 % n-Nonane.....	0.0000
	1994-19 % n-Decane.....	0.0000
	1994-20 % Helium (He).....	0.0000
	1994-21 % Argon (Ar).....	0.0000
Prod #2	Fluid Name.....	
	Fluid Type Select (F1=Help).....	None Selected
	Reference Density KG/M3.....	0
	Viscosity in pa.s.....	0
	Isentropic Exponent.....	0
	Heating Value MJ/NM3.....	38.97
Prod #3	Fluid Name.....	
	Fluid Type Select (F1=Help).....	None Selected
	Reference Density KG/M3.....	0
	Viscosity in pa.s.....	0
	Isentropic Exponent.....	0
	Heating Value MJ/NM3.....	0
Prod #4	Fluid Name.....	
	Fluid Type Select (F1=Help).....	None Selected
	Reference Density Lb/Ft3.....	0
	Viscosity in Centipoise.....	0
	Isentropic Exponent.....	0
	Heating Value Btu/Scf.....	0

TABLE B.3 CONFIGURATION DATA REPORT 20/07/2007

```

=====
CONFIGURATION DATA REPORT : [ BLAM1607.OMI ]

COMPANY NAME : TRANSCO part of Lattice Group plc
LOCATION      : Sunny Blackrod
COMPUTER ID  : 62823

CURRENT DATE : 3-31-2010  TIME : 12:02a
CONFIGURATION FILE : LAST MODIFIED
=====

----- CHECK I/O MODULE CONFIG
OMNI Flow Computer Model Number..... OMNI 6000
Number of TYPE A Modules Installed..... 3
Number of TYPE B Modules Installed..... 0
Number of TYPE C Modules Installed..... 0
Number of TYPE E Modules Installed..... 0
Number of TYPE E/D Modules Installed..... 0
Number of TYPE H Modules Installed..... 0
Number of DIGITAL Modules Installed..... 1
Number of SERIAL Modules Installed..... 2

----- FLOW COMPUTER TIME & DATE
OMNI Time..... 11:43:40
OMNI Date..... 20/07/07
Select Date Type..... dd/mm/yy

----- CONFIG STATION DATA
Station Totals and Flows Defined As:..... 1+2
Reference Gravity.I/O Pnt#..... 0
Tag.....
Type..... 4-20 mA
Nitrogen % I/O Pnt#..... 0
Tag.....
Carbon Dioxide I/O Pnt#..... 0
Tag.....
Heating Value I/O Pnt#..... 0
Tag.....
Auxiliary Input #1 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd
Auxiliary Input #2 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd
Auxiliary Input #3 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd
Auxiliary Input #4 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd

----- CONFIG METER RUNS
Meter #1 Select Turbine Y/N..... NO
DP Low Range I/O Pnt#..... 3
Tag..... DPLR-1

```



























```

----- CONFIG SERIAL I/O (Cont'd)
          Protocol Type..... Modbus ASCII
          Modbus ID..... 1
          Modicon Compatible..... YES
          CRC Enabled..... YES
Serial I/O #4 Baud Rate..... 9600
              Stop Bits..... 1 Bit
              Data Bits..... 8
              Parity..... None
              Xmit Key Delay..... 0ms
              Protocol Type..... Modbus RTU
              Modbus ID..... 0
              Modicon Compatible..... YES
              CRC Enabled..... YES
  
```

```

----- MODBUS PEER/PEER COMMUNICATIONS
          Activate Redundancy Mode..... NO
          Next Master in Sequence..... 0
          Last Master in Sequence..... 0
          Retry Timer (50 mS Ticks)..... 0
Transaction #1 Target Slave ID..... 0
              Read/Write ?..... Read
              Source Index #..... 0
              # of Points..... 0
              Dest. Point #..... 0
Transaction #2 Target Slave ID..... 0
              Read/Write ?..... Read
              Source Index #..... 0
              # of Points..... 0
              Dest. Point #..... 0
Transaction #3 Target Slave ID..... 0
              Read/Write ?..... Read
              Source Index #..... 0
              # of Points..... 0
              Dest. Point #..... 0
Transaction #4 Target Slave ID..... 0
              Read/Write ?..... Read
              Source Index #..... 0
              # of Points..... 0
              Dest. Point #..... 0
Transaction #5 Target Slave ID..... 0
              Read/Write ?..... Read
              Source Index #..... 0
              # of Points..... 0
              Dest. Point #..... 0
Transaction #6 Target Slave ID..... 0
              Read/Write ?..... Read
              Source Index #..... 0
              # of Points..... 0
              Dest. Point #..... 0
Transaction #7 Target Slave ID..... 0
              Read/Write ?..... Read
              Source Index #..... 0
              # of Points..... 0
  
```

----- MODBUS PEER/PEER COMMUNICATIONS                    (Cont'd)

	Dest. Point #.....	0
Transaction #8	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #9	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #10	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #11	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #12	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #13	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #14	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #15	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #16	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0

----- CUSTOM MODBUS PACKET(ADDR:001)

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0

----- CUSTOM MODBUS PACKET(ADDR:001)                    (Cont'd)

	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Packet #17	Pnt.#.....	0
	# of Points.....	0
Packet #18	Pnt.#.....	0
	# of Points.....	0
Packet #19	Pnt.#.....	0
	# of Points.....	0
Packet #20	Pnt.#.....	0
	# of Points.....	0

----- CUSTOM MODBUS PACKET(ADDR:201)

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0

----- CUSTOM MODBUS PACKET(ADDR:401)

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Packet #17	Pnt.#.....	0
	# of Points.....	0
Packet #18	Pnt.#.....	0
	# of Points.....	0
Packet #19	Pnt.#.....	0
	# of Points.....	0
Packet #20	Pnt.#.....	0
	# of Points.....	0

----- ARCHIVE 701 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0

----- ARCHIVE 701 - RECORD DEFINITION                    (Cont'd)

Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Max Records.....		0
Archive Boolean Trigger.....		0

----- ARCHIVE 702 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0





----- ARCHIVE 704 - RECORD DEFINITION                    (Cont'd)

	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Max Records.....		0
Archive Boolean Trigger.....		0

----- ARCHIVE 705 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0

```
----- ARCHIVE 705 - RECORD DEFINITION                    (Cont'd)
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
                   # of Points..... 0
      Packet #15 Pnt.#..... 0
                   # of Points..... 0
      Packet #16 Pnt.#..... 0
                   # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0

----- ARCHIVE 706 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
                   # of Points..... 0
      Packet #02 Pnt.#..... 0
                   # of Points..... 0
      Packet #03 Pnt.#..... 0
                   # of Points..... 0
      Packet #04 Pnt.#..... 0
                   # of Points..... 0
      Packet #05 Pnt.#..... 0
                   # of Points..... 0
      Packet #06 Pnt.#..... 0
                   # of Points..... 0
      Packet #07 Pnt.#..... 0
                   # of Points..... 0
      Packet #08 Pnt.#..... 0
                   # of Points..... 0
      Packet #09 Pnt.#..... 0
                   # of Points..... 0
      Packet #10 Pnt.#..... 0
                   # of Points..... 0
      Packet #11 Pnt.#..... 0
                   # of Points..... 0
      Packet #12 Pnt.#..... 0
                   # of Points..... 0
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
                   # of Points..... 0
      Packet #15 Pnt.#..... 0
                   # of Points..... 0
      Packet #16 Pnt.#..... 0
                   # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0

----- ARCHIVE 707 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
                   # of Points..... 0
      Packet #02 Pnt.#..... 0
                   # of Points..... 0
```

----- ARCHIVE 707 - RECORD DEFINITION                    (Cont'd)

Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Max Records.....		0
Archive Boolean Trigger.....		0

----- ARCHIVE 708 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0

```
----- ARCHIVE 708 - RECORD DEFINITION                    (Cont'd)
      # of Points..... 0
Packet #12 Pnt.#..... 0
      # of Points..... 0
Packet #13 Pnt.#..... 0
      # of Points..... 0
Packet #14 Pnt.#..... 0
      # of Points..... 0
Packet #15 Pnt.#..... 0
      # of Points..... 0
Packet #16 Pnt.#..... 0
      # of Points..... 0
Max Records..... 0
Archive Boolean Trigger..... 0

----- ARCHIVE 709 - RECORD DEFINITION
Packet #01 Pnt.#..... 0
      # of Points..... 0
Packet #02 Pnt.#..... 0
      # of Points..... 0
Packet #03 Pnt.#..... 0
      # of Points..... 0
Packet #04 Pnt.#..... 0
      # of Points..... 0
Packet #05 Pnt.#..... 0
      # of Points..... 0
Packet #06 Pnt.#..... 0
      # of Points..... 0
Packet #07 Pnt.#..... 0
      # of Points..... 0
Packet #08 Pnt.#..... 0
      # of Points..... 0
Packet #09 Pnt.#..... 0
      # of Points..... 0
Packet #10 Pnt.#..... 0
      # of Points..... 0
Packet #11 Pnt.#..... 0
      # of Points..... 0
Packet #12 Pnt.#..... 0
      # of Points..... 0
Packet #13 Pnt.#..... 0
      # of Points..... 0
Packet #14 Pnt.#..... 0
      # of Points..... 0
Packet #15 Pnt.#..... 0
      # of Points..... 0
Packet #16 Pnt.#..... 0
      # of Points..... 0
Max Records..... 0
Archive Boolean Trigger..... 0
```

```

----- ARCHIVE 710 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
                   # of Points..... 0
      Packet #02 Pnt.#..... 0
                   # of Points..... 0
      Packet #03 Pnt.#..... 0
                   # of Points..... 0
      Packet #04 Pnt.#..... 0
                   # of Points..... 0
      Packet #05 Pnt.#..... 0
                   # of Points..... 0
      Packet #06 Pnt.#..... 0
                   # of Points..... 0
      Packet #07 Pnt.#..... 0
                   # of Points..... 0
      Packet #08 Pnt.#..... 0
                   # of Points..... 0
      Packet #09 Pnt.#..... 0
                   # of Points..... 0
      Packet #10 Pnt.#..... 0
                   # of Points..... 0
      Packet #11 Pnt.#..... 0
                   # of Points..... 0
      Packet #12 Pnt.#..... 0
                   # of Points..... 0
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
                   # of Points..... 0
      Packet #15 Pnt.#..... 0
                   # of Points..... 0
      Packet #16 Pnt.#..... 0
                   # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0
  
```

```

----- CONFIG AB PLC BLOCK#1 READ
      Start Address of Data Block #1..... 9
      Item #1 Source Point #..... 8
                   # of Points..... 10
      Item #2 Source Point #..... 11
                   # of Points..... 2
      Item #3 Source Point #..... 0
                   # of Points..... 0
      Item #4 Source Point #..... 0
                   # of Points..... 0
      Item #5 Source Point #..... 0
                   # of Points..... 3
      Item #6 Source Point #..... 4
                   # of Points..... 6
      Item #7 Source Point #..... 7
                   # of Points..... 1
      Item #8 Source Point #..... 0
  
```



----- CONFIG AB PLC BLOCK#3 READ  
Start Address of Data Block #3..... 0  
Item #1 Source Point #..... 0  
      # of Points..... 0  
Item #2 Source Point #..... 0  
      # of Points..... 0  
Item #3 Source Point #..... 0  
      # of Points..... 0  
Item #4 Source Point #..... 0  
      # of Points..... 0  
Item #5 Source Point #..... 0  
      # of Points..... 0  
Item #6 Source Point #..... 0  
      # of Points..... 0  
Item #7 Source Point #..... 0  
      # of Points..... 0  
Item #8 Source Point #..... 0  
      # of Points..... 0  
Item #9 Source Point #..... 0  
      # of Points..... 0  
Item #10 Source Point #..... 0  
      # of Points..... 0  
Item #11 Source Point #..... 0  
      # of Points..... 0  
Item #12 Source Point #..... 0  
      # of Points..... 0  
Item #13 Source Point #..... 0  
      # of Points..... 0  
Item #14 Source Point #..... 0  
      # of Points..... 0  
Item #15 Source Point #..... 0  
      # of Points..... 0  
Item #16 Source Point #..... 0  
      # of Points..... 0

----- CONFIG AB PLC COMMAND BLOCK  
Start Address of Command Block ..... 0  
Item #1 Dest. Point #..... 0  
      # of Points..... 0  
Item #2 Dest. Point #..... 0  
      # of Points..... 0  
Item #3 Dest. Point #..... 0  
      # of Points..... 0  
Item #4 Dest. Point #..... 0  
      # of Points..... 0  
Item #5 Dest. Point #..... 0  
      # of Points..... 0  
Item #6 Dest. Point #..... 0  
      # of Points..... 0



=====  
CONFIGURATION DATA REPORT                    COMPUTER ID : 62823                    PAGE : 26  
=====

----- CONFIG AB PLC SETPOINT BLOCK  
Start Address of Command Block..... 0  
Item #1 Dest. Point #..... 0  
      # of Points..... 0  
Item #2 Dest. Point #..... 0  
      # of Points..... 0  
Item #3 Dest. Point #..... 0  
      # of Points..... 0  
Item #4 Dest. Point #..... 0  
      # of Points..... 0  
Item #5 Dest. Point #..... 0  
      # of Points..... 0  
Item #6 Dest. Point #..... 0  
      # of Points..... 0

=====  
 CONFIGURATION DATA REPORT                    COMPUTER ID : 62823                    PAGE : 27  
 =====

----- PRINTER SETUP

Computer ID..... 62823  
 Print Interval in Minutes..... 0  
 Print Interval Start Time..... 18:00:00  
 Daily Report Time..... 06:00:00  
 Disable Daily Report..... YES  
 Day Light Savings Start..... 00/00/00  
 Day Light Savings End..... 00/00/00  
 Clear Daily Totals at Batch End..... YES  
 Auto Hourly Batch Select..... NO  
 Auto Weekly Batch Select..... No Batch End  
 Auto Monthly Batch Select..... 0  
 Print Priority..... 0  
 Number of Nulls..... 0  
 Use Default Report Template..... NO  
 Printer Condensed Mode String.....  
 Printer Normal Mode String.....  
 Company Name  
     TRANSCO part of Lattice Group plc  
 Location  
     Sunny Blackrod

----- ANALYSER SETUP

Analyser ID Number..... 1  
 Analyser Type..... DANALYZER  
 Results Interval (Minutes)..... 4  
 Listen Only Mode (Y or N)..... NO  
 GC Fail Code..... Always use  
 GC Comp. # for Methane (CH4)..... 0  
 GC Comp. # for Nitrogen (N2)..... 0  
 GC Comp. # for Carbon Dioxide (CO2)..... 0  
 GC Comp. # for Ethane (C2H6)..... 0  
 GC Comp. # for Propane (C3H8)..... 0  
 GC Comp. # for Water (H2O)..... 0  
 GC Comp. # for Hydrogen Sulfide (H2S)..... 0  
 GC Comp. # for Hydrogen (H2)..... 0  
 GC Comp. # for Carbon Monoxide (CO)..... 0  
 GC Comp. # for Oxygen (O2)..... 0  
 GC Comp. # for i-Butane (iC4H10)..... 0  
 GC Comp. # for n-Butane (nC4H10)..... 0  
 GC Comp. # for i-Pentane (iC5H12)..... 0  
 GC Comp. # for n-Pentane (nC5H12)..... 0  
 GC Comp. # for n-Hexane (C6H14)..... 0  
 GC Comp. # for n-Heptane (C7H16)..... 0  
 GC Comp. # for n-Octane (C8H16)..... 0  
 GC Comp. # for n-Nonane..... 0  
 GC Comp. # for n-Decane..... 0  
 GC Comp. # for Helium (He)..... 0  
 GC Comp. # for Argon (Ar)..... 0  
 GC Comp. # for Heating Value..... 0  
 GC Comp. # for Specific Gravity..... 0

```

----- PID CONTROL SETUP
Loop #1 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
            High Limit..... 0
            Zero Value..... 0
            Full Scale Value..... 0
      Secondary Var Zero Value..... 0
            Full Scale Value..... 0
Loop #2 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
            High Limit..... 0
            Zero Value..... 0
            Full Scale Value..... 0
      Secondary Var Zero Value..... 0
            Full Scale Value..... 0
Loop #3 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
            High Limit..... 0
            Zero Value..... 0
            Full Scale Value..... 0
      Secondary Var Zero Value..... 0
            Full Scale Value..... 0
Loop #4 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
  
```



```

----- DIFF. PRESSURE SETUP (Cont'd)
      Low DP at 4mA..... 0
      Low DP at 20mA..... 50
      Damping Code..... 0.0 Seconds
      High DP at 4mA..... 0
      High DP at 20mA..... 500
      Damping Code..... 0.0 Seconds
      High DP Select %..... 95
      Low DP Select %..... 9
Diff Pressure #3 Low Alarm Limit..... -2.5
      Hi Alarm Limit..... 502.5
      Override Value..... 0
      Override Code..... Avg on fail
      Low DP at 4mA..... 0
      Low DP at 20mA..... 500
      Damping Code..... 0.0 Seconds
      High DP at 4mA..... 0
      High DP at 20mA..... 500
      Damping Code..... 0.0 Seconds
      High DP Select %..... 0
      Low DP Select %..... 0
  
```

```

----- STATION SG/N2 ETC SETUP
Station ID..... Blackrod
Flow Low Limit (Tons/Hr)..... 0
Flow High Limit (Tons/Hr)..... 862.0438
Gross Flowrate Full Scale..... 0
Mass Flowrate Full Scale..... 0
Run Switch Mode..... Manual
Run Switch Time..... 0
Run Switch Threshold Low %DP..... 0
Run Switch Threshold High %DP..... 0
  
```

```

----- METER RUN SETUP
Meter #1 Meter ID..... 9741/MTA
      Analysis Selected..... Product #1
      Analyzer Stream Number..... 3
      Flow Low Limit..... 0
      Flow High Limit..... 431.0219
      Gross Flow Full Scale..... 0
      Mass Flow Full Scale..... 0
      Low Flow Cutoff..... .45
      Orifice Measured Dia..... 366.156
      Orifice Reference Temp..... 21
      Orifice Expansion Coef..... 1.600000E-005
      Pipe Measured Dia..... 730.1738
      Pipe Reference Temp..... 20
      Pipe Expansion Coef..... 1.100000E-005
      Use Downstream Pressure?..... NO
      Use Upstream Temperature?..... NO
      Orifice Plate Taps..... Flange Taps
      Transducer Density (Y/N)..... NO
Meter #2 Meter ID..... 8171/MTB
  
```

----- METER RUN SETUP (Cont'd)

Analysis Selected.....	Product #1
Analyzer Stream Number.....	1
Flow Low Limit.....	0
Flow High Limit.....	431.0219
Gross Flow Full Scale.....	0
Mass Flow Full Scale.....	0
Low Flow Cutoff.....	.45
Orifice Measured Dia.....	366.6744
Orifice Reference Temp.....	20
Orifice Expansion Coef.....	1.600000E-005
Pipe Measured Dia.....	730.2849
Pipe Reference Temp.....	20
Pipe Expansion Coef.....	1.100000E-005
Use Downstream Pressure?.....	NO
Use Upstream Temperature?.....	NO
Orifice Plate Taps.....	Flange Taps
Transducer Density (Y/N).....	NO
Meter #3 Meter ID.....	
Analysis Selected.....	Product #1
Analyzer Stream Number.....	0
Flow Low Limit.....	0
Flow High Limit.....	0
Gross Flow Full Scale.....	0
Mass Flow Full Scale.....	0
Low Flow Cutoff.....	0
Orifice Measured Dia.....	0
Orifice Reference Temp.....	0
Orifice Expansion Coef.....	0.000000E+000
Pipe Measured Dia.....	0
Pipe Reference Temp.....	0
Pipe Expansion Coef.....	0.000000E+000
Use Downstream Pressure?.....	NO
Use Upstream Temperature?.....	YES
Orifice Plate Taps.....	Flange Taps
Transducer Density (Y/N).....	NO

----- FACTOR SETUP & SYS CONSTANTS

Atmospheric Pressure (absolute).....	1.01325
Base Pressure (absolute).....	1.01325
Base Temperature.....	15
Density of Air.....	1.225410
Flow Average Factor.....	0
Alarm Deadband %.....	2.00
Roll All Totalizers.....	9 Digits
Gross Totalizer Decimal Places.....	0
Net Totalizer Decimal Places.....	0
Mass Totalizer Decimal Places.....	0
Energy Totalizer Decimal Places.....	0
Select Averaging Method.....	Flow Weighted
Select Pressure Units.....	Bar
Select DP Units.....	Milli Bar

----- FLUID DATA & ANALYSIS

Prod #1	Fluid Name.....	
	Fluid Type Select (F1=Help).....	Natural Gas
	Viscosity in pa.s.....	.0000119
	Isentropic Exponent.....	1.3257
	AGA-8 Method (F1=Help).....	94 Detailed
	Heating Value Method (F1=Help).....	ISO 6976
	Heating Value MJ/NM3.....	38.883
	Specific Gravity.....	0.6341
	1994-01 % Methane (CH4).....	87.9784
	1994-02 % Nitrogen (N2).....	3.0080
	1994-03 % Carbon Dioxide (CO2).....	1.7608
	1994-04 % Ethane (C2H6).....	5.2067
	1994-05 % Propane (C3H8).....	1.3992
	1994-06 % Water (H2O).....	0.0000
	1994-07 % Hydrogen Sulfide (H2S).....	0.0000
	1994-08 % Hydrogen (H2).....	0.0000
	1994-09 % Carbon Monoxide (CO).....	0.0000
	1994-10 % Oxygen (O2).....	0.0000
	1994-11 % i-Butane (iC4H10).....	0.1678
	1994-12 % n-Butane (nC4H10).....	0.2721
	1994-13 % i-Pentane (iC5H12).....	0.0757
	1994-14 % n-Pentane (nC5H12).....	0.0676
	1994-15 % n-Hexane (C6H14).....	0.0636
	1994-16 % n-Heptane (C7H16).....	0.0000
	1994-17 % n-Octane (C8H16).....	0.0000
	1994-18 % n-Nonane.....	0.0000
	1994-19 % n-Decane.....	0.0000
	1994-20 % Helium (He).....	0.0000
	1994-21 % Argon (Ar).....	0.0000
Prod #2	Fluid Name.....	
	Fluid Type Select (F1=Help).....	None Selected
	Reference Density KG/M3.....	0
	Viscosity in pa.s.....	0
	Isentropic Exponent.....	0
	Heating Value MJ/NM3.....	38.883
Prod #3	Fluid Name.....	
	Fluid Type Select (F1=Help).....	None Selected
	Reference Density KG/M3.....	0
	Viscosity in pa.s.....	0
	Isentropic Exponent.....	0
	Heating Value MJ/NM3.....	0
Prod #4	Fluid Name.....	
	Fluid Type Select (F1=Help).....	None Selected
	Reference Density Lb/Ft3.....	0
	Viscosity in Centipoise.....	0
	Isentropic Exponent.....	0
	Heating Value Btu/Scf.....	0

**TABLE B.4 CONFIGURATION DATA REPORT 15/07/2008**

```

=====
CONFIGURATION DATA REPORT : [ BLAN0715.OMI ]

COMPANY NAME : TRANSCO part of Lattice Group plc
LOCATION      : Sunny Blackrod
COMPUTER ID  : 62823

CURRENT DATE : 3-31-2010  TIME : 12:15a
CONFIGURATION FILE : LAST MODIFIED
=====

----- CHECK I/O MODULE CONFIG
OMNI Flow Computer Model Number..... OMNI 6000
Number of TYPE A Modules Installed..... 3
Number of TYPE B Modules Installed..... 0
Number of TYPE C Modules Installed..... 0
Number of TYPE E Modules Installed..... 0
Number of TYPE E/D Modules Installed..... 0
Number of TYPE H Modules Installed..... 0
Number of DIGITAL Modules Installed..... 1
Number of SERIAL Modules Installed..... 2

----- FLOW COMPUTER TIME & DATE
OMNI Time..... 13:46:07
OMNI Date..... 15/07/08
Select Date Type..... dd/mm/yy

----- CONFIG STATION DATA
Station Totals and Flows Defined As:..... 1+2
Reference Gravity.I/O Pnt#..... 0
Tag.....
Type..... 4-20 mA
Nitrogen % I/O Pnt#..... 0
Tag.....
Carbon Dioxide I/O Pnt#..... 0
Tag.....
Heating Value I/O Pnt#..... 0
Tag.....
Auxiliary Input #1 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd
Auxiliary Input #2 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd
Auxiliary Input #3 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd
Auxiliary Input #4 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd

----- CONFIG METER RUNS
Meter #1 Select Turbine Y/N..... NO
DP Low Range I/O Pnt#..... 3
Tag..... DPLR-1

```















----- CONFIGURE VARIABLE STATEMENTS                    (Cont'd)

	Remarks.....	Set odour flow
Statement #7045 =.....		1069)7044=7085
	Remarks.....	LGT-low flow
Statement #7046 =.....		1055)7044=7086
	Remarks.....	LGT-Met Susp
Statement #7047 =.....		7025)7044=7087
	Remarks.....	LGT-fix flow
Statement #7048 =.....		7107-#80
	Remarks.....	1. Hi den?
Statement #7049 =.....		#24-7107
	Remarks.....	1. Low den?
Statement #7050 =.....		
	Remarks.....	
Statement #7051 =.....		7207-#80
	Remarks.....	2. Hi den?
Statement #7052 =.....		#24-7207
	Remarks.....	2. Low den?
Statement #7053 =.....		
	Remarks.....	
Statement #7054 =.....		7141-#0.7
	Remarks.....	RD hi?
Statement #7055 =.....		#0.5-7141
	Remarks.....	RD low?
Statement #7056 =.....		
	Remarks.....	
Statement #7057 =.....		
	Remarks.....	
Statement #7058 =.....		7854=7138*17002
	Remarks.....	St mass fl limit
Statement #7059 =.....		7854=7854/#1000
	Remarks.....	Convert to ton/h
Statement #7060 =.....		7162=7854/#2
	Remarks.....	1. Mass flow lim
Statement #7061 =.....		7262=7854/#2
	Remarks.....	2. Mass flow lim
Statement #7062 =.....		7151=#.0009*7158
	Remarks.....	1.Set DP cutoff
Statement #7063 =.....		7251=#.0009*7258
	Remarks.....	2.Set DP cutoff
Statement #7064 =.....		
	Remarks.....	
Statement #7065 =.....		
	Remarks.....	
Statement #7066 =.....		
	Remarks.....	
Statement #7067 =.....		7802*#0.000024
	Remarks.....	St vol MSCM/D
Statement #7068 =.....		7804*#0.024
	Remarks.....	St. energy MMJ/D
Statement #7069 =.....		7802/17002*#100
	Remarks.....	%Max flow
Statement #7070 =.....		17002*#0.000024
	Remarks.....	Max vol MSCM/D
Statement #7071 =.....		7070*#44













----- MODBUS PEER/PEER COMMUNICATIONS                    (Cont'd)

	Dest. Point #.....	0
Transaction #8	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #9	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #10	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #11	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #12	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #13	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #14	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #15	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #16	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0

----- CUSTOM MODBUS PACKET(ADDR:001)

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0

----- CUSTOM MODBUS PACKET(ADDR:001)                    (Cont'd)

	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Packet #17	Pnt.#.....	0
	# of Points.....	0
Packet #18	Pnt.#.....	0
	# of Points.....	0
Packet #19	Pnt.#.....	0
	# of Points.....	0
Packet #20	Pnt.#.....	0
	# of Points.....	0

----- CUSTOM MODBUS PACKET(ADDR:201)

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0

----- CUSTOM MODBUS PACKET(ADDR:401)

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Packet #17	Pnt.#.....	0
	# of Points.....	0
Packet #18	Pnt.#.....	0
	# of Points.....	0
Packet #19	Pnt.#.....	0
	# of Points.....	0
Packet #20	Pnt.#.....	0
	# of Points.....	0

----- ARCHIVE 701 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0

----- ARCHIVE 701 - RECORD DEFINITION                    (Cont'd)

Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Max Records.....		0
Archive Boolean Trigger.....		0

----- ARCHIVE 702 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0



```

----- ARCHIVE 702 - RECORD DEFINITION                    (Cont'd)
      # of Points..... 0
    Packet #15 Pnt.#..... 0
      # of Points..... 0
    Packet #16 Pnt.#..... 0
      # of Points..... 0
    Max Records..... 0
    Archive Boolean Trigger..... 0

----- ARCHIVE 703 - RECORD DEFINITION
    Packet #01 Pnt.#..... 0
      # of Points..... 0
    Packet #02 Pnt.#..... 0
      # of Points..... 0
    Packet #03 Pnt.#..... 0
      # of Points..... 0
    Packet #04 Pnt.#..... 0
      # of Points..... 0
    Packet #05 Pnt.#..... 0
      # of Points..... 0
    Packet #06 Pnt.#..... 0
      # of Points..... 0
    Packet #07 Pnt.#..... 0
      # of Points..... 0
    Packet #08 Pnt.#..... 0
      # of Points..... 0
    Packet #09 Pnt.#..... 0
      # of Points..... 0
    Packet #10 Pnt.#..... 0
      # of Points..... 0
    Packet #11 Pnt.#..... 0
      # of Points..... 0
    Packet #12 Pnt.#..... 0
      # of Points..... 0
    Packet #13 Pnt.#..... 0
      # of Points..... 0
    Packet #14 Pnt.#..... 0
      # of Points..... 0
    Packet #15 Pnt.#..... 0
      # of Points..... 0
    Packet #16 Pnt.#..... 0
      # of Points..... 0
    Max Records..... 0
    Archive Boolean Trigger..... 0

----- ARCHIVE 704 - RECORD DEFINITION
    Packet #01 Pnt.#..... 0
      # of Points..... 0
    Packet #02 Pnt.#..... 0
      # of Points..... 0
    Packet #03 Pnt.#..... 0
      # of Points..... 0
    Packet #04 Pnt.#..... 0
  
```

----- ARCHIVE 704 - RECORD DEFINITION                    (Cont'd)

	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Max Records.....		0
Archive Boolean Trigger.....		0

----- ARCHIVE 705 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0

```
----- ARCHIVE 705 - RECORD DEFINITION                    (Cont'd)
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
                   # of Points..... 0
      Packet #15 Pnt.#..... 0
                   # of Points..... 0
      Packet #16 Pnt.#..... 0
                   # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0

----- ARCHIVE 706 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
                   # of Points..... 0
      Packet #02 Pnt.#..... 0
                   # of Points..... 0
      Packet #03 Pnt.#..... 0
                   # of Points..... 0
      Packet #04 Pnt.#..... 0
                   # of Points..... 0
      Packet #05 Pnt.#..... 0
                   # of Points..... 0
      Packet #06 Pnt.#..... 0
                   # of Points..... 0
      Packet #07 Pnt.#..... 0
                   # of Points..... 0
      Packet #08 Pnt.#..... 0
                   # of Points..... 0
      Packet #09 Pnt.#..... 0
                   # of Points..... 0
      Packet #10 Pnt.#..... 0
                   # of Points..... 0
      Packet #11 Pnt.#..... 0
                   # of Points..... 0
      Packet #12 Pnt.#..... 0
                   # of Points..... 0
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
                   # of Points..... 0
      Packet #15 Pnt.#..... 0
                   # of Points..... 0
      Packet #16 Pnt.#..... 0
                   # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0

----- ARCHIVE 707 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
                   # of Points..... 0
      Packet #02 Pnt.#..... 0
                   # of Points..... 0
```

----- ARCHIVE 707 - RECORD DEFINITION                    (Cont'd)

Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Max Records.....		0
Archive Boolean Trigger.....		0

----- ARCHIVE 708 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0

```
----- ARCHIVE 708 - RECORD DEFINITION                    (Cont'd)
      # of Points..... 0
Packet #12 Pnt.#..... 0
      # of Points..... 0
Packet #13 Pnt.#..... 0
      # of Points..... 0
Packet #14 Pnt.#..... 0
      # of Points..... 0
Packet #15 Pnt.#..... 0
      # of Points..... 0
Packet #16 Pnt.#..... 0
      # of Points..... 0
Max Records..... 0
Archive Boolean Trigger..... 0

----- ARCHIVE 709 - RECORD DEFINITION
Packet #01 Pnt.#..... 0
      # of Points..... 0
Packet #02 Pnt.#..... 0
      # of Points..... 0
Packet #03 Pnt.#..... 0
      # of Points..... 0
Packet #04 Pnt.#..... 0
      # of Points..... 0
Packet #05 Pnt.#..... 0
      # of Points..... 0
Packet #06 Pnt.#..... 0
      # of Points..... 0
Packet #07 Pnt.#..... 0
      # of Points..... 0
Packet #08 Pnt.#..... 0
      # of Points..... 0
Packet #09 Pnt.#..... 0
      # of Points..... 0
Packet #10 Pnt.#..... 0
      # of Points..... 0
Packet #11 Pnt.#..... 0
      # of Points..... 0
Packet #12 Pnt.#..... 0
      # of Points..... 0
Packet #13 Pnt.#..... 0
      # of Points..... 0
Packet #14 Pnt.#..... 0
      # of Points..... 0
Packet #15 Pnt.#..... 0
      # of Points..... 0
Packet #16 Pnt.#..... 0
      # of Points..... 0
Max Records..... 0
Archive Boolean Trigger..... 0
```

```

----- ARCHIVE 710 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
                   # of Points..... 0
      Packet #02 Pnt.#..... 0
                   # of Points..... 0
      Packet #03 Pnt.#..... 0
                   # of Points..... 0
      Packet #04 Pnt.#..... 0
                   # of Points..... 0
      Packet #05 Pnt.#..... 0
                   # of Points..... 0
      Packet #06 Pnt.#..... 0
                   # of Points..... 0
      Packet #07 Pnt.#..... 0
                   # of Points..... 0
      Packet #08 Pnt.#..... 0
                   # of Points..... 0
      Packet #09 Pnt.#..... 0
                   # of Points..... 0
      Packet #10 Pnt.#..... 0
                   # of Points..... 0
      Packet #11 Pnt.#..... 0
                   # of Points..... 0
      Packet #12 Pnt.#..... 0
                   # of Points..... 0
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
                   # of Points..... 0
      Packet #15 Pnt.#..... 0
                   # of Points..... 0
      Packet #16 Pnt.#..... 0
                   # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0
  
```

```

----- CONFIG AB PLC BLOCK#1 READ
      Start Address of Data Block #1..... 9
      Item #1 Source Point #..... 8
                   # of Points..... 10
      Item #2 Source Point #..... 11
                   # of Points..... 2
      Item #3 Source Point #..... 0
                   # of Points..... 0
      Item #4 Source Point #..... 0
                   # of Points..... 0
      Item #5 Source Point #..... 0
                   # of Points..... 3
      Item #6 Source Point #..... 4
                   # of Points..... 6
      Item #7 Source Point #..... 7
                   # of Points..... 1
      Item #8 Source Point #..... 0
  
```



----- CONFIG AB PLC BLOCK#3 READ

Start Address of Data Block #3.....	0
Item #1 Source Point #.....	0
# of Points.....	0
Item #2 Source Point #.....	0
# of Points.....	0
Item #3 Source Point #.....	0
# of Points.....	0
Item #4 Source Point #.....	0
# of Points.....	0
Item #5 Source Point #.....	0
# of Points.....	0
Item #6 Source Point #.....	0
# of Points.....	0
Item #7 Source Point #.....	0
# of Points.....	0
Item #8 Source Point #.....	0
# of Points.....	0
Item #9 Source Point #.....	0
# of Points.....	0
Item #10 Source Point #.....	0
# of Points.....	0
Item #11 Source Point #.....	0
# of Points.....	0
Item #12 Source Point #.....	0
# of Points.....	0
Item #13 Source Point #.....	0
# of Points.....	0
Item #14 Source Point #.....	0
# of Points.....	0
Item #15 Source Point #.....	0
# of Points.....	0
Item #16 Source Point #.....	0
# of Points.....	0

----- CONFIG AB PLC COMMAND BLOCK

Start Address of Command Block .....	0
Item #1 Dest. Point #.....	0
# of Points.....	0
Item #2 Dest. Point #.....	0
# of Points.....	0
Item #3 Dest. Point #.....	0
# of Points.....	0
Item #4 Dest. Point #.....	0
# of Points.....	0
Item #5 Dest. Point #.....	0
# of Points.....	0
Item #6 Dest. Point #.....	0
# of Points.....	0



=====  
CONFIGURATION DATA REPORT            COMPUTER ID : 62823            PAGE : 26  
=====

----- CONFIG AB PLC SETPOINT BLOCK  
Start Address of Command Block..... 0  
Item #1 Dest. Point #..... 0  
      # of Points..... 0  
Item #2 Dest. Point #..... 0  
      # of Points..... 0  
Item #3 Dest. Point #..... 0  
      # of Points..... 0  
Item #4 Dest. Point #..... 0  
      # of Points..... 0  
Item #5 Dest. Point #..... 0  
      # of Points..... 0  
Item #6 Dest. Point #..... 0  
      # of Points..... 0

=====  
 CONFIGURATION DATA REPORT                    COMPUTER ID : 62823                    PAGE : 27  
 =====

----- PRINTER SETUP

Computer ID..... 62823  
 Print Interval in Minutes..... 0  
 Print Interval Start Time..... 18:00:00  
 Daily Report Time..... 06:00:00  
 Disable Daily Report..... YES  
 Day Light Savings Start..... 00/00/00  
 Day Light Savings End..... 00/00/00  
 Clear Daily Totals at Batch End..... YES  
 Auto Hourly Batch Select..... NO  
 Auto Weekly Batch Select..... No Batch End  
 Auto Monthly Batch Select..... 0  
 Print Priority..... 0  
 Number of Nulls..... 0  
 Use Default Report Template..... NO  
 Printer Condensed Mode String.....  
 Printer Normal Mode String.....  
 Company Name  
     TRANSCO part of Lattice Group plc  
 Location  
     Sunny Blackrod

----- ANALYSER SETUP

Analyser ID Number..... 1  
 Analyser Type..... DANALYZER  
 Results Interval (Minutes)..... 4  
 Listen Only Mode (Y or N)..... NO  
 GC Fail Code..... Always use  
 GC Comp. # for Methane (CH4)..... 0  
 GC Comp. # for Nitrogen (N2)..... 0  
 GC Comp. # for Carbon Dioxide (CO2)..... 0  
 GC Comp. # for Ethane (C2H6)..... 0  
 GC Comp. # for Propane (C3H8)..... 0  
 GC Comp. # for Water (H2O)..... 0  
 GC Comp. # for Hydrogen Sulfide (H2S)..... 0  
 GC Comp. # for Hydrogen (H2)..... 0  
 GC Comp. # for Carbon Monoxide (CO)..... 0  
 GC Comp. # for Oxygen (O2)..... 0  
 GC Comp. # for i-Butane (iC4H10)..... 0  
 GC Comp. # for n-Butane (nC4H10)..... 0  
 GC Comp. # for i-Pentane (iC5H12)..... 0  
 GC Comp. # for n-Pentane (nC5H12)..... 0  
 GC Comp. # for n-Hexane (C6H14)..... 0  
 GC Comp. # for n-Heptane (C7H16)..... 0  
 GC Comp. # for n-Octane (C8H16)..... 0  
 GC Comp. # for n-Nonane..... 0  
 GC Comp. # for n-Decane..... 0  
 GC Comp. # for Helium (He)..... 0  
 GC Comp. # for Argon (Ar)..... 0  
 GC Comp. # for Heating Value..... 0  
 GC Comp. # for Specific Gravity..... 0

```

----- PID CONTROL SETUP
Loop #1 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
            High Limit..... 0
            Zero Value..... 0
            Full Scale Value..... 0
      Secondary Var Zero Value..... 0
            Full Scale Value..... 0
Loop #2 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
            High Limit..... 0
            Zero Value..... 0
            Full Scale Value..... 0
      Secondary Var Zero Value..... 0
            Full Scale Value..... 0
Loop #3 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
            High Limit..... 0
            Zero Value..... 0
            Full Scale Value..... 0
      Secondary Var Zero Value..... 0
            Full Scale Value..... 0
Loop #4 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
  
```



```

----- DIFF. PRESSURE SETUP (Cont'd)
      Low DP at 4mA..... 0
      Low DP at 20mA..... 50
      Damping Code..... 0.0 Seconds
      High DP at 4mA..... 0
      High DP at 20mA..... 500
      Damping Code..... 0.0 Seconds
      High DP Select %..... 95
      Low DP Select %..... 9
Diff Pressure #3 Low Alarm Limit..... -2.5
      Hi Alarm Limit..... 502.5
      Override Value..... 0
      Override Code..... Avg on fail
      Low DP at 4mA..... 0
      Low DP at 20mA..... 500
      Damping Code..... 0.0 Seconds
      High DP at 4mA..... 0
      High DP at 20mA..... 500
      Damping Code..... 0.0 Seconds
      High DP Select %..... 0
      Low DP Select %..... 0
  
```

```

----- STATION SG/N2 ETC SETUP
Station ID..... Blackrod
Flow Low Limit (Tons/Hr)..... 0
Flow High Limit (Tons/Hr)..... 858.7809
Gross Flowrate Full Scale..... 0
Mass Flowrate Full Scale..... 0
Run Switch Mode..... Manual
Run Switch Time..... 0
Run Switch Threshold Low %DP..... 0
Run Switch Threshold High %DP..... 0
  
```

```

----- METER RUN SETUP
Meter #1 Meter ID..... 9741/MTA
      Analysis Selected..... Product #1
      Analyzer Stream Number..... 3
      Flow Low Limit..... 0
      Flow High Limit..... 429.3905
      Gross Flow Full Scale..... 0
      Mass Flow Full Scale..... 0
      Low Flow Cutoff..... .45
      Orifice Measured Dia..... 366.3466
      Orifice Reference Temp..... 20
      Orifice Expansion Coef..... 1.600000E-005
      Pipe Measured Dia..... 730.1738
      Pipe Reference Temp..... 20
      Pipe Expansion Coef..... 1.100000E-005
      Use Downstream Pressure?..... NO
      Use Upstream Temperature?..... NO
      Orifice Plate Taps..... Flange Taps
      Transducer Density (Y/N)..... NO
Meter #2 Meter ID..... 8171/MTB
  
```

----- METER RUN SETUP (Cont'd)

	Analysis Selected.....	Product #1
	Analyzer Stream Number.....	1
	Flow Low Limit.....	0
	Flow High Limit.....	429.3905
	Gross Flow Full Scale.....	0
	Mass Flow Full Scale.....	0
	Low Flow Cutoff.....	.45
	Orifice Measured Dia.....	366.6384
	Orifice Reference Temp.....	19
	Orifice Expansion Coef.....	1.600000E-005
	Pipe Measured Dia.....	730.2849
	Pipe Reference Temp.....	20
	Pipe Expansion Coef.....	1.100000E-005
	Use Downstream Pressure?.....	NO
	Use Upstream Temperature?.....	NO
	Orifice Plate Taps.....	Flange Taps
	Transducer Density (Y/N).....	NO
Meter #3	Meter ID.....	
	Analysis Selected.....	Product #1
	Analyzer Stream Number.....	0
	Flow Low Limit.....	0
	Flow High Limit.....	0
	Gross Flow Full Scale.....	0
	Mass Flow Full Scale.....	0
	Low Flow Cutoff.....	0
	Orifice Measured Dia.....	0
	Orifice Reference Temp.....	0
	Orifice Expansion Coef.....	0.000000E+000
	Pipe Measured Dia.....	0
	Pipe Reference Temp.....	0
	Pipe Expansion Coef.....	0.000000E+000
	Use Downstream Pressure?.....	NO
	Use Upstream Temperature?.....	YES
	Orifice Plate Taps.....	Flange Taps
	Transducer Density (Y/N).....	NO

----- FACTOR SETUP & SYS CONSTANTS

	Atmospheric Pressure (absolute).....	1.01325
	Base Pressure (absolute).....	1.01325
	Base Temperature.....	15
	Density of Air.....	1.225410
	Flow Average Factor.....	0
	Alarm Deadband %.....	2.00
	Roll All Totalizers.....	9 Digits
	Gross Totalizer Decimal Places.....	0
	Net Totalizer Decimal Places.....	0
	Mass Totalizer Decimal Places.....	0
	Energy Totalizer Decimal Places.....	0
	Select Averaging Method.....	Flow Weighted
	Select Pressure Units.....	Bar
	Select DP Units.....	Milli Bar

----- FLUID DATA & ANALYSIS

Prod #1	Fluid Name.....	
	Fluid Type Select (F1=Help).....	Natural Gas
	Viscosity in pa.s.....	.0000117
	Isentropic Exponent.....	1.328646
	AGA-8 Method (F1=Help).....	94 Detailed
	Heating Value Method (F1=Help).....	ISO 6976
	Heating Value MJ/NM3.....	39.854
	Specific Gravity.....	0.6317
	1994-01 % Methane (CH4).....	88.9096
	1994-02 % Nitrogen (N2).....	1.4097
	1994-03 % Carbon Dioxide (CO2).....	1.6309
	1994-04 % Ethane (C2H6).....	5.6258
	1994-05 % Propane (C3H8).....	1.7901
	1994-06 % Water (H2O).....	0.0000
	1994-07 % Hydrogen Sulfide (H2S).....	0.0000
	1994-08 % Hydrogen (H2).....	0.0000
	1994-09 % Carbon Monoxide (CO).....	0.0000
	1994-10 % Oxygen (O2).....	0.0000
	1994-11 % i-Butane (iC4H10).....	0.1640
	1994-12 % n-Butane (nC4H10).....	0.3014
	1994-13 % i-Pentane (iC5H12).....	0.0578
	1994-14 % n-Pentane (nC5H12).....	0.0607
	1994-15 % n-Hexane (C6H14).....	0.0498
	1994-16 % n-Heptane (C7H16).....	0.0000
	1994-17 % n-Octane (C8H16).....	0.0000
	1994-18 % n-Nonane.....	0.0000
	1994-19 % n-Decane.....	0.0000
	1994-20 % Helium (He).....	0.0000
	1994-21 % Argon (Ar).....	0.0000
Prod #2	Fluid Name.....	
	Fluid Type Select (F1=Help).....	None Selected
	Reference Density KG/M3.....	0
	Viscosity in pa.s.....	0
	Isentropic Exponent.....	0
	Heating Value MJ/NM3.....	39.854
Prod #3	Fluid Name.....	
	Fluid Type Select (F1=Help).....	None Selected
	Reference Density KG/M3.....	0
	Viscosity in pa.s.....	0
	Isentropic Exponent.....	0
	Heating Value MJ/NM3.....	0
Prod #4	Fluid Name.....	
	Fluid Type Select (F1=Help).....	None Selected
	Reference Density Lb/Ft3.....	0
	Viscosity in Centipoise.....	0
	Isentropic Exponent.....	0
	Heating Value Btu/Scf.....	0

**TABLE B.5 CONFIGURATION DATA REPORT 02/07/2009**

```

=====
CONFIGURATION DATA REPORT : [ BLAO0702.OMI ]

COMPANY NAME : TRANSCO part of Lattice Group plc
LOCATION      : Sunny Blackrod
COMPUTER ID  : 62823

CURRENT DATE : 3-31-2010  TIME : 12:20a
CONFIGURATION FILE : LAST MODIFIED
=====

----- CHECK I/O MODULE CONFIG
OMNI Flow Computer Model Number..... OMNI 6000
Number of TYPE A Modules Installed..... 3
Number of TYPE B Modules Installed..... 0
Number of TYPE C Modules Installed..... 0
Number of TYPE E Modules Installed..... 0
Number of TYPE E/D Modules Installed..... 0
Number of TYPE H Modules Installed..... 0
Number of DIGITAL Modules Installed..... 1
Number of SERIAL Modules Installed..... 2

----- FLOW COMPUTER TIME & DATE
OMNI Time..... 10:38:44
OMNI Date..... 02/07/09
Select Date Type..... dd/mm/yy

----- CONFIG STATION DATA
Station Totals and Flows Defined As:..... 1+2
Reference Gravity.I/O Pnt#..... 0
Tag.....
Type..... 4-20 mA
Nitrogen % I/O Pnt#..... 0
Tag.....
Carbon Dioxide I/O Pnt#..... 0
Tag.....
Heating Value I/O Pnt#..... 0
Tag.....
Auxiliary Input #1 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd
Auxiliary Input #2 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd
Auxiliary Input #3 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd
Auxiliary Input #4 I/O Pnt#..... 0
Tag.....
Type..... DIN Rtd

----- CONFIG METER RUNS
Meter #1 Select Turbine Y/N..... NO
DP Low Range I/O Pnt#..... 3
Tag..... DPLR-1

```





























----- MODBUS PEER/PEER COMMUNICATIONS                    (Cont'd)

	Dest. Point #.....	0
Transaction #8	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #9	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #10	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #11	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #12	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #13	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #14	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #15	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0
Transaction #16	Target Slave ID.....	0
	Read/Write ?.....	Read
	Source Index #.....	0
	# of Points.....	0
	Dest. Point #.....	0

----- CUSTOM MODBUS PACKET(ADDR:001)

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0

----- CUSTOM MODBUS PACKET(ADDR:001)                    (Cont'd)

	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Packet #17	Pnt.#.....	0
	# of Points.....	0
Packet #18	Pnt.#.....	0
	# of Points.....	0
Packet #19	Pnt.#.....	0
	# of Points.....	0
Packet #20	Pnt.#.....	0
	# of Points.....	0

----- CUSTOM MODBUS PACKET(ADDR:201)

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0

----- CUSTOM MODBUS PACKET(ADDR:401)

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Packet #17	Pnt.#.....	0
	# of Points.....	0
Packet #18	Pnt.#.....	0
	# of Points.....	0
Packet #19	Pnt.#.....	0
	# of Points.....	0
Packet #20	Pnt.#.....	0
	# of Points.....	0

----- ARCHIVE 701 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0

----- ARCHIVE 701 - RECORD DEFINITION                    (Cont'd)

Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Max Records.....		0
Archive Boolean Trigger.....		0

----- ARCHIVE 702 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0



```
----- ARCHIVE 702 - RECORD DEFINITION                    (Cont'd)
      # of Points..... 0
      Packet #15 Pnt.#..... 0
      # of Points..... 0
      Packet #16 Pnt.#..... 0
      # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0

----- ARCHIVE 703 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
      # of Points..... 0
      Packet #02 Pnt.#..... 0
      # of Points..... 0
      Packet #03 Pnt.#..... 0
      # of Points..... 0
      Packet #04 Pnt.#..... 0
      # of Points..... 0
      Packet #05 Pnt.#..... 0
      # of Points..... 0
      Packet #06 Pnt.#..... 0
      # of Points..... 0
      Packet #07 Pnt.#..... 0
      # of Points..... 0
      Packet #08 Pnt.#..... 0
      # of Points..... 0
      Packet #09 Pnt.#..... 0
      # of Points..... 0
      Packet #10 Pnt.#..... 0
      # of Points..... 0
      Packet #11 Pnt.#..... 0
      # of Points..... 0
      Packet #12 Pnt.#..... 0
      # of Points..... 0
      Packet #13 Pnt.#..... 0
      # of Points..... 0
      Packet #14 Pnt.#..... 0
      # of Points..... 0
      Packet #15 Pnt.#..... 0
      # of Points..... 0
      Packet #16 Pnt.#..... 0
      # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0

----- ARCHIVE 704 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
      # of Points..... 0
      Packet #02 Pnt.#..... 0
      # of Points..... 0
      Packet #03 Pnt.#..... 0
      # of Points..... 0
      Packet #04 Pnt.#..... 0
```

```

----- ARCHIVE 704 - RECORD DEFINITION                    (Cont'd)
      # of Points..... 0
Packet #05 Pnt.#..... 0
      # of Points..... 0
Packet #06 Pnt.#..... 0
      # of Points..... 0
Packet #07 Pnt.#..... 0
      # of Points..... 0
Packet #08 Pnt.#..... 0
      # of Points..... 0
Packet #09 Pnt.#..... 0
      # of Points..... 0
Packet #10 Pnt.#..... 0
      # of Points..... 0
Packet #11 Pnt.#..... 0
      # of Points..... 0
Packet #12 Pnt.#..... 0
      # of Points..... 0
Packet #13 Pnt.#..... 0
      # of Points..... 0
Packet #14 Pnt.#..... 0
      # of Points..... 0
Packet #15 Pnt.#..... 0
      # of Points..... 0
Packet #16 Pnt.#..... 0
      # of Points..... 0
Max Records..... 0
Archive Boolean Trigger..... 0
  
```

```

----- ARCHIVE 705 - RECORD DEFINITION
Packet #01 Pnt.#..... 0
      # of Points..... 0
Packet #02 Pnt.#..... 0
      # of Points..... 0
Packet #03 Pnt.#..... 0
      # of Points..... 0
Packet #04 Pnt.#..... 0
      # of Points..... 0
Packet #05 Pnt.#..... 0
      # of Points..... 0
Packet #06 Pnt.#..... 0
      # of Points..... 0
Packet #07 Pnt.#..... 0
      # of Points..... 0
Packet #08 Pnt.#..... 0
      # of Points..... 0
Packet #09 Pnt.#..... 0
      # of Points..... 0
Packet #10 Pnt.#..... 0
      # of Points..... 0
Packet #11 Pnt.#..... 0
      # of Points..... 0
Packet #12 Pnt.#..... 0
      # of Points..... 0
  
```

```
----- ARCHIVE 705 - RECORD DEFINITION                    (Cont'd)
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
                   # of Points..... 0
      Packet #15 Pnt.#..... 0
                   # of Points..... 0
      Packet #16 Pnt.#..... 0
                   # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0

----- ARCHIVE 706 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
                   # of Points..... 0
      Packet #02 Pnt.#..... 0
                   # of Points..... 0
      Packet #03 Pnt.#..... 0
                   # of Points..... 0
      Packet #04 Pnt.#..... 0
                   # of Points..... 0
      Packet #05 Pnt.#..... 0
                   # of Points..... 0
      Packet #06 Pnt.#..... 0
                   # of Points..... 0
      Packet #07 Pnt.#..... 0
                   # of Points..... 0
      Packet #08 Pnt.#..... 0
                   # of Points..... 0
      Packet #09 Pnt.#..... 0
                   # of Points..... 0
      Packet #10 Pnt.#..... 0
                   # of Points..... 0
      Packet #11 Pnt.#..... 0
                   # of Points..... 0
      Packet #12 Pnt.#..... 0
                   # of Points..... 0
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
                   # of Points..... 0
      Packet #15 Pnt.#..... 0
                   # of Points..... 0
      Packet #16 Pnt.#..... 0
                   # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0

----- ARCHIVE 707 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
                   # of Points..... 0
      Packet #02 Pnt.#..... 0
                   # of Points..... 0
```

----- ARCHIVE 707 - RECORD DEFINITION                    (Cont'd)

Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Max Records.....		0
Archive Boolean Trigger.....		0

----- ARCHIVE 708 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0

----- ARCHIVE 708 - RECORD DEFINITION                    (Cont'd)

	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Max Records.....		0
Archive Boolean Trigger.....		0

----- ARCHIVE 709 - RECORD DEFINITION

Packet #01	Pnt.#.....	0
	# of Points.....	0
Packet #02	Pnt.#.....	0
	# of Points.....	0
Packet #03	Pnt.#.....	0
	# of Points.....	0
Packet #04	Pnt.#.....	0
	# of Points.....	0
Packet #05	Pnt.#.....	0
	# of Points.....	0
Packet #06	Pnt.#.....	0
	# of Points.....	0
Packet #07	Pnt.#.....	0
	# of Points.....	0
Packet #08	Pnt.#.....	0
	# of Points.....	0
Packet #09	Pnt.#.....	0
	# of Points.....	0
Packet #10	Pnt.#.....	0
	# of Points.....	0
Packet #11	Pnt.#.....	0
	# of Points.....	0
Packet #12	Pnt.#.....	0
	# of Points.....	0
Packet #13	Pnt.#.....	0
	# of Points.....	0
Packet #14	Pnt.#.....	0
	# of Points.....	0
Packet #15	Pnt.#.....	0
	# of Points.....	0
Packet #16	Pnt.#.....	0
	# of Points.....	0
Max Records.....		0
Archive Boolean Trigger.....		0

```

----- ARCHIVE 710 - RECORD DEFINITION
      Packet #01 Pnt.#..... 0
                   # of Points..... 0
      Packet #02 Pnt.#..... 0
                   # of Points..... 0
      Packet #03 Pnt.#..... 0
                   # of Points..... 0
      Packet #04 Pnt.#..... 0
                   # of Points..... 0
      Packet #05 Pnt.#..... 0
                   # of Points..... 0
      Packet #06 Pnt.#..... 0
                   # of Points..... 0
      Packet #07 Pnt.#..... 0
                   # of Points..... 0
      Packet #08 Pnt.#..... 0
                   # of Points..... 0
      Packet #09 Pnt.#..... 0
                   # of Points..... 0
      Packet #10 Pnt.#..... 0
                   # of Points..... 0
      Packet #11 Pnt.#..... 0
                   # of Points..... 0
      Packet #12 Pnt.#..... 0
                   # of Points..... 0
      Packet #13 Pnt.#..... 0
                   # of Points..... 0
      Packet #14 Pnt.#..... 0
                   # of Points..... 0
      Packet #15 Pnt.#..... 0
                   # of Points..... 0
      Packet #16 Pnt.#..... 0
                   # of Points..... 0
      Max Records..... 0
      Archive Boolean Trigger..... 0
  
```

```

----- CONFIG AB PLC BLOCK#1 READ
      Start Address of Data Block #1..... 9
      Item #1 Source Point #..... 8
                   # of Points..... 10
      Item #2 Source Point #..... 11
                   # of Points..... 2
      Item #3 Source Point #..... 0
                   # of Points..... 0
      Item #4 Source Point #..... 0
                   # of Points..... 0
      Item #5 Source Point #..... 0
                   # of Points..... 3
      Item #6 Source Point #..... 4
                   # of Points..... 6
      Item #7 Source Point #..... 7
                   # of Points..... 1
      Item #8 Source Point #..... 0
  
```



----- CONFIG AB PLC BLOCK#3 READ  
Start Address of Data Block #3..... 0  
Item #1 Source Point #..... 0  
      # of Points..... 0  
Item #2 Source Point #..... 0  
      # of Points..... 0  
Item #3 Source Point #..... 0  
      # of Points..... 0  
Item #4 Source Point #..... 0  
      # of Points..... 0  
Item #5 Source Point #..... 0  
      # of Points..... 0  
Item #6 Source Point #..... 0  
      # of Points..... 0  
Item #7 Source Point #..... 0  
      # of Points..... 0  
Item #8 Source Point #..... 0  
      # of Points..... 0  
Item #9 Source Point #..... 0  
      # of Points..... 0  
Item #10 Source Point #..... 0  
      # of Points..... 0  
Item #11 Source Point #..... 0  
      # of Points..... 0  
Item #12 Source Point #..... 0  
      # of Points..... 0  
Item #13 Source Point #..... 0  
      # of Points..... 0  
Item #14 Source Point #..... 0  
      # of Points..... 0  
Item #15 Source Point #..... 0  
      # of Points..... 0  
Item #16 Source Point #..... 0  
      # of Points..... 0

----- CONFIG AB PLC COMMAND BLOCK  
Start Address of Command Block ..... 0  
Item #1 Dest. Point #..... 0  
      # of Points..... 0  
Item #2 Dest. Point #..... 0  
      # of Points..... 0  
Item #3 Dest. Point #..... 0  
      # of Points..... 0  
Item #4 Dest. Point #..... 0  
      # of Points..... 0  
Item #5 Dest. Point #..... 0  
      # of Points..... 0  
Item #6 Dest. Point #..... 0  
      # of Points..... 0



=====  
CONFIGURATION DATA REPORT            COMPUTER ID : 62823            PAGE : 26  
=====

----- CONFIG AB PLC SETPOINT BLOCK  
Start Address of Command Block..... 0  
Item #1 Dest. Point #..... 0  
      # of Points..... 0  
Item #2 Dest. Point #..... 0  
      # of Points..... 0  
Item #3 Dest. Point #..... 0  
      # of Points..... 0  
Item #4 Dest. Point #..... 0  
      # of Points..... 0  
Item #5 Dest. Point #..... 0  
      # of Points..... 0  
Item #6 Dest. Point #..... 0  
      # of Points..... 0

=====  
 CONFIGURATION DATA REPORT                    COMPUTER ID : 62823                    PAGE : 27  
 =====

----- PRINTER SETUP

Computer ID..... 62823  
 Print Interval in Minutes..... 0  
 Print Interval Start Time..... 18:00:00  
 Daily Report Time..... 06:00:00  
 Disable Daily Report..... YES  
 Day Light Savings Start..... 00/00/00  
 Day Light Savings End..... 00/00/00  
 Clear Daily Totals at Batch End..... YES  
 Auto Hourly Batch Select..... NO  
 Auto Weekly Batch Select..... No Batch End  
 Auto Monthly Batch Select..... 0  
 Print Priority..... 0  
 Number of Nulls..... 0  
 Use Default Report Template..... NO  
 Printer Condensed Mode String.....  
 Printer Normal Mode String.....  
 Company Name  
     TRANSCO part of Lattice Group plc  
 Location  
     Sunny Blackrod

----- ANALYSER SETUP

Analyser ID Number..... 1  
 Analyser Type..... DANALYZER  
 Results Interval (Minutes)..... 4  
 Listen Only Mode (Y or N)..... NO  
 GC Fail Code..... Always use  
 GC Comp. # for Methane (CH4)..... 0  
 GC Comp. # for Nitrogen (N2)..... 0  
 GC Comp. # for Carbon Dioxide (CO2)..... 0  
 GC Comp. # for Ethane (C2H6)..... 0  
 GC Comp. # for Propane (C3H8)..... 0  
 GC Comp. # for Water (H2O)..... 0  
 GC Comp. # for Hydrogen Sulfide (H2S)..... 0  
 GC Comp. # for Hydrogen (H2)..... 0  
 GC Comp. # for Carbon Monoxide (CO)..... 0  
 GC Comp. # for Oxygen (O2)..... 0  
 GC Comp. # for i-Butane (iC4H10)..... 0  
 GC Comp. # for n-Butane (nC4H10)..... 0  
 GC Comp. # for i-Pentane (iC5H12)..... 0  
 GC Comp. # for n-Pentane (nC5H12)..... 0  
 GC Comp. # for n-Hexane (C6H14)..... 0  
 GC Comp. # for n-Heptane (C7H16)..... 0  
 GC Comp. # for n-Octane (C8H16)..... 0  
 GC Comp. # for n-Nonane..... 0  
 GC Comp. # for n-Decane..... 0  
 GC Comp. # for Helium (He)..... 0  
 GC Comp. # for Argon (Ar)..... 0  
 GC Comp. # for Heating Value..... 0  
 GC Comp. # for Specific Gravity..... 0

```

----- PID CONTROL SETUP
Loop #1 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
            High Limit..... 0
            Zero Value..... 0
            Full Scale Value..... 0
      Secondary Var Zero Value..... 0
            Full Scale Value..... 0
Loop #2 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
            High Limit..... 0
            Zero Value..... 0
            Full Scale Value..... 0
      Secondary Var Zero Value..... 0
            Full Scale Value..... 0
Loop #3 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
            High Limit..... 0
            Zero Value..... 0
            Full Scale Value..... 0
      Secondary Var Zero Value..... 0
            Full Scale Value..... 0
Loop #4 Secondary Setpoint Value..... 0
      Primary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Secondary Gain Factor..... 0.00
            Rpts/Min..... 0.00
      Deadband %..... 0
      Startup Ramp %..... 0
      Shutdown Ramp %..... 0
  
```

```

----- PID CONTROL SETUP (Cont'd)
      Minimum Ramp To %..... 0
      Primary Setpoint Low Limit..... 0
                           High Limit..... 0
                           Zero Value..... 0
                           Full Scale Value..... 0
      Secondary Var Zero Value..... 0
                           Full Scale Value..... 0

----- GRAV/DENSITY SETUP

----- TEMP/PRESS SETUP
      Temp #1 Low Alarm Limit..... -10
                Hi Alarm Limit..... 40
                Override Value..... 15
                Override Code..... Avg on fail
      Temp #2 Low Alarm Limit..... -10
                Hi Alarm Limit..... 40
                Override Value..... 15
                Override Code..... Avg on fail
      Press #1 Low Alarm Limit..... 35
                Hi Alarm Limit..... 80
                Override Value..... 50
                Override Code..... Avg on fail
                at 4mA..... 0
                at 20mA..... 80
                Damping Code..... 0.0 Seconds
      Press #2 Low Alarm Limit..... 30
                Hi Alarm Limit..... 80
                Override Value..... 50
                Override Code..... Avg on fail
                at 4mA..... 0
                at 20mA..... 80
                Damping Code..... 0.0 Seconds

----- DIFF. PRESSURE SETUP
      Diff Pressure #1 Low Alarm Limit..... -2.5
                Hi Alarm Limit..... 502.5
                Override Value..... 0
                Override Code..... Avg on fail
                Low DP at 4mA..... 0
                Low DP at 20mA..... 50
                Damping Code..... 0.0 Seconds
                High DP at 4mA..... 0
                High DP at 20mA..... 500
                Damping Code..... 0.0 Seconds
                High DP Select %..... 95
                Low DP Select %..... 9
      Diff Pressure #2 Low Alarm Limit..... -2.5
                Hi Alarm Limit..... 502.5
                Override Value..... 0
                Override Code..... Avg on fail
  
```

```

----- DIFF. PRESSURE SETUP (Cont'd)
      Low DP at 4mA..... 0
      Low DP at 20mA..... 50
      Damping Code..... 0.0 Seconds
      High DP at 4mA..... 0
      High DP at 20mA..... 500
      Damping Code..... 0.0 Seconds
      High DP Select %..... 95
      Low DP Select %..... 9
Diff Pressure #3 Low Alarm Limit..... -2.5
      Hi Alarm Limit..... 502.5
      Override Value..... 0
      Override Code..... Avg on fail
      Low DP at 4mA..... 0
      Low DP at 20mA..... 500
      Damping Code..... 0.0 Seconds
      High DP at 4mA..... 0
      High DP at 20mA..... 500
      Damping Code..... 0.0 Seconds
      High DP Select %..... 0
      Low DP Select %..... 0
  
```

```

----- STATION SG/N2 ETC SETUP
Station ID..... Blackrod
Flow Low Limit (Tons/Hr)..... 0
Flow High Limit (Tons/Hr)..... 867.4584
Gross Flowrate Full Scale..... 0
Mass Flowrate Full Scale..... 0
Run Switch Mode..... Manual
Run Switch Time..... 0
Run Switch Threshold Low %DP..... 0
Run Switch Threshold High %DP..... 0
  
```

```

----- METER RUN SETUP
Meter #1 Meter ID..... 9741/MTA
      Analysis Selected..... Product #1
      Analyzer Stream Number..... 3
      Flow Low Limit..... 0
      Flow High Limit..... 433.7292
      Gross Flow Full Scale..... 0
      Mass Flow Full Scale..... 0
      Low Flow Cutoff..... .45
      Orifice Measured Dia..... 367.0034
      Orifice Reference Temp..... 20.2
      Orifice Expansion Coef..... 1.600000E-005
      Pipe Measured Dia..... 730.1738
      Pipe Reference Temp..... 20
      Pipe Expansion Coef..... 1.100000E-005
      Use Downstream Pressure?..... NO
      Use Upstream Temperature?..... NO
      Orifice Plate Taps..... Flange Taps
      Transducer Density (Y/N)..... NO
Meter #2 Meter ID..... 8171/MTB
  
```

----- METER RUN SETUP (Cont'd)

	Analysis Selected.....	Product #1
	Analyzer Stream Number.....	1
	Flow Low Limit.....	0
	Flow High Limit.....	433.7292
	Gross Flow Full Scale.....	0
	Mass Flow Full Scale.....	0
	Low Flow Cutoff.....	.45
	Orifice Measured Dia.....	366.4895
	Orifice Reference Temp.....	20.3
	Orifice Expansion Coef.....	1.600000E-005
	Pipe Measured Dia.....	730.2849
	Pipe Reference Temp.....	20
	Pipe Expansion Coef.....	1.100000E-005
	Use Downstream Pressure?.....	NO
	Use Upstream Temperature?.....	NO
	Orifice Plate Taps.....	Flange Taps
	Transducer Density (Y/N).....	NO
Meter #3	Meter ID.....	
	Analysis Selected.....	Product #1
	Analyzer Stream Number.....	0
	Flow Low Limit.....	0
	Flow High Limit.....	0
	Gross Flow Full Scale.....	0
	Mass Flow Full Scale.....	0
	Low Flow Cutoff.....	0
	Orifice Measured Dia.....	0
	Orifice Reference Temp.....	0
	Orifice Expansion Coef.....	0.000000E+000
	Pipe Measured Dia.....	0
	Pipe Reference Temp.....	0
	Pipe Expansion Coef.....	0.000000E+000
	Use Downstream Pressure?.....	NO
	Use Upstream Temperature?.....	YES
	Orifice Plate Taps.....	Flange Taps
	Transducer Density (Y/N).....	NO

----- FACTOR SETUP & SYS CONSTANTS

	Atmospheric Pressure (absolute).....	1.01325
	Base Pressure (absolute).....	1.01325
	Base Temperature.....	15
	Density of Air.....	1.225410
	Flow Average Factor.....	0
	Alarm Deadband %.....	2.00
	Roll All Totalizers.....	9 Digits
	Gross Totalizer Decimal Places.....	0
	Net Totalizer Decimal Places.....	0
	Mass Totalizer Decimal Places.....	0
	Energy Totalizer Decimal Places.....	0
	Select Averaging Method.....	Flow Weighted
	Select Pressure Units.....	Bar
	Select DP Units.....	Milli Bar

----- FLUID DATA & ANALYSIS

Prod #1	Fluid Name.....	
	Fluid Type Select (F1=Help).....	Natural Gas
	Viscosity in pa.s.....	.0000117
	Isentropic Exponent.....	1.328626
	AGA-8 Method (F1=Help).....	94 Detailed
	Heating Value Method (F1=Help).....	ISO 6976
	Heating Value MJ/NM3.....	39.15599
	Specific Gravity.....	0.6381
	1994-01 % Methane (CH4).....	87.1718
	1994-02 % Nitrogen (N2).....	3.2063
	1994-03 % Carbon Dioxide (CO2).....	1.5881
	1994-04 % Ethane (C2H6).....	5.7779
	1994-05 % Propane (C3H8).....	1.5528
	1994-06 % Water (H2O).....	0.0000
	1994-07 % Hydrogen Sulfide (H2S).....	0.0000
	1994-08 % Hydrogen (H2).....	0.0000
	1994-09 % Carbon Monoxide (CO).....	0.0000
	1994-10 % Oxygen (O2).....	0.0000
	1994-11 % i-Butane (iC4H10).....	0.2048
	1994-12 % n-Butane (nC4H10).....	0.3254
	1994-13 % i-Pentane (iC5H12).....	0.0721
	1994-14 % n-Pentane (nC5H12).....	0.0590
	1994-15 % n-Hexane (C6H14).....	0.0417
	1994-16 % n-Heptane (C7H16).....	0.0000
	1994-17 % n-Octane (C8H16).....	0.0000
	1994-18 % n-Nonane.....	0.0000
	1994-19 % n-Decane.....	0.0000
	1994-20 % Helium (He).....	0.0000
	1994-21 % Argon (Ar).....	0.0000
Prod #2	Fluid Name.....	
	Fluid Type Select (F1=Help).....	None Selected
	Reference Density KG/M3.....	0
	Viscosity in pa.s.....	0
	Isentropic Exponent.....	0
	Heating Value MJ/NM3.....	39.15599
Prod #3	Fluid Name.....	
	Fluid Type Select (F1=Help).....	None Selected
	Reference Density KG/M3.....	0
	Viscosity in pa.s.....	0
	Isentropic Exponent.....	0
	Heating Value MJ/NM3.....	0
Prod #4	Fluid Name.....	
	Fluid Type Select (F1=Help).....	None Selected
	Reference Density Lb/Ft3.....	0
	Viscosity in Centipoise.....	0
	Isentropic Exponent.....	0
	Heating Value Btu/Scf.....	0

## APPENDIX C CORRECTED DAILY VOLUME FLOWS

TABLE C.1 FLOWS AT BLACKROD DURING THE PERIOD OF THE MIS-MEASUREMENT

	<b>Original Values (total)</b>	<b>Corrected values (total)</b>	<b>% increase</b>
<b>Date</b>	<b>Volume (mscm)</b>	<b>Volume (mscm)</b>	<b>Volume (mscm)</b>
16/07/2007	4.42297	<b>4.42329</b>	0.0073
17/07/2007	4.64599	<b>4.64615</b>	0.0035
18/07/2007	0.67304	<b>0.67317</b>	0.0192
19/07/2007	0.14594	<b>0.14622</b>	0.1933
20/07/2007	0.28699	<b>0.28755</b>	0.1936
21/07/2007	5.76404	<b>5.77520</b>	0.1936
22/07/2007	4.35999	<b>4.36843</b>	0.1936
23/07/2007	4.06097	<b>4.06883</b>	0.1936
24/07/2007	3.60004	<b>3.60701</b>	0.1936
25/07/2007	4.21295	<b>4.22111</b>	0.1936
26/07/2007	0.66205	<b>0.66333</b>	0.1936
27/07/2007	0.00000	<b>0.00000</b>	
28/07/2007	0.00000	<b>0.00000</b>	
29/07/2007	0.00000	<b>0.00000</b>	
30/07/2007	0.00000	<b>0.00000</b>	
31/07/2007	0.66498	<b>0.66627</b>	0.1936
01/08/2007	0.00000	<b>0.00000</b>	
02/08/2007	0.00000	<b>0.00000</b>	
03/08/2007	0.00000	<b>0.00000</b>	
04/08/2007	0.00000	<b>0.00000</b>	
05/08/2007	0.00000	<b>0.00000</b>	
06/08/2007	0.00702	<b>0.00703</b>	0.1936
07/08/2007	0.00000	<b>0.00000</b>	
08/08/2007	0.00000	<b>0.00000</b>	
09/08/2007	0.00000	<b>0.00000</b>	
10/08/2007	0.00000	<b>0.00000</b>	
11/08/2007	0.00000	<b>0.00000</b>	
12/08/2007	0.00000	<b>0.00000</b>	
13/08/2007	0.00000	<b>0.00000</b>	
14/08/2007	0.00000	<b>0.00000</b>	
15/08/2007	0.00000	<b>0.00000</b>	
16/08/2007	0.04297	<b>0.04305</b>	0.1936
17/08/2007	0.00000	<b>0.00000</b>	
18/08/2007	0.00000	<b>0.00000</b>	
19/08/2007	0.55603	<b>0.55711</b>	0.1936
20/08/2007	4.73297	<b>4.74213</b>	0.1936
21/08/2007	4.39899	<b>4.40751</b>	0.1936
22/08/2007	3.71704	<b>3.72424</b>	0.1936
23/08/2007	3.52301	<b>3.52983</b>	0.1936
24/08/2007	3.02399	<b>3.02984</b>	0.1936
25/08/2007	3.05200	<b>3.05791</b>	0.1936
26/08/2007	3.34601	<b>3.35249</b>	0.1936
27/08/2007	0.02899	<b>0.02905</b>	0.1936
28/08/2007	0.00000	<b>0.00000</b>	
29/08/2007	0.00000	<b>0.00000</b>	
30/08/2007	0.00000	<b>0.00000</b>	
31/08/2007	0.00000	<b>0.00000</b>	
01/09/2007	4.16998	<b>4.17805</b>	0.1936
02/09/2007	4.89502	<b>4.90450</b>	0.1936
03/09/2007	4.74097	<b>4.75015</b>	0.1936
04/09/2007	4.58600	<b>4.59488</b>	0.1936



05/09/2007	4.23700	<b>4.24520</b>	0.1936
06/09/2007	3.56799	<b>3.57490</b>	0.1936
07/09/2007	3.50500	<b>3.51179</b>	0.1936
08/09/2007	0.41901	<b>0.41982</b>	0.1936
09/09/2007	3.80701	<b>3.81438</b>	0.1936
10/09/2007	1.06903	<b>1.07110</b>	0.1936
11/09/2007	4.05499	<b>4.06284</b>	0.1936
12/09/2007	3.90399	<b>3.91155</b>	0.1936
13/09/2007	3.96100	<b>3.96867</b>	0.1936
14/09/2007	4.62097	<b>4.62992</b>	0.1936
15/09/2007	3.88702	<b>3.89455</b>	0.1936
16/09/2007	3.38300	<b>3.38955</b>	0.1936
17/09/2007	4.18604	<b>4.19414</b>	0.1936
18/09/2007	6.62097	<b>6.63379</b>	0.1936
19/09/2007	4.28497	<b>4.29327</b>	0.1936
20/09/2007	6.22705	<b>6.23911</b>	0.1936
21/09/2007	6.79700	<b>6.81016</b>	0.1936
22/09/2007	5.00000	<b>5.00968</b>	0.1936
23/09/2007	5.30798	<b>5.31826</b>	0.1936
24/09/2007	8.00800	<b>8.02350</b>	0.1936
25/09/2007	6.31201	<b>6.32423</b>	0.1936
26/09/2007	7.66602	<b>7.68086</b>	0.1936
27/09/2007	6.79095	<b>6.80410</b>	0.1936
28/09/2007	5.55701	<b>5.56777</b>	0.1936
29/09/2007	4.08502	<b>4.09293</b>	0.1936
30/09/2007	4.95300	<b>4.96259</b>	0.1936
01/10/2007	6.06000	<b>6.07173</b>	0.1936
02/10/2007	8.05701	<b>8.07261</b>	0.1936
03/10/2007	8.24500	<b>8.26096</b>	0.1936
04/10/2007	8.33496	<b>8.35110</b>	0.1936
05/10/2007	7.40503	<b>7.41937</b>	0.1936
06/10/2007	7.26300	<b>7.27706</b>	0.1936
07/10/2007	7.68500	<b>7.69988</b>	0.1936
08/10/2007	8.91300	<b>8.93026</b>	0.1936
09/10/2007	8.91100	<b>8.92825</b>	0.1936
10/10/2007	8.90900	<b>8.92625</b>	0.1936
11/10/2007	0.87200	<b>0.87369</b>	0.1936
12/10/2007	6.87800	<b>6.89132</b>	0.1936
13/10/2007	4.49200	<b>4.50070</b>	0.1936
14/10/2007	3.23700	<b>3.24327</b>	0.1936
15/10/2007	5.40700	<b>5.41747</b>	0.1936
16/10/2007	4.44600	<b>4.45461</b>	0.1936
17/10/2007	6.82900	<b>6.84222</b>	0.1936
18/10/2007	7.49600	<b>7.51051</b>	0.1936
19/10/2007	6.92300	<b>6.93640</b>	0.1936
20/10/2007	5.61700	<b>5.62787</b>	0.1936
21/10/2007	4.48800	<b>4.49669</b>	0.1936
22/10/2007	5.20800	<b>5.21808</b>	0.1936
23/10/2007	4.54600	<b>4.55480</b>	0.1936
24/10/2007	3.91200	<b>3.91957</b>	0.1936
25/10/2007	3.71500	<b>3.72219</b>	0.1936
26/10/2007	5.82000	<b>5.83127</b>	0.1936
27/10/2007	3.73100	<b>3.73822</b>	0.1936
28/10/2007	4.67700	<b>4.68605</b>	0.1936
29/10/2007	7.87800	<b>7.89325</b>	0.1936
30/10/2007	7.34000	<b>7.35421</b>	0.1936
31/10/2007	5.53799	<b>5.54871</b>	0.1936
01/11/2007	5.44301	<b>5.45355</b>	0.1936
02/11/2007	1.01100	<b>1.01296</b>	0.1936
03/11/2007	1.58899	<b>1.59207</b>	0.1936
04/11/2007	5.50500	<b>5.51566</b>	0.1936

05/11/2007	7.80800	<b>7.82312</b>	0.1936
06/11/2007	8.08301	<b>8.09866</b>	0.1936
07/11/2007	7.23999	<b>7.25401</b>	0.1936
08/11/2007	8.97800	<b>8.99538</b>	0.1936
09/11/2007	8.80101	<b>8.81805</b>	0.1936
10/11/2007	6.55699	<b>6.56968</b>	0.1936
11/11/2007	7.53300	<b>7.54758</b>	0.1936
12/11/2007	8.21201	<b>8.22791</b>	0.1936
13/11/2007	4.75400	<b>4.76320</b>	0.1936
14/11/2007	7.85699	<b>7.87220</b>	0.1936
15/11/2007	6.91701	<b>6.93040</b>	0.1936
16/11/2007	0.00000	<b>0.00000</b>	
17/11/2007	5.05800	<b>5.06779</b>	0.1936
18/11/2007	6.20100	<b>6.21301</b>	0.1936
19/11/2007	6.86800	<b>6.88130</b>	0.1936
20/11/2007	8.07901	<b>8.09465</b>	0.1936
21/11/2007	4.54800	<b>4.55680</b>	0.1936
22/11/2007	5.29099	<b>5.30123</b>	0.1936
23/11/2007	8.07101	<b>8.08664</b>	0.1936
24/11/2007	8.00497	<b>8.02047</b>	0.1936
25/11/2007	5.98102	<b>5.99260</b>	0.1936
26/11/2007	4.79700	<b>4.80629</b>	0.1936
27/11/2007	4.45001	<b>4.45863</b>	0.1936
28/11/2007	5.90500	<b>5.91643</b>	0.1936
29/11/2007	6.50299	<b>6.51558</b>	0.1936
30/11/2007	5.05600	<b>5.06579</b>	0.1936
01/12/2007	5.32599	<b>5.33630</b>	0.1936
02/12/2007	8.07202	<b>8.08765</b>	0.1936
03/12/2007	8.32898	<b>8.34510</b>	0.1936
04/12/2007	6.76901	<b>6.78211</b>	0.1936
05/12/2007	5.47198	<b>5.48257</b>	0.1936
06/12/2007	7.22000	<b>7.23398</b>	0.1936
07/12/2007	8.25803	<b>8.27402</b>	0.1936
08/12/2007	9.00897	<b>9.02641</b>	0.1936
09/12/2007	7.11902	<b>7.13280</b>	0.1936
10/12/2007	8.87601	<b>8.89319</b>	0.1936
11/12/2007	8.09500	<b>8.11067</b>	0.1936
12/12/2007	8.16299	<b>8.17879</b>	0.1936
13/12/2007	8.87000	<b>8.88717</b>	0.1936
14/12/2007	8.08200	<b>8.09765</b>	0.1936
15/12/2007	5.73300	<b>5.74410</b>	0.1936
16/12/2007	7.01401	<b>7.02759</b>	0.1936
17/12/2007	7.82401	<b>7.83906</b>	0.1924
18/12/2007	9.06097	<b>9.07833</b>	0.1915
19/12/2007	8.45901	<b>8.47521</b>	0.1915
20/12/2007	8.53500	<b>8.55135</b>	0.1915
21/12/2007	8.31198	<b>8.32790</b>	0.1915
22/12/2007	7.54901	<b>7.56347</b>	0.1915
23/12/2007	6.64301	<b>6.65573</b>	0.1915
24/12/2007	7.62100	<b>7.63560</b>	0.1915
25/12/2007	8.15399	<b>8.16961</b>	0.1915
26/12/2007	7.68298	<b>7.69770</b>	0.1915
27/12/2007	6.49304	<b>6.50548</b>	0.1915
28/12/2007	6.92297	<b>6.93623</b>	0.1915
29/12/2007	9.72504	<b>9.74367</b>	0.1915
30/12/2007	7.21698	<b>7.23080</b>	0.1915
31/12/2007	9.60602	<b>9.62442</b>	0.1915
01/01/2008	7.11700	<b>7.13063</b>	0.1915
02/01/2008	10.41090	<b>10.43084</b>	0.1915
03/01/2008	8.33301	<b>8.34897</b>	0.1915
04/01/2008	6.61304	<b>6.62571</b>	0.1915

05/01/2008	8.28595	<b>8.30182</b>	0.1915
06/01/2008	4.41504	<b>4.42350</b>	0.1915
07/01/2008	8.25299	<b>8.26880</b>	0.1915
08/01/2008	8.33197	<b>8.34793</b>	0.1915
09/01/2008	9.06104	<b>9.07840</b>	0.1915
10/01/2008	8.19397	<b>8.20967</b>	0.1915
11/01/2008	8.95801	<b>8.97517</b>	0.1915
12/01/2008	3.66003	<b>3.66704</b>	0.1915
13/01/2008	8.65997	<b>8.67656</b>	0.1915
14/01/2008	6.67902	<b>6.69181</b>	0.1915
15/01/2008	7.43298	<b>7.44722</b>	0.1915
16/01/2008	5.80701	<b>5.81813</b>	0.1915
17/01/2008	7.78699	<b>7.80191</b>	0.1915
18/01/2008	8.89203	<b>8.90906</b>	0.1915
19/01/2008	6.30896	<b>6.32104</b>	0.1915
20/01/2008	5.69702	<b>5.70793</b>	0.1915
21/01/2008	7.28400	<b>7.29795</b>	0.1915
22/01/2008	8.55304	<b>8.56942</b>	0.1915
23/01/2008	6.24194	<b>6.25390</b>	0.1915
24/01/2008	8.88000	<b>8.89701</b>	0.1915
25/01/2008	8.10602	<b>8.12155</b>	0.1915
26/01/2008	8.97198	<b>8.98917</b>	0.1915
27/01/2008	9.10303	<b>9.12047</b>	0.1915
28/01/2008	7.69000	<b>7.70473</b>	0.1915
29/01/2008	7.20697	<b>7.22077</b>	0.1915
30/01/2008	9.30505	<b>9.32287</b>	0.1915
31/01/2008	8.34094	<b>8.35692</b>	0.1915
01/02/2008	8.52704	<b>8.54337</b>	0.1915
02/02/2008	8.04401	<b>8.05942</b>	0.1915
03/02/2008	6.57898	<b>6.59158</b>	0.1915
04/02/2008	6.25500	<b>6.26698</b>	0.1915
05/02/2008	8.22498	<b>8.24073</b>	0.1915
06/02/2008	7.88800	<b>7.90311</b>	0.1915
07/02/2008	9.00903	<b>9.02629</b>	0.1915
08/02/2008	6.69000	<b>6.70281</b>	0.1915
09/02/2008	7.37000	<b>7.38412</b>	0.1915
10/02/2008	7.61597	<b>7.63056</b>	0.1915
11/02/2008	7.85706	<b>7.87211</b>	0.1915
12/02/2008	6.98999	<b>7.00338</b>	0.1915
13/02/2008	7.80298	<b>7.81793</b>	0.1915
14/02/2008	8.58203	<b>8.59847</b>	0.1915
15/02/2008	7.61798	<b>7.63257</b>	0.1915
16/02/2008	7.83197	<b>7.84697</b>	0.1915
17/02/2008	8.85303	<b>8.86999</b>	0.1915
18/02/2008	7.65900	<b>7.67367</b>	0.1915
19/02/2008	7.97302	<b>7.98829</b>	0.1915
20/02/2008	8.59796	<b>8.61443</b>	0.1915
21/02/2008	7.94904	<b>7.96427</b>	0.1915
22/02/2008	7.50201	<b>7.51638</b>	0.1915
23/02/2008	6.27899	<b>6.29102</b>	0.1915
24/02/2008	6.93500	<b>6.94828</b>	0.1915
25/02/2008	8.30298	<b>8.31888</b>	0.1915
26/02/2008	7.41400	<b>7.42820</b>	0.1915
27/02/2008	8.54803	<b>8.56440</b>	0.1915
28/02/2008	8.92600	<b>8.94310</b>	0.1915
29/02/2008	10.36400	<b>10.38385</b>	0.1915
01/03/2008	9.25300	<b>9.27072</b>	0.1915
02/03/2008	7.40500	<b>7.41918</b>	0.1915
03/03/2008	9.73400	<b>9.75265</b>	0.1915
04/03/2008	10.52500	<b>10.54516</b>	0.1915
05/03/2008	7.72700	<b>7.74180</b>	0.1915

06/03/2008	7.80200	<b>7.81694</b>	0.1915
07/03/2008	7.94300	<b>7.95821</b>	0.1915
08/03/2008	8.03900	<b>8.05440</b>	0.1915
09/03/2008	7.58100	<b>7.59552</b>	0.1915
10/03/2008	8.64300	<b>8.65956</b>	0.1915
11/03/2008	7.95800	<b>7.97324</b>	0.1915
12/03/2008	9.69500	<b>9.71357</b>	0.1915
13/03/2008	7.88100	<b>7.89610</b>	0.1915
14/03/2008	7.94800	<b>7.96322</b>	0.1915
15/03/2008	7.75101	<b>7.76586</b>	0.1915
16/03/2008	8.23500	<b>8.25077</b>	0.1915
17/03/2008	8.87401	<b>8.89101</b>	0.1915
18/03/2008	9.60899	<b>9.62740</b>	0.1915
19/03/2008	8.59599	<b>8.61246</b>	0.1915
20/03/2008	9.44501	<b>9.46310</b>	0.1915
21/03/2008	8.53101	<b>8.54735</b>	0.1915
22/03/2008	8.89699	<b>8.91403</b>	0.1915
23/03/2008	8.73801	<b>8.75475</b>	0.1915
24/03/2008	8.49901	<b>8.51529</b>	0.1915
25/03/2008	9.84000	<b>9.85885</b>	0.1915
26/03/2008	7.72000	<b>7.73479</b>	0.1915
27/03/2008	6.94099	<b>6.95428</b>	0.1915
28/03/2008	8.88600	<b>8.90302</b>	0.1915
29/03/2008	9.02301	<b>9.04029</b>	0.1915
30/03/2008	6.96201	<b>6.97537</b>	0.1918
31/03/2008	6.85999	<b>6.87327</b>	0.1936
01/04/2008	8.58899	<b>8.60562</b>	0.1936
02/04/2008	7.61002	<b>7.62475</b>	0.1936
03/04/2008	7.50101	<b>7.51553</b>	0.1936
04/04/2008	4.99698	<b>5.00665</b>	0.1936
05/04/2008	6.79800	<b>6.81116</b>	0.1936
06/04/2008	9.85300	<b>9.87208</b>	0.1936
07/04/2008	7.69202	<b>7.70691</b>	0.1936
08/04/2008	8.62000	<b>8.63669</b>	0.1936
09/04/2008	8.98599	<b>9.00339</b>	0.1936
10/04/2008	7.36801	<b>7.38227</b>	0.1936
11/04/2008	8.81601	<b>8.83308</b>	0.1936
12/04/2008	7.67899	<b>7.69386</b>	0.1936
13/04/2008	7.43900	<b>7.45340</b>	0.1936
14/04/2008	7.32202	<b>7.33620</b>	0.1936
15/04/2008	7.52499	<b>7.53956</b>	0.1936
16/04/2008	7.21600	<b>7.22997</b>	0.1936
17/04/2008	8.49200	<b>8.50844</b>	0.1936
18/04/2008	7.92200	<b>7.93734</b>	0.1936
19/04/2008	8.84799	<b>8.86512</b>	0.1936
20/04/2008	8.20001	<b>8.21589</b>	0.1936
21/04/2008	5.09399	<b>5.10385</b>	0.1936
22/04/2008	4.68600	<b>4.69507</b>	0.1936
23/04/2008	5.67599	<b>5.68698</b>	0.1936
24/04/2008	6.93799	<b>6.95142</b>	0.1936
25/04/2008	7.97900	<b>7.99445</b>	0.1936
26/04/2008	6.46600	<b>6.47852</b>	0.1936
27/04/2008	7.32501	<b>7.33919</b>	0.1936
28/04/2008	5.60999	<b>5.62085</b>	0.1936
29/04/2008	5.94501	<b>5.95652</b>	0.1936
30/04/2008	6.07199	<b>6.08375</b>	0.1936
01/05/2008	5.73502	<b>5.74612</b>	0.1936
02/05/2008	4.75201	<b>4.76121</b>	0.1936
03/05/2008	5.39600	<b>5.40645</b>	0.1936
04/05/2008	7.77899	<b>7.79405</b>	0.1936
05/05/2008	5.64996	<b>5.66090</b>	0.1936

06/05/2008	6.94904	<b>6.96249</b>	0.1936
07/05/2008	5.30499	<b>5.31526</b>	0.1936
08/05/2008	7.18201	<b>7.19591</b>	0.1936
09/05/2008	6.48596	<b>6.49852</b>	0.1936
10/05/2008	6.06805	<b>6.07980</b>	0.1936
11/05/2008	6.08295	<b>6.09473</b>	0.1936
12/05/2008	1.94305	<b>1.94681</b>	0.1936
13/05/2008	0.83496	<b>0.83658</b>	0.1936
14/05/2008	0.00000	<b>0.00000</b>	
15/05/2008	0.00000	<b>0.00000</b>	
16/05/2008	1.34601	<b>1.34862</b>	0.1936
17/05/2008	7.54498	<b>7.55959</b>	0.1936
18/05/2008	8.06201	<b>8.07762</b>	0.1936
19/05/2008	7.79004	<b>7.80512</b>	0.1936
20/05/2008	7.43298	<b>7.44737</b>	0.1936
21/05/2008	6.54596	<b>6.55863</b>	0.1936
22/05/2008	1.45404	<b>1.45686</b>	0.1936
23/05/2008	5.83197	<b>5.84326</b>	0.1936
24/05/2008	4.94501	<b>4.95458</b>	0.1936
25/05/2008	5.49304	<b>5.50367</b>	0.1936
26/05/2008	3.74396	<b>3.75121</b>	0.1936
27/05/2008	6.46100	<b>6.47351</b>	0.1936
28/05/2008	6.47504	<b>6.48758</b>	0.1936
29/05/2008	2.77197	<b>2.77734</b>	0.1936
30/05/2008	4.96698	<b>4.97660</b>	0.1936
31/05/2008	0.00000	<b>0.00000</b>	
01/06/2008	0.49304	<b>0.49399</b>	0.1936
02/06/2008	5.02997	<b>5.03971</b>	0.1936
03/06/2008	3.48102	<b>3.48776</b>	0.1936
04/06/2008	4.98499	<b>4.99464</b>	0.1936
05/06/2008	4.88202	<b>4.89147</b>	0.1936
06/06/2008	4.88397	<b>4.89343</b>	0.1936
07/06/2008	0.08301	<b>0.08317</b>	0.1936
08/06/2008	0.00000	<b>0.00000</b>	
09/06/2008	0.00000	<b>0.00000</b>	
10/06/2008	0.00000	<b>0.00000</b>	
11/06/2008	0.09302	<b>0.09320</b>	0.1936
12/06/2008	3.89899	<b>3.90654</b>	0.1936
13/06/2008	3.25500	<b>3.26130</b>	0.1936
14/06/2008	3.81403	<b>3.82141</b>	0.1936
15/06/2008	4.18298	<b>4.19108</b>	0.1936
16/06/2008	5.18799	<b>5.19803</b>	0.1936
17/06/2008	5.48602	<b>5.49664</b>	0.1936
18/06/2008	6.53998	<b>6.55264</b>	0.1936
19/06/2008	3.44403	<b>3.45070</b>	0.1936
20/06/2008	4.83795	<b>4.84732</b>	0.1936
21/06/2008	0.66003	<b>0.66131</b>	0.1936
22/06/2008	5.85797	<b>5.86931</b>	0.1936
23/06/2008	5.01202	<b>5.02172</b>	0.1936
24/06/2008	4.41101	<b>4.41955</b>	0.1936
25/06/2008	4.07001	<b>4.07789</b>	0.1936
26/06/2008	5.22198	<b>5.23209</b>	0.1936
27/06/2008	0.00000	<b>0.00000</b>	
28/06/2008	0.00000	<b>0.00000</b>	
29/06/2008	0.06702	<b>0.06715</b>	0.1936
30/06/2008	3.95898	<b>3.96664</b>	0.1936
01/07/2008	3.31799	<b>3.32441</b>	0.1936
02/07/2008	3.53198	<b>3.53882</b>	0.1936
03/07/2008	3.61005	<b>3.61704</b>	0.1936
04/07/2008	0.01099	<b>0.01101</b>	0.1936
05/07/2008	0.00000	<b>0.00000</b>	

06/07/2008	0.00000	<b>0.00000</b>	
07/07/2008	3.73401	<b>3.74124</b>	0.1936
08/07/2008	0.00696	<b>0.00697</b>	0.1936
09/07/2008	4.27502	<b>4.28330</b>	0.1936
10/07/2008	3.87201	<b>3.87951</b>	0.1936
11/07/2008	4.31500	<b>4.32335</b>	0.1936
12/07/2008	0.73596	<b>0.73738</b>	0.1936
13/07/2008	0.00000	<b>0.00000</b>	
14/07/2008	0.00000	<b>0.00000</b>	
15/07/2008	0.00000	<b>0.00000</b>	
16/07/2008	0.06702	<b>0.06711</b>	0.1361
17/07/2008	0.08899	<b>0.08912</b>	0.1448
18/07/2008	0.00000	<b>0.00000</b>	
19/07/2008	0.00000	<b>0.00000</b>	
20/07/2008	0.00000	<b>0.00000</b>	
21/07/2008	0.00000	<b>0.00000</b>	
22/07/2008	0.00000	<b>0.00000</b>	
23/07/2008	0.00000	<b>0.00000</b>	
24/07/2008	0.00000	<b>0.00000</b>	
25/07/2008	0.00000	<b>0.00000</b>	
26/07/2008	0.00000	<b>0.00000</b>	
27/07/2008	0.00000	<b>0.00000</b>	
28/07/2008	0.00000	<b>0.00000</b>	
29/07/2008	0.00000	<b>0.00000</b>	
30/07/2008	0.00000	<b>0.00000</b>	
31/07/2008	0.00000	<b>0.00000</b>	
01/08/2008	0.62097	<b>0.62206</b>	0.1752
02/08/2008	0.00000	<b>0.00000</b>	
03/08/2008	0.00000	<b>0.00000</b>	
04/08/2008	0.02100	<b>0.02104</b>	0.1752
05/08/2008	0.00000	<b>0.00000</b>	
06/08/2008	0.00000	<b>0.00000</b>	
07/08/2008	0.00000	<b>0.00000</b>	
08/08/2008	0.00000	<b>0.00000</b>	
09/08/2008	0.00000	<b>0.00000</b>	
10/08/2008	0.00000	<b>0.00000</b>	
11/08/2008	0.00000	<b>0.00000</b>	
12/08/2008	0.00000	<b>0.00000</b>	
13/08/2008	0.00000	<b>0.00000</b>	
14/08/2008	0.00000	<b>0.00000</b>	
15/08/2008	0.00000	<b>0.00000</b>	
16/08/2008	0.00000	<b>0.00000</b>	
17/08/2008	0.00000	<b>0.00000</b>	
18/08/2008	0.00000	<b>0.00000</b>	
19/08/2008	0.31903	<b>0.31959</b>	0.1752
20/08/2008	0.12201	<b>0.12222</b>	0.1752
21/08/2008	3.81696	<b>3.82365</b>	0.1752
22/08/2008	3.65802	<b>3.66443</b>	0.1752
23/08/2008	0.00000	<b>0.00000</b>	
24/08/2008	0.00000	<b>0.00000</b>	
25/08/2008	0.00000	<b>0.00000</b>	
26/08/2008	0.00000	<b>0.00000</b>	
27/08/2008	0.00000	<b>0.00000</b>	
28/08/2008	0.00000	<b>0.00000</b>	
29/08/2008	0.00000	<b>0.00000</b>	
30/08/2008	0.00000	<b>0.00000</b>	
31/08/2008	0.00000	<b>0.00000</b>	
01/09/2008	0.00000	<b>0.00000</b>	
02/09/2008	0.20001	<b>0.20036</b>	0.1752
03/09/2008	0.00000	<b>0.00000</b>	
04/09/2008	0.00000	<b>0.00000</b>	

05/09/2008	1.24597	<b>1.24815</b>	0.1752
06/09/2008	3.83002	<b>3.83673</b>	0.1752
07/09/2008	4.20898	<b>4.21635</b>	0.1752
08/09/2008	4.81403	<b>4.82246</b>	0.1752
09/09/2008	5.69800	<b>5.70798</b>	0.1752
10/09/2008	5.30200	<b>5.31129</b>	0.1752
11/09/2008	4.80499	<b>4.81341</b>	0.1752
12/09/2008	4.60602	<b>4.61409</b>	0.1752
13/09/2008	3.41901	<b>3.42500</b>	0.1752
14/09/2008	0.00000	<b>0.00000</b>	
15/09/2008	0.00000	<b>0.00000</b>	
16/09/2008	6.36096	<b>6.37210</b>	0.1752
17/09/2008	6.81604	<b>6.82798</b>	0.1752
18/09/2008	5.94501	<b>5.95543</b>	0.1752
19/09/2008	5.06696	<b>5.07584</b>	0.1752
20/09/2008	4.05701	<b>4.06412</b>	0.1752
21/09/2008	4.46399	<b>4.47181</b>	0.1752
22/09/2008	5.82001	<b>5.83021</b>	0.1752
23/09/2008	6.51202	<b>6.52343</b>	0.1752
24/09/2008	6.50000	<b>6.51139</b>	0.1752
25/09/2008	6.26001	<b>6.27098</b>	0.1752
26/09/2008	6.06396	<b>6.07458</b>	0.1752
27/09/2008	5.33600	<b>5.34535</b>	0.1752
28/09/2008	6.27399	<b>6.28498</b>	0.1752
29/09/2008	8.82703	<b>8.84249</b>	0.1752
30/09/2008	8.34998	<b>8.36461</b>	0.1752
01/10/2008	6.89404	<b>6.90612</b>	0.1752
02/10/2008	6.09796	<b>6.10864</b>	0.1752
03/10/2008	6.91101	<b>6.92312</b>	0.1752
04/10/2008	6.16602	<b>6.17682</b>	0.1752
05/10/2008	5.05298	<b>5.06183</b>	0.1752
06/10/2008	5.26904	<b>5.27827</b>	0.1752
07/10/2008	4.88800	<b>4.89656</b>	0.1752
08/10/2008	4.52698	<b>4.53491</b>	0.1752
09/10/2008	5.28198	<b>5.29123</b>	0.1752
10/10/2008	5.79803	<b>5.80819</b>	0.1752
11/10/2008	4.64197	<b>4.65010</b>	0.1752
12/10/2008	5.03101	<b>5.03982</b>	0.1752
13/10/2008	5.07404	<b>5.08293</b>	0.1752
14/10/2008	6.33997	<b>6.35108</b>	0.1752
15/10/2008	7.44800	<b>7.46105</b>	0.1752
16/10/2008	8.62700	<b>8.64211</b>	0.1752
17/10/2008	7.61500	<b>7.62834</b>	0.1752
18/10/2008	7.43500	<b>7.44803</b>	0.1752
19/10/2008	7.42300	<b>7.43601</b>	0.1752
20/10/2008	9.60700	<b>9.61711</b>	0.1052
21/10/2008	9.42400	<b>9.43655</b>	0.1332
22/10/2008	10.00700	<b>10.01592</b>	0.0891
23/10/2008	10.99700	<b>11.00663</b>	0.0876
24/10/2008	9.58100	<b>9.58939</b>	0.0876
25/10/2008	9.69100	<b>9.69948</b>	0.0875
26/10/2008	9.68600	<b>9.69448</b>	0.0875
27/10/2008	12.07600	<b>12.08657</b>	0.0875
28/10/2008	11.95700	<b>11.96747</b>	0.0875
29/10/2008	12.43000	<b>12.44088</b>	0.0875
30/10/2008	11.55900	<b>11.56912</b>	0.0875
31/10/2008	10.91800	<b>10.92755</b>	0.0875
01/11/2008	9.79300	<b>9.80157</b>	0.0875
02/11/2008	10.59300	<b>10.60228</b>	0.0876
03/11/2008	9.58200	<b>9.59039</b>	0.0876
04/11/2008	8.22000	<b>8.22720</b>	0.0876

05/11/2008	9.55301	<b>9.56138</b>	0.0876
06/11/2008	9.10199	<b>9.10996</b>	0.0876
07/11/2008	9.53700	<b>9.54535</b>	0.0876
08/11/2008	8.54401	<b>8.55149</b>	0.0876
09/11/2008	10.62400	<b>10.63331</b>	0.0876
10/11/2008	12.06200	<b>12.07257</b>	0.0876
11/11/2008	11.83500	<b>11.84537</b>	0.0876
12/11/2008	10.03700	<b>10.04579</b>	0.0876
13/11/2008	9.03900	<b>9.04691</b>	0.0875
14/11/2008	7.03802	<b>7.04415</b>	0.0870
15/11/2008	6.88998	<b>6.89598</b>	0.0870
16/11/2008	9.60300	<b>9.61141</b>	0.0875
17/11/2008	8.19302	<b>8.20019</b>	0.0875
18/11/2008	6.99197	<b>6.99809</b>	0.0876
19/11/2008	8.73102	<b>8.73866</b>	0.0875
20/11/2008	8.66098	<b>8.66856</b>	0.0875
21/11/2008	8.75000	<b>8.75766</b>	0.0875
22/11/2008	8.08502	<b>8.09210</b>	0.0875
23/11/2008	8.91901	<b>8.92682</b>	0.0875
24/11/2008	8.82098	<b>8.82870</b>	0.0875
25/11/2008	8.85400	<b>8.86175</b>	0.0875
26/11/2008	6.46799	<b>6.47365</b>	0.0876
27/11/2008	7.39301	<b>7.39948</b>	0.0875
28/11/2008	10.28800	<b>10.29700</b>	0.0875
29/11/2008	13.62900	<b>13.64093</b>	0.0876
30/11/2008	13.38400	<b>13.39572</b>	0.0875
01/12/2008	13.55700	<b>13.56887</b>	0.0875
02/12/2008	13.49700	<b>13.50882</b>	0.0875
03/12/2008	13.73900	<b>13.75103</b>	0.0875
04/12/2008	11.54400	<b>11.55410</b>	0.0875
05/12/2008	10.24600	<b>10.25497</b>	0.0875
06/12/2008	8.47299	<b>8.48040</b>	0.0875
07/12/2008	10.77800	<b>10.78743</b>	0.0875
08/12/2008	8.29803	<b>8.30529</b>	0.0875
09/12/2008	11.17600	<b>11.18578</b>	0.0875
10/12/2008	10.60400	<b>10.61328</b>	0.0875
11/12/2008	11.59800	<b>11.60815</b>	0.0875
12/12/2008	10.57996	<b>10.58922</b>	0.0875
13/12/2008	8.51105	<b>8.51850</b>	0.0875
14/12/2008	8.62598	<b>8.63353</b>	0.0875
15/12/2008	11.30300	<b>11.31289</b>	0.0875
16/12/2008	7.82501	<b>7.83186</b>	0.0875
17/12/2008	7.91400	<b>7.92093</b>	0.0875
18/12/2008	6.62000	<b>6.62580</b>	0.0876
19/12/2008	8.84601	<b>8.85375</b>	0.0875
20/12/2008	8.23102	<b>8.23823</b>	0.0876
21/12/2008	7.46698	<b>7.47352</b>	0.0876
22/12/2008	6.73700	<b>6.74290</b>	0.0876
23/12/2008	8.10400	<b>8.11109</b>	0.0875
24/12/2008	7.01202	<b>7.01816</b>	0.0875
25/12/2008	6.64197	<b>6.64779</b>	0.0876
26/12/2008	8.36700	<b>8.37432</b>	0.0875
27/12/2008	9.44000	<b>9.44826</b>	0.0875
28/12/2008	10.36600	<b>10.37507</b>	0.0875
29/12/2008	11.02500	<b>11.03465</b>	0.0875
30/12/2008	13.19500	<b>13.20655</b>	0.0875
31/12/2008	14.84500	<b>14.85799</b>	0.0875
01/01/2009	11.54700	<b>11.55710</b>	0.0875
02/01/2009	9.73499	<b>9.74351</b>	0.0875
03/01/2009	9.48999	<b>9.49829</b>	0.0875
04/01/2009	9.49103	<b>9.49934</b>	0.0875



05/01/2009	11.99200	<b>12.00249</b>	0.0875
06/01/2009	10.09700	<b>10.10584</b>	0.0875
07/01/2009	9.06500	<b>9.07293</b>	0.0875
08/01/2009	9.64600	<b>9.65444</b>	0.0875
09/01/2009	11.14300	<b>11.15275</b>	0.0875
10/01/2009	12.54100	<b>12.55198</b>	0.0875
11/01/2009	9.92297	<b>9.93165</b>	0.0875
12/01/2009	7.77399	<b>7.78080</b>	0.0875
13/01/2009	10.01500	<b>10.02376</b>	0.0875
14/01/2009	9.68903	<b>9.69751</b>	0.0875
15/01/2009	8.77197	<b>8.77965</b>	0.0875
16/01/2009	8.61102	<b>8.61855</b>	0.0875
17/01/2009	7.82898	<b>7.83583</b>	0.0875
18/01/2009	8.88098	<b>8.88875</b>	0.0875
19/01/2009	11.00400	<b>11.01363</b>	0.0875
20/01/2009	9.31500	<b>9.32315</b>	0.0875
21/01/2009	9.30200	<b>9.31014</b>	0.0875
22/01/2009	8.89301	<b>8.90079</b>	0.0875
23/01/2009	9.96301	<b>9.97173</b>	0.0875
24/01/2009	8.87897	<b>8.88674</b>	0.0875
25/01/2009	7.39398	<b>7.40045</b>	0.0875
26/01/2009	9.31702	<b>9.32517</b>	0.0875
27/01/2009	9.03100	<b>9.03890</b>	0.0875
28/01/2009	7.87600	<b>7.88289</b>	0.0875
29/01/2009	8.97100	<b>8.97885</b>	0.0875
30/01/2009	10.94300	<b>10.95257</b>	0.0875
31/01/2009	10.13300	<b>10.14186</b>	0.0875
01/02/2009	12.15200	<b>12.16263</b>	0.0875
02/02/2009	11.49000	<b>11.50005</b>	0.0875
03/02/2009	10.16400	<b>10.17289</b>	0.0875
04/02/2009	11.01500	<b>11.02464</b>	0.0875
05/02/2009	11.88300	<b>11.89340</b>	0.0875
06/02/2009	10.15100	<b>10.15988</b>	0.0875
07/02/2009	9.85600	<b>9.86462</b>	0.0875
08/02/2009	11.63800	<b>11.64818</b>	0.0875
09/02/2009	11.36199	<b>11.37193</b>	0.0875
10/02/2009	10.02400	<b>10.03277</b>	0.0875
11/02/2009	10.41200	<b>10.42110</b>	0.0874
12/02/2009	12.22300	<b>12.23370</b>	0.0875
13/02/2009	8.60500	<b>8.61253</b>	0.0875
14/02/2009	7.91000	<b>7.91692</b>	0.0875
15/02/2009	6.50099	<b>6.50668</b>	0.0875
16/02/2009	7.65601	<b>7.66271</b>	0.0875
17/02/2009	6.60600	<b>6.61178</b>	0.0876
18/02/2009	6.52000	<b>6.52571</b>	0.0875
19/02/2009	7.79100	<b>7.79782</b>	0.0875
20/02/2009	8.35799	<b>8.36531</b>	0.0875
21/02/2009	7.39001	<b>7.39648</b>	0.0875
22/02/2009	7.94598	<b>7.95293</b>	0.0875
23/02/2009	8.11301	<b>8.12011</b>	0.0875
24/02/2009	8.52100	<b>8.52846</b>	0.0875
25/02/2009	8.62701	<b>8.63456</b>	0.0875
26/02/2009	7.73999	<b>7.74676</b>	0.0875
27/02/2009	6.57800	<b>6.58376</b>	0.0875
28/02/2009	8.42499	<b>8.43236</b>	0.0875
01/03/2009	8.75803	<b>8.76570</b>	0.0875
02/03/2009	8.25400	<b>8.26122</b>	0.0875
03/03/2009	8.08499	<b>8.09207</b>	0.0875
04/03/2009	8.77899	<b>8.78667</b>	0.0875
05/03/2009	8.08502	<b>8.09210</b>	0.0875
06/03/2009	7.47299	<b>7.47953</b>	0.0875

07/03/2009	6.54402	<b>6.54975</b>	0.0876
08/03/2009	7.79898	<b>7.80581</b>	0.0875
09/03/2009	8.07800	<b>8.08507</b>	0.0875
10/03/2009	8.15302	<b>8.16016</b>	0.0875
11/03/2009	6.61499	<b>6.62078</b>	0.0876
12/03/2009	6.00201	<b>6.00727</b>	0.0876
13/03/2009	7.17099	<b>7.17727</b>	0.0875
14/03/2009	7.53900	<b>7.54560</b>	0.0875
15/03/2009	6.13800	<b>6.14337</b>	0.0875
16/03/2009	6.52301	<b>6.52872</b>	0.0875
17/03/2009	6.63199	<b>6.64106</b>	0.1368
18/03/2009	6.09799	<b>6.10867</b>	0.1752
19/03/2009	5.78201	<b>5.79214</b>	0.1752
20/03/2009	6.27301	<b>6.28400</b>	0.1752
21/03/2009	8.71799	<b>8.73326</b>	0.1752
22/03/2009	7.60800	<b>7.62133</b>	0.1752
23/03/2009	10.03800	<b>10.05559</b>	0.1752
24/03/2009	8.22302	<b>8.23743</b>	0.1752
25/03/2009	9.87598	<b>9.89328</b>	0.1752
26/03/2009	6.82800	<b>6.83996</b>	0.1752
27/03/2009	5.16000	<b>5.16904</b>	0.1752
28/03/2009	6.12402	<b>6.13475</b>	0.1752
29/03/2009	5.03699	<b>5.04581</b>	0.1752
30/03/2009	6.21100	<b>6.22188</b>	0.1752
31/03/2009	4.84003	<b>4.84851</b>	0.1752
01/04/2009	6.02997	<b>6.04053</b>	0.1752
02/04/2009	6.40002	<b>6.41123</b>	0.1752
03/04/2009	7.57098	<b>7.58424</b>	0.1752
04/04/2009	7.82898	<b>7.84270</b>	0.1752
05/04/2009	7.67303	<b>7.68647</b>	0.1752
06/04/2009	7.91296	<b>7.92682</b>	0.1752
07/04/2009	7.05304	<b>7.06540</b>	0.1752
08/04/2009	7.61298	<b>7.62632</b>	0.1752
09/04/2009	6.69403	<b>6.70576</b>	0.1752
10/04/2009	6.72998	<b>6.74177</b>	0.1752
11/04/2009	5.87396	<b>5.88425</b>	0.1752
12/04/2009	3.08606	<b>3.09147</b>	0.1752
13/04/2009	2.75397	<b>2.75879</b>	0.1752
14/04/2009	4.32898	<b>4.33656</b>	0.1752
15/04/2009	4.34399	<b>4.35160</b>	0.1752
16/04/2009	5.81500	<b>5.82519</b>	0.1752
17/04/2009	6.40405	<b>6.41527</b>	0.1752
18/04/2009	4.84100	<b>4.84948</b>	0.1752
19/04/2009	4.08795	<b>4.09511</b>	0.1752
20/04/2009	4.10205	<b>4.10924</b>	0.1752
21/04/2009	4.88696	<b>4.89552</b>	0.1752
22/04/2009	4.57300	<b>4.58101</b>	0.1752
23/04/2009	3.79004	<b>3.79668</b>	0.1752
24/04/2009	4.51996	<b>4.52788</b>	0.1752
25/04/2009	3.99103	<b>3.99802</b>	0.1752
26/04/2009	5.25897	<b>5.26818</b>	0.1752
27/04/2009	7.67603	<b>7.68948</b>	0.1752
28/04/2009	7.73901	<b>7.75257</b>	0.1752
29/04/2009	6.29498	<b>6.30601</b>	0.1752
30/04/2009	7.20801	<b>7.22064</b>	0.1752
01/05/2009	5.62799	<b>5.63785</b>	0.1752
02/05/2009	5.14099	<b>5.15000</b>	0.1752
03/05/2009	5.73102	<b>5.74106</b>	0.1752
04/05/2009	8.45300	<b>8.46781</b>	0.1752
05/05/2009	8.55298	<b>8.56796</b>	0.1752
06/05/2009	6.24103	<b>6.25196</b>	0.1752

07/05/2009	5.75897	<b>5.76906</b>	0.1752
08/05/2009	3.64703	<b>3.65342</b>	0.1752
09/05/2009	0.00000	<b>0.00000</b>	
10/05/2009	0.00000	<b>0.00000</b>	
11/05/2009	0.00000	<b>0.00000</b>	
12/05/2009	0.00000	<b>0.00000</b>	
13/05/2009	0.00000	<b>0.00000</b>	
14/05/2009	0.00000	<b>0.00000</b>	
15/05/2009	0.00000	<b>0.00000</b>	
16/05/2009	0.00098	<b>0.00098</b>	0.0000
17/05/2009	0.00000	<b>0.00000</b>	
18/05/2009	0.00000	<b>0.00000</b>	
19/05/2009	0.00000	<b>0.00000</b>	
20/05/2009	0.00000	<b>0.00000</b>	
21/05/2009	0.00000	<b>0.00000</b>	
22/05/2009	0.00104	<b>0.00104</b>	0.0000
23/05/2009	0.00000	<b>0.00000</b>	
24/05/2009	0.00000	<b>0.00000</b>	
25/05/2009	0.00000	<b>0.00000</b>	
26/05/2009	0.00000	<b>0.00000</b>	
27/05/2009	0.00000	<b>0.00000</b>	
28/05/2009	0.00000	<b>0.00000</b>	
29/05/2009	1.33801	<b>1.34035</b>	0.1752
30/05/2009	5.30499	<b>5.31428</b>	0.1752
31/05/2009	5.25403	<b>5.26324</b>	0.1752
01/06/2009	5.57300	<b>5.58276</b>	0.1752
02/06/2009	5.58398	<b>5.59376</b>	0.1752
03/06/2009	0.11401	<b>0.11421</b>	0.1752
04/06/2009	0.00000	<b>0.00000</b>	
05/06/2009	0.00000	<b>0.00000</b>	
06/06/2009	0.00000	<b>0.00000</b>	
07/06/2009	5.61096	<b>5.62079</b>	0.1752
08/06/2009	5.04700	<b>5.05584</b>	0.1752
09/06/2009	5.04199	<b>5.05082</b>	0.1752
10/06/2009	4.18402	<b>4.19135</b>	0.1752
11/06/2009	4.01501	<b>4.02204</b>	0.1752
12/06/2009	3.48102	<b>3.48712</b>	0.1752
13/06/2009	5.23999	<b>5.24917</b>	0.1752
14/06/2009	5.44501	<b>5.45455</b>	0.1752
15/06/2009	5.92896	<b>5.93935</b>	0.1752
16/06/2009	5.95300	<b>5.96343</b>	0.1752
17/06/2009	7.27802	<b>7.29077</b>	0.1752
18/06/2009	7.68103	<b>7.69449</b>	0.1752
19/06/2009	7.93799	<b>7.95190</b>	0.1752
20/06/2009	6.88397	<b>6.89603</b>	0.1752
21/06/2009	7.13104	<b>7.14353</b>	0.1752
22/06/2009	6.77197	<b>6.78383</b>	0.1752
23/06/2009	5.91901	<b>5.92938</b>	0.1752
24/06/2009	5.96899	<b>5.97945</b>	0.1752
25/06/2009	5.87000	<b>5.88028</b>	0.1752
26/06/2009	1.82300	<b>1.82619</b>	0.1752
27/06/2009	0.00000	<b>0.00000</b>	
28/06/2009	0.00000	<b>0.00000</b>	
29/06/2009	0.11896	<b>0.11917</b>	0.1752
30/06/2009	0.08203	<b>0.08214</b>	0.1375
01/07/2009	0.05505	<b>0.05515</b>	0.1752
02/07/2009	0.10497	<b>0.10502</b>	0.0448