SEP 30 1996

21

ENGINEERING DATA TRANSMITTAL

Page 1 of 1

1. EDT No. 141089

2. To: (Receiving Organization) TWRS/ENG	3. From: (Originating Organization) KHC/ETS	4. Related EDT No.: None
5. Proj./Prog./Dept./Div.: AN-107 Caustic Addition	6. Cog. Engr.: J. L. Dowell	7. Purchase Order No.: N/A
8. Originator Remarks:		9. Equip./Component No.: N/A
		10. System/Bldg./Facility: 241-AN-274
11. Receiver Remarks:		12. Major Assm. Dwg. No.: N/A
		13. Permit/Permit Application No.: N/A
		14. Required Response Date: ASAP

DATA TRANSMITTED					(F)	(G)	(H)	(I)
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	Approval Designator	Reason for Trans- mittal	Originator Dispo- sition	Receiver Dispo- sition
1	WHC-SD-WM-OTR-214		0	Operational Test Report for Hourly Recording the Level of Tank 241-AN-107	N/A	1,2	1	

16.

KEY

Approval Designator (F)	Reason for Transmittal (G)		Disposition (H) & (I)	
E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)	1. Approval 2. Release 3. Information	4. Review 5. Post-Review 6. Dist. (Receipt Acknow. Required)	1. Approved 2. Approved w/comment 3. Disapproved w/comment	4. Reviewed no/comment 5. Reviewed w/comment 6. Receipt acknowledged

SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)									
(G)	(H)								
Reason	Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN
1	1	Cog. Eng. J. L. Dowell	<i>J. L. Dowell</i>	9-1-96	E6-21	KG Carothers per telecon	<i>J. L. Dowell</i>	9-2-96	R1-56
1	1	Cog. Mgr. GN Hanson per telecon	<i>J. L. Dowell</i>	9-1-96	S5-05	JT Ross per telecon	<i>J. L. Dowell</i>	9-2-96	S5-03
		QA N/A				WD Harding per telecon	<i>J. L. Dowell</i>	9-25-96	S5-01
		Safety N/A							
		Env. N/A							

18. <i>J. L. Dowell</i> Signature of EDT Originator	19. _____ Authorized Representative for Receiving Organization	20. <i>J. L. Dowell</i> Cogizant Manager	21. DOE APPROVAL (if required) Ctrl. No. ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments
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Operational Test Report for Hourly Recording the Level of Tank 241-AN-107.

JL DOWELL

for Westinghouse Hanford Co., Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-87RL10930

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Key Words: AN-107, CAUSTIC ADDITION, MIXER PUMP, DATALOGGER, DATA ACQUISITION, ENRAF, LEVEL GAUGE, FLAMMABLE GAS

Abstract: The purpose of this report is to document the existing Enraf Advanced Technology Gauges, Communications Interface Unit, and LOGVR18 software installed at 241-AN tank farm record the level of 241-AN-107 on an hourly basis for up to 10 days.

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Karen M. Nolan 9/30/96
Release Approval Date

Approved for Public Release

WHC-SD-WM-OTR-214
Revision 0

OPERATIONAL TEST REPORT
FOR HOURLY RECORDING THE
LEVEL OF TANK 241-AN-107

August 1996

J. L. Dowell

Westinghouse Hanford Company
P.O. Box 1970
Richland, Washington 99352

CONTENTS

1.0	INTRODUCTION	3
2.0	DESCRIPTION OF TEST	3
3.0	TEST METHOD AND TEST EQUIPMENT	3
4.0	TEST RESULTS	4
	4.1 Summary of Test Results	4
	4.2 Detailed Explanation of Test Results	4
5.0	DISCUSSION OF TEST EXCEPTIONS	5
6.0	CONCLUSIONS AND RECOMMENDATIONS	5
7.0	REFERENCES	6
	7.1 Procedures	6
	7.2 Drawings	6
	7.3 Other	6
8.0	Attachment 1: Files and Calculations	7
	Batch File: LL1C.RQS	7
	Batch File: LL15A.RQS	18
	File: JUL16_1.RPL	29
	File: JUL16_2.RPL	32
	File: JUL17_1.RPL	40
	File: JUL17_2.RPL	42
	File: JUL16_1.LOG	56
	File: JUL16_2.LOG	59
	File: JUL17_1.LOG	65
	File: JUL17_2.LOG	67
	Calculations for 147 cm3 displacer	77
	Calculations for 150 cm3 displacer	78
9.0	Attachment 2: REPRODUCTION OF THE OTP "MASTER" COPY	A1-i

**OPERATIONAL TEST REPORT FOR
HOURLY RECORDING THE LEVEL OF TANK 241-AN-107**

**OPERATIONAL TEST REPORT FOR
HOURLY RECORDING THE LEVEL OF TANK 241-AN-107**

1.0 INTRODUCTION

The Operational Test Procedure for Hourly Recording the Level of Tank 241-AN-107, WHC-SD-WM-OTP-214, was started on July 17, 1996, and completed on July 26, 1996. K. G. Carothers of Tank Waste Remediation Systems Engineering requested the test procedure; ICF Kaiser Engineers' Control Systems Engineering department wrote the test procedure and supported its performance at the 241-AN-271 Instrument Building on the Hanford Site.

2.0 DESCRIPTION OF TEST

The purpose of the test procedure is to verify correct operation of the "batch" files LL1C.RQS and LL15A.RQS. Testing was intended to verify that the functional, operational, and design requirements are met as installed in its final inservice configuration meet the following criteria:

- 2.1 The workstation communicates with the ENRAF gauges via the Communication Interface Unit (CIU) using the LOGVR18 program.
- 2.2 The "batch" files LL1C.RQS and LL15A.RQS collect level data from the appropriate gauge.
- 2.3 Each gauge responds with an error code = 000 or 0000 (indicating no problems) for the XPU and SPU of the ATG.

3.0 TEST METHOD AND TEST EQUIPMENT

The ENRAF gauges are installed per H-2-824486 and H-2-85573 on Tank 241-AN-107, risers 101-G (1C) and 131-G (15A). The gauges are connected to the computer workstation through the Communications Interface Unit (CIU). The program LOGV18 consists of a main menu and several submenus. The submenu File-to-Field can specify and run a "batch" file and store the data in a specified .RPL file. Another function in the File-to-Field submenu also converts .RPL files to .LOG files, eliminating redundant transactions, protocol information and yet retains the desired data. No special test equipment was needed.

4.0 TEST RESULTS

4.1 Summary of Test Results

A reproduction of the master control copy of the test procedure follows (Attachment 2). The data sheets containing all data taken are included as part of Attachment 2. Also included in Attachment 2 are printouts of the batch files LL15A.RQS and LL1C.RQS.

Communication between the gauges, CIU, computer workstation and panel meters was without problems. When queried for an error code, both gauges indicated there were no problems with either gauge.

The batch files were successfully used. Using the batch files the displacer was successfully controlled and the level reported into the .RPL and .LOG files. The test results can be described as successful.

4.2 Detailed Explanation of Test Results

On July 17, 1996 testing started and except for minor typographical and procedural errors [see Test Exceptions 1-4] testing went well. The most significant change occurred in section 1.8.2 to omit repeating the demonstration that datalogging to the .RPL file was occurring, since section 1.8.1 had already demonstrated that capability [see Test Exceptions 5 and 6]. The "batch" file LL1C.RQS was allowed to run and the test was suspended until July 26, 1996, when the data files were transferred to removable disk. Testing resumed on July 26, 1996 at Section 1.9 with a step added before step 1.9.1 and another step added after for a congruous program halt, data transfer and program restart [see Test Exception 7].

The batch files successfully controlled the gauges and obtained the level data. Each reply file was successfully converted into a .LOG file. Copies of the .LOG files and spreadsheet compatible files are included in the Test Data Sheet section of Attachment 1.

The values obtained for the waste level were consistent with expectations, since the data is to look for changes in the level (rather than the absolute value of the level). The tension setting used submerged the displacer about half of its length into the waste. This was so the air-waste interface was on the vertical portion on the displacer rather than on the sloped portion, thus eliminating any non-linear buoyancy effects. See TBD? for the tension/submergence calculations.

5.0 DISCUSSION OF TEST EXCEPTIONS

During the course of the test 12 (twelve) test exceptions were generated. Most were to correct typos and to make minor changes to the test procedure. These Test Exceptions are summarized and discussed here.

Test Exception #1: Corrected typo in step 1.7.2.7 to change DV from 135 to 147.32 per WHC-SD-WM-OTR-187, which noted incorrect setting for DV. Corrected typo in steps 1.7.2.7 and 1.7.2.11 to change S1 from 138 to 170 so the displacer would sink about half way into the waste. Also corrected Test Data sheet appropriately.

Test Exception #2: Changed steps 1.8.1.7 and 1.8.2.7 to use ESC key to interrupt program, instead of (incorrectly) using F2.

Test Exception #3: Step 1.8.1.10 was deleted as unneeded since the previous step returned to the File-to-Field menu.

Test Exception #4: In step 1.8.1.12 change the statement "first 4 readings" to "first 3 readings" since the third reading is the first of the hourly readings. Also corrected Test Data sheet appropriately.

Test Exceptions #5 and 6: Steps 1.8.2.7 through 1.8.2.15 were modified/skipped, as it had be previously shown that datalogging is occurring (in section 1.8.1). It was decided [in the interests of saving time] not to interrupt the batch file and let the batch file record 7 to 10 days of data before proceeding with the final steps of the OTP.

Test Exception #7: A step was added before 1.9.1 to "Interrupt batch file; copy data file(s) to removable disc." and a step was added after step 1.9.1 to "Change the name of the .RPL file (per step 1.8.2.5). Restart batch file LL1C.RQS (per step 1.8.2.6); leave batch file running.". These changes allowed a congruous program halt, data transfer and program restart.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The results of the Operational Test Procedure show that the gauges successfully function as required to record the tank "level" on an hourly basis.

7.0 REFERENCES

7.1 Procedures

- WHC-SD-WM-OTP-187, *OPERATIONAL TEST PROCEDURE FOR THE 241-AN-107 ENRAF ADVANCED TECHNOLOGY GAUGES*
- 6-TF-125, *ENRAF SERIES 854 PREVENTIVE MAINTENANCE AND CALIBRATION PROCEDURE*
- TO-020-420, *CLEAN LIT TAPES, PLUMMETS AND DISPLACERS; REPLACE FIC/ROBERTSHAW TAPES AND PLUMMETS*

7.2 Drawings

- H-2-824485, *Densitometer Mechanical Installation.*
- H-2-824486, *Densitometer Electrical Installation.*

7.3 Other

- *Instruction Manual, Series 854 ATG level gauge*, Part No. 4416.220, Version 2.2, Enraf B.V., The Netherlands.
- *Installation Info, Model 854 ATG Servo Powered Tank Gauge*, Part No. 4416.601, Version 1.0, Enraf B.V., The Netherlands.
- *Instruction Manual 854 ATG density software package*, Part No. 564.4416.221-40, Version 1.0, Enraf B.V., The Netherlands.
- *Instruction Manual MPU analog output 4-20mA*, Part No. 4416.222, Version 2.0, Enraf B.V., The Netherlands.
- *Instruction Manual, series 847 Portable Enraf Terminal*, Part No. 4416.210, Version 1.1, Enraf B.V., The Netherlands.
- *Instruction Manual, Series 858 Communications Interface Unit*, Part No. 4416.500, Version 2.1, Enraf B.V., The Netherlands.

8.0 Attachment 1: Files and Calculations
Batch File: LL1C.RQS

[illegible]

'1 DAY OF READINGS DONE*****

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

'7 DAYS OF READINGS DONE*****

[illegible]

WHC-SD-WM-OTR-214
Revision 0

```
>000BZLQ  
!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
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!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
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!PAUSE 3600  
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!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
'9 DAYS OF READINGS DONE*****  
>000BZLQ  
!PAUSE 3600  
>000BZLQ  
!PAUSE 3600  
>000BZLQ
```

WHC-SD-WM-OTR-214
Revision 0

[illegible]

WHC-SD-WM-OTR-214
Revision 0

Batch File: LL15A.RQS

[illegible]

WHC-SD-WM-OTR-214
Revision 0

[illegible]

WHC-SD-WM-OTR-214
Revision 0

[illegible]

[illegible]

WHC-SD-WM-OTR-214
Revision 0

[illegible]

[illegible]

[illegible]

WHC-SD-WM-OTR-214
Revision 0

'7 DAYS OF READINGS DONE*****

[illegible]

'8 DAYS OF READINGS DONE*****

WHC-SD-WM-OTR-214
Revision 0

```
>001BZLQ  
!PAUSE 3600  
>001BZLQ  
!PAUSE 3600  
>001BZLQ  
!PAUSE 3600  
>001BZLQ  
!PAUSE 3600  
>001BZLQ  
!PAUSE 3600  
>001BZLQ  
!PAUSE 3600  
>001BZLQ  
!PAUSE 3600  
>001BZLQ  
!PAUSE 3600  
>001BZLQ  
!PAUSE 3600  
>001BZLQ  
!PAUSE 3600  
>001BZLQ  
!PAUSE 3600  
>001BZLQ  
!PAUSE 3600  
>001BZLQ  
!PAUSE 3600  
>001BZLQ  
!PAUSE 3600  
>001BZLQ  
!PAUSE 3600  
>001BZLQ  
!PAUSE 3600  
'9 DAYS OF READINGS DONE*****  
>001BZLQ  
!PAUSE 3600  
>001BZLQ  
!PAUSE 3600  
>001BZLQ
```

[illegible]

File: JUL16_1.RPL

```
'THIS FILE READS THE LEVELS FROM GAUGE
'AT RISER 15A (TA=01)
'EVERY 60 MINUTES FOR 10 DAYS
'WRITTEN BY JL DOWELL MARCH 28, 1996
'LAST MODIFIED JUNE 21, 1996
'PAUSE COMMAND (IN THE .LOG & .RPL FILE
'PROVIDES THE DATE & TIME FOR THE MOMENT
'THE PAUSE IS DONE.
'*****
'SEND THE DISPLACER DOWN AND WAIT 10
'MINUTES FOR IT TO GET THERE
>001BZUN
<001BZUN&
>001BZII
<001BZII&
!PAUSE 600 07-16-1996 18:38:47
'TAKE 3 LEVEL READINGS 1 MINUTE APART
>001BZLQ
<001BZLQLA@--+00675.97
!PAUSE 60 07-16-1996 18:39:47
>001BZLQ
<001BZLQL@--+00675.97
!PAUSE 60 07-16-1996 18:40:48
>001BZLQ
<001BZLQL@--+00675.97
!PAUSE 60 07-16-1996 18:41:48
'TAKE 24 LEVEL READINGS 1 HOUR APART
>001BZLQ
<001BZLQLB@--+00675.97
!PAUSE 3600 07-16-1996 18:41:54
>001BZLQ
<001BZLQL@--+00675.97
!PAUSE 3600 07-16-1996 18:42:07
>001BZLQ
<001BZLQL@--+00675.97
!PAUSE 3600 07-16-1996 18:42:10
>001BZLQ
<001BZLQL@--+00675.97
!PAUSE 3600 07-16-1996 18:42:19
>001BZLQ
<001BZLQL@--+00675.97
!PAUSE 3600 07-16-1996 18:42:19
>001BZLQ
<001BZLQL@--+00675.96
!PAUSE 3600 07-16-1996 18:42:20
>001BZLQ
<001BZLQL@--+00675.97
!PAUSE 3600 07-16-1996 18:42:22
>001BZLQ
<001BZLQL@--+00675.97
# ABORTED 07-16-1996 18:42:26
# APPEND 07-16-1996 18:52:40
```

```
'THIS FILE READS THE LEVELS FROM GAUGE
'AT RISER 15A (TA=01)
'EVERY 60 MINUTES FOR 10 DAYS
'WRITTEN BY JL DOWELL MARCH 28, 1996
'LAST MODIFIED JUNE 21, 1996
'PAUSE COMMAND (IN THE .LOG & .RPL FILE
'PROVIDES THE DATE & TIME FOR THE MOMENT
'THE PAUSE IS DONE.
'*****
'SEND THE DISPLACER DOWN AND WAIT 10
'MINUTES FOR IT TO GET THERE
>001BZUN
<001BZUN&
>001BZII
<001BZII&
!PAUSE 600 07-16-1996 18:52:42
'TAKE 3 LEVEL READINGS 1 MINUTE APART
>001BZLQ
<001BZLQL@-+00675.97
!PAUSE 60 07-16-1996 18:52:43
>001BZLQ
<001BZLQL@-+00675.96
!PAUSE 60 07-16-1996 18:52:44
>001BZLQ
<001BZLQLB@-+00675.97
!PAUSE 60 07-16-1996 18:52:45
'TAKE 24 LEVEL READINGS 1 HOUR APART
>001BZLQ
<001BZLQL@-+00675.97
!PAUSE 3600 07-16-1996 18:52:47
>001BZLQ
<001BZLQLA@-+00675.96
!PAUSE 3600 07-16-1996 18:52:48
>001BZLQ
<001BZLQL@-+00675.96
!PAUSE 3600 07-16-1996 18:52:49
>001BZLQ
<001BZLQL@-+00675.97
!PAUSE 3600 07-16-1996 18:52:50
>001BZLQ
<001BZLQLA@-+00675.97
# ABORTED 07-16-1996 18:52:54
```

File: JUL16_2.RPL

'THIS FILE READS THE LEVEL FROM A
'GAUGE AT RISER 1C (TA=00)
'EVERY 60 MINUTES FOR 10 DAYS
'WRITTEN BY JL DOWELL MARCH 28, 1996
'LAST MODIFIED JUNE 21, 1996
'PAUSE COMMAND (IN THE .LOG & .RPL FILE
'PROVIDES THE DATE & TIME FOR THE MOMENT
'THE PAUSE IS DONE.

'*****

'SEND THE DISPLACER DOWN AND WAIT 10
'MINUTES FOR IT TO GET THERE

>000BZUN

<000BZUN&

>000BZ11

<000BZ11&

!PAUSE 600 07-16-1996 18:49:06

'TAKE 3 LEVEL READINGS 1 MINUTE APART

>000BZLQ

<000BZLQL@@--+00679.87

!PAUSE 60 07-16-1996 18:49:07

>000BZLQ

<000BZLQL@@--+00679.87

!PAUSE 60 07-16-1996 18:49:08

>000BZLQ

<000BZLQL@@--+00679.87

!PAUSE 60 07-16-1996 18:49:10

'TAKE 24 LEVEL READINGS 1 HOUR APART

>000BZLQ

<000BZLQL@@--+00679.87

!PAUSE 3600 07-16-1996 18:49:11

>000BZLQ

<000BZLQL@@--+00679.87

!PAUSE 3600 07-16-1996 18:49:12

>000BZLQ

<000BZLQLA@@--+00679.87

!PAUSE 3600 07-16-1996 18:49:13

>000BZLQ

<000BZLQL@@--+00679.87

!PAUSE 3600 07-16-1996 18:49:14

>000BZLQ

<000BZLQL@@--+00679.87

!PAUSE 3600 07-16-1996 18:49:16

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<000BZLQLA@@--+00679.86

!PAUSE 3600 07-16-1996 18:49:17

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<000BZLQL@@--+00679.86

!PAUSE 3600 07-16-1996 18:49:18

>000BZLQ

<000BZLQL@@--+00679.87

!PAUSE 3600 07-16-1996 18:49:19
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<000BZLQLA@--+00679.87
!PAUSE 3600 07-16-1996 18:49:21
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!PAUSE 3600 07-16-1996 18:49:22
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!PAUSE 3600 07-16-1996 18:49:23
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!PAUSE 3600 07-16-1996 18:49:24
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<000BZLQL@--+00679.87
!PAUSE 3600 07-16-1996 18:49:27
>000BZLQ
<000BZLQLA@--+00679.87
!PAUSE 3600 07-16-1996 18:49:28
>000BZLQ
<000BZLQL@--+00679.86
!PAUSE 3600 07-16-1996 18:49:29
>000BZLQ
<000BZLQL@--+00679.87
!PAUSE 3600 07-16-1996 18:49:30
>000BZLQ
<000BZLQLA@--+00679.87
!PAUSE 3600 07-16-1996 18:49:32
>000BZLQ
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!PAUSE 3600 07-16-1996 18:49:33
>000BZLQ
<000BZLQLB@--+00679.87

!PAUSE 3600 07-16-1996 18:49:34
>000BZLQ
<000BZLQL@--+00679.87
!PAUSE 3600 07-16-1996 18:49:35
>000BZLQ
<000BZLQL@--+00679.86
!PAUSE 3600 07-16-1996 18:49:36
>000BZLQ
<000BZLQLB@--+00679.87
!PAUSE 3600 07-16-1996 18:49:38
>000BZLQ
<000BZLQL@--+00679.87
!PAUSE 3600 07-16-1996 18:49:39
'1 DAY OF READINGS DONE*****

>000BZLQ
<000BZLQL@@--+00679.86
!PAUSE 3600 07-16-1996 18:49:40
>000BZLQ
<000BZLQLB@--+00679.87
!PAUSE 3600 07-16-1996 18:49:41
>000BZLQ
<000BZLQL@@--+00679.87

!PAUSE 3600 07-16-1996 18:49:43
>000BZLQ
<000BZLQL@@--+00679.86
!PAUSE 3600 07-16-1996 18:49:44
>000BZLQ
<000BZLQLB@--+00679.87
!PAUSE 3600 07-16-1996 18:49:45
>000BZLQ
<000BZLQL@@--+00679.87
!PAUSE 3600 07-16-1996 18:49:46
>000BZLQ
<000BZLQL@@--+00679.87
!PAUSE 3600 07-16-1996 18:49:47
>000BZLQ
<000BZLQL@@--+00679.87
!PAUSE 3600 07-16-1996 18:49:49
>000BZLQ
<000BZLQL@@--+00679.87
!PAUSE 3600 07-16-1996 18:49:50
>000BZLQ
<000BZLQL@@--+00679.86

!PAUSE 3600 07-16-1996 18:49:51
>000BZLQ
<000BZLQL@@--+00679.86
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>000BZLQ
<000BZLQL@@--+00679.87
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>000BZLQ
<000BZLQLA@--+00679.87
!PAUSE 3600 07-16-1996 18:49:55
>000BZLQ
<000BZLQL@@--+00679.86
!PAUSE 3600 07-16-1996 18:49:56
>000BZLQ
<000BZLQL@@--+00679.87
!PAUSE 3600 07-16-1996 18:49:57
>000BZLQ
<000BZLQLA@--+00679.87
!PAUSE 3600 07-16-1996 18:49:58
>000BZLQ
<000BZLQL@@--+00679.86

```
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>000BZLQ
<000BZLQLB@-+00679.87
!PAUSE 3600 07-16-1996 18:50:01
>000BZLQ
<000BZLQLA@-+00679.87
!PAUSE 3600 07-16-1996 18:50:02
>000BZLQ
<000BZLQL@-+00679.86
!PAUSE 3600 07-16-1996 18:50:03
>000BZLQ
<000BZLQL@-+00679.87
!PAUSE 3600 07-16-1996 18:50:04
>000BZLQ
<000BZLQL@-+00679.87
!PAUSE 3600 07-16-1996 18:50:06
>000BZLQ
<000BZLQL@-+00679.86
!PAUSE 3600 07-16-1996 18:50:07
>000BZLQ
<000BZLQLB@-+00679.87

!PAUSE 3600 07-16-1996 18:50:08
'2 DAYS OF READINGS DONE*****
>000BZLQ
<000BZLQL@-+00679.87

# ABORTED 07-16-1996 18:50:12

# APPEND 07-16-1996 18:55:49
'THIS FILE READS THE LEVEL FROM A
'GAUGE AT RISER IC (TA=00)
'EVERY 60 MINUTES FOR 10 DAYS
'WRITTEN BY JI DOWELL MARCH 28, 1996
'LAST MODIFIED JUNE 21, 1996
'PAUSE COMMAND (IN THE .LOG & .RPL FILE
'PROVIDES THE DATE & TIME FOR THE MOMENT
'THE PAUSE IS DONE.
'*****
'SEND THE DISPLACER DOWN AND WAIT 10
'MINUTES FOR IT TO GET THERE
>000BZUN
<000BZUN&
>000BZII
<000BZII&
!PAUSE 600 07-16-1996 18:56:57
'TAKE 3 LEVEL READINGS 1 MINUTE APART
>000BZLQ
<000BZLQL@-+00679.87
!PAUSE 60 07-16-1996 18:57:57
>000BZLQ
<000BZLQL@-+00679.87
```

WHC-SD-WM-OTR-214
Revision 0

```
!PAUSE 60 07-16-1996 18:58:58
>000BZLQ
<000BZLQLA@--+00679.86
!PAUSE 60 07-16-1996 18:59:58
'TAKE 24 LEVEL READINGS 1 HOUR APART
>000BZLQ
<000BZLQLA@--+00679.86
!PAUSE 3600 07-16-1996 19:00:35
>000BZLQ
<000BZLQLA@--+00679.87
!PAUSE 3600 07-16-1996 19:00:35
>000BZLQ
<000BZLQLA@--+00679.86
!PAUSE 3600 07-16-1996 19:00:36
>000BZLQ
<000BZLQLA@--+00679.87
!PAUSE 3600 07-16-1996 19:00:37
>000BZLQ
<000BZLQLA@--+00679.87

# LOG 07-16-1996 19:00:44
# ABORTED 07-16-1996 19:00:44

# APPEND 07-16-1996 19:01:55
'THIS FILE READS THE LEVEL FROM A
'GAUGE AT RISER 1C (TA=00)
'EVERY 60 MINUTES FOR 10 DAYS
'WRITTEN BY JI DOWELL MARCH 28, 1996
'LAST MODIFIED JUNE 21, 1996
'PAUSE COMMAND (IN THE .LOG & .RPL FILE
'PROVIDES THE DATE & TIME FOR THE MOMENT
'THE PAUSE IS DONE.
'*****
'SEND THE DISPLACER DOWN AND WAIT 10
'MINUTES FOR IT TO GET THERE
>000BZUN
<000BZUN&
>000BZ11
<000BZ11&
!PAUSE 600 07-16-1996 19:01:56
'TAKE 3 LEVEL READINGS 1 MINUTE APART
>000BZLQ
<000BZLQLA@--+00679.87
!PAUSE 60 07-16-1996 19:01:57
>000BZLQ
<000BZLQLA@--+00679.87
!PAUSE 60 07-16-1996 19:01:59
>000BZLQ
<000BZLQLA@--+00679.86
!PAUSE 60 07-16-1996 19:02:00
'TAKE 24 LEVEL READINGS 1 HOUR APART
>000BZLQ
```

```
<000BZLQL@@-+00679.87
!PAUSE 3600 07-16-1996 19:02:01
>000BZLQ
<000BZLQL@@-+00679.87
!PAUSE 3600 07-16-1996 19:02:02
>000BZLQ
<000BZLQL@@-+00679.86
# ABORTED 07-16-1996 19:02:21

# APPEND 07-16-1996 19:03:40
'THIS FILE READS THE LEVEL FROM A
'GAUGE AT RISER 1C (TA=00)
'EVERY 60 MINUTES FOR 10 DAYS
'WRITTEN BY JL DOWELL MARCH 28, 1996
'LAST MODIFIED JUNE 21, 1996
'PAUSE COMMAND (IN THE .LOG & .RPL FILE
'PROVIDES THE DATE & TIME FOR THE MOMENT
'THE PAUSE IS DONE.
'*****
'SEND THE DISPLACER DOWN AND WAIT 10
'MINUTES FOR IT TO GET THERE
>000BZUN
<000BZUN&
>000BZII
<000BZII&
!PAUSE 600 07-16-1996 19:04:25
'TAKE 3 LEVEL READINGS 1 MINUTE APART
>000BZLQ
<000BZLQL@@-+00679.87
!PAUSE 60 07-16-1996 19:04:25
>000BZLQ
<000BZLQL@@-+00679.86
!PAUSE 60 07-16-1996 19:04:26
>000BZLQ
<000BZLQLB@-+00679.87
!PAUSE 60 07-16-1996 19:04:28
'TAKE 24 LEVEL READINGS 1 HOUR APART
>000BZLQ
<000BZLQL@@-+00679.87
!PAUSE 3600 07-16-1996 19:04:29
>000BZLQ
<000BZLQL@@-+00679.86
!PAUSE 3600 07-16-1996 19:04:30
>000BZLQ
<000BZLQL@@-+00679.86
!PAUSE 3600 07-16-1996 19:04:31
>000BZLQ
<000BZLQL@@-+00679.87
!PAUSE 3600 07-16-1996 19:04:32
>000BZLQ
<000BZLQL@@-+00679.86
!PAUSE 3600 07-16-1996 19:04:34
```

WHC-SD-WM-OTR-214
Revision 0

>000BZLQ
<000BZLQLB@-+00679.87
!PAUSE 3600 07-16-1996 19:04:35
>000BZLQ
<000BZLQL@@-+00679.87
ABORTED 07-16-1996 19:04:39

File: JUL17_1.RPL

```
'THIS FILE READS THE LEVELS FROM GAUGE
'AT RISER 15A (TA=01)
'EVERY 60 MINUTES FOR 10 DAYS
'WRITTEN BY JL DOWELL MARCH 28, 1996
'LAST MODIFIED JUNE 21, 1996
'PAUSE COMMAND (IN THE .LOG & .RPL FILE
'PROVIDES THE DATE & TIME FOR THE MOMENT
'THE PAUSE IS DONE.
'*****
'SEND THE DISPLACER DOWN AND WAIT 10
'MINUTES FOR IT TO GET THERE
>001BZUN
<001BZUN&
>001BZ11
<001BZ11&
!PAUSE 600 07-17-1996 16:59:06
'TAKE 3 LEVEL READINGS 1 MINUTE APART
>001BZLQ
<001BZLQL@--+00676.16
!PAUSE 60 07-17-1996 17:00:07
>001BZLQ
<001BZLQL@--+00676.15
!PAUSE 60 07-17-1996 17:01:07
>001BZLQ
<001BZLQLA@--+00676.15
!PAUSE 60 07-17-1996 17:02:07
'TAKE 24 LEVEL READINGS 1 HOUR APART
>001BZLQ
<001BZLQL@--+00676.16
!PAUSE 3600 07-17-1996 17:02:36
>001BZLQ
<001BZLQLB@--+00676.15
!PAUSE 3600 07-17-1996 17:02:36
>001BZLQ
<001BZLQL@--+00676.15
# ABORTED 07-17-1996 17:02:48
```

File: JUL17_2.RPL


```
'THIS FILE READS THE LEVEL FROM A
'GAUGE AT RISER 1C (TA=00)
'EVERY 60 MINUTES FOR 10 DAYS
'WRITTEN BY JL DOWELL MARCH 28, 1996
'LAST MODIFIED JUNE 21, 1996
'PAUSE COMMAND (IN THE .LOG & .RPL FILE
'PROVIDES THE DATE & TIME FOR THE MOMENT
'THE PAUSE IS DONE.
'*****
'SEND THE DISPLACER DOWN AND WAIT 10
'MINUTES FOR IT TO GET THERE
>000BZUN
<000BZUN&
>000BZI1
<000BZI1&
!PAUSE 600 07-17-1996 17:23:12
'TAKE 3 LEVEL READINGS 1 MINUTE APART
>000BZLQ
<000BZLQ@@-+00382.46
!PAUSE 60 07-17-1996 17:24:12
>000BZLQ
<000BZLQ@@-+00382.46
!PAUSE 60 07-17-1996 17:25:13
>000BZLQ
<000BZLQ@D@-+00382.46
!PAUSE 60 07-17-1996 17:26:13
'TAKE 24 LEVEL READINGS 1 HOUR APART
>000BZLQ
<000BZLQ@@-+00382.46
!PAUSE 3600 07-17-1996 18:26:13
>000BZLQ
<000BZLQ@@-+00382.47
!PAUSE 3600 07-17-1996 19:26:13
>000BZLQ
<000BZLQ@@-+00382.46
!PAUSE 3600 07-17-1996 20:26:13
>000BZLQ
<000BZLQ@@-+00382.46
!PAUSE 3600 07-17-1996 21:26:14
>000BZLQ
<000BZLQ@@-+00382.46
!PAUSE 3600 07-17-1996 22:26:14
>000BZLQ
<000BZLQ@@-+00382.46
!PAUSE 3600 07-17-1996 23:26:14
>000BZLQ
<000BZLQ@@-+00382.47
!PAUSE 3600 07-18-1996 00:26:14
>000BZLQ
<000BZLQ@@-+00382.46
!PAUSE 3600 07-18-1996 01:26:16
>000BZLQ
```

```

<000BZLQ@@--+00382.46
!PAUSE 3600 07-18-1996 02:26:16
>000BZLQ
<000BZLQ@B@--+00382.47
!PAUSE 3600 07-18-1996 03:26:16
>000BZLQ
<000BZLQ@@--+00382.47
!PAUSE 3600 07-18-1996 04:26:16
>000BZLQ
<000BZLQ@@--+00382.46
!PAUSE 3600 07-18-1996 05:26:16
>000BZLQ
<000BZLQ@@--+00382.46
!PAUSE 3600 07-18-1996 06:26:17
>000BZLQ
<000BZLQ@@--+00382.46
!PAUSE 3600 07-18-1996 07:26:17
>000BZLQ
<000BZLQ@@--+00382.46
!PAUSE 3600 07-18-1996 08:26:17
>000BZLQ
<000BZLQ@@--+00382.45
!PAUSE 3600 07-18-1996 09:26:17
>000BZLQ
<000BZLQ@D@--+00382.46
!PAUSE 3600 07-18-1996 10:26:18
>000BZLQ
<000BZLQ@@--+00382.46
!PAUSE 3600 07-18-1996 11:26:18
>000BZLQ
<000BZLQ@@--+00382.46
!PAUSE 3600 07-18-1996 12:26:18
>000BZLQ
<000BZLQ@B@--+00382.46
!PAUSE 3600 07-18-1996 13:26:18
>000BZLQ
<000BZLQ@@--+00382.45
!PAUSE 3600 07-18-1996 14:26:18
>000BZLQ
<000BZLQ@@--+00382.45
!PAUSE 3600 07-18-1996 15:26:19
>000BZLQ
<000BZLQ@@--+00382.46
!PAUSE 3600 07-18-1996 16:26:19
>000BZLQ
<000BZLQ@@--+00382.45
!PAUSE 3600 07-18-1996 17:26:19
'1 DAY OF READINGS DONE*****
>000BZLQ
<000BZLQ@@--+00382.45
!PAUSE 3600 07-18-1996 18:26:19
>000BZLQ

```

<000BZLQ@@-+00382.45
!PAUSE 3600 07-18-1996 19:26:20
>000BZLQ
<000BZLQ@@-+00382.45
!PAUSE 3600 07-18-1996 20:26:20
>000BZLQ
<000BZLQ@@-+00382.46
!PAUSE 3600 07-18-1996 21:26:20
>000BZLQ
<000BZLQ@@-+00382.45
!PAUSE 3600 07-18-1996 22:26:20
>000BZLQ
<000BZLQ@@-+00382.45
!PAUSE 3600 07-18-1996 23:26:20
>000BZLQ
<000BZLQ@@-+00382.46
!PAUSE 3600 07-19-1996 00:26:21
>000BZLQ
<000BZLQ@B@-+00382.45
!PAUSE 3600 07-19-1996 01:26:22
>000BZLQ
<000BZLQ@B@-+00382.45
!PAUSE 3600 07-19-1996 02:26:22
>000BZLQ
<000BZLQ@@-+00382.46
!PAUSE 3600 07-19-1996 03:26:22
>000BZLQ
<000BZLQ@@-+00382.46
!PAUSE 3600 07-19-1996 04:26:23
>000BZLQ
<000BZLQ@@-+00382.45
!PAUSE 3600 07-19-1996 05:26:23
>000BZLQ
<000BZLQ@@-+00382.45
!PAUSE 3600 07-19-1996 06:26:23
>000BZLQ
<000BZLQ@@-+00382.46
!PAUSE 3600 07-19-1996 07:26:23
>000BZLQ
<000BZLQ@D@-+00382.45
!PAUSE 3600 07-19-1996 08:26:23
>000BZLQ
<000BZLQ@@-+00382.46
!PAUSE 3600 07-19-1996 09:26:24
>000BZLQ
<000BZLQ@@-+00382.45
!PAUSE 3600 07-19-1996 10:26:24
>000BZLQ
<000BZLQ@@-+00382.46
!PAUSE 3600 07-19-1996 11:26:24
>000BZLQ
<000BZLQ@@-+00382.45

!PAUSE 3600 07-19-1996 12:26:24
>000BZLQ
<000BZLQ@D@-+00382.46
!PAUSE 3600 07-19-1996 13:26:24
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-19-1996 14:26:25
>000BZLQ
<000BZLQ@D@-+00382.46
!PAUSE 3600 07-19-1996 15:26:25
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-19-1996 16:26:25
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-19-1996 17:26:25
'2 DAYS OF READINGS DONE*****
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-19-1996 18:26:26
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-19-1996 19:26:26
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-19-1996 20:26:26
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-19-1996 21:26:26
>000BZLQ
<000BZLQ@B@-+00382.45
!PAUSE 3600 07-19-1996 22:26:26
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-19-1996 23:26:27
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-20-1996 00:26:27
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-20-1996 01:26:28
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-20-1996 02:26:28
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-20-1996 03:26:29
>000BZLQ
<000BZLQ@A@-+00382.45
!PAUSE 3600 07-20-1996 04:26:29
>000BZLQ
<000BZLQ@@@-+00382.45

!PAUSE 3600 07-20-1996 05:26:29
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-20-1996 06:26:29
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-20-1996 07:26:29
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-20-1996 08:26:30
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-20-1996 09:26:30
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-20-1996 10:26:30
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-20-1996 11:26:30
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-20-1996 12:26:30
>000BZLQ
<000BZLQ@A@-+00382.45
!PAUSE 3600 07-20-1996 13:26:31
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-20-1996 14:26:31
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-20-1996 15:26:31
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-20-1996 16:26:31
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-20-1996 17:26:32
'3 DAYS OF READINGS DONE*****
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-20-1996 18:26:32
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-20-1996 19:26:32
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-20-1996 20:26:32
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-20-1996 21:26:32
>000BZLQ
<000BZLQ@@@-+00382.45

!PAUSE 3600 07-20-1996 22:26:33
>000BZLQ
<000BZLQ@D@--+00382.45
!PAUSE 3600 07-20-1996 23:26:33
>000BZLQ
<000BZLQ@@@--+00382.45
!PAUSE 3600 07-21-1996 00:26:33
>000BZLQ
<000BZLQ@@@--+00382.46
!PAUSE 3600 07-21-1996 01:26:34
>000BZLQ
<000BZLQ@@@--+00382.45
!PAUSE 3600 07-21-1996 02:26:34
>000BZLQ
<000BZLQ@@@--+00382.45
!PAUSE 3600 07-21-1996 03:26:35
>000BZLQ
<000BZLQ@@@--+00382.45
!PAUSE 3600 07-21-1996 04:26:35
>000BZLQ
<000BZLQ@@@--+00382.45
!PAUSE 3600 07-21-1996 05:26:35
>000BZLQ
<000BZLQ@@@--+00382.45
!PAUSE 3600 07-21-1996 06:26:35
>000BZLQ
<000BZLQ@@@--+00382.45
!PAUSE 3600 07-21-1996 07:26:36
>000BZLQ
<000BZLQ@@@--+00382.46
!PAUSE 3600 07-21-1996 08:26:36
>000BZLQ
<000BZLQ@@@--+00382.45
!PAUSE 3600 07-21-1996 09:26:36
>000BZLQ
<000BZLQ@@@--+00382.45
!PAUSE 3600 07-21-1996 10:26:36
>000BZLQ
<000BZLQ@@@--+00382.46
!PAUSE 3600 07-21-1996 11:26:36
>000BZLQ
<000BZLQ@@@--+00382.46
!PAUSE 3600 07-21-1996 12:26:37
>000BZLQ
<000BZLQ@B@--+00382.46
!PAUSE 3600 07-21-1996 13:26:37
>000BZLQ
<000BZLQ@@@--+00382.45
!PAUSE 3600 07-21-1996 14:26:37
>000BZLQ
<000BZLQ@@@--+00382.45
!PAUSE 3600 07-21-1996 15:26:37

>000BZLQ
<000BZLQ@A@-+00382.46
!PAUSE 3600 07-21-1996 16:26:37
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-21-1996 17:26:38
'4 DAYS OF READINGS DONE*****
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-21-1996 18:26:38
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-21-1996 19:26:38
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-21-1996 20:26:38
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-21-1996 21:26:39
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-21-1996 22:26:39
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-21-1996 23:26:39
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-22-1996 00:26:39
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-22-1996 01:26:41
>000BZLQ
<000BZLQ@B@-+00382.46
!PAUSE 3600 07-22-1996 02:26:41
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-22-1996 03:26:41
>000BZLQ
<000BZLQ@B@-+00382.45
!PAUSE 3600 07-22-1996 04:26:41
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-22-1996 05:26:41
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-22-1996 06:26:42
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-22-1996 07:26:42
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-22-1996 08:26:42

>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-22-1996 09:26:42
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-22-1996 10:26:42
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-22-1996 11:26:43
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-22-1996 12:26:43
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-22-1996 13:26:43
>000BZLQ
<000BZLQ@B@-+00382.46
!PAUSE 3600 07-22-1996 14:26:43
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-22-1996 15:26:44
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-22-1996 16:26:44
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-22-1996 17:26:44
'5 DAYS OF READINGS DONE*****
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-22-1996 18:26:44
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-22-1996 19:26:44
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-22-1996 20:26:45
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-22-1996 21:26:45
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-22-1996 22:26:45
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-22-1996 23:26:45
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-23-1996 00:26:45
>000BZLQ
<000BZLQ@B@-+00382.45
!PAUSE 3600 07-23-1996 01:26:47

>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-23-1996 02:26:47
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-23-1996 03:26:47
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-23-1996 04:26:47
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-23-1996 05:26:48
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-23-1996 06:26:48
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-23-1996 07:26:48
>000BZLQ
<000BZLQ@B@-+00382.46
!PAUSE 3600 07-23-1996 08:26:48
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-23-1996 09:26:48
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-23-1996 10:26:49
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-23-1996 11:26:49
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-23-1996 12:26:49
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-23-1996 13:26:49
>000BZLQ
<000BZLQ@D@-+00382.46
!PAUSE 3600 07-23-1996 14:26:49
>000BZLQ
<000BZLQ@D@-+00382.46
!PAUSE 3600 07-23-1996 15:26:50
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-23-1996 16:26:50
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-23-1996 17:26:50
'6 DAYS OF READINGS DONE*****
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-23-1996 18:26:50

>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-23-1996 19:26:51
>000BZLQ
<000BZLQ@@@+00382.46
!PAUSE 3600 07-23-1996 20:26:51
>000BZLQ
<000BZLQ@@@+00382.46
!PAUSE 3600 07-23-1996 21:26:51
>000BZLQ
<000BZLQ@@@+00382.46
!PAUSE 3600 07-23-1996 22:26:51
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-23-1996 23:26:51
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-24-1996 00:26:52
>000BZLQ
<000BZLQ@B@+00382.46
!PAUSE 3600 07-24-1996 01:26:53
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-24-1996 02:26:53
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-24-1996 03:26:53
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-24-1996 04:26:54
>000BZLQ
<000BZLQ@@@+00382.46
!PAUSE 3600 07-24-1996 05:26:54
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-24-1996 06:26:54
>000BZLQ
<000BZLQ@D@+00382.45
!PAUSE 3600 07-24-1996 07:26:54
>000BZLQ
<000BZLQ@@@+00382.46
!PAUSE 3600 07-24-1996 08:26:54
>000BZLQ
<000BZLQ@@@+00382.46
!PAUSE 3600 07-24-1996 09:26:55
>000BZLQ
<000BZLQ@B@+00382.45
!PAUSE 3600 07-24-1996 10:26:55
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-24-1996 11:26:55
>000BZLQ

<000BZLQ@@@-+00382.45
!PAUSE 3600 07-24-1996 12:26:55
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-24-1996 13:26:55
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-24-1996 14:26:56
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-24-1996 15:26:56
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-24-1996 16:26:56
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-24-1996 17:26:56
'7 DAYS OF READINGS DONE*****
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-24-1996 18:26:57
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-24-1996 19:26:57
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-24-1996 20:26:57
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-24-1996 21:26:57
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-24-1996 22:26:57
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-24-1996 23:26:58
>000BZLQ
<000BZLQ@B@-+00382.46
!PAUSE 3600 07-25-1996 00:26:58
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-25-1996 01:26:59
>000BZLQ
<000BZLQ@@@-+00382.46
!PAUSE 3600 07-25-1996 02:26:59
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-25-1996 03:27:00
>000BZLQ
<000BZLQ@@@-+00382.45
!PAUSE 3600 07-25-1996 04:27:00
>000BZLQ

<000BZLQ@@@+00382.45
!PAUSE 3600 07-25-1996 05:27:00
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-25-1996 06:27:00
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-25-1996 07:27:00
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-25-1996 08:27:01
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-25-1996 09:27:01
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-25-1996 10:27:01
>000BZLQ
<000BZLQ@@@+00382.46
!PAUSE 3600 07-25-1996 11:27:01
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-25-1996 12:27:01
>000BZLQ
<000BZLQ@@@+00382.46
!PAUSE 3600 07-25-1996 13:27:02
>000BZLQ
<000BZLQ@B@+00382.46
!PAUSE 3600 07-25-1996 14:27:02
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-25-1996 15:27:02
>000BZLQ
<000BZLQ@@@+00382.46
!PAUSE 3600 07-25-1996 16:27:02
>000BZLQ
<000BZLQ@@@+00382.46
!PAUSE 3600 07-25-1996 17:27:03
'8 DAYS OF READINGS DONE*****
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-25-1996 18:27:03
>000BZLQ
<000BZLQ@A@+00382.45
!PAUSE 3600 07-25-1996 19:27:03
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-25-1996 20:27:03
>000BZLQ
<000BZLQ@@@+00382.45
!PAUSE 3600 07-25-1996 21:27:03
>000BZLQ

<000BZLQ@@-+00382.46
!PAUSE 3600 07-25-1996 22:27:04
>000BZLQ
<000BZLQ@A@-+00382.45
!PAUSE 3600 07-25-1996 23:27:04
>000BZLQ
<000BZLQ@@-+00382.45
!PAUSE 3600 07-26-1996 00:27:04
>000BZLQ
<000BZLQ@@-+00382.45
!PAUSE 3600 07-26-1996 01:27:05
>000BZLQ
<000BZLQ@@-+00382.45
!PAUSE 3600 07-26-1996 02:27:05
>000BZLQ
<000BZLQ@@-+00382.45
!PAUSE 3600 07-26-1996 03:27:06
>000BZLQ
<000BZLQ@@-+00382.45
!PAUSE 3600 07-26-1996 04:27:06
>000BZLQ
<000BZLQ@@-+00382.45
!PAUSE 3600 07-26-1996 05:27:06
>000BZLQ
<000BZLQ@@-+00382.45
!PAUSE 3600 07-26-1996 06:27:06
>000BZLQ
<000BZLQ@B@-+00382.45
!PAUSE 3600 07-26-1996 07:27:07
>000BZLQ
<000BZLQ@@-+00382.45
!PAUSE 3600 07-26-1996 08:27:07
>000BZLQ
<000BZLQ@B@-+00382.45
!PAUSE 3600 07-26-1996 08:36:28
>000BZLQ
<000BZLQ@@-+00382.45
!PAUSE 3600 07-26-1996 08:36:28
>000BZLQ
<000BZLQ@@-+00382.46
ABORTED 07-26-1996 08:36:35

WHC-SD-WM-OTR-214
Revision 0

File: JUL16_1.L06

```
' LOGv18 RPL LOG converter v1.00 / 07-16-1996 19:05:20
'THIS FILE READS THE LEVELS FROM GAUGE
'AT RISER 15A (TA=01)
'EVERY 60 MINUTES FOR 10 DAYS
'WRITTEN BY JL DOWELL MARCH 28, 1996
'LAST MODIFIED JUNE 21, 1996
'PAUSE COMMAND (IN THE .LOG & .RPL FILE
'PROVIDES THE DATE & TIME FOR THE MOMENT
'THE PAUSE IS DONE.
'*****
'SEND THE DISPLACER DOWN AND WAIT 10
'MINUTES FOR IT TO GET THERE
UN=&
I1=&
' !PAUSE 600 07-16-1996 18:38:47
'TAKE 3 LEVEL READINGS 1 MINUTE APART
LQ=LA@-+00675.97
' !PAUSE 60 07-16-1996 18:39:47
LQ=L@-+00675.97
' !PAUSE 60 07-16-1996 18:40:48
LQ=L@-+00675.97
' !PAUSE 60 07-16-1996 18:41:48
'TAKE 24 LEVEL READINGS 1 HOUR APART
LQ=LB@-+00675.97
' !PAUSE 3600 07-16-1996 18:41:54
LQ=L@-+00675.97
' !PAUSE 3600 07-16-1996 18:42:07
LQ=L@-+00675.97
' !PAUSE 3600 07-16-1996 18:42:10
LQ=L@-+00675.97
' !PAUSE 3600 07-16-1996 18:42:19
LQ=L@-+00675.96
' !PAUSE 3600 07-16-1996 18:42:20
LQ=L@-+00675.97
' !PAUSE 3600 07-16-1996 18:42:22
LQ=L@-+00675.97
' # ABORTED 07-16-1996 18:42:26
' # APPEND 07-16-1996 18:52:40
'THIS FILE READS THE LEVELS FROM GAUGE
'AT RISER 15A (TA=01)
'EVERY 60 MINUTES FOR 10 DAYS
'WRITTEN BY JL DOWELL MARCH 28, 1996
'LAST MODIFIED JUNE 21, 1996
'PAUSE COMMAND (IN THE .LOG & .RPL FILE
'PROVIDES THE DATE & TIME FOR THE MOMENT
'THE PAUSE IS DONE.
'*****
'SEND THE DISPLACER DOWN AND WAIT 10
'MINUTES FOR IT TO GET THERE
UN=&
```

```
I1=&  
' !PAUSE 600 07-16-1996 18:52:42  
'TAKE 3 LEVEL READINGS 1 MINUTE APART  
LQ=L@@-+00675.97  
' !PAUSE 60 07-16-1996 18:52:43  
LQ=L@@-+00675.96  
' !PAUSE 60 07-16-1996 18:52:44  
LQ=LB@-+00675.97  
' !PAUSE 60 07-16-1996 18:52:45  
'TAKE 24 LEVEL READINGS 1 HOUR APART  
LQ=L@@-+00675.97  
' !PAUSE 3600 07-16-1996 18:52:47  
LQ=LA@-+00675.96  
' !PAUSE 3600 07-16-1996 18:52:48  
LQ=L@@-+00675.96  
' !PAUSE 3600 07-16-1996 18:52:49  
LQ=L@@-+00675.97  
' !PAUSE 3600 07-16-1996 18:52:50  
LQ=LA@-+00675.97  
' # ABORTED 07-16-1996 18:52:54
```


File: JUL16_2.L06

WHC-SD-WM-OTR-214
Revision 0

```
' LOGv18 RPL LOG converter v1.00 / 09-26-1996 07:15:17
'THIS FILE READS THE LEVEL FROM A
'GAUGE AT RISER 1C (TA=00)
'EVERY 60 MINUTES FOR 10 DAYS
'WRITTEN BY JL DOWELL MARCH 28, 1996
'LAST MODIFIED JUNE 21, 1996
'PAUSE COMMAND (IN THE .LOG & .RPL FILE
'PROVIDES THE DATE & TIME FOR THE MOMENT
'THE PAUSE IS DONE.
'*****
'SEND THE DISPLACER DOWN AND WAIT 10
'MINUTES FOR IT TO GET THERE
UN=&
I1=&
' !PAUSE 600 07-16-1996 18:49:06
'TAKE 3 LEVEL READINGS 1 MINUTE APART
LQ=L@@-+00679.87
' !PAUSE 60 07-16-1996 18:49:07
LQ=L@@-+00679.87
' !PAUSE 60 07-16-1996 18:49:08
LQ=L@@-+00679.87
' !PAUSE 60 07-16-1996 18:49:10
'TAKE 24 LEVEL READINGS 1 HOUR APART
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:11
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:12
LQ=LA@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:13
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:14
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:16
LQ=LA@-+00679.86
' !PAUSE 3600 07-16-1996 18:49:17
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 18:49:18
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:19
LQ=LA@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:21
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:22
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:23
LQ=LA@-+00679.86
' !PAUSE 3600 07-16-1996 18:49:24
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 18:49:26
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:27
LQ=LA@-+00679.87
```

' !PAUSE 3600 07-16-1996 18:49:28
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 18:49:29
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:30
LQ=LA@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:32
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 18:49:33
LQ=LB@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:34
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:35
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 18:49:36
LQ=LB@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:38
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:39
' 1 DAY OF READINGS DONE*****
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 18:49:40
LQ=LB@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:41
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:43
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 18:49:44
LQ=LB@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:45
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:46
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:47
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:49
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:50
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 18:49:51
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 18:49:52
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:54
LQ=LA@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:55
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 18:49:56
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:57
LQ=LA@-+00679.87
' !PAUSE 3600 07-16-1996 18:49:58

```
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 18:50:00
LQ=LB@-+00679.87
' !PAUSE 3600 07-16-1996 18:50:01
LQ=LA@-+00679.87
' !PAUSE 3600 07-16-1996 18:50:02
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 18:50:03
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:50:04
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 18:50:06
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 18:50:07
LQ=LB@-+00679.87
' !PAUSE 3600 07-16-1996 18:50:08
'2 DAYS OF READINGS DONE*****
LQ=L@@-+00679.87
' # ABORTED 07-16-1996 18:50:12
' # APPEND 07-16-1996 18:55:49
'THIS FILE READS THE LEVEL FROM A
'GAUGE AT RISER 1C (TA=00)
'EVERY 60 MINUTES FOR 10 DAYS
'WRITTEN BY JI DOWELL MARCH 28, 1996
'LAST MODIFIED JUNE 21, 1996
'PAUSE COMMAND (IN THE .LOG & .RPL FILE
'PROVIDES THE DATE & TIME FOR THE MOMENT
'THE PAUSE IS DONE.
'*****
'SEND THE DISPLACER DOWN AND WAIT 10
'MINUTES FOR IT TO GET THERE
UN=&
I1=&
' !PAUSE 600 07-16-1996 18:56:57
'TAKE 3 LEVEL READINGS 1 MINUTE APART
LQ=L@@-+00679.87
' !PAUSE 60 07-16-1996 18:57:57
LQ=L@@-+00679.87
' !PAUSE 60 07-16-1996 18:58:58
LQ=LA@-+00679.86
' !PAUSE 60 07-16-1996 18:59:58
'TAKE 24 LEVEL READINGS 1 HOUR APART
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 19:00:35
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 19:00:35
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 19:00:36
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 19:00:37
LQ=L@@-+00679.87
' # LOG 07-16-1996 19:00:44
```

```
' # ABORTED 07-16-1996 19:00:44
' # APPEND 07-16-1996 19:01:55
'THIS FILE READS THE LEVEL FROM A
'GAUGE AT RISER 1C (TA=00)
'EVERY 60 MINUTES FOR 10 DAYS
'WRITTEN BY JL DOWELL MARCH 28, 1996
'LAST MODIFIED JUNE 21, 1996
'PAUSE COMMAND (IN THE .LOG & .RPL FILE
'PROVIDES THE DATE & TIME FOR THE MOMENT
'THE PAUSE IS DONE.
'*****
'SEND THE DISPLACER DOWN AND WAIT 10
'MINUTES FOR IT TO GET THERE
UN=&
I1=&
' !PAUSE 600 07-16-1996 19:01:56
'TAKE 3 LEVEL READINGS 1 MINUTE APART
LQ=L@@-+00679.87
' !PAUSE 60 07-16-1996 19:01:57
LQ=LA@-+00679.87
' !PAUSE 60 07-16-1996 19:01:59
LQ=L@@-+00679.86
' !PAUSE 60 07-16-1996 19:02:00
'TAKE 24 LEVEL READINGS 1 HOUR APART
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 19:02:01
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 19:02:02
LQ=L@@-+00679.86
' # ABORTED 07-16-1996 19:02:21
' # APPEND 07-16-1996 19:03:40
'THIS FILE READS THE LEVEL FROM A
'GAUGE AT RISER 1C (TA=00)
'EVERY 60 MINUTES FOR 10 DAYS
'WRITTEN BY JL DOWELL MARCH 28, 1996
'LAST MODIFIED JUNE 21, 1996
'PAUSE COMMAND (IN THE .LOG & .RPL FILE
'PROVIDES THE DATE & TIME FOR THE MOMENT
'THE PAUSE IS DONE.
'*****
'SEND THE DISPLACER DOWN AND WAIT 10
'MINUTES FOR IT TO GET THERE
UN=&
I1=&
' !PAUSE 600 07-16-1996 19:04:25
'TAKE 3 LEVEL READINGS 1 MINUTE APART
LQ=L@@-+00679.87
' !PAUSE 60 07-16-1996 19:04:25
LQ=L@@-+00679.86
' !PAUSE 60 07-16-1996 19:04:26
LQ=LB@-+00679.87
' !PAUSE 60 07-16-1996 19:04:28
```

'TAKE 24 LEVEL READINGS 1 HOUR APART
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 19:04:29
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 19:04:30
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 19:04:31
LQ=L@@-+00679.87
' !PAUSE 3600 07-16-1996 19:04:32
LQ=L@@-+00679.86
' !PAUSE 3600 07-16-1996 19:04:34
LQ=LB@-+00679.87
' !PAUSE 3600 07-16-1996 19:04:35
LQ=L@@-+00679.87
' # ABORTED 07-16-1996 19:04:39

WHC-SD-WM-OTR-214
Revision 0

File: JUL17_1.LOG

WHC-SD-WM-OTR-214
Revision 0

```
' LOGv18 RPL LOG converter v1.00 / 07-17-1996 17:03:07
'THIS FILE READS THE LEVELS FROM GAUGE
'AT RISER 15A (TA=01)
'EVERY 60 MINUTES FOR 10 DAYS
'WRITTEN BY JL DOWELL MARCH 28, 1996
'LAST MODIFIED JUNE 21, 1996
'PAUSE COMMAND (IN THE .LOG & .RPL FILE
'PROVIDES THE DATE & TIME FOR THE MOMENT
'THE PAUSE IS DONE.
'*****
'SEND THE DISPLACER DOWN AND WAIT 10
'MINUTES FOR IT TO GET THERE
UN=&
I1=&
' !PAUSE 600 07-17-1996 16:59:06
'TAKE 3 LEVEL READINGS 1 MINUTE APART
LQ=L@@-+00676.16
' !PAUSE 60 07-17-1996 17:00:07
LQ=L@@-+00676.15
' !PAUSE 60 07-17-1996 17:01:07
LQ=LA@-+00676.15
' !PAUSE 60 07-17-1996 17:02:07
'TAKE 24 LEVEL READINGS 1 HOUR APART
LQ=L@@-+00676.16
' !PAUSE 3600 07-17-1996 17:02:36
LQ=LB@-+00676.15
' !PAUSE 3600 07-17-1996 17:02:36
LQ=L@@-+00676.15
' # ABORTED 07-17-1996 17:02:48
```


File: JUL17_2.LOG

```
' LOGv18 RPL LOG converter v1.00 / 08-21-1996 11:52:52
'THIS FILE READS THE LEVEL FROM A
'GAUGE AT RISER 1C (TA=00)
'EVERY 60 MINUTES FOR 10 DAYS
'WRITTEN BY JL DOWELL MARCH 28, 1996
'LAST MODIFIED JUNE 21, 1996
'PAUSE COMMAND (IN THE .LOG & .RPL FILE
'PROVIDES THE DATE & TIME FOR THE MOMENT
'THE PAUSE IS DONE.
'*****
'SEND THE DISPLACER DOWN AND WAIT 10
'MINUTES FOR IT TO GET THERE
UN=&
I1=&
' !PAUSE 600 07-17-1996 17:23:12
'TAKE 3 LEVEL READINGS 1 MINUTE APART
LQ=@@@-+00382.46
' !PAUSE 60 07-17-1996 17:24:12
LQ=@@@-+00382.46
' !PAUSE 60 07-17-1996 17:25:13
LQ=@D@-+00382.46
' !PAUSE 60 07-17-1996 17:26:13
'TAKE 24 LEVEL READINGS 1 HOUR APART
LQ=@@@-+00382.46
' !PAUSE 3600 07-17-1996 18:26:13
LQ=@@@-+00382.47
' !PAUSE 3600 07-17-1996 19:26:13
LQ=@@@-+00382.46
' !PAUSE 3600 07-17-1996 20:26:13
LQ=@@@-+00382.46
' !PAUSE 3600 07-17-1996 21:26:14
LQ=@@@-+00382.46
' !PAUSE 3600 07-17-1996 22:26:14
LQ=@@@-+00382.46
' !PAUSE 3600 07-17-1996 23:26:14
LQ=@@@-+00382.47
' !PAUSE 3600 07-18-1996 00:26:14
LQ=@@@-+00382.46
' !PAUSE 3600 07-18-1996 01:26:16
LQ=@@@-+00382.46
' !PAUSE 3600 07-18-1996 02:26:16
LQ=@B@-+00382.47
' !PAUSE 3600 07-18-1996 03:26:16
LQ=@@@-+00382.47
' !PAUSE 3600 07-18-1996 04:26:16
LQ=@@@-+00382.46
' !PAUSE 3600 07-18-1996 05:26:16
LQ=@@@-+00382.46
' !PAUSE 3600 07-18-1996 06:26:17
LQ=@@@-+00382.46
' !PAUSE 3600 07-18-1996 07:26:17
LQ=@@@-+00382.46
```

' !PAUSE 3600 07-18-1996 08:26:17
LQ=@@@-+00382.45
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WHC-SD-WM-OTR-214
Revision 0

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' !PAUSE 3600 07-25-1996 20:27:03
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WHC-SD-WM-OTR-214
Revision 0

Calculations for 150 cm3 displacer

Input	Name	Output	Unit	Comment
	DD	1.8483607	g/cm ³	Disp. Density
279.36123	DW		g	Dips. Weight
151.14	DV		cm ³	Disp. Volume
170	F		g	Force on wire/Tension setpoint
	V1	73.578844	cm ³	Volume of disp above waste
	V2	77.561156	cm ³	Volume of disp below waste
1.41	R2		g/cm ¹	Density of waste
	VA	9.14	cm ³	Vol of lower disp segment
	VB	68.418369	cm ³	Vol of middle disp segment
	VC	.00278693	cm ³	Vol of upper disp segment
3.1415	PI			PI, a constant
	Z	2.6150886	in	Distance disp submerged in waste
	Ra	2.143	cm	Radius of cone in Volume A (bottom)
1.9	Zcone		cm	Cone section height (same for Va&Vb)
	Rc	2.143	cm	Radius of cone in Volume C (top)
2.143	R		cm	Radius of displacer
	Theta	.84542983	Radians	Cone angle

Model for 150 cm3 displacer

```

DD=DW/DV           Disp Density = Disp Weight / Disp Volume
F=DW-V2*R2         Eq. 8.8 from ENRAF
DV=V1+V2           Volume of disp=Vol. above line + Vol below
V2=VA+VB+VC        Volume of disp in waste per physical model
VA=MIN(9.14,(PI/3)*Ra^2*Z)  Volume of lower disp segment
VB=PI*R*R*(MIN(MAX(1.9,Z),11.03)-1.9)  Volume of middle disp segment
VC=MAX(0,9.14-(PI/3)*(MIN(12.93,12.93-MAX(11.03,Z)))*Rc^2)  Volume of upper d
TAN(Theta)=Ra/(MIN(Z,1.9))  Find Ra=f(Z) for VA calculation
TAN(Theta)=R/Zcone  Find cone angle
MIN(TAN(Theta)*(12.93-Z),R)=Rc  Find Rc=f(Z)

```

9.0 Attachment 2: REPRODUCTION OF THE OTP "MASTER" COPY

OPERATIONAL TEST PROCEDURE FOR HOURLY RECORDING THE LEVEL OF TANK 241-AN-107

1.0 INSTRUCTION SECTION

1.1 PURPOSE/SCOPE

The purpose of this document is to demonstrate that the existing Enraf Advanced Technology Gauges (ATGs), Communications Interface Unit (CIU) and LOGVR18 software installed at 241-AN tank farm will run a "batch" file to record the level of 241-AN-107 on an hourly basis for up to 10 days. One "batch" file for each gauge will be tested. Actual test execution steps begin in Section 1.7. All portions of the test shall be completed before the batch files are either accepted or rejected. Testing is expected to take one day to complete.

The purpose of this procedure is to verify correct operation of the "batch" files LL1C.RQS and LL15A.RQS. Operational testing will verify that the hardware and software function according to intent prior to recording level data on a regular basis.

1.2 DESCRIPTION OF THE SYSTEM

The following items are already installed at 241-AN-271: the two (2) Enraf ATGs, Enraf CIU, digital panel meters, LOGVR18 software and the interconnecting cables. The test consists of Enraf LOGVR18 software running on a standard administrative workstation to communicate with a gauge by the "batch" files LL1C.RQS or LL15A.RQS. The batch file(s) will command the gauge to lower the displacer to the tank waste surface (and wait 10 minutes for it to get there), and take 3 level readings 1 minute apart (to let the operator know communication is established). Then the batch file will take level readings once an hour for 10 days. At the end of 10 days, recording will end. Recording can be restarted by running the batch file again.

1.3 CRITERIA

This Operational Test Procedure (OTP) will be successful if all the following criteria are met:

- 1.3.0.1 The workstation communicates with the ATGs via the CIU using the LOGVR18 program.
- 1.3.0.2 The "batch" files LL1C.RQS and LL15A.RQS collect level data from the appropriate gauge.
- 1.3.0.3 Each ATG responds with an error code = 000 or 0000 (indicating no problems) for the XPU and SPU of the ATG.

¹LOGVR18 is a trademark of Enraf, Houston, TX.

1.4 REFERENCES

1.4.1 Procedures

- 6-TF-125, *ENRAF SERIES 854 PREVENTIVE MAINTENANCE AND CALIBRATION PROCEDURE*
- T0-020-420, *CLEAN LIT TAPES, PLUMMETS AND DISPLACERS; REPLACE FIC/ROBERTSHAW TAPES AND PLUMMETS*

1.4.2 Drawings

- H-2-824485, *Densitometer Mechanical Installation.*
- H-2-824486, *Densitometer Electrical Installation.*

1.4.3 Other

- *Instruction Manual, Series 854 ATG level gauge*, Part No. 4416.220, Version 2.2, Enraf B.V., The Netherlands.
- *Installation Info, Model 854 ATG Servo Powered Tank Gauge*, Part No. 4416.601, Version 1.0, Enraf B.V., The Netherlands.
- *Instruction Manual 854 ATG density software package*, Part No. 564.4416.221-40, Version 1.0, Enraf B.V., The Netherlands.
- *Instruction Manual MPU analog output 4-20mA*, Part No. 4416.222, Version 2.0, Enraf B.V., The Netherlands.
- *Instruction Manual, series 847 Portable Enraf Terminal*, Part No. 4416.210, Version 1.1, Enraf B.V., The Netherlands.
- *Instruction Manual, Series 858 Communications Interface Unit*, Part No. 4416.500, Version 2.1, Enraf B.V., The Netherlands.

1.5 RESPONSIBILITIES

Each organization participating in the execution of this OTP will designate personnel for the responsibilities and duties as defined herein for their respective roles. The names of these designees shall be provided to the Recorder for listing on the Recorder's copy of the Test Execution Sheet prior to the performance of any part of this OTP.

All individuals shall carry out their assigned work in a safe manner to protect themselves, others, and the equipment from undue hazards and to prevent damage to property and environment. Performance of test activities shall always include safety and health aspects as delineated in the operations manuals and as directed by the Project Engineer. Any hazard identified during the performance of the OTP shall be reported to the Test Director.

1.5.1 Project Engineer

1.5.1.1 Designate a Test Director.

1.5.1.2 Coordinate testing with facility management.

1.5.1.3 Act as liaison between the participants in operational testing.

1.5.1.4 Ensure informal testing and inspection is complete.

1.5.1.5 Schedule and conduct a pre-OTP meeting with test participants prior to start of testing.

1.5.1.6 Notify the persons performing and witnessing the test prior to the start of testing.

1.5.1.7 Notify all concerned parties when a change is made in the testing schedule.

1.5.1.8 Approve field changes to the OTP.

1.5.1.9 Sign/date Test Execution Sheet (Appendix D) when OTP is approved and accepted.

1.5.1.10 Take necessary action to clear exceptions to the OTP.

1.5.1.11 Sign/date Test Exception Sheet (Appendix B) when an exception has been resolved.

1.5.1.12 Provide a distribution list for the approved and accepted OTP.

1.5.1.13 Confirm that all equipment required for performing this test, as listed in Section 1.6.2, will be available for the test duration.

- 1.5.1.14 Provide equipment required for performing this operational test, which has not been designated as being provided by others.

1.5.2 Test Director

- 1.5.2.1 Witness the tests.
- 1.5.2.2 Coordinate all operational testing.
- 1.5.2.3 Confirm that shop testing (if any) and/or inspection (if any) of the test unit(s) or portion of the test unit(s) have been completed.
- 1.5.2.4 Stop any test which may cause damage to the test unit(s) until the test procedure has been revised.
- 1.5.2.5 Approve field changes to the OTP.
- 1.5.2.6 Obtain revisions to the OTP, as necessary, to comply with authorized field changes or to accommodate existing field conditions.
- 1.5.2.7 Evaluate recorded data, discrepancies, and exceptions.
- 1.5.2.8 Obtain from the Project Engineer, any information or changes necessary to clear or resolve exceptions.
- 1.5.2.9 Sign/date Test Data sheets and Test Execution sheet (Appendix A & D) when execution of the OTP has been completed.
- 1.5.2.10 Sign/date Test Exception Sheet (Appendix B) when acceptable retest has been performed.
- 1.5.2.11 Prepare and obtain required signatures on the Operational Test Report prior to reproduction and distribution.

1.5.3 Recorder

- 1.5.3.1 Witness testing and perform all recording using black ink.
- 1.5.3.2 Record names of all designated personnel on the Test Execution sheet (Appendix D) on the Recorder's copy of OTP prior to testing.
- 1.5.3.3 Observe tests, record test data and maintain Test Log (Appendix C).
- 1.5.3.4 Sign/date the Test Execution Sheet, Test Data sheets and Test Exception sheet(s) (Appendices A, B & D) as the Recorder.
- 1.5.3.5 Initial every test step on the Recorder's copy as it is completed, next to the step number and under the appropriate gauge identifier.
- 1.5.3.6 Record authorized field changes to the OTP.

- 1.5.3.7 Record, on a Test Exception Sheet, exceptions and test steps that are either modified or are not performed. Additional Test Exception Sheets can be reproduced as needed (Appendix B).
- 1.5.3.8 Orally notify the Test Director at the time an objection is made.
- 1.5.3.9 After OTP is complete assign page numbers to Test Exception Sheets.
- 1.5.3.10 Submit the completed OTP to the Test Director for approval signatures and distribution.

1.5.4 Quality

- 1.5.4.1 Witness the tests.
- 1.5.4.2 Evaluate recorded data, discrepancies, and exceptions.
- 1.5.4.3 Approve field changes to the OTP.
- 1.5.4.4 Sign/date Test Execution Sheet (Appendix D) when execution of the OTP is completed and again when it is approved and accepted.
- 1.5.4.5 Sign/date Test Exception Sheet (Appendix B) when an exception is made and again when it has been resolved.
- 1.5.4.6 Initial/mark Test Data sheets (Appendix A), assuring data is entered correctly.

1.5.5 Other Personnel

- 1.5.5.1 Instrument Technician familiar with ENRAF gauges and use of LOGV18 program.

1.6 TEST CONDITIONS & EQUIPMENT REQUIRED

1.6.1 Test Conditions

No unique or unusual chemical, fire, release of energy, or criticality safety hazards involved with performing or supporting these tests have been identified. Normal facility safety rules and procedures shall be followed during these tests. All electrical and mechanical apparatus shall be operated as designed.

The test items, equipment, and facilities used in this test procedure are not expected to be affected permanently by this procedure. Test equipment that has been damaged shall be repaired or replaced.

1.6.2 Equipment Required

The Project Engineer shall assure all test equipment is available unless otherwise noted. The following list is provided as an aid and is not intended to be an exhaustive list.

- Blank, formatted 3.5 inch or 5 1/4 inch data diskette(s).

1.7 OPERATIONAL TEST SETUP

Step Checkoff and Data Sheet Entries

Spaces for the Recorders initials are provided to the left of the step numbers. The gauge identifiers (risers) 1C and 15A are at the top of the check mark columns, as needed. Initial each space as the step is completed for the corresponding gauge.

Each RECORD, RECORD VERIFICATION, or VERIFY in a step requires an entry on the data sheets. The data sheets include the step numbers and two separate columns for entries for gauges at Riser 1C (TA=00) and at Riser 15A (TA=01).

1.7.1 Preliminary Conditions

JAD ✓ 1.7.1.1 The pre-OTP meeting with test participants has been held and the personnel responsible for directing, witnessing and performing the test described in this OTP have read and understand their roles.

JAD ✓ 1.7.1.2 RECORD VERIFICATION by visual inspection that the isolation valve for each gauge is in the CLOSED position AND the displacer for each gauge is visible through the site glass.

1.7.2 Initializing the Workstation

- YDV* 1.7.2.1 Assure the power to the CIU, panel meters, ENRAF gauges and computer workstation is ON. If needed, turn the power ON.
- YDV* 1.7.2.2 If needed, when the menu comes up select the DOS function and press the ENTER key.
- YDV* 1.7.2.3 If needed, when the menu comes up, select LOGGER, and press ENTER. A LOGV18 menu screen will be shown.

COMMANDS:

The commands typed on the computer are shown in square brackets "[]" (the square brackets are NOT to be typed as part of the command). Included is any additional information the command requires. After typing the text within the square brackets, press the ENTER key. If an error is made during the typing of the command, use the backspace key to delete the error. If the input contains an error in format or protocol, the response will include an exclamation point (!). If the command is accepted, the response includes an ampersand (&).

The small x replaces a number where values will differ. Direction is given as to where to find the specific value. Commands require certain formats for the data being entered. They will not be accepted in any other form.

INFORMATION

This section checks that a gauge does not show an error code pertaining to an internal problem. The commands are entered from the computer using LOGV18.

- YDV* 1.7.2.4 Assure the program is communicating with the gauge at Riser 1C (TA=00) by (if needed) pressing F2, entering 00 and pressing ENTER.
- YDV* 1.7.2.5 Enter command [EP] to obtain the XPU error codes. *now* RECORD the error codes displayed by LOGV18 on the data sheet. Correct any error, or enter it as a Test Exception. For definitions of EP error codes, see Section 12 (pages 60-62) of the 854 ATG Instruction Manual. An error code of 000 means there are no XPU problems.

AD ✓ 1.7.2.6 *WWE* Enter command [ES] to obtain SPU error codes. RECORD the error codes displayed by LOGVR18 on the data sheet. Correct any error, or enter it as a Test Exception. For definitions of ES error codes, see Section 12 (pages 63-65) of the 854 ATG Instruction Manual. An error code of 0000 means there are no SPU problems.

AD ✓ 1.7.2.7 For each of the following parameters read the value from the gauge. If the value is different from that shown, change the value to match. RECORD VERIFICATION for each item in the test data sheet. *See test exception #1*

- DV = ~~135~~ 147.32
- DW = 276.15888
- S1 = ~~138~~ 170 71.76
- RL = (RECORD VALUE)
- WV = (RECORD VALUE)

AD ✓ 1.7.2.8 Switch to the gauge at Riser 15A (TA=01) by pressing F2, entering 01 and pressing ENTER.

AD ✓ 1.7.2.9 Enter command [EP] to obtain the XPU error codes. RECORD the error codes displayed by LOGVR18 on the data sheet. Correct any error, or enter it as a Test Exception. For definitions of EP error codes, see Section 12 (pages 60-62) of the 854 ATG Instruction Manual. An error code of 000 means there are no XPU problems.

AD ✓ 1.7.2.10 Enter command [ES] to obtain SPU error codes. RECORD the error codes displayed by LOGVR18 on the data sheet. Correct any error, or enter it as a Test Exception. For definitions of ES error codes, see Section 12 (pages 63-65) of the 854 ATG Instruction Manual. An error code of 0000 means there are no SPU problems.

AD ✓ 1.7.2.11 For each of the following parameters read the value from the gauge. If the value is different from that shown, change the value to match. RECORD VERIFICATION for each item in the test data sheet.

- DV = 151.14
- DW = 279.36123
- S1 = ~~138~~ 170 *AD* 717.96 *See test exception #1*
- RL = (RECORD VALUE)
- WV = (RECORD VALUE)

1.8 OPERATIONAL TEST

1.8.1 Testing "batch" file LL15A.RQS

INFORMATION

Procedures in this section serve to verify and validate the "batch" mode capabilities of obtaining level measurements using the file LL15A.RQS. This is the "backup" file using the gauge at Riser 15A if the gauge at riser 1C is not available.

JDS ✓ 1.8.1.1 Assure the ball valve at Riser 15A is CLOSED.

JDS ✓ 1.8.1.2 Press the ESC key to return to the main menu of LOGVR18 software. Select 5) File-to-Field Utility.

JDS ✓ 1.8.1.3 From the File-to-Field menu, select item 2) .RQS file.

JDS ✓ 1.8.1.4 Select the file LL15A.RQS file and press ENTER. This should return you to the File-to-Field menu with your selected file.

JDS ✓ 1.8.1.5 Select 3) .RPL file and press ENTER. Enter the file name as the month, day, underscore and test run number (e.g., MAR7_3 represents March 7, test run 3). RECORD the file name.

JDS ✓ 1.8.1.6 Select item 7) to send the .RQS file and press ENTER. The file will be tested then sent to the gauge at Riser 15A.
NOTE: if a fault condition occurs follow the directions of the Test Director.

JDS ✓ 1.8.1.7 The displacer will be lowered to the top of the ball valve. After the 3 measurements [1 minute apart] and the first 1 hour reading are complete (after about 15 minutes total), interrupt the operation of the batch file by pressing *ESC* twice. *JDS* 7-17-96
See Test Exception #2

JDS ✓ 1.8.1.8 Select item 9) Convert .RPL to .LOG and press ENTER.

JDS ✓ 1.8.1.9 Select the file created in Step 1.8.1.5 to be converted from the reply file to a log file and press ENTER.

JDS ✓ 1.8.1.10 Type EXIT to return to the File-to-Field menu. *JDS* 7-17-96
See Test Exception #3

JDS ✓ 1.8.1.11 Select C) to return to the main menu of the LOGVR18 software. From the appropriate menu send the CA command to the gauge. When the displacer is visible in the sight glass sent the FR command to stop the displacer.

JDS ✓ 1.8.1.12 RECORD the accepted value for the top of the ball valve and the source for that value. Examine the .LOG file; VERIFY the adjusted level of the first 4 readings are within ± 1.5 inches of the accepted value for the top of the ball valve.

1.8.2 Testing "batch" file LL1C.RQS

INFORMATION

Procedures in this section serve to verify and validate the "batch" mode capabilities of obtaining level measurements using the file LL1C.RQS. This is the file that will initially be used with the gauge at Riser 1C.

- JD ✓ 1.8.2.1 Assure the ball valve at Riser 1C is OPEN.
- JD ✓ 1.8.2.2 Press the ESC key to return to the main menu of LOGVR18 software. Select 5) File-to-Field Utility.
- JD ✓ 1.8.2.3 From the File-to-Field menu, select item 2) .RQS file.
- JD ✓ 1.8.2.4 Select the file LL1C.RQS file and press ENTER. This should return you to the File-to-Field menu with your selected file.
- JD ✓ 1.8.2.5 Select 3) .RPL file and press ENTER. Enter the file name as the month, day, underscore and test run number (e.g., MAR7_3 represents March 7, test run 3). RECORD the file name.
- JD ✓ 1.8.2.6 Select item 7) to send the .RQS file and press ENTER. The file will be tested then sent to the gauge at Riser 1C. NOTE: if a fault condition occurs follow the directions of the Test Director.
- JD ✓ 1.8.2.7 The displacer will be lowered to the top of the tank waste. After the 3 measurements [1 minute apart] and the first 1 hour reading are complete (after about 15 minutes total) ~~interrupt the operation of the batch file by pressing F2 twice.~~
- ~~1.8.2.8 Select item 9) Convert .RPL to .LOG and press ENTER.~~
- ~~1.8.2.9 Select the file created in Step 1.8.2.5 to be converted from the reply file to a log file and press ENTER.~~
- ~~1.8.2.10 Read and RECORD the first 4 measurements from the .LOG file created in the previous step. See Note 1 at the end of this section.~~
- ~~1.8.2.11 Return to the File-to-Field menu, select item 2) .RQS file.~~
- ~~1.8.2.12 Reselect the file LL1C.RQS file and press ENTER to return to the File-to-Field menu with the selected file.~~

See
Test
Exception
5

JD Donelli
7/7/90

Cont from
prev. page
Test Excep
#5
J.D. Donnell
7-17-96

- 1.8.2.13 Select 3) RPL file and press ENTER. Enter the file name as the month, day, underscore and test run number (e.g., MAR7_3 represents March 7, test run 3). RECORD the file name.
- 1.8.2.14 Select item 7) to send the .RQS file and press ENTER. The file will be tested then sent to the gauge at Riser 1C. NOTE: if a fault condition occurs follow the directions of the Test Director.
- J.D. ✓ 1.8.2.15 The displacer ^{is} will be lowered to the ⁱⁿ top of the tank waste. Read (from the screen) and RECORD VERIFICATION the 3 measurements [1 minute apart] and the first 1 hour reading (after about 15 minutes total) are within 0.1 inch of the previous readings. See Note 1 at the end of this section. J.D. Donnell 7-17-96 Test Exception #6
- J.D. ✓ 1.8.2.16 Leave the "batch" file LL1C.RQS running.

Note 1: The values for the waste level will be lower than that reported by the FIC gauge. This is due to the Enraf displacer being submerged further into into the waste (about halfway or approximately 2.5 inches) rather than the typical 0.6 inch (or less).

1.9 OPERATIONAL TEST CLOSURE

Test Excep
#7
J.D. Donnell
7-26-96

- J.D. ✓ 1.9.1 Include in the Test Data a copy of the files LL1C.RQS and LL15A.RQS run and the .LOG files generated. To obtain a copy, Select B) DOS Shell and change to the appropriate sub-directory. Copy the files to the removable disk and transfer to another computer to print.
- J.D. ✓ 1.9.2 The person(s), by their signature below state the "batch" files LL1C.RQS and LL15A.RQS, running under LOGVR18 software are functional and ready for use.

<u>James I. Ross</u>	7-26-96	<u>J.D. Donnell</u>	7-26-96
Test Director	Date	Project Engineer	Date
<u>James I. Ross</u>	7-26-96		
Tank Farm Operations	Date		

1.10 TEST DATA SHEETS

The Test Data Sheets are used to document any procedure step requiring verification or recording of a value. All entries are made in black ink. A description of the data sheet format follows. Upon successful completion of testing activities, the master copy of the test execution data sheets shall be signed by the Test Witnesses. Witness signatures at the bottom of the data sheets indicate that the witness agrees to the accuracy of the data recorded and comparisons made.

1. Date of Test--Record the date the test is performed.
2. Gauge Transmission Address--The transmission address of the gauge is prerecorded as TA=00 (Riser 1C) and TA=01 (Riser 15A).
3. Equipment Serial Number(s)--Record the serial numbers of any device used during the tests.
4. Test Performed By--Print the name of the person performing the test.
5. Procedure Step Number--This column contains the test steps requiring verification.
6. Item--This column contains the item or parameter being verified or recorded.
7. Expected Result--This column indicates the acceptable value of the item being recorded.
8. Value--Record the quantitative or qualitative measure (i.e., a line voltage may have a value of 120V, whereas a pump may have a value of ON or OFF) of the item being verified in this column.
9. Accept/Reject--Indicate whether the value obtained is acceptable in comparison with the Expected Value.
10. Comment--If the value is rejected, give a justification for denial.
11. QA--This column indicates that QA concurred with the items recorded or verified. Test Data Sheets are in Appendix A.

1.11 TEST LOG SHEET

Test Log Sheets are used to document test start and stop times and to document any other notes concerning the execution of the Operational Test Procedure. A Test Log Sheet is included in Appendix C.

2.0 CHANGE CONTROL AND EXCEPTIONS TO OPERATIONAL TEST SECTION

2.1 OPERATIONAL TEST PROCEDURE CHANGE CONTROL

Operational testing is to be conducted in accordance with the steps and requirements specified in this procedure. Any required field changes must be per Sections 1.5.1, 1.5.2, and 1.5.4. Field changes shall also be recorded as a test exception.

2.2 TEST EXECUTION

The operational test procedures detailed in Sections 1.7 and 1.8 shall be performed in sequential steps starting with Section 1.7.1, except for fault recovery, as specified within the procedure. As required by Section 1.5.3, the Recorder will initial every test step in the space provided on the Recorder's copy of the OTP as each step is completed. Any step that requires a value recording or verification must also be recorded on the Test Data Sheet.

2.2.1 Without Exception

2.2.1.1 Check applicable space on the Test Execution Sheet (Appendix D) to show that the OTP has been performed and no exceptions have been recorded.

2.2.1.2 Sign and date the Test Execution Sheet in the spaces provided.

2.2.1.3 Distribute requisite copies of OTP.

2.2.2 With Exception(s) Resolved

2.2.2.1 Check applicable space on the Test Execution Sheet to show that the OTP has been performed with exceptions recorded and resolved.

2.2.2.2 Sign and date the Test Execution Sheet in the spaces provided.

2.2.2.3 Distribute requisite copies of OTP.

2.2.3 With Exception(s) Outstanding

2.2.3.1 Check applicable space on the Test Execution Sheet to show that the OTP has been performed with exceptions recorded, part or all of which are presently outstanding, unresolved.

2.2.3.2 Sign and date the Test Execution Sheet in the spaces provided.

2.2.3.3 Distribute requisite copies of OTP.

3.0 RECORDING AND RESOLVING EXCEPTIONS

3.1 GENERAL

Exceptions to the OTP are sequentially numbered and recorded on individual Exception Sheets. This enables case-by-case resolution, recording, approval, and distribution of each exception.

3.2 RECORDING

3.2.1 Number each exception sequentially as it occurs in the comments column on the Test Data Sheet, if applicable, and record it on a Test Exception Sheet. If the exception occurs without a reference to the data sheet, record the exception on a Test Exception Sheet.

3.2.2 Enter name and organization of objecting party for each exception.

3.2.3 Enter planned action to resolve each exception when determined.

3.3 RETEST/RESOLUTION

3.3.1 Record the action taken to resolve each exception on the Test Exception Sheet. Action taken might not be the same as planned action.

3.3.2 When action taken results in an acceptable retest, sign and date Acceptable Retest section of the Test Exception Sheet.

3.3.3 When action taken does not involve an acceptable retest, mark the N/A block. Resolve exception per Section 3.4 below.

3.4 APPROVAL AND OPERATIONAL

3.4.1 The Project Engineer provides final approval of exception by checking one of the following on the Test Exception Sheet:

- Retest Approved and Accepted: Applicable when Retest Execution and Operational section is completed.
- Exception Accepted-As-Is: Requires detailed explanation.

- Other: Requires detailed explanation.

3.4.2 The Project Engineer signs and dates the Test Exception Sheet and obtains other internal approval, if required.

3.5 DISTRIBUTION

Distribute requisite copies of completed Test Exception Sheets to the OTP participants.

APPENDIX A - TEST DATA SHEETS

Test Data Sheets

Date of test: 7-17-96			Gauge at Riser 1C (TA=00)				Gauge at Riser 15A (TA=01)			
Test Performed By: J. Dowell, et al										
Procedure Step Number	Item	Expected Result	Value	(A/R)	Comment	QA	Value	(A/R)	Comment	QA
1.7.2.2	Isolation Valve	Closed	closed	A		PAW	closed	A		PAW
	Displacer visible	Yes	yes	A		PAW	yes	A		PAW
1.7.2.5	EP Error	000	000	A		PAW	000	---	---	---
1.7.2.6	ES Error	0000	0000	A		PAW	0000	---	---	---
1.7.2.7	DV	435-147.32- HFE 712/16	147.32	A	See Test Description #1	PAW	147.32	---	---	---
	DW	276.15888	276.15888	A		PAW	276.15888	---	---	---
	S1	436-170 HFE 712/16	170.0	A	See Test Description #1	PAW	170.0	---	---	---
	RL	Record Value	679.94	A		PAW	679.94	---	---	---
	WV	Record Value	0.0281	A		PAW	0.0281	---	---	---
1.7.2.9	EP Error	000	000	---	---	---	000	A		PAW
1.7.2.10	ES Error	0000	0000	---	---	---	0000	A		PAW
1.7.2.11	DV	151.14	151.14	---	---	---	151.14	A		PAW
	DW	279.36123	279.36123	---	---	---	279.36123	A		PAW
	S1	436-170 HFE 712/16	170.0	---	---	---	170.0	A	See Test Description #1	PAW
	RL	Record Value	675.98	---	---	---	675.98	A		PAW
	WV	Record Value	0.032	---	---	---	0.032	A		PAW

Test Data Sheets

Date of test: 7-17-96			Gauge on Riser 1C (TA=00)				Gauge on Riser 15A (TA=01)			
Test Performed By: J. L. Dowell, et al			Value	(A/R)	Comment	QA	Value	(A/R)	Comment	QA
1.8.1.5 1.8.2.5 1.8.1.12 1.8.2.10	Procedure Step Number	Item	Expected Result							
		.RPL file	Record filename							
		Top of ball valve elevation	Record value							
		Source for top of ball valve	Record source							
		Reading #1	Record value							
		Reading #1 w/in 1.5 inch?	Yes							
		Reading #2	Record value							
		Reading #2 w/in 1.5 inch?	Yes							
1.8.2.13		Reading #3	Record value							
		Reading #3 w/in 1.5 inch?	Yes							
		Reading #4	Record value							
		Reading #4 w/in 1.5 inch?	Yes							
		.RPL file	Record filename							

See Test Exception #5

A-19

Date of test: 7-17-96			Gauge on Riser 46 (TA=00) ¹⁵ 7-17-96 1C (TA=00) (ERRORS CORRECTION)				Gauge on Riser 15A (TA=01)			
Test Performed By: J.L. DOWELL, et al										
Procedure Step Number	Item	Expected Result	Value	(A/R)	Comment	QA	Value	(A/R)	Comment	QA
1.8.2.15	Reading #1	Record value	322.46	A		PAW	-----	----	-----	---
	Reading #1 w/in 0.1 inch?	Yes	N/A		See Test Exception #6		-----	----	-----	---
	Reading #2	Record value	322.46	A		PAW	-----	----	-----	---
	Reading #2 w/in 0.1 inch?	Yes	N/A		See Test Exception #6		-----	----	-----	---
	Reading #3	Record value	322.46	A		PAW	-----	----	-----	---
	Reading #3 w/in 0.1 inch?	Yes	N/A		See Test Exception #6		-----	----	-----	---
	Reading #4	Record value	N/A		See Test Exception #6		-----	----	-----	---
	Reading #4 w/in 0.1 inch?	Yes				-----	----	-----	---	

Test Data Sheets

Test Director

Date

Quality

Date

Recorder

Date

WHC-SD-WM-OTR-214

Revision 0

APPENDIX B - TEST EXCEPTION SHEET
(Copy as needed)

WHC-SD-WM-OTR-214
Revision 0

TEST EXCEPTION # 1

Test Title: WHC-SD-WM-OTP-214, REV 0			Gauge Transmission Address: 00,01	
EXCEPTIONS			CORRECTION APPROVAL	
Procedure Step Number	Date	Description	Initials/Date	
			Project Engineer	Quality
1.7.2.7 1.7.2.11	7-17-96	Change DV from 135 to 147.32 [step 1.7.2.7 only] and SI from 138 to 170; (to correct math error). Steps 1.7.2.7 & 1.7.2.11] Also corrected Test Data Sheet.	<i>JTD</i> 7-17-96	<i>PAW</i> 7-17-96

Project Engineer 7-17-96
 OBJECTING PARTY Date *JTD* 7-17-96
 RECORDER Date
 ACCEPTABLE RETEST PERFORMED: YES ____ NO ____ N/A ☒
NA 7-17-96
 Quality Date *James Ross* 7-17-96
 Test Director Date
 Retest Approved and Accepted ____ Exception Accepted As-Is ☒ Other ____
 Explanation Corrected values for correct level operation

EXCEPTION RESOLVED:
JTD 7-17-96
 Project Engineer Date
Paul A. Werner 7-17-96
 Quality Date

WHC-SD-WM-OTP-214
Revision 0

TEST EXCEPTION # 2

Test Title: WHC-SD-WM-OTP-214, REV 0			Gauge Transmission Address: <u>01,00</u>	
EXCEPTIONS			CORRECTION APPROVAL	
Procedure Step Number	Date	Description	Initials/Date	
			Project Engineer	Quality
1.8.1.7 1.8.2.7	7-17-96	Change instruction (step 1.8.1.7) to interrupt program from "press F2 twice" to "press ESC	<u>JL Dowd</u> 7-17-96	<u>PAW</u> 7-17-96

Project Engineer 7-17-96
OBJECTING PARTY Date

AT Dowd 7-17-96
RECORDER Date

ACCEPTABLE RETEST PERFORMED: YES ___ NO ___ N/A ☒

NA PAW 7-17-96
Quality Date

James R 7-17-96
Test Director Date

Retest Approved and Accepted ___ Exception Accepted As-Is ☒ Other ___

Explanation F2 is incorrect to interrupt program - ESC is correct key.

EXCEPTION RESOLVED:

JL Dowd 7-17-96
Project Engineer Date
Paul A. Werner 7-17-96
Quality Date

WHC-SD-WM-OTR-214
Revision 0

TEST EXCEPTION # 3

Test Title: WHC-SD-WM-OTP-214, REV 0			Gauge Transmission Address: Riser ISA	
EXCEPTIONS			CORRECTION APPROVAL	
Procedure Step Number	Date	Description	Initials/Date	
			Project Engineer	Quality
1.8.1.10	7-17-96	Delete this step as previous step returns to Feet File-to Field menu.	<i>J. D. Dault</i> 7-17-96	<i>P. H. W.</i> 7-17-96

Project Engineer 7-17-96
OBJECTING PARTY Date

J. D. Dault 7-17-96
RECORDER Date

ACCEPTABLE RETEST PERFORMED: YES ___ NO ___ N/A ☒

N/A *P. H. W.* 7-17-96
Quality Date

James A. Ross 7-17-96
Test Director Date

Retest Approved and Accepted ___ Exception Accepted As-Is ☒ Other ___

Explanation Step 1.8.1.10 not needed.

EXCEPTION RESOLVED:

J. D. Dault 7-17-96
Project Engineer Date

Paul A. Welmer 7-17-96
Quality Date

WHC-SD-WM-OTR-214
Revision 0

TEST EXCEPTION # 4

Test Title: WHC-SD-WM-OTP-214, REV 0			Gauge Transmission Address: Riser 15A	
EXCEPTIONS			CORRECTION APPROVAL	
Procedure Step Number	Date	Description	Initials/Date	
			Project Engineer	Quality
1.8.1.1L	7-17-96	Change "first 4 readings" to "first 3 readings". Correct Data sheet as needed. to	JLD 7-17-96	PAW 7-17-96

Project Engineer
OBJECTING PARTY _____ Date _____

JLD 7-17-96
RECORDER _____ Date _____

ACCEPTABLE RETEST PERFORMED: YES _____ NO _____ N/A ☒

NA PAW 7-17-96
Quality _____ Date _____

James I. Ross 7-17-96
Test Director _____ Date _____

Retest Approved and Accepted _____ Exception Accepted As-Is ☒ Other _____

Explanation The third reading is the first reading of the hourly readings.

EXCEPTION RESOLVED:

JLD 7-17-96
Project Engineer _____ Date _____
Paul A. Werner 7-17-96
Quality _____ Date _____

WHC-SD-WM-OTR-214
Revision 0

TEST EXCEPTION # 5

Test Title: WHC-SD-WM-OTP-214, REV 0			Gauge Transmission Address: Riser 1C	
EXCEPTIONS			CORRECTION APPROVAL	
Procedure Step Number	Date	Description	Initials/Date	
			Project Engineer	Quality
1.8.2.7 thru 1.8.2.15	7-17-96	Do not interrupt operation of batch file (step 1.8.2.7) & create, read .LOG file. Logging was verified in step section 1.8.1. Continue test with displacer in waste at step 1.8.2.15.	JTD 7-17-96	PAW 7-17-96

Project Engineer JTD 7-17-96
OBJECTING PARTY _____ Date

JTD 7-17-96
RECORDER _____ Date

ACCEPTABLE RETEST PERFORMED: YES _____ NO _____ N/A ☒

NA 7-17-96
Quality _____ Date

[Signature] 7-17-96
Test Director _____ Date

Retest Approved and Accepted _____ Exception Accepted As-Is ☒ Other _____

Explanation To interrupt this batch file * restart is not needed as section 1.8.1 showed data logging is occurring; step modify steps as shown.

EXCEPTION RESOLVED:

JTD 7-17-96
Project Engineer _____ Date
Paul A. Werner 7-17-96
Quality _____ Date

WHC-SD-WM-OTR-214
Revision 0

TEST EXCEPTION # 6

Test Title: WHC-SD-WM-OTP-214, REV 0			Gauge Transmission Address: <u>Riser 15A</u>	
EXCEPTIONS			CORRECTION APPROVAL	
Procedure Step Number	Date	Description	Initials/Date	
			Project Engineer	Quality
1.8.2.15	7-17-96	Comparison of data is not done as: - Logging of data function already shown in section 1.8.1. - The first 3 readings were identical.	<u>JSD</u> 7-17-96	<u>PAU</u> 7-17-96

Project Engineer 7-17-96 Date
OBJECTING PARTY JSD RECORDER 7-17-96 Date

ACCEPTABLE RETEST PERFORMED: YES ___ NO ___ N/A ☒

Quality NA PAU 7-17-96 Date
Test Director 7-17-96 Date

Retest Approved and Accepted ___ Exception Accepted As-Is ☒ Other ___

Explanation Interrupting the "batch" file LOG.ROS to create a LOG file + read the data was not needed since the data was already displayed on the screen + the data displayed was identical.

EXCEPTION RESOLVED:

JSD
Project Engineer 7-17-96 Date
Paul A. Werner
Quality 7-17-96 Date

TEST EXCEPTION # 7

Test Title: WHC-SD-WM-OTP-214, REV 0			Gauge Transmission Address: 1C <i>Riser</i>	
EXCEPTIONS			CORRECTION APPROVAL	
Procedure Step Number	Date	Description	Initials/Date	
			Project Engineer	Quality
1.9.1	7-28-96	<p>Before step 1.9.1 add the following: "Interrupt batch file. Copy data files to removable disc."</p> <p>After step 1.9.1 add the following: "Change name of .RPL file (per step 1.8.2.5). Restart batch file, LIC.RAS (per step 1.8.2.6). Leave batch file running."</p>	<i>JLD</i> 7-28-96	

Project Engineer 7-28-96
OBJECTING PARTY Date

J. J. Dowell 7-28-96
RECORDER Date

ACCEPTABLE RETEST PERFORMED: YES ___ NO ___ N/A ☒

N/A ENR 7-26-96
Quality Date

James I. Ross 7-26-96
Test Director Date

Retest Approved and Accepted ___ Exception Accepted As-Is ☒ Other ___

Explanation Added steps to correct omissions in test procedure. Step 1.9.1 could not be performed while the batch file ran, afterwards the batch file was restarted.

EXCEPTION RESOLVED:

J. J. Dowell 7-26-96
Project Engineer Date

E. M. Wegener 7-26-96
Quality Date

WHC-SD-WM-OTR-214
Revision 0

APPENDIX C - TEST LOG SHEET
(Copy as needed)

TEST LOG: WHC-SD-WM-OTP-214, REV 0

A1-29

APPENDIX D - TEST EXECUTION SHEET

TEST EXECUTION SHEET

Date: 7-17-96

Document Number: WHC-SD-WM-OTP-214, REV 0

Test Unit Number: Riser IC, ISA

TEST PERSONNEL

Project Engineer: JL DOWELL

Test Director: J. T. ROSS

JL Dowell

J. T. Ross

Recorder: JL DOWELL

Quality: Paul A. Werner

JL Dowell

Paul A. Werner
 ERNIE N. WEGENER
 Ernie Wegener 7-26-96

TEST EXECUTION

J. T. Ross
 Test Director

7-17-96 *JL Dowell*
 Date Recorder

7-17-96
 Date

Paul A. Werner 7-17-96
 Quality Paul A. Werner Date
Ernie Wegener
 ERNIE N. WEGENER 7-26-96

TEST APPROVAL AND ACCEPTANCE

Without
 Exception

✓ With
 Exception/Resolved

With
 Exception/Outstanding

JL Dowell
 Project Engineer

26 JUL
 7-18-96 *Paul A. Werner*
 Date Quality

7/26/96
 Date

DISTRIBUTION SHEET

To	From		Page 1 of 1		
Distribution	Control Systems Engineering		Date Sept 30, 1996		
Project Title/Work Order			EDT No. 141089		
WHC-SD-WM-OTR-214, Rev. 0, Operational Test Report for Hourly Recording the Level of Tank 241-AN-107			ECN No. N/A		

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
K. G. Carothers	R1-56	X			
J. L. Dowell	E6-21	X			
G. N. Hanson	S5-05				X
M. D. Harding R.S. NICHOLSON	S5-05	X			
M. N. Islam	R3-08				X
J. T. Ross	S5-03	X			
J. J. Verderber	S1-57	X			
S. U. Zaman	R3-08	X			
Central Files	A3-88	X			
TFIC	R1-20	X			