Att. 2
OCT 17 1996

ENGINEERING DATA TRANSMITTAL

Page 1 of 1

1. EDT No. 141308

2. To: (Receiving Organization) Interim Stabilization		3. From: (Originating Organization) Support Engineering		4. Related EDT No.: 141307	
5. Proj./Prog./Dept./Div.: West Tank Farm Project / Interim Stabilization		6. Design Authority/ Design Agent/Cog. Engr.: C.C. Sciaef III / R.E. Larson		7. Purchase Order No.: N/A	
8. Originator Remarks: This document is being routed for approval				9. Equip./Component No.: N/A	
				10. System/Bldg./Facility: 241-A-101	
11. Receiver Remarks: 11A. Design Baseline Document? ☒ Yes ☐ No				12. Major Assm. Dwg. No.: N/A	
				13. Permit/Permit Application No.: N/A	
				14. Required Response Date: 10/02/96	

15. 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 Transmittal	Originator Disposition	Receiver Disposition
1	WHC-SD-WM-ATR-185	A11	0	Acceptance Test Report for the Safety Class Shutdown System.	SQ	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	4. Review		1. Approved	4. Reviewed no/comment	
		2. Release	5. Post-Review		2. Approved w/comment	5. Reviewed w/comment	
		3. Information	6. Dist. (Receipt Acknow. Required)		3. Disapproved w/comment	6. Receipt acknowledged	

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)											
(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN
1	1	Design Authority C.C. Sciaef III	<i>[Signature]</i>	10/16/96		1	1	M. R. Koch	<i>[Signature]</i>	10/19/96	
1	1	Design Agent R. E. Larson	<i>[Signature]</i>	10/16/96		1	1	ETF Design Authority D. A. Bragg	<i>[Signature]</i>	10/19/96	
1	1	Cog. Eng. R. E. Larson	<i>[Signature]</i>	10/16/96	7407	1	1	W. F. Zuroff	<i>[Signature]</i>	10/19/96	
1	1	Cog. Mgr. J.J. Badden	<i>[Signature]</i>	10/16/96		1	1	Dist. Authority D. Bragg	<i>[Signature]</i>	10/19/96	
1	1	QA T.J. Volkman	<i>[Signature]</i>	10/16/96							
1	1	Safety L.S. Krogsrud	<i>[Signature]</i>	10/17/96							
		Env.									

18. W. F. Zuroff <i>[Signature]</i> Signature of EDT Originator Date 10/2/96		19. T.A. Erickson Authorized Representative Date for Receiving Organization		20. <i>[Signature]</i> Design Authority/Cognizant Manager Date 10-17-96		21. DOE APPROVAL (if required) Ctrl. No. ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments	
--	--	--	--	--	--	---	--

ACCEPTANCE TEST REPORT FOR THE SAFETY CLASS SHUTDOWN SYSTEM

W.F. Zuroff
Lockheed Martin Hanford Company, Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-87RL10930

EDT/ECN: 141308 UC: 2030
Org Code: 77B20 Charge Code: N1737
B&R Code: EW3120071 Total Pages: 43

Key Words: 241-A-101; Interim Stabilization; Jet Pumping; Single Shell
Tanks; Safety Shutdown Circuit; Safety Class; Saltwell Pumping

Abstract: This document provides the Acceptance Test Report for the
successful testing of the Safety Shutdown Circuit. The test was done in
accordance with the requirements that were defined in WHC-SD-WM-SCH-003,
Interim Stabilization Safety Class Trip Circuit CGI Dedication Criteria.
The actual test procedure document was contained in WHC-SD-WM-ATP-185,
Acceptance Test Procedure for the Safety Class Shutdown System.

TRADEMARK DISCLAIMER. Reference herein to any specific commercial product, process, or service by
trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its
endorsement, recommendation, or favoring by the United States Government or any agency thereof or
its contractors or subcontractors.

Printed in the United States of America. To obtain copies of this document, contact: WHC/BCS
Document Control Services, P.O. Box 1970, Mailstop H6-08, Richland WA 99352, Phone (509) 372-2420;
Fax (509) 376-4989.

Release Approval

10/17/96
Date

Approved for Public Release

ACCEPTANCE TEST REPORT FOR THE SAFETY CLASS SHUTDOWN SYSTEM

1.0 PURPOSE

The purpose of this report is to document the results of the acceptance testing that was performed on the safety class shutdown system in accordance with WHC-SD-WM-ATP-185, *Acceptance Test Procedure for the Safety Class Shutdown System*. A copy of the completed test is attached to this report.

2.0 DISCUSSION

The test was performed by Westinghouse Hanford Company personnel using work package ES-96-00704, *241-A-101 Perform ATP on Safety Shutdown System*. The test commenced on 8/21/96. The test demonstrated the equipment functioned as designed and in accordance with the test procedure.

This test demonstrated the acceptance of the Safety Class (SC) Commercial Grade Items (CGI) as required by WHC-SD-WM-SCH-003, *INTERIM STABILIZATION SAFETY CLASS TRIP CIRCUIT CGI DEDICATION CRITERIA*.

The testing resulted in seven minor exceptions to the test document. All exceptions have been properly resolved and dispositioned.

The shutdown system performed very well and had an excellent time response time of less than 10 milliseconds. All components functioned as expected except the mercury switches. The switches are designed to operate in only one direction. This feature required the addition of two more switches (one for the X-plane and one for the Z-plane).

3.0 CONCLUSION

The system functioned as designed. It has been installed and is awaiting the Operational Test that will be performed in conjunction with all the equipment installed to support the saltwell pumping of Single-Shell Tank 241-A-101.

ATTACHMENT

A copy of the completed Acceptance Test Procedure is attached to this document. It includes all exceptions with the required disposition.

TANK FARM PLANT OPERATIONS PROCEDURE

ACCEPTANCE TEST REPORT FOR THE SAFETY CLASS SHUTDOWN SYSTEM ATTACHMENT

Document No.	Rev/Mod	Page
WHC-SD-WM-ATR-185	0	A-1

TABLE OF CONTENTS

PAGE

1.0	PURPOSE	3
2.0	INFORMATION	4
2.1	SCOPE	4
2.2	TERMS AND DEFINITIONS	7
2.3	RESPONSIBILITIES	7
2.4	REFERENCES	8
2.5	SAFETY	8
2.6	RADIATION AND CONTAMINATION CONTROL	9
2.7	QUALITY ASSURANCE	9
2.8	GENERAL INFORMATION	9
3.0	RECORDS	10
4.0	PREREQUISITES	11
5.0	PROCEDURE	12
5.1	MERCURY SWITCHES FUNCTIONAL TEST	12
5.2	DIFFERENTIAL PRESSURE RELAY FUNCTIONAL TEST	15
5.3	FLAMMABLE GAS MONITOR INPUT SIGNAL FUNCTIONAL TEST	16
5.4	VENTILATION SKID FLOW INPUT SIGNAL FUNCTIONAL TEST	20
5.5	CONTACTORS FUNCTIONAL TEST AND SHUTDOWN SYSTEM TIME RESPONSE	21
5.6	CONTROL CABINET (A) FUNCTIONAL TEST	25
FIGURES		
FIGURE 5.1	SAFETY CLASS CONTROL CABINET A	28
FIGURE 5.2	SAFETY CLASS CONTROL CABINET B	29
DATA FORMS		
DATA SHEET LOG		30
DATA SHEET I		31
EXCEPTION FORMS		
ATP EXCEPTION LOG		32
ATP EXCEPTION RECORD		33
ATP ACCEPTANCE RECORD		34
PROCEDURE HISTORY SIGNATURE SHEET		35

1.0 PURPOSE

- 1.1 This ATP will test and verify the operability of the safety class shutdown system to be located at 241-A-101, in support of the A-101 saltwell jet pumping campaign.

Systems/checks that will be tested/performed include the following:

- Mercury Switches Functional Test
- Differential Pressure Relay Functional Test
- Flammable Gas Monitor Input Signal Functional Check
- Ventilation Skid Flow Input Signal Functional Check
- Contactors (PMP-1, PMP-2, HT-1 and HT-2) Functional Check and Shutdown System Time Response
- Control Cabinet (A) Switches Functional Test
- Control Cabinet (B) Switch and Indicating Lights Functional Check
- Output Signals to PICS Skid Functional Check

- 1.2 This ATP will NOT check the operability of the following equipment that is to be or has been tested via other test procedures;

- Portable Ventilation Flow Relay Operation
- Flammable Gas Relay Operation
- Dome Pressure Transmitter Operation
- Input Signal Cables (checked by the field installation crew)

Document No.	Rev/Mod	Page
WHC-SD-WM-ATR-185	0	A-3

2.0 INFORMATION

2.1 SCOPE

2.1.1 MERCURY SWITCHES FUNCTIONAL TEST

This test will verify the two mercury switches actuate when the cabinets are shaken in the X and Z planes (similar to a seismic event). A check of the switch continuity (i.e., a voltmeter across the each switch) shall be performed during the switching function. The relay actuated by the mercury switches is relay K3. This test will also verify the operation of this relay. The three input signals received from other devices will have to be simulated to allow this test to be performed.

Once the mercury switches operate the "Seismic" reset button shall be used to reset the shutdown circuitry.

2.1.2 DIFFERENTIAL PRESSURE RELAY FUNCTIONAL TEST

The pressure relay functional test shall be performed by providing a 4-20ma input signal to the isolator relay. The input signal shall be varied between 4 and 20ma. When the setpoint is reached the differential pressure relay will open causing the shutdown circuit to function. The relays actuated by this input signal are relays K1 and K2. This test will also verify the operation of these relays.

Once the differential pressure switch operates the "Panel" reset button shall be used to reset the shutdown circuitry.

2.1.3 FLAMMABLE GAS MONITOR INPUT SIGNAL FUNCTIONAL CHECK

The flammable gas monitor (FGM) input signal functional check shall be tested by installing a light switch wired across the input signal terminals. The switch shall be opened and closed to ensure the safety shutdown circuitry operates correctly. The relays actuated by this input signal are relays K1 and K2. This test will also verify the operation of these relays.

Once the FGM test switch operates the "Panel" reset button shall be used to reset the shutdown circuitry.

2.1 SCOPE (cont.)**2.1.4 VENTILATION SKID FLOW INPUT SIGNAL FUNCTIONAL CHECK**

The ventilation skid flow input signal functional check shall be tested by installing a light switch wired across the input signal terminals. The switch shall be opened and closed to ensure the safety shutdown circuitry operates correctly. The relays actuated by this input signal are relays K1 and K2. This test will also verify the operation of these relays.

Once the flow test switch operates the "Panel" reset button shall be used to reset the shutdown circuitry.

2.1.5 CONTACTORS (PMP-1, PMP-2, HT-1 and HT-2) FUNCTIONAL CHECK and SHUTDOWN SYSTEM TIME RESPONSE

A check of contactors functioning properly shall be verified during the tests performed via steps 2.1.2, 2.1.3 and 2.1.4. The operation of the safety class shutdown system will be timed from the time the input signal actuates to the time the contactors drop out. The time needs to be less than or equal to one second (re-perform step 2.1.3 or 2.1.4, as required).

Once the input signal actuates the "Panel" reset button shall be used to reset the shutdown circuitry.

2.1.6 CONTROL CABINET (A) SWITCHES FUNCTIONAL TEST

A check of the Manual Shutdown/Test pushbutton must be accomplished. Simulated input signals shall be provided for the cabinet to function properly. The switch shall be pressed to initiate a shutdown.

Once the switch actuates the contactors the "Panel" reset button shall be used to reset the shutdown circuitry.

2.1.7 CONTROL CABINET (B) SWITCH and INDICATING LIGHTS FUNCTIONAL CHECK

A check of the Seismic Reset pushbutton must be accomplished. Simulated input signals shall be provided for the cabinet to function properly. The structure shall be shaken to initiate a shutdown.

Once the relay actuates the contactors the "Seismic" reset button shall be used to reset the shutdown circuitry. this portion of the system will be checked as part of the scope of Section 2.1.2.

2.1 SCOPE (cont.)

2.1.8 OUTPUT SIGNALS TO PICS SKID FUNCTIONAL CHECK

A check of the K3 relay output signal must be accomplished when the mercury switches have operated (de-energizing the K3 relay coil). A check of the motor power contactors (PMP-1 and PMP-2) auxiliary contact, for indication of the shutdown circuitry functioning, to the PICS skid is required. When a shutdown occurs verify these auxiliary contacts open.

Once the K3 relay actuates the contactors the "Seismic" reset button shall be used to reset the shutdown circuitry. Once the K1 and/or K2 relay actuates the contactors the "Panel" reset button shall be used to reset the shutdown circuitry.

The K-3 relay output signal will be checked as part of the scope of Section 2.1.1. The PMP-1 and PMP-2 auxiliary contacts will be checked as part of the scope of Section 2.1.5.

TANK FARM PLANT OPERATIONS PROCEDURE

2.2 TERMS AND DEFINITIONS

- 2.2.1 ATP - Acceptance Test Procedure
- 2.2.2 ATR - Acceptance Test Report
- 2.2.3 DPM - Differential Pressure Monitor
- 2.2.4 ma - milli-ampere
- 2.2.5 msec - milli-second
- 2.2.6 JHA - Job Hazards Analysis
- 2.2.7 QC - Quality Control
- 2.2.8 SCSS - Safety Class Shutdown System
- 2.2.9 TFO - Tank Farm Operations
- 2.2.10 VAC - Voltage Alternating Current

2.3 RESPONSIBILITIES

- 2.3.1 The Maintenance craft personnel are responsible for:
 - Providing assistance during the test.
- 2.3.2 Quality Control (QC) is responsible for:
 - Verifying that this procedure was performed, all sections were completed and the documentation properly filled out or an exception written. Witnessing of certain procedure steps will be required.

2.3 RESPONSIBILITIES (cont.)

2.3.3 Test Director

- Provides concurrence that ATP may commence.
- Ensures the equipment found in step 4.1 of this procedure is available.
- Records equipment status and data per this procedure.
- Conducts a pre-job planning meeting.
- Conducts a Safety Class Shutdown System walkdown.
- Verifying Tank Farms Maintenance Crafts are in-place prior to commencing the ATP.
- Notifying the TFO Shift Manager of intent to start this procedure before commencing the ATP.

2.4 REFERENCES

2.4.1 The following documents were used to write or are referenced in this procedure:

- WHC-CM-1-10, SAFETY MANUAL, WKS-6, "PRE-JOB SAFETY PLANNING," WKS-8.1, "OPERATIONS LOCK AND TAG PROGRAM," WKS-15, "ELECTRICAL WORK SAFETY"
- WHC-CM-4-2 QR 11.0, QUALITY ASSURANCE MANUAL "TEST CONTROL"
- WHC-CM-6-1 EP 4.2., STANDARD ENGINEERING PRACTICE "TESTING PRACTICES"
- WHC-CM-6-1 APPX M, STANDARD ENGINEERING PRACTICES "ACCEPTANCE TEST PROCEDURES AND REPORTS".
- ECN-632817, SAFETY CLASS SHUTDOWN CIRCUIT
- WHC-SD-WM-SCH-003, INTERIM STABILIZATION SAFETY CLASS TRIP CIRCUIT CGI DEDICATION CRITERIA

2.5 SAFETY

WARNING

Energized circuits and leads are contained inside the equipment. Observe appropriate electrical precautions. Comply with WHC-CM-1-10, WKS-15, ELECTRICAL WORK SAFETY.

2.5 SAFETY (cont.)

2.5.1 The following administrative procedures control work performed in this procedure:

- Building Emergency Plan, WHC-IP-0263-TF
- Industrial Hygiene Manuals, WHC-CM-4-40 and 1-11
- Safety Manual, WHC-CM-1-10
- Tank Farm Health and Safety Plan (HASP), WHC-SD-WM-HSP-002

2.6 RADIATION AND CONTAMINATION CONTROL

2.6.1 HPT assistance is not required as the test is being performed in the assembly shop.

2.6.2 The following administrative procedures control work performed in this procedure:

- Safety Manual, WHC-CM-1-10

2.7 QUALITY ASSURANCE

2.7.1 Ensure that the check(s)/test(s) are performed per procedure. The QC Inspector shall sign and date each procedure section authenticating the validity of the data (if any) obtained and verifying that the procedure section has been performed and documented correctly.

2.8 GENERAL INFORMATION

2.8.1 Complete each procedure step in the given order, unless otherwise noted or as directed by the Test Director.

2.8.2 Editorial changes required to this ATP may be made per the red line method by the Test Director and Cognizant Engineer as long as they do not impact the equipments safety function, or performance and will not compromise or influence the test data. Any changes affecting the above stated criteria shall be made in accordance with WHC-CM-6-1, *Standard Engineering Practices*, EP-2.2 Change Control.

TANK FARM PLANT OPERATION PROCEDURE

2.8 GENERAL INFORMATION (cont.)

- 2.8.3 All entries recorded in this procedure shall be made in black ink except for those noted using the redline method.
- 2.8.4 Any non-conformance of the equipment or unexpected results during testing shall be logged and recorded in ATP EXCEPTION LOG.
- 2.8.5 Do not perform any part of this procedure on faulty equipment. If faulty equipment is discovered, STOP the execution of this procedure and resolve the problem (i.e. repair equipment or write up faulty equipment as an exception and continue).
- 2.8.6 If the performance of this procedure is suspended for any reason, ensure the requirements of the Lock and Tag System are met before leaving the test site.
- 2.8.7 At the completion of daily ATP testing, ensure that the equipment is returned to a safe configuration.
- 2.8.8 This procedure DOES contain separate data/ verification sheets. Reference to data sheets are incorporated into the specific section.
- 2.8.9 The equipment has no interfaces with other equipment (other than the test equipment) for the purposes of this test.
- 2.8.10 A JHA form will be used in conjunction with the Prejob safety meeting form when any unusual hazards are identified. The PRE-JOB SAFETY MEETING FORM will be used with the JHA to document all attendees.

3.0 RECORDS

- 3.1 The completed working copy of this ATP, data sheets and all exception logs and exception records generated by this ATP, will be kept as permanent records and released in an ATR.

Document No.	Rev/Mod	Page
WHC-SD-WM-ATR-185	0	A-10

4.0 PREREQUISITES

4.1 The following supplies shall be available at the workplace:

- 15 Amp (min.) light switches (2)
- Calibrated 4-20ma current loop source
- Calibrated Multimeter(s)
- Shorting jumpers #12 AWG SIS or engineering approved equal, length as required
- 250 OHM resistor, 1/2 watt
- Calibrated Multi-channel event recorder (or equivalent)

4.2 The following documents are required to be at the test site, before and during the performance of this procedure:

- WHC-IP-0842, Vol II Section 4.9.1, LOCKOUT/TAGOUT
- WHC-CM-1-10, WKS-8.1, OPERATIONS LOCK & TAG PROGRAM
- WORK PACKAGE, ES-96-00589/M

4.3 The following conditions must be met before this test may commence:

- 4.3.1 A pre-job safety meeting has been held before performing this procedure in accordance with WHC-IP-0842, Vol V Section 4.1, PRE-JOB SAFETY MEETING FORM.

Michael C. Kell
Test Director

8/21/96
Date

EXCEPTION # 1

- 4.3.2 Verify the equipment is fabricated and identified per ECN 632817.

mel
8/21/96 ☒

- 4.3.3 Verify all equipment is prepared for the test.

Michael C. Kell
Test Director

8/21/96
Date

- 4.3.4 Verify test equipment is calibrated and record data on page 27.

EXCEPTION # 6

- 4.3.5 QC Inspector SHALL VERIFY that section 4.0 has been COMPLETED by SIGNING below.

RS Plummer (SEE EXCEPTION #6)
QC Inspector Signature

9.19.96
Date

Document No.	Rev/Mod	Page
WHC-SD-WM-ATR-185	0	A-11

5.0 PROCEDURE

WARNING

Energized circuits and leads are contained inside the equipment. Observe appropriate electrical precautions. Comply with WHC-CM-1-10, WKS-15, ELECTRICAL WORK SAFETY.

5.1 MERCURY SWITCHES FUNCTIONAL TEST

- 5.1.1 ENSURE that temporary power (120 VAC) is available to the Safety Class Shutdown System via a 15 amp circuit breaker and the breaker is open. ☒
- 5.1.2 CONNECT 250 OHM resistor between terminals TB-3-1 and TB -3-2. ☒
- 5.1.3 ENSURE temporary jumpers are installed on the FGM, DPM, and Ventilation System inputs. ☒
- 5.1.4 CONNECT temporary power to the SCSS and close the circuit breaker. ☒
- 5.1.5 DEPRESS Seismic Reset Switch (PB-1). ☒
- 5.1.6 VERIFY Power Available Indicator Light "ON". ☒
- 5.1.7 DEPRESS Panel Reset switch (PB-2). Verify Trip Circuit Functional Indicator Light is "ON". ☒
- EXCEPTION # 2 5.1.8 RECORD voltage drop across Seismic Switch ~~SW-1~~ and the resistance across K3-3 (TB3-1,2). 4 mill VAC .3 OHMS ☒
- 5.1.9 TILT cabinet 1-3 degrees in the X-plane. ☒
- 5.1.10 VERIFY Power Available Indicator Light and the Trip Circuit Functional Indicator Light are off. ☒

TANK FARM PLANT OPERATION PROCEDURE

5.1 MERCURY SWITCHES FUNCTIONAL TEST (CONT.)

EXCEPTION # 2

5.1.11 ^{RESISTANCE} RECORD ~~voltage drop~~ across Seismic Switch ~~SW-1~~ and the resistance across K3-3.
~~∞~~ VAC OHMS ~~∞~~ OHMS

5.1.12 LOWER the cabinet to a level position.

EXCEPTION # 2

5.1.13 REPEAT steps 5.1.5 through 5.1.12 five (5) times and record data below.

level	{	11.6 m VAC	.2 OHMS	∞ ^{OHMS} <u>VAC</u>	∞ OHMS	} tilted
		14.9 m VAC	.2 OHMS	∞ ^{OHMS} <u>VAC</u>	∞ OHMS	
		11.7 m VAC	.2 OHMS	∞ ^{OHMS} <u>VAC</u>	∞ OHMS	
		12.3 m VAC	.2 OHMS	∞ ^{OHMS} <u>VAC</u>	∞ OHMS	
		14.6 m VAC	.2 OHMS	∞ ^{OHMS} <u>VAC</u>	∞ OHMS

EXCEPTION # 2

5.1.14 REPEAT steps 5.1.5 through 5.1.12 five (5) times and record data below. TILT cabinet 1-3 degrees in the opposite direction of the X-Plane. ~~OHMS~~

12.9 m VAC	.2 OHMS	∞ ^{OHMS} <u>VAC</u>	∞ OHMS
10.5 m VAC	.2 OHMS	∞ ^{OHMS} <u>VAC</u>	∞ OHMS
7.4 m VAC	.2 OHMS	∞ ^{OHMS} <u>VAC</u>	∞ OHMS
6.5 m VAC	.2 OHMS	∞ ^{OHMS} <u>VAC</u>	∞ OHMS
7.1 m VAC	.2 OHMS	∞ ^{OHMS} <u>VAC</u>	∞ OHMS

5.1.15 DEPRESS Seismic Reset Switch, * AND PANEL RESET
 MLK 8/22/96

5.1.16 ENSURE Power Available Light is on.

EXCEPTION # 2

5.1.17 RECORD the voltage drop across seismic switch ~~SW-2~~ and the resistance across K3-3.
3.8 m VAC .2 OHMS

TANK FARM PLANT OPERATION PROCEDURE

5.1 MERCURY SWITCHES FUNCTIONAL TEST (CONT.)

5.1.18 TILT cabinet 1-3 degrees in the Z-Plane ☒

5.1.19 VERIFY Power Available Indicator Light and the Trip Circuit Function Indicator Light "OFF". ☒

EXCEPTION # 2 5.1.20 RECORD the ^{RESISTANCE} ~~voltage drop~~ across seismic switch ~~SW-2~~ and the resistance across K3-3.
 ∞ ~~VAC~~ + ms ∞ OHMS ☒

5.1.21 LOWER the cabinet to a level position. ☒

EXCEPTION # 2 5.1.22 REPEAT steps 5.1.15 through 5.1.21 five (5) times and record data below.

<u>10.9m VAC</u>	<u>.2 OHMS</u>	∞ ^{OHMS} VAC	∞ OHMS
<u>11.0m VAC</u>	<u>.2 OHMS</u>	∞ ^{OHMS} VAC	∞ OHMS
<u>8.4m VAC</u>	<u>.2 OHMS</u>	∞ ^{OHMS} VAC	∞ OHMS
<u>10.4m VAC</u>	<u>.2 OHMS</u>	∞ ^{OHMS} VAC	∞ OHMS
<u>10.9m VAC</u>	<u>.2 OHMS</u>	∞ ^{OHMS} VAC	∞ OHMS

☒

EXCEPTION # 2 5.1.23 REPEAT steps 5.1.15 through 5.1.21 five (5) times and record data below. TILT cabinet in the opposite direction in the Z-Plane.

<u>11.6m VAC</u>	<u>.3 OHMS VAC</u>	∞ OHMS	∞ OHMS
<u>8.8m VAC</u>	<u>.2 OHMS VAC</u>	∞ OHMS	∞ OHMS
<u>8.2m VAC</u>	<u>.3 OHMS VAC</u>	∞ OHMS	∞ OHMS
<u>6.0m VAC</u>	<u>.3 OHMS VAC</u>	∞ OHMS	∞ OHMS
<u>7.2m VAC</u>	<u>.2 OHMS VAC</u>	∞ OHMS	∞ OHMS

☒

TANK FARM PLANT OPERATION PROCEDURE

5.1 MERCURY SWITCHES FUNCTIONAL TEST (CONT.)

5.1.24 OPEN temporary power circuit breaker. ☒

5.1.25 Test Director SHALL VERIFY that section 5.3 is COMPLETE by SIGNING below.

Michael R. K.
Test Director Signature

8/21/96
Date

5.1.26 QC Inspector SHALL VERIFY that section 5.3 is COMPLETE by SIGNING below.

* PJ Clement
QC Inspector Signature

8-21-96
Date

* WITH EXCEPTION #2 AS NOTED.

5.2 DIFFERENTIAL PRESSURE RELAY TEST

5.2.1 ENSURE cabinet is de-energized. ☒

5.2.2 REMOVE DPM temporary input jumper. ☒

EXCEPTION # 3

5.2.3 CONNECT 4-20 ma current source to TB-3-~~4(+)~~ and TB-3-~~5(-)~~ in cabinet A (SALW-PNL-080H).
-1(+)
-2(-) ☒

5.2.4 CONNECT 250 OHM resistor between terminals TB-3-~~1~~ and TB-3-~~2~~ in cabinet A. (if not already connected).
-4
-5 ☒

5.2.5 CLOSE temporary power circuit breaker.

5.2.6 DEPRESS Seismic Reset Switch (PB-1). VERIFY Power Available Light "ON". ☐

EXCEPTION # 4

EXCEPTION # 5

5.2.7 RESET DPM alarm module by ^{Decreasing} increasing the current source until the module resets. Verify by measuring voltage drop across DPM alarm contacts. ☒

5.2.8 DEPRESS Panel Reset Pushbutton (PB-2). "VERIFY" Trip Circuit Functional Indicating Light "ON". ☒

Document No.

WHC-SD-WM-ATR-185

Rev/Mod

0

Page

A-15

TANK FARM PLANT OPERATION PROCEDURE

5.2 DIFFERENTIAL PRESSURE RELAY TEST (CONT.)

EXCEPTION # 5

5.2.9 TRIP DPM alarm module by ^{INCREASING} ~~decreasing~~ the current source until the module trips. ☒

5.2.10 VERIFY Trip Circuit Functional Indicating Light is OFF. ☒

5.2.11 OPEN temporary power circuit breaker. ⁻¹⁽⁺⁾ ☒

EXCEPTION # 3

5.2.12 REMOVE 4-20 ma current source from TB-3-4(+) and TB-3-5(-). ⁻²⁽⁻⁾ ☒

5.2.13 INSTALL DPM temporary input jumper. ☒

5.2.14 Test Director SHALL VERIFY that section 5.2 is COMPLETE by SIGNING below.

M. H. N. K. H.
Test Director Signature

8/22/86
Date

5.2.15 QC Inspector SHALL VERIFY that section 5.2 is COMPLETE by SIGNING below.

P. J. G. M. A. N. D. O. N.
QC Inspector Signature

8.22.86
Date

5.3

With EXCEPTIONS #3, 4, 9 & 10 AS NOTED.

FLAMMABLE GAS MONITOR INPUT SIGNAL FUNCTIONAL TEST

5.3.1 ENSURE cabinet is de-energized. ☒

5.3.2 REMOVE temporary jumper from the FGM system input. ☒

5.3.3 CONNECT temporary light switch across input terminals of FGM system input. CLOSE light switch. ☒

5.3.4 CLOSE temporary power circuit breaker.

Document No.

WHC-SD-WM-ATR-185

Rev/Mod

0

Page

A-16

5.3 FLAMMABLE GAS MONITOR INPUT SIGNAL FUNCTIONAL TEST
(CONT.)

- 5.3.5 VERIFY Power Available light and Trip Circuit Functional Indicator Light are "OFF". ☒
- 5.3.6 DEPRESS Seismic Reset Switch (PB-1). VERIFY Power Available Light "ON". ☒
- 5.3.7 DEPRESS Panel Reset Pushbutton (PB-2). "VERIFY" Trip Circuit Functional Indicating Light "ON". ☒
- 5.3.8 CONNECT voltmeter across relay contact K1-1 (TB1-2, TB2-2). MEASURE and record voltage.
4.2 m VAC ☒
- 5.3.9 OPEN temporary light switch. VERIFY Trip Circuit Functional Indicating Light is OFF. ☒
- 5.3.10 MEASURE and RECORD voltage drop across relay contact K1-1.
119.2 VAC ☒
- 5.3.11 CLOSE temporary light switch. ☒
- 5.3.12 DEPRESS Panel Reset Pushbutton (PB-2). "VERIFY" Trip Circuit Functional Indicating Light "ON". ☒
- 5.3.13 CONNECT voltmeter across relay contact K1-2 (TB1-2, TB2-3). ☒

TANK FARM PLANT OPERATIONS PROCEDURE

5.3 FLAMMABLE GAS MONITOR INPUT SIGNAL FUNCTIONAL TEST (CONT.)

- 5.3.14 MEASURE and RECORD voltage drop across relay contact K1-2.

~~8.7m~~ 8.7m ^{MLK}
9.3m VAC 8/22/96

- 5.3.15 OPEN temporary light switch. VERIFY Trip Circuit Functional Indicating Light is OFF.

- 5.3.16 MEASURE and RECORD voltage drop across relay contact K1-2.

119.2 VAC

- 5.3.17 CLOSE temporary light switch.

- 5.3.18 DEPRESS Panel Reset Pushbutton (PB-2). "VERIFY" Trip Circuit Functional Indicating Light "ON".

- 5.3.19 CONNECT voltmeter across relay contact K2-1 (TB1-
2, TB2-3 Channel B).

²
MLK 8/22/96

- 5.3.20 MEASURE and RECORD voltage drop across relay contact K2-1.

~~12.9m~~ 6.3m
9.1m VAC

- 5.3.21 OPEN temporary light switch. VERIFY Trip Circuit Functional Indicating Light is OFF.

TANK FARM PLANT OPERATION PROCEDURE

5.3 FLAMMABLE GAS MONITOR INPUT SIGNAL FUNCTIONAL TEST (CONT.)

5.3.22 MEASURE and RECORD voltage drop across relay contact K2-1.

119.2
119.4 VAC ^{mk} 8/22/96

5.3.23 CLOSE temporary light switch.

5.3.24 DEPRESS Panel Reset Pushbutton (PB-2). "VERIFY" Trip Circuit Functional Indicating Light "ON".

5.3.25 CONNECT voltmeter across relay contact K2-2 (TB1-2, TB2-3 Channel B).

5.3.26 MEASURE and RECORD voltage drop across relay contact K2-2.

8.3 m VAC

5.3.27 OPEN temporary light switch. VERIFY Trip Circuit Functional Indicating Light is OFF.

5.3.28 MEASURE and RECORD voltage drop across relay contact K2-2.

119.3 VAC

5.3.29 OPEN temporary power circuit breaker.

5.3.30 REMOVE temporary light switch.

5.3.31 INSTALL the temporary FGM system input jumper.

Document No.

WHC-SD-WM-ATR-185

Rev/Mod

0

Page

A-19

TANK FARM PLANT OPERATIONS PROCEDURE

5.3 FLAMMABLE GAS MONITOR INPUT SIGNAL FUNCTIONAL TEST (CONT.)

5.3.32 Test Director SHALL VERIFY that section 5.3 is COMPLETE by SIGNING below.

M. L. K.
Test Director Signature

8/21/96
Date

5.3.33 QC Inspector SHALL VERIFY that section 5.3 is COMPLETE by SIGNING below.

P. J. Elwood
QC Inspector Signature

8-21-96
Date

5.4 VENTILATION SKID FLOW INPUT SIGNAL FUNCTIONAL TEST

5.4.1 ENSURE cabinet is de-energized.

5.4.2 REMOVE the temporary jumper across the Ventilation Skid Flow Input.

5.4.3 INSTALL temporary light switch across input terminals of Ventilation system input.

5.4.4 CLOSE the temporary power circuit breaker.

5.4.5 VERIFY Power Available light and Trip Circuit Functional Indicator Light are "OFF".

5.4.6 DEPRESS the PB-1. VERIFY Power Available Light is ON.

TANK FARM PLANT OPERATIONS PROCEDURE

5.4 VENTILATION SKID FLOW INPUT SIGNAL FUNCTIONAL TEST (CONT.)

5.4.7 DEPRESS Panel Reset Pushbutton (PB-2). "VERIFY" Trip Circuit Functional Indicating Light "ON". ☒

5.4.8 OPEN the temporary light switch. ☒

5.4.9 VERIFY Trip Circuit Functional Indicating Light is OFF. ☒

5.4.10 OPEN the temporary power circuit breaker. ☒

5.4.11 REMOVE the temporary light switch. ☒

5.4.12 INSTALL temporary jumper across the Ventilation Skid Flow Input. ☒

5.4.13 Test Director SHALL VERIFY that section 5.4 is COMPLETE by SIGNING below.

M. E. Loh
Test Director Signature

8/21/96
Date

5.4.14 QC Inspector SHALL VERIFY that section 5.4 is COMPLETE by SIGNING below.

PS Almond
QC Inspector Signature

8-21-96
Date

5.5 CONTACTORS FUNCTIONAL TEST AND SHUTDOWN SYSTEM TIME RESPONSE

5.5.1 ENSURE cabinet is de-energized. ☒

TANK FARM PLANT OPERATIONS PROCEDURE

- 5.5.2 REMOVE the temporary jumper across FGM input. ☒
- 5.5.3 INSTALL temporary light switch across FGM System input. ☒
- EXCEPTION # 6 5.5.4 INSTALL an event recorder with the following inputs:
CH1 -- FGM Input
CH2 -- PMP-1-1
CH3 -- PMP-2-1 ☒
- 5.5.5 INSTALL ohmmeter across auxiliary contacts PMP-1-2 and PMP-2-2 (Channel A TB2-7,8). ☒
- 5.5.6 CLOSE the temporary power circuit breaker. ☒
- 5.5.7 VERIFY Power Available light and Trip Circuit Functional Indicator Light are "OFF". ☒
- 5.5.8 DEPRESS Seismic Reset Switch (PB-1). VERIFY Power Available Light "ON". ☒
- 5.5.9 DEPRESS Panel Reset Pushbutton (PB-2). "VERIFY" Trip Circuit Functional Indicating Light "ON". ☒
- 5.5.10 RESET event recorder. ☒
- 5.5.11 RECORD resistance across auxiliary contacts PMP-1-2 and PMP-2-2.
.3 OHMS ☒
- 5.5.12 OPEN the temporary light switch. ☒

TANK FARM PLANT OPERATION PROCEDURE

5.5 CONTACTORS FUNCTIONAL TEST AND SHUTDOWN SYSTEM TIME RESPONSE (CONT.)

5.5.13 VERIFY Panel Trip Functional Indicating Light is OFF. ☒

5.5.14 RECORD elapsed time from input trip to contactor operation. (This time should be less than 1 second.)

10 msec (record longest time response) ☒

5.5.15 RECORD resistance across auxiliary contacts PMP-1-2 and PMP-2-2.

∞ OHMS ☒

5.5.16 CLOSE the temporary light switch. ☒

5.5.17 REPEAT steps 5.5.8 through 5.5.16 four times and record resistance and time response below.

.3 OHMS >10 msec ∞ OHMS

.3 OHMS 10 msec ∞ OHMS

.3 OHMS 10 msec ∞ OHMS

.3 OHMS 10 msec ∞ OHMS ☒

5.5.18 CONNECT ohmmeters across contactors HT1-1, HT1-2, PMP1-1, and PMP1-2. ☒

5.5.19 CLOSE the temporary light switch. ☒

TANK FARM PLANT OPERATIONS PROCEDURE

5.5 CONTACTORS FUNCTIONAL TEST AND SHUTDOWN SYSTEM TIME RESPONSE (CONT.)

5.5.20 DEPRESS Panel Reset Pushbutton (PB-2). "VERIFY" Trip Circuit Functional Indicating Light "ON". ☒

5.5.21 RECORD the resistance indicated by the ohmmeters in DATA SHEET I. ☒

5.5.22 OPEN the temporary light switch. VERIFY Trip Circuit Function Light is OFF. RECORD the resistance indicated by the ohmmeters DATA SHEET I. (Ohmmeters should indicate an open circuit) ☒

5.5.23 REPEAT steps 5.5.19 through 5.5.22 twenty five (25) times. ☒

5.5.24 REMOVE the ohmmeters. ☒

5.5.25 OPEN temporary power circuit breaker. ☒

5.5.26 REMOVE temporary light switch. ☒

5.5.27 INSTALL the temporary jumper removed in step 5.5.2 ☒

5.5.28 Test Director SHALL VERIFY that section 5.5 is COMPLETE by SIGNING below.

M. H. K. K.
Test Director Signature

8/22/96
Date

TANK FARM PLANT OPERATIONS PROCEDURE

5.5 CONTACTORS FUNCTIONAL TEST AND SHUTDOWN SYSTEM TIME RESPONSE (CONT.)

- 5.5.29 QC Inspector SHALL VERIFY that section 5.5 is COMPLETE by SIGNING below.

RJ [Signature]
WITH EXCEPTION #3 AS NOTED
QC Inspector Signature

9-22-94
Date

5.6 CONTROL CABINET A FUNCTIONAL TEST

- 5.6.1 ENSURE temporary jumpers are installed on the system inputs.

- 5.6.2 CLOSE the temporary power circuit breaker.

- 5.6.3 DEPRESS Seismic Reset Switch (PB-1). VERIFY Power Available Light "ON".

- 5.6.4 DEPRESS Panel Reset Pushbutton (PB-2). "VERIFY" Trip Circuit Functional Indicating Light "ON".

- 5.6.5 DEPRESS the manual shutdown pushbutton switch (PB-3).

- 5.6.6 ENSURE and RECORD Trip Circuit Functional Indicator Light is off.

____ ON

____ *X* OFF

TANK FARM PLANT OPERATIONS PROCEDURE

5.6 CONTROL CABINET A FUNCTION TEST (CONT.)

5.6.7 REPEAT steps 5.6.4 through 5.6.6 ten (10) times.

<u> </u> ON	<u> </u> X OFF
<u> </u> ON	<u> </u> X OFF
<u> </u> ON	<u> </u> X OFF
<u> </u> ON	<u> </u> X OFF
<u> </u> ON	<u> </u> X OFF
<u> </u> ON	<u> </u> X OFF
<u> </u> ON	<u> </u> X OFF
<u> </u> ON	<u> </u> X OFF
<u> </u> ON	<u> </u> X OFF
<u> </u> ON	<u> </u> X OFF

5.6.8 OPEN temporary power circuit breaker.

5.6.9 REMOVE temporary jumpers.

5.6.10 Test Director SHALL VERIFY that section 5.6 is COMPLETE by SIGNING below.

M. L. K. K.
Test Director Signature

8/22/96
Date

5.6.11 QC Inspector SHALL VERIFY that section 5.6 is COMPLETE by SIGNING below.

P. J. Glumond
QC Inspector Signature

8.22.96
Date

TANK FARM PLANT OPERATION, PROCEDURE

TEST EQUIPMENT CALIBRATION DATA

[illegible]

TANK FARM PLANT OPERATIONS PROCEDURE

FIGURE 5.1 SAFETY CLASS CONTROL CABINET A EXCEPTION #7

Safety Class Control Cabinet (A)
(SALW-PNL-808H)

TANK FARM PLANT OPERATIONS PROCEDURE

FIGURE 5.2 SAFETY CLASS CONTROL CABINET B EXCEPTION #7

Safety Class Control Cabinet (B) (SALW-PNL-809H)

TANK FARM PLANT OPERATIONS PROCEDURE

DATA SHEET I

This page may be reproduced as necessary Page 1 of 1

These readings taken as a part of Section 5 of this ATP.

Time readings taken 11:00 Date 8/22/96

STEP 5.5.21 (OHMS)

	HT1-1	HT1-2	PMP1-1	²⁻¹ PMP1-2
1)	.4 Ω	1.2 Ω	.3 Ω	.4 Ω
2)	1.0Ω	.2Ω	.6Ω	.2Ω
3)	.5 Ω	.3 Ω	.3 Ω	.78 Ω
4)	.3 Ω	.2 Ω	.4 Ω	.3 Ω
5)	.3 Ω	.2 Ω	.4 Ω	.6 Ω
6)	2.3 Ω	.2 Ω	.5 Ω	.4 Ω
7)	.76 Ω	.2 Ω	.5	.3
8)	.3	.2	.6	.4
9)	.3	.2	.4	.43
10)	.3	1.3	2.1	.2
11)	.4	.2	.6	.3
12)	.4	.9	1.5	.2
13)	.4	.4	1.2	.2
14)	.6	.2	.6	.2
15)	.5	1.6	.3	.2
16)	.4	.2	3.9	.2
17)	1.7	.7	.4	.2
18)	1.0	1.2	.6	.2
19)	.9	.3	3.1	.2
20)	1.8	.3	.3	2.7
21)	1.0	.4	4.8	.4

STEP 5.5.22 (OHMS)

HT1-1	HT1-2	PMP1-1	PMP2-1
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞
∞	∞	∞	∞

Document No.

WHC-SD-WM-ATR-185

Rev/Mod

0

Page

A-31

ATP EXCEPTION LOG

This page may be reproduced as necessary PAGE 1 of 1

[illegible]

ATP EXCEPTION RECORD

This page may be reproduced as necessary.

ATP step number: 4.3.2	ATP Exception Log Number: 1
Description of Exception: EQUIPMENT IS NOT EXACTLY WIRED AND CONFIGURED PER ECN 632817.	
* HINGE, SPRING AND TIPGUARD PER PAGE 632817 PAGE 5 WHERE NOT INSTALLED AT TIME OF TESTING.	
Resolution of Exception: QC VERIFIED EQUIPMENT IS FABRICATED AND IDENTIFIED PER A REDLINED COPY OF ECN 632817.	
REDLINED ECN WAS PROVIDED BY COGNIZANT ENGINEER.	
REDLINES WILL BE INCORPORATED BY COGNIZANT ENGINEER CHANGE ECN 632835 AND RELEASED AS A REVISED ECN. ISSUED 9.17.96. RE 9.17.96	
* THIS EQUIPMENT NECESSARY FOR FIELD INSTALL, BUT NOT REQUIRED FOR TESTING.	
Date of Resolution: 8/21/96	8/21/96
Test Director signature:	<i>Michael K. K.</i>
Cognizant Engineer signature:	<i>J. J. [unclear]</i> 9/19/96
Quality Assurance signature:	<i>PJ [unclear]</i> 9.19.96 SEE NOTE BELOW
Tank Farm Operations signature:	<i>[unclear]</i> 9/22/96

QC VERIFICATION PER STEP 4.3.2 WAS LIMITED TO SHOP WORK; NO FIELD WIRING YET INSTALLED. CHANGES MADE BY ECN 632835 DO NOT REPRESENT CHANGES IN CONFIGURATION THAT WOULD AFFECT ATP RESULTS (EXCEPT AS SPECIFIED IN OTHER EXCEPTIONS TO THIS TEST). THEY REPRESENT AN AS-BUILT OF THE CONFIGURATION AT THE TIME OF THE TESTING. PJ [unclear] 9.17.96

ATP EXCEPTION RECORD

This page may be reproduced as necessary.

ATP step number: 5.1.8, 5.1.20, 5.1.22, 5.1.23 5.1.11, 5.1.13, 5.1.14, 5.1.17	ATP Exception Log Number: 2
Description of Exception: VOLTAGE DROP ACROSS SWITCH IS NOT MEANINGFUL WHEN CIRCUIT IS DEENERGIZED. ALSO, IT IS IMPRACTICAL TO MEASURE ACROSS INDIVIDUAL MERCURY SWITCHES AS 2 ARE IN THE "X" PLANE AND 2 ARE IN THE "Z" PLANE, ALL WIRED IN SERIES WITH NO TERMINAL ACCESS.	
Resolution of Exception: MEASURE RESISTANCE ACROSS ENTIRE SERIES OF MERCURY SWITCHES. VISUALLY VERIFY IF THE CORRECT (X PLANE OR Z PLANE) MERCURY SWITCH IS ACTUATED.	
GLASS TUBE STYLE MERCURY SWITCHES ARE EASILY VERIFIED OPEN OR CLOSED.	
Date of Resolution: 8/21/96	8/21/96
Test Director signature:	<i>[Signature]</i>
Cognizant Engineer signature:	<i>[Signature]</i> 9/19/96
Quality Assurance signature:	<i>[Signature]</i> 9/19/96
Tank Farm Operations signature:	<i>[Signature]</i> 9/22/96

TANK F / PLANT OPERATION PROCEDURE

ATP EXCEPTION RECORD

This page may be reproduced as necessary.

ATP step number: 5.2.3, 5.2.4	ATP Exception Log Number: 3
Description of Exception: DPM TEST SECTION IS UNPERFORMABLE AS WRITTEN. THE INPUT TERMINALS (TB3-1, 2) ARE SPECIFIED AS OUTPUT TERMINALS IN STEP 5.2.4. OUTPUT TERMINALS (TB-3, -4) ¹⁵ ARE SPECIFIED AS INPUT TERMINALS IN STEP 5.2.3.	
Resolution of Exception: Correct steps to specify correct input and output terminals and continue with procedure. STEP 5.1.2 INSTALLED RESISTOR ACROSS TB-3-1, AND TB-3-2, FOR MERCURY SWITCH FUNCTIONAL TEST. NO ADVERSE TEST RESULTS OCCURRED AS RESULT OF RESISTOR BEING INSTALLED AT THIS LOCATION DURING SECTION 5.1.	
Date of Resolution:	8/21/96
Test Director signature:	<i>M. J. K. L.</i>
Cognizant Engineer signature:	<i>D. J. Samra</i> 9/17/96
Quality Assurance signature:	<i>P. J. Elmer</i> 9.19.96
Tank Farm Operations signature:	<i>D. J. Samra</i> 9/22/96

TANK F / PLANT OPERATION PROCEDURE

ATP EXCEPTION RECORD

This page may be reproduced as necessary.

ATP step number: 5.2.7	ATP Exception Log Number: 4
Description of Exception: ALARM MODULE CLOSED ABOVE HI SETPOINT AND OPENED BELOW SETPOINT.	
Resolution of Exception: FAILSAFE DIP SWITCH SETTING REQUIRES NORMALLY OPEN CONTACTS FOR CORRECT HI LIMIT OPERATION. REWIRED ALARM CONTACTS N.O. ECN 632817 PAGE 10 WIRE ON TERMINAL 11 MOVED TO 9. WIRE ON TERMINAL B MOVED TO 6. ECN CORRECTION REQUIRED PAGE 10 AND PAGE 14. CHANGE ECN 632835 ISSUED 9.17.96	
Date of Resolution:	8/22/96
Test Director signature:	<i>mphylkll</i>
Cognizant Engineer signature:	<i>H. Bryant</i> 9/18/96
Quality Assurance signature:	<i>W. Bailey</i> 9/19/96
Tank Farm Operations signature:	<i>W. Bailey</i> 9/22/96

ATP EXCEPTION RECORD

This page may be reproduced as necessary.

ATP step number: 5.2.7 5.2.9	ATP Exception Log Number: 5
Description of Exception: PROCEDURE CALLS FOR INCREASING	
CURRENT SOURCE UNTIL ALARM CLEARS, AND INCREAS	
DECREASING UNTIL ALARM TRIPS.	
Resolution of Exception: DPM IS A HIGH ALARM.	
DECREASING CURRENT SOURCE IS REQUIRED	
TO CLEAR MODULE, AND INCREASING TO ALARM	
MODULE	
Date of Resolution:	8/22/96
Test Director signature:	<i>Michael K. K.</i>
Cognizant Engineer signature:	<i>W. J. Smith 9/19/96</i>
Quality Assurance signature:	<i>PJ Clements 9.19.96</i>
Tank Farm Operations signature:	<i>DJ Semmes 9/22/96</i>

TANK FARM PLANT OPERATIONS PROCEDURE

ATP EXCEPTION RECORD

This page may be reproduced as necessary.

ATP step number: 4.3.5	ATP Exception Log Number: 6
Description of Exception: multi-channel event recorder equivalent was an uncalibrated PLC.	
Resolution of Exception:	
Response time was well under 1 second, closer to 10 ms. Visual indicator on contactors was observed to be instantaneous. Accept test results provided by uncalibrated PLC.	
Date of Resolution:	8/22/96
Test Director signature:	<i>[Signature]</i>
Cognizant Engineer signature:	<i>T. Burt</i> 9/19/96
Quality Assurance signature:	<i>PJ Elmendorf</i> 9.19.96
Tank Farm Operations signature:	<i>W. Sams</i> 9/22/96

TANK FARM PLANT OPERATIONS PROCEDURE

ATP EXCEPTION RECORD

This page may be reproduced as necessary.

ATP step number: FIGURE 5.1 p 28, FIGURE 5.2 p 29	ATP Exception Log Number: 7
Description of Exception: FIGURES 5.1 and 5.2	
do not reflect field asbuilt conditions.	
Resolution of Exception:	
ECN 632835 WAS WRITTEN TO CORRECT THE ORIGINAL	
ECN 632817. THE CHANGE ECN HAS BEEN INSERTED	
IN THE OTP PACKAGE ES-96-00704/I FOR REFERENCE.	
EQUIPMENT CHANGES DO NOT INVALIDATE TEST RESULTS.	
ACCEPT TEST RESULTS AS RECORDED	
Date of Resolution:	9-19-96
Test Director signature:	<i>M. H. Kich</i>
Cognizant Engineer signature:	<i>H. S. Smith 9/19/96</i>
Quality Assurance signature:	<i>P. S. Edmunds 9.19.96</i>
Tank Farm Operations signature:	<i>D. J. Smith 9/22/96</i>

TANK FARM PLANT OPERATIONS PROCEDURE

ATP ACCEPTANCE RECORD

This ATP has been completed and the results, including red-line changes, exceptions, and exception resolutions, have been reviewed for compliance with the intent of the Purpose (Section 1.0). The ATP results are accepted by the undersigned:

Cognizant Engineer

9/19/96
Date

West Tank Farm Operations

9/22/96
Date

Safety

9/23/96
Date

Quality Control

9/23/96
Date

Test Director

8/22/96
Date