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Title/Desc:

OPERATIONAL TEST REPORT FOR SY TANK FARM
REPLACEMENT EXHAUSTER UNIT

STA-4 (2)

OCT 10 1995

ENGINEERING DATA TRANSMITTAL

Page 1 of 1

1. EDT No 613450

2. To: (Receiving Organization) DISTRIBUTION	3. From: (Originating Organization) TEST ENGINEERING	4. Related EDT No.: 610896
5. Proj./Prog./Dept./Div.: FLAMMABLE GAS PROGRAM	6. Cog. Engr.: J. McCLEES	7. Purchase Order No.: WDW-XVV-281212
8. Originator Remarks: NONE For release		9. Equip./Component No.: VTP-EF-3102 EXHAUSTER
11. Receiver Remarks: NONE		10. System/Bldg./Facility: 241-SY
		12. Major Assm. Dwg. No.: H-2-85593
		13. Permit/Permit Application No.: N/A
		14. Required Response Date: N/A

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-OTR-189	-	0	OPERATIONAL TEST REPORT FOR SY TANK FARM REPLACEMENT EXHAUSTER UNIT	N/A	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

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)									
(G)	(H)	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN
Reason	Disp.								
1	1	Proj. Cog. Eng. J McCLEES	<i>J McClees</i>	10/9/95					
1	1	Proj. Cog. Mgr. R.W. Reed	<i>R.W. Reed</i>	9/20/95					
		QA							
		Safety							
		Env.							
1		Facility Cog. Eng. T.D. Kaiser	<i>T.D. Kaiser</i>	10/10/95					

18. Signature of EDT Originator <i>J McClees</i> Date: 10/9/95	19. Authorized Representative Date for Receiving Organization	20. Cognizant Manager Date <i>R.W. Reed</i> Date: 9/20/95	21. DOE APPROVAL (if required) Ctrl. No. ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments
--	---	---	---

RELEASE AUTHORIZATION

Document Number: WHC-SD-WM-OTR-189, REV 0

Document Title: Operational Test Report for SY Tank Farm Replacement Exhauster Unit

Release Date: 10/10/95

**This document was reviewed following the
procedures described in WHC-CM-3-4 and is:**

APPROVED FOR PUBLIC RELEASE

WHC Information Release Administration Specialist:

Kara Broz

10/10/95

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SUPPORTING DOCUMENT

1. Total Pages *100*

2. Title

OPERATIONAL TEST REPORT FOR SY TANK FARM
REPLACEMENT EXHAUSTER UNIT.

3. Number

WHC-SD-WM-OTR-189

4. Rev No.

0

5. Key Words

SY, TANK FARM, EXHAUSTER

6. Author

Name: J. McCLEES

Signature

Organization/Charge Code 77640/N2169

7. Abstract

THIS TEST REPORT SERVES TO DOCUMENT THE RESULTS OF OPERATIONAL TESTING PERFORMED ON THE NEW SY TANK FARM EXHAUSTER, PER WHC-SD-WM-OTP-189, REV. 0-A.

8. RELEASE STAMP

OFFICIAL RELEASE
BY WHC

DATE OCT 10 1995

Sta 4

**OPERATIONAL TEST REPORT FOR SY TANK FARM
REPLACEMENT EXHAUSTER UNIT**

WHC-SD-WM-OTR-189
REVISION 0

OCTOBER 1995

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Summary of WHC-SD-WM-OTP-189, Rev 0-A "OPERATIONAL TEST PROCEDURE FOR SY TANK FARM REPLACEMENT EXHAUSTER"

Testing commenced on 09/27/95 and was successfully completed on 09/30/95.

The completed procedure consists of 8 operational tests. The first seven tests (sections 5.1 through 5.7) were conducted prior to final hot tie-in to the tank farm ventilation header. Also prior to hot tie-in, an aerosol test was performed to confirm an adequate seal of the HEPA filters. The eighth test (section 5.8) of the OTP consisted of an in-situ aerosol test and stack flow rate check.

There was one ECN (#626401) which modified the prerequisite for hot tie-in. Instead of requiring that the installation work control packages (2W-94-1004 and 2W-94-1005) be completed, the cognizant engineer verified that all work needed to maintain containment, bonding, and detection was completed.

Seven test exceptions were found during testing, noted on the OTP Exception Log, and dispositions were documented on Exception Record sheets. The noted exceptions did not compromise testing activities or results, and were accepted as is. Redline changes were made in various places (as described in exception 1) to correct minor editorial changes.

The remainder of this Operational Test Report (OTR) consists of related ECNs, summary of test exceptions, and completed pages from the OTP. The completed OTP describes the tests that were conducted and attests to the results that were obtained. The page numbers for the OTR appear in the lower left corner of the page. The page numbers of the OTP performed are left for reference.

ENGINEERING CHANGE NOTICE				<i>JM 9/29/95</i> Page 1 of <i>2</i>	1. ECN 626401 Proj. ECN
2. ECN Category (mark one) Supplemental ☐ Direct Revision ☒ Change ECN ☐ Temporary ☐ Standby ☐ Supersedure ☐ Cancel/Void ☐	3. Originator's Name, Organization, MSIN, and Telephone No. Gary D. Feltner, Inst. & Accpt. Engineering, R1-51, 3-4077	3a. USQ Required? ☐ Yes ☒ No	4. Date 09/28/95		
5. Project Title/No./Work Order No. NEW 241-SY FARM EXHAUSTER / N2DBC		6. Bldg./Sys./Fac. No. 241-SY	7. Approval Designator Q		
8. Document Numbers Changed by this ECN (includes sheet no. and rev.) WHC-SD-WM-OTP-189 REV 0		9. Related ECN No(s). N/A	10. Related PO No. N/A		
11a. Modification Work ☐ Yes (fill out Blk. 11b) ☒ No (NA Blks. 11b, 11c, 11d)	11b. Work Package No. N/A	11c. Modification Work Complete N/A Cog. Engineer Signature & Date	11d. Restored to Original Condition (Temp. or Standby ECN only) N/A Cog. Engineer Signature & Date		
12. Description of Change <ul style="list-style-type: none"> - This ECN revises Operational Test Procedure (OTP) for testing the replacement exhauster - The changes are to reword and/or relocate step 5.8.9 to allow Operational Testing to continue without the COMPLETION of work packages 2W-94-01004/M and 2W-94-01005/M. 					
13a. Justification (mark one) Criteria Change ☒ Design Improvement ☐ Environmental ☐ Facility Deactivation ☐ As-Found ☐ Facilitate Const ☐ Const. Error/Omission ☐ Design Error/Omission ☐					
13b. Justification Details Work packages 2W-94-01004/M and 2W-94-01005/M only lack a few work steps until final completion. Completion of these work steps are not essential to complete the OTP nor does it compromise the integrity of the OTP.					
14. Distribution (include name, MSIN, and no. of copies) Reed, RW R1-51 1 Volkman, TS T4-08 1 McClees, J R1-51 1 Reber, DP T4-08 1 Kaiser, TD T4-07 1 Rifaey, SK T4-07 1				RELEASE STAMP <div style="border: 1px solid black; padding: 10px; display: inline-block;"> OFFICIAL RELEASE 12 BY WHC DATE SEP 29 1995 <i>Sta 5</i> </div>	

[illegible]

TANK FARM PLANT OPERATIONS PROCEDURE**5.8 FLOW RATE CHECK**

5.8.1 BEFORE beginning flow rate check or aerosol (DOP) test, BOND all applicable equipment per Maintenance Procedure 6-TF-160, "ELECTRICAL BONDING FOR VENT AND BALANCE TESTS", REV. 0, CHG A.

☐

5.8.2 CONDUCT an in-place aerosol (DOP) test on the 241-SY EF 3102 HEPA filters by PERFORMING Maintenance Procedure 6-TF-156, "HEPA FILTER IN-PLACE LEAK TEST (AEROSOL TEST)", REV. 0, CHG 0.

☐

5.8.3 RECORD data on Maintenance Procedure 6-TF-156-TQ, "241-SY 296-S-25 TANK EXHAUSTER HEPA FILTER AEROSOL TEST DATA SHEETS", REV. 0, CHG A.

☐

5.8.4 POSITION the VTP-HS-3146 FAN START switch to OFF.

☐

5.8.5 OPEN Circuit Breaker K1A EXHAUSTER PANEL EDS-DP-3107 located on compartment 7FE of MCC-HMT in 241-SY-272.

☐

5.8.6 LOCK AND TAG Circuit Breaker K1A EXHAUSTER PANEL EDS-DP-3107 located on compartment 7FE of MCC-HMT in 241-SY-272.

☐

5.8.7 DISCONNECT the Inlet Test Assembly, from then 241-SY EF 3102 EXHAUSTER, per work package 2W-94-01005/M.

☐

5.8.8 CONNECT the 241-SY EF 3102 EXHAUSTER to the 241-SY Tank Farm Exhauster System, per work package 2W-94-01005/M.

☐

5.8.9 VERIFY that work required to maintain containment, bonding, and detection packages 2W-94-01004/M and 2W-94-01005/M, for the installation of the 241-SY EF3102 EXHAUSTER, have been COMPLETED met and open items have been noted as exceptions in the attached exception log.

Cog Engineer Signature

Date

This page may be reproduced as necessary PAGE 1 of 8

[illegible]

OTP EXCEPTION RECORD

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PAGE 2 of 8

OTP step number: 4.3.6, 4.3.7, 4.3.8, 4.3.9, 5.1.1, 5.1.2, 5.1.3, 5.1.9, 5.2.1, 5.2.11, 5.2.14, 5.2.15, 5.2.17, 5.2.19, 5.2.25, 5.2.28, 5.3.3, 5.3.10.4, 5.3.11, 5.3.14, 5.3.15.5, 5.3.20.4, 5.4.3, 5.4.69, 5.4.8, 5.4.10, 5.4.9.5, 5.4.18, 5.4.20.5, 5.4.22, 5.5, 5.5.18, 5.6.41, 5.8.1, 5.8.12, 5.8.8	OTP Exception Log Number: 001
Description of Exception:	
Minor editorial changes have been made to this OTP that do not effect the Test Results. Notes were added, typographical errors and component identifications errors were made. Some steps were out of sequence and needed to be relocated in the sequence of steps.	
Resolution of Exception:	
All component identification changes have been verified by field configurations and drawing verifications. All changes have been redlined, initial and dated by the Test Director and Cog. Engr.	
Date of Resolution:	September 30, 1995
Test Director signature:	Jim Langdon <i>Jim Langdon 9/30/95</i>
Cognizant Engineer signature:	Terry Kaiser <i>Terry O'Karin 9/30/95</i>
Quality Assurance signature:	Roger True <i>P.J. Blumendy 9/30/95</i> <i>PER TELEPHONE CALL R. TRUE 17:32</i>
Tank Farm Operations signature:	Mark Garrett <i>Mark Garrett 9/30/95</i>

OTP EXCEPTION RECORD

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PAGE 3 of 8

OTP step number: 4.3.8	OTP Exception Log Number: 002
Description of Exception:	
The Watlow heater controller TDIC-3103 does not have a current calibrations sticker.	
Resolution of Exception:	
Instrument technician verified calibration and attached the proper calibration sticker. OTP steps to test the heater did not require readings from this instrument and could be performed.	
Accept Disposition for OTP completion and sign off.	
Date of Resolution:	September 30, 1995
Test Director signature:	Jim Langdon <i>Jim Langdon</i> 9/30/95
Cognizant Engineer signature:	Terry Kaiser <i>Terry Kaiser</i> 9/30/95
Quality Assurance signature:	Roger True <i>P.J. Elmerick</i> 9/30/95 PER TELECON WITH R. TRUE 17:32
Tank Farm Operations signature:	Mark Garrett <i>Mark Garrett</i> 9/30/95

OTP EXCEPTION RECORD

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PAGE 4 of 8

OTP step number: 5.2.8	OTP Exception Log Number: 003
Description of Exception: The Vacuum pump swap would not work when tested in this OTP. Trouble shooting problem will have to continue.	
Resolution of Exception: Trouble shot system and verified wiring configuration to released drawings. The PLC was not properly sequence. The Vacuum selector valves were operating in the opposite direction. The vacuum valve wires were corrected per the OTP. Power to the PLC was turned off and PLC reset. Section 5.2 of the OTP will be re-performed. Completed Accept Disposition for OTP completion and sign off.	
Date of Resolution:	September 30, 1995
Test Director signature:	Jim Langdon <i>Jim Langdon 9/30/95</i>
Cognizant Engineer signature:	Terry Kaiser <i>Terry Kaiser 9/30/95</i>
Quality Assurance signature:	Roger True <i>R. True 9/30/95</i> <i>PER TELECON WITH R. TRUE 17:32</i>
Tank Farm Operations signature:	Mark Garrett <i>Mark Garrett 9/30/95</i>

OTP EXCEPTION RECORD

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PAGE 5 of 8

OTP step number: 5.5.26, 5.5.31, 5.5.32	OTP Exception Log Number: 004
<p>Description of Exception: The simulation of both vacuum pumps failing did not cause the exhauster fan to shut down within 30 secs.</p> <p>The exhauster fan, vacuum pumps or monitoring systems did not shut down at all. Alarms from the previous steps were engaged and did not affect the ability nor enhance the performance of the dual vacuum pump failure.</p>	
<p>Resolution of Exception:</p> <p>Simulated a double pump failure with an alternative method. The Vacuum pump breaker was shut off at EDS-DP-3107 panel. The loss of flow caused a Beta CAM failure which then shut down the Exhaust fan.</p> <p>The following steps were not performed 5.5.31, 5.5.32.</p> <p>Accept Disposition for OTP completion and sign off.</p>	
Date of Resolution:	September 30, 1995
Test Director signature:	Jim Langdon <i>Jim Langdon</i> 9/30/95
Cognizant Engineer signature:	Terry Kaiser <i>Terry Kaiser</i> 9/30/95
Quality Assurance signature:	Roger True <i>P.J. Allen</i> 9/30/95 PER TELECON WITH R. TRUE 17:32
Tank Farm Operations signature:	Mark Garrett <i>Mark Garrett</i> 9/30/95

OTP EXCEPTION RECORD

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PAGE 6 of 8

OTP step number: 5.2.9, 5.2.10	OTP Exception Log Number: 005
Description of Exception:	
The Vacuum Pump system isolation valve covers were swapped, and vacuum valve VTP-MOV-3101 was wired incorrectly.	
Resolution of Exception:	
Covers were switched into the correct locations and the wires on VTP-MOV-3101 were corrected. No further action is required the Corrective action is acceptable per OTP.	
Accept Disposition for OTP completion and sign off.	
Date of Resolution:	September 30, 1995
Test Director signature:	Jim Langdon <i>Jim Langdon</i> 9-30-95
Cognizant Engineer signature:	Terry Kaiser <i>Terry Kaiser</i> 9/30/95
Quality Assurance signature:	Roger True <i>R. True</i> 9-30-95 PER TELECON WITH R. TRUE 17:32
Tank Farm Operations signature:	Mark Garrett <i>Mark Garrett</i> 9/30/95

OTP EXCEPTION RECORD

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OTP step number: 5.3, 5.3.9.6 to 5.3.9.9, 5.8.20, 5.8.21, 5.8.22, 5.8.23	OTP Exception Log Number: 006
Description of Exception: The remote alarm design does not work. The current K-1-4-1 system and the new EF-3102 alarms would not operate together.	
Resolution of Exception: The system has been re-design on ECN No. 625306. This ECN will be performed and tested as a punch list item. The new system will require testing of the remote alarms in 242-S as well as CASS. This work will be completed before the system is considered operational. Steps 5.3.9.6, 5.3.9.9, and 5.8.20 through 5.8.23 were not performed during the OTP. Accept Disposition for OTP completion and sign off.	
Date of Resolution:	September 30, 1995
Test Director signature:	Jim Langdon <i>Jim Langdon 9/30/95</i>
Cognizant Engineer signature:	Terry Kaiser <i>Terry Kaiser 9/30/95</i>
Quality Assurance signature:	Roger True <i>RJ Cunningham 9.30.95 PER TELECON WITH R. TRUE 17:32</i>
Tank Farm Operations signature:	Mark Garrett <i>Wbanett 9/30/95</i>

OTP EXCEPTION RECORD

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OTP step number: 5.8.19, 5.8.24	OTP Exception Log Number: 007
Description of Exception:	
The Emergency Stop test was incorrectly placed in the back of the OTP.	
Resolution of Exception:	
<p>The Emergency Stop test was performed in step 5.6.84, the fan did restart after the button was pulled back out. This test was incorrectly placed into the Hot Tie in section of this OTP. A test of this system would result in unneeded risk to the ventilation system</p> <p>Accept Disposition for OTP completion and sign off.</p>	
Date of Resolution:	September 30, 1995
Test Director signature:	Jim Langdon <i>Jim Langdon 9/30/95</i>
Cognizant Engineer signature:	Terry Kaiser <i>Terry Kaiser 9/30/95</i>
Quality Assurance signature:	Roger True <i>P.J. Ellwood 9/30/95</i> <i>PER TELECON WITH R. TRUE 17:32</i>
Tank Farm Operations signature:	Mark Garrett <i>Mark Garrett 9/30/95</i>

DISTRIBUTION SHEET

To DISTRIBUTION	From J. McCLEES	Page 1 of 1
Project Title/Work Order OPERATIONAL TEST PROCEDURE FOR SY TANK FARM REPLACEMENT EXHAUSTER UNIT		Date 9/25/95
		EDT No. 610896
		ECN No. N/A

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
CENTRAL FILES (2)	A3-88	X			
TD KAISER	T4-07	X			
JR KRISOVICH	S2-24	X			
LS KROGSRUD	R3-08	X			
J LANGDON	S2-02	X			
RE LARSON	T4-07	X			
J McCLEES	R1-51	X			
DP REBER	T4-08				X
RW REED	R1-51				X
SH RIFAAY	T4-07				X

SEP 26 1995

ENGINEERING DATA TRANSMITTAL

Page 1 of 1

1. EDT № 610896

2. To: (Receiving Organization) DISTRIBUTION	3. From: (Originating Organization) TEST ENGINEERING	4. Related EDT No.: N/A
5. Proj./Prog./Dept./Div.: FLAMMABLE GAS	6. Cog. Engr.: T. D. KAISER	7. Purchase Order No.: WDW-XVV-281212
8. Originator Remarks: N/A		9. Equip./Component No.: VTP-EF-3102 EXHAUSTER
		10. System/Bldg./Facility: 241-SY
11. Receiver Remarks: N/A		12. Major Assm. Dwg. No.: H-2-85593
		13. Permit/Permit Application No.: N/A
		14. Required Response Date: N/A

[illegible]

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

[illegible]

18. <i>File</i> J. McClellan Signature of EDT Originator	19. <i>9/25/95</i> N/A Date Authorized Representative for Receiving Organization	20. <i>Approved</i> Cognizant Manager Date	21. DOE APPROVAL (if required) Ctrl. No. ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments
---	--	--	---

RELEASE AUTHORIZATION	
Document Number:	WHC-SD-WM-OTP-189, REV 0
Document Title:	Operational Test Procedure for SY Tank Farm Replacement Exhauster Unit
Release Date:	9/26/95
<p style="text-align: center;">This document was reviewed following the procedures described in WHC-CM-3-4 and is:</p> <p style="text-align: center;">APPROVED FOR PUBLIC RELEASE</p>	
WHC Information Release Administration Specialist:
Kara Broz
9/26/95	

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SUPPORTING DOCUMENT

1. Total Pages 81

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7/24/95

2. Title

OPERATIONAL TEST PROCEDURE FOR SY TANK FARM
REPLACEMENT EXHAUSTER UNIT

3. Number

WHC-SD-WM-OTP-189

4. Rev No.

A-0
0

5. Key Words

SY, TANK FARM, EXHAUSTER

6. Author

Name: JORGE McCLEES

JW
9/26/95

Signature

Organization/Charge Code 77640/N2DBB

7. Abstract

THIS OPERATIONAL TEST PROCEDURE WILL VERIFY THAT THE REMAINING FUNCTIONS NOT TESTED PER WHC-SD-WM-ATP-080, OR COMPONENTS DISTURBED DURING FINAL INSTALLATION, AS WELL AS INTERFACES WITH OTHER TANK FARM EQUIPMENT AND REMOTE MONITORING STATIONS ARE OPERATING CORRECTLY.

8. RELEASE STAMP

OFFICIAL RELEASE
BY WHC
DATE SEP 26 1995

Sta. 4

**TANK FARM
PLANT OPERATING PROCEDURE**

SYSTEM

241-SY

OTP FOR SY TANK FARM REPLACEMENT EXHAUSTER UNIT

WHC-SD-WM-OTR-189, REV.0
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TANK FARM. PLANT OPERATIONS . PROCEDURE

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TANK FARM, PLANT OPERATIONS , PROCEDURE

1.0 PURPOSE

1.1 This OTP will test and verify the operability of various systems and their general equipment for the 241-SY-101 EF 3102 Modular Exhauster. Systems/checks that will be tested/performed include the following:

- Power System
- Vacuum Sample Pump and Fan Rotation
- High Radiation Shutdown
- Stack Sampler (Beta Monitor) Shutdown
- Vacuum Sampling System
- Interlock Check
- Heater Check
- Flow Rate Check

2.0 INFORMATION

2.1 SCOPE

2.1.1 POWER SYSTEM CHECK

The POWER SYSTEM CHECK will verify that there is power to the 241-SY EF 3102 Exhauster skid.

2.1.2 VACUUM SAMPLE PUMP AND FAN ROTATION CHECK

The VACUUM SAMPLE PUMP AND FAN ROTATION CHECK will verify that the 241-SY EF 3102 Exhauster fan and vacuum pumps rotate in the correct direction.

2.1.3 HI RADIATION SHUTDOWN

The HI RADIATION SHUTDOWN will shut down the 241-SY EF 3102 Exhauster fan when a high radiation condition occurs. A high radiation alarm condition will be annunciated on the 241-SY EF 3102 Exhauster alarm cabinet VTP-PNL-3103, Stack Monitoring cabinet VTP-PNL-3104 and; also, the alarm panels in the 242-S Evaporator Bldg. and 241-SY-271 Instrument Bldg.

2.1.4 STACK SAMPLER (BETA MONITOR) SHUTDOWN

The STACK SAMPLER SHUTDOWN will shut down the 241-SY EF 3102 Exhauster for any type of "common" failure that occurs with the Beta Monitor. A stack sampler shutdown alarm condition will be annunciated on the 241-SY EF 3102 Exhauster alarm cabinet VTP-PNL-3103, Stack Monitoring cabinet VTP-PNL-3104 and; also, the alarm panels in the 242-S Evaporator Bldg. and 241-SY-271 Instrument Bldg.

2.1.5 SAMPLING VACUUM SYSTEM CHECK

The SAMPLING VACUUM SYSTEM CHECK will be performed to verify that the vacuum pumps and associated equipment operate correctly. The vacuum system is utilized to obtain samples from the 241-SY EF 3102 Exhauster's stack.

2.1.6 INTERLOCK CHECK

The INTERLOCK CHECK will be performed to verify that the HEPA 1, HEPA 2, inlet vacuum and system differential interlocks perform as required.

2.1.7 HEATER CHECK

The HEATER CHECK will be performed to verify that the heater functions properly.

2.1.8 FLOW RATE CHECK

The FLOW RATE CHECK examines the 241-SY EF 3102 Exhauster stack and HEPA filters for leaks and obstructed components by testing for appropriate differential pressures and volumetric flow rates. Maintenance procedures 6-TF-155 and 6-TF-156 will be utilized to perform the flow rate checks on the 241-SY EF 3102 Exhauster stack and HEPA filters respectively. Data will be recorded in 6-TF-155-M and 6-TF-156-TQ for the stack and HEPA filters respectively.

2.2 TERMS AND DEFINITIONS

2.2.1 CASS - Computer Automated Surveillance System

2.2.2 HEPA - High Efficiency Particulate Air

2.2.3 HPT - Health Physics Technician

2.2.4 JCS PM/S - Job Control System Preventative
Maintenance/Surveillance

2.2.5 JHA - Job Hazards Analysis

2.2.6 MCC - Motor Control Center

2.2.7 NC - Normally Closed

2.2.8 NO - Normally Open

2.2.9 OTP - Operational Test Procedure

2.2.10 OTR - Operational Test Report

2.2.11 PS - Pressure Switch

2.2.12 QC - Quality Control

2.2.13 RWP - Radiation Work Permit

2.2.14 SST - Single Shell Tanks

2.2.15 TFO - Tank Farm Operations

2.2.16 WG - Water Gauge

TANK FARM PLANT OPERATIONS PROCEDURE

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 the procedure sections were performed correctly by witnessing procedure steps as they occur.

2.3.3 HPT personnel are responsible for:

- Conducting surveys of all equipment used during this OTP.
- Conducting surveys of all affected areas

2.3.4 Test Director

- Provides concurrence that OTP 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 241-SY-101 Facility and 241-SY EF 3102 Exhauster walkdown.
- Verifying cessation of all 241-SY Tank Farm transfer and/or mixer pump activities before commencing the OTP.
- Notifying the TFO Shift Manager of on going 241-SY Tank Farm transfer and/or mixer pump activities before commencing the OTP.

TANK FARM PLANT OPERATIONS PROCEDURE

2.4 REFERENCES

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

- WHC-CM-4-3, INDUSTRIAL SAFETY MANUAL, STANDARD A-3, "PRE-JOB SAFETY PLANNING/JOB SAFETY ANALYSIS," STANDARD E-2, "ELECTRICAL SAFETY PRACTICES"
- WHC-CM-6-1 EP 4.2., STANDARD ENGINEERING PRACTICE "TESTING PRACTICES"
- WHC-CM-6-1 APPX L, STANDARD ENGINEERING PRACTICES "OPERABILITY TEST PROCEDURES AND REPORTS".
- TO-060-230, "OPERATE PRIMARY VENTILATION SYSTEM FOR 241-SY TANK FARMS".
- 6-TF-155, MAINTENANCE PROCEDURE "AIR FLOW TEST FOR TANK FARM STACKS AND DUCTS", REV. 1, CHG 0.
- 6-TF-155-M, MAINTENANCE PROCEDURE "241-SY TANK EXHAUSTER STACK 296-S-25 AIR FLOW TEST DATA SHEETS", REV. 1, CHG 0.
- 6-TF-156, MAINTENANCE PROCEDURE "HEPA FILTER IN-PLACE LEAK TEST (AEROSOL TEST)", REV. 0, CHG 0.
- 6-TF-156-TQ, MAINTENANCE PROCEDURE "241-SY TANK EXHAUSTER 296-S-25 HEPA FILTER AEROSOL TEST DATA SHEETS", REV. 0, CHG A.
- 6-TF-160, MAINTENANCE PROCEDURE "ELECTRICAL BONDING FOR VENT AND BALANCE TESTS", REV. 0, CHG A.
- H-2-85591, KIA EXHAUSTER
- H-2-85593, GENERAL ARRANGEMENT TANK FARM EXHAUSTER
- H-2-85595, STACK SAMPLING AND FLOW MONITORING GENERAL ARRANGEMENT
- H-2-85596, INSTRUMENT AND CONTROL CABINET
- H-2-85597, INSTRUMENT AND CONTROL CABINET ARRANGEMENT
- H-2-85598, SAMPLE & FLOW PROBE ENCLOSURE ASSEMBLY
- H-2-85600, PROCESS & INST DIAG TANK FARM EXHAUSTER
- H-2-85314, PANELBOARD SCHEDULES
- H-2-46424, ELECTRICAL SINGLE LINE DIAGRAM
- H-14-020131, SHEETS 3 & 4, VENTILATION TK PRIMARY SYSTEM EXHAUSTER (VTP) P & ID
- WORK PACKAGE 2W-95-00591/I
- WORK PACKAGE 2W-94-01004/M
- WORK PACKAGE 2W-94-01005/M

TANK FARM PLANT OPERATIONS PROCEDURE

2.5 SAFETY

Warning - Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

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

- o Industrial Safety Manual, WHC-CM-4-3, Vols 1-4
- o Building Emergency Plan, WHC-IP-0263-TF
- o Industrial Hygiene Manual, WHC-CM-4-40
- o Safety Manual, WHC-CM-1-10
- o Tank Farm Health and Safety Plan (HASP), WHC-SD-WM-HSP-002

2.5.2 The test shall be STOPPED and the TFO Shift Manager immediately notified, if radiation levels significantly increase as determined by a Radiation Monitor.

2.6 RADIATION AND CONTAMINATION CONTROL

2.6.1 HPT assistance is required in accordance with RWP.

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

- o Hanford Site Radiological Control Manual (HSRCM), Rev. 2
- o Safety Manual, WHC-CM-1-10
- o Industrial Safety Manual, WHC-CM-4-3, Vols 1-4

2.7 QUALITY ASSURANCE

2.7.1 Ensure that the 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 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.

TANK FARM PLANT OPERATIONS PROCEDURE

2.8 GENERAL INFORMATION (Continued)

- 2.8.2 Editorial changes required to this OTP may be made per the red line method by the Test Director and Cognizant Engineer as long as they do not impact operational facility 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.
- 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 instrumentation or unexpected results during testing shall be logged and recorded in OTP 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 OTP testing, ensure that the 241-SY EF 3102 Exhauster is shutdown, in a safe condition and either 241-SY exhauster K-1-4-1 or P-28 is operating.
- 2.8.8 Restore the 241-SY EF 3102 Exhauster to operating status to continue the OTP.
- 2.8.9 Initial (cold) aerosol (DOP) testing can be performed out of sequence.
- 2.8.10 This procedure DOES NOT contain any separate data/verification sheets. Verification of procedural steps and validity of the data is incorporated into the specific section.
- 2.8.11 The following interface area(s) exist:
- CASS
- 2.8.12 A JHA form will be used instead of the pre-job 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 OTP, maintenance procedure data sheets and all exception logs and exception records generated by this OTP, will be kept as permanent records and released in an OTR.

4.0 PREREQUISITES

4.1 The following supplies shall be available at the workplace:

- Pressure Source: minimum range 0 - 6 in wg
Calibration No. 817-35-40-022 Expiration Date 9.13.96
- Radioactive Source: minimum of 300 cpm
- 5V Power Source
- Type J Thermocouple Simulator: connection wire, four (4) feet long
- Shorting Jumper: #12 insulated wire, two (2) feet long.

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
- TO-060-230, OPERATE PRIMARY VENTILATION SYSTEM FOR 241-SY TANK FARMS
- ✓ 6-TF-155, MAINTENANCE PROCEDURE "AIR FLOW TEST FOR TANK FARM STACKS AND DUCTS", REV. 1, CHG 0.
- ✓ 6-TF-155-M, MAINTENANCE PROCEDURE "241-SY TANK EXHAUSTER STACK 296-S-25 AIR FLOW TEST DATA SHEETS", REV. 1, CHG 0.
- 6-TF-156, MAINTENANCE PROCEDURE "HEPA FILTER IN-PLACE LEAK TEST (AEROSOL TEST)", REV. 0, CHG 0.
- 6-TF-156-TQ, MAINTENANCE PROCEDURE "241-SY TANK EXHAUSTER 296-S-25 HEPA FILTER AEROSOL TEST DATA SHEETS", REV. 0, CHG A.
- 6-TF-160, MAINTENANCE PROCEDURE "ELECTRICAL BONDING FOR VENT AND BALANCE TESTS", REV. 0, CHG A.
- WORK PACKAGE, 2W-94-01004/M.
- WORK PACKAGE, 2W-94-01005/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.

Jim Langston
Test Director

9-27-95
Date

TANK FARM PLANT OPERATIONS PROCEDURE

4.0 PREREQUISITES (Continued)

- 4.3.2 Notify CASS that the OTP is to be performed.
- 4.3.3 Ensure that the Lock and Tag has been removed from Circuit Breaker K1A EXHAUSTER PANEL EDS-DP-3107 (located on compartment 7FE of MCC-HMT in 241-SY-272).
- 4.3.4 Verify that there is access to the Stack Monitoring Station.
- 4.3.5 Verify that all 241-SY Tank Farm transfer and/or mixer pump activities have ceased and notify the TFO Shift Manager if these activities have not.

Jim Engden
Test Director Signature

9-22-95
Date

- 4.3.6 Verify that the Inlet Test Assembly has been installed per work package 2W-94-01005/M, Figure 1 and, the concurrence of the Test Director.

~~2~~

①

J.m.L.
9-20-95
OK 9/21/95

Jim Engden
Test Director

4 J.m.L. 9-26-95
OK 9-26-95

9-27-95
Date

P.J. Chandra
QC Inspector Signature

9-27-95
Date

TANK FARM PLANT OPERATIONS PROCEDURE

4.0 PREREQUISITES (Continued)

NOTE - QC Inspector shall verify current calibration by inspecting calibration stickers on instruments in the field. In the event a sticker is missing or shows a device to be out of calibration, consult the JCS PM/S system and work package 2W-95-591/I for calibration verification.

4.3.7 QC Inspector shall verify the current calibration and, record the calibration date and calibration due date on the table below.

INSTRUMENT		CALIBRATION DATE	CALIBRATION DUE DATE
DMST D/P XMIT	VTP-PDT-3111	8.18.95	8.96
FLT TRN TOTAL D/P XMIT	VTP-PDT-3110	8.18.95	8.96
FLT INLET PRESS XMIT	VTP-PDT-3112 <small>PT 9-27-95 OKL 9-27-95</small>	8.18.95	8.96
VTP-FLT-3102 D/P XMIT	VTP-PDT-3102	8.18.95	8.96
VTP-FLT-3104 D/P XMIT	VTP-PDT-3104	8.18.95	8.96
VTP-FLT-3106 D/P XMIT	VTP-PDT-3106	8.18.95	8.96
MASS FLO CNTRL	VTP-FIC-3101	8.29.95	8.29.96
RECORD SAMP FLOW CNTRL	VTP-FIC-3102	8.29.95	8.29.96
BETA SAMPLER FLOW CNTRL	VTP-FIC-3103	8.29.95	8.29.96
SAMP SYS PRESS XMIT	VTP-PIT-3101	8.20.95	8.20.96

BEST COPY AVAILABLE

TANK FARM PLANT OPERATIONS PROCEDURE

4.0 PREREQUISITES (Continued)

NOTE - QC Inspector shall verify current calibration by inspecting calibration stickers on instruments in the field. In the event a sticker is missing or shows a device to be out of calibration, consult the JCS PM/S system and work package 2W-95-591/I for calibration verification.

4.3.8 QC Inspector shall verify the current calibration and, record the calibration date and calibration due date on the table below.

INSTRUMENT		CALIBRATION DATE	CALIBRATION DUE DATE
MIST ELIMINATOR ΔP	VTP-PDIS-3111	8.20.95	8.20.96
PREFILTER ΔP	VTP-PDIS-3102	8.20.95	8.20.96
HEPA 1 ΔP	VTP-PDIS-3104	8.20.95	8.20.96
HEPA 2 ΔP	VTP-PDIS-3106	8.20.95	8.20.96
SYSTEM ΔP	VTP-PDIS-3110	8.20.95	8.20.96
SYSTEM INLET VAC	VTP-PIS-3112	8.20.95	8.20.96
TC3 DUCT HEAT ΔT	VTP-TDIC-3103	9.95 RJE 9.30.95	9.96 RJE 9.30.95

Exception 2

VERIFIED STEP 4.3.9
4.3.7 AND 4.3.8
EXCEPT VTP-TDIC-3103.
QC RJE 9.27.95

QC Inspector SHALL VERIFY that steps 4.3.8 and 4.3.9 are COMPLETE by SIGNING below.

P.J. Clements
QC Inspector Signature

9.30.95
Date

4.3.10

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

P.J. Clements
QC Inspector Signature

9.30.95
Date

VERIFIED SECTION
4.0 EXCEPT AS
NOTED ABOVE.
QC RJE 9.27.95

TANK FARM PLANT OPERATIONS PROCEDURE

5.0 PROCEDURE

5.1 POWER SYSTEM CHECK

- 5.1.1 ENSURE that Circuit Breaker KIA EXHAUSTER PANEL EDS-DP-3107, located on compartment 7FE of MCC-HMT in 241-SY-272 is OPEN.

①

No label Jim L 9-27-95
K 9/29/95

- 5.1.2 ENSURE the following 480V circuit breakers (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) are OFF:

①

Note: No EDS-DP-3107 label on enclosure. Jim L 9-27-95 K 9/29/95

- 5.1.2.1 Circuit Breaker # 14 (TRANSFORMER T-3108, 7.5KVA)

- 5.1.2.2 Circuit Breaker # 7 (K1A EXHAUSTER FAN, 2HP)

- 5.1.2.3 Circuit Breaker # 13 (K1A DUCT HEATER)

- 5.1.2.4 Circuit Breaker # 26 (K1A STACK MONITOR PUMPS 3HP)

- 5.1.3 ENSURE the following 120V circuit breakers (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3108) are OFF:

①

No EDS-DP-3108 label on the enclosure. Jim L 9-18-95 K 9/21/95

- 5.1.3.1 Circuit Breaker # 4 (Alarm Cabinet Instruments)

- 5.1.3.2 Circuit Breaker # 5 (Receptacle [GFCI])

- 5.1.3.3 Circuit Breaker # 6 (Alarm Cabinet Heaters and Lights)

①

Jim L 9-27-95
K 9-27-95

K 9-27-95
Jim L 9-27-95

- 5.1.3.4 Circuit Breaker # 7 (Heat Tracing)

- 5.1.3.5 Circuit Breaker # 8 (Duct Heater Cont Cab Heater)

TANK FARM PLANT OPERATIONS PROCEDURE

5.1 POWER SYSTEM CHECK (Continued)

- 5.1.3.6 Circuit Breaker # 9 (Press/Flow XMTR & Cont) ☒
- 5.1.3.7 Circuit Breaker # 10 (Stack Sample Cab HTR and AC-1) ☒
- 5.1.3.8 Circuit Breaker # 11 (Stack Monitor Instruments, Horn) ☒
- ① 5.1.3.9 Circuit Breaker # 12 (Stack Sample Cab HTR and AC-2) ☒ *Monitor Jim L. 9-27-95*
- 5.1.4 VERIFY VTP-HS-3146 FAN START switch (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is in the OFF position. ☒
- 5.1.5 VERIFY Exhauster VTP-YL-3149 FAN NOT RUNNING red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is NOT ILLUMINATED. ☒
- 5.1.6 VERIFY that the VTP-YL-3145 POWER ON blue indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is NOT ILLUMINATED. ☒
- 5.1.7 CLOSE Circuit Breaker K1A EXHAUSTER PANEL EDS-DP-3107 (located on compartment 7FE of MCC-HMT in 241-SY-272). ☒

TANK FARM PLANT OPERATIONS PROCEDURE

5.1 POWER SYSTEM CHECK (Continued)

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

5.1.8 POSITION the following 480 volt circuit breakers (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to ON:

5.1.8.1 Circuit Breaker # 14 (TRANSFORMER T-3108, 7.5KVA) ☒

5.1.8.2 Circuit Breaker # 7 (K1A EXHAUSTER FAN, 2HP) ☒

5.1.8.3 Circuit Breaker # 13 (K1A DUCT HEATER) ☒

5.1.8.4 Circuit Breaker # 26 (K1A STACK MONITOR PUMPS 3HP) ☒

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

5.1.9 POSITION the following 120 volt circuit breakers (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3108) to ON: ☒

①

5.1.9.1 Circuit Breaker # 4 (Alarm Cabinet Instruments) ☒

5.1.9.2 Circuit Breaker # 5 (Receptacle [GFCI]) ☒

5.1.9.3 Circuit Breaker # 6 (Alarm Cabinet Heater and Lights) ☒

TANK FARM PLANT OPERATIONS PROCEDURE

5.1 POWER SYSTEM CHECK (Continued)

- 5.1.9.4 Circuit Breaker # 7 (Heat Tracing) ☒
- 5.1.9.5 Circuit Breaker # 8 (Duct Heater Cont Cab Heater) ☒
- 5.1.9.6 Circuit Breaker # 9 (Press/Flow XMTR & Cont) ☒
- 5.1.9.7 Circuit Breaker # 10 (Stack Sample Cab HTR and AC-1) ☒
- 5.1.9.8 Circuit Breaker # 11 (Instruments, Horn) ☒
- 5.1.9.9 Circuit Breaker # 12 (Stack Sample Cab HTR and AC-2) ☒
- 5.1.10 IF alarms are ANNUNCIATING, ACKNOWLEDGE as necessary. ☒
- 5.1.11 VERIFY that the following (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) are ILLUMINATED:
- 5.1.11.1 VTP-YL-3145 POWER ON blue indicating light. ☒
- 5.1.11.2 VTP-XA-3147 SYSTEM SHUTDOWN yellow indicating light. ☒
- 5.1.11.3 VTP-YL-3149 FAN NOT RUNNING red indicating light. ☒
- 5.1.12 Test Director SHALL VERIFY that section 5.1 is COMPLETE by SIGNING below.
-
Test Director Signature
- 9-27-95
Date

TANK FARM PLANT OPERATIONS PROCEDURE

5.1 POWER SYSTEM CHECK (Continued)

5.1.13 QC Inspector SHALL VERIFY that section 5.1 is COMPLETE by SIGNING below.

P.J. Hernandez
QC Inspector Signature

9.27.98
Date

TANK FARI PLANT OPERATIONS PROCEDURE

5.2 VACUUM SAMPLE PUMP AND FAN ROTATION CHECK

- 5.2.1 REMOVE the plug located at the end of the 241-SY EF 3102 fan motor housing (this will facilitate the determination of the fan rotation). *Note: No lead on fan.*

*WLB 4/21/95
JmL 9-28-95*

- 5.2.2 POSITION the VTP-HS-3146 FAN START switch (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) to ON AND THEN QUICKLY REPOSITION the VTP-HS-3146 FAN START switch to OFF (i.e. bump the fan).

- 5.2.3 VERIFY that the direction of rotation of the 241-SY EF 3102 Exhauster fan is in the DIRECTION of the arrow on the fan housing.

- 5.2.4 IF the direction of rotation of the 241-SY EF 3102 Exhauster fan is in the incorrect DIRECTION then PERFORM the following:

- 5.2.4.1 DO NOT EXECUTE any further part of this OTP UNTIL steps 5.2.4.2 through 5.2.4.5 are COMPLETED.

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

- 5.2.4.2 POSITION 480V circuit breaker #7 K1A EXHAUSTER FAN, 2HP (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to OFF.

- 5.2.4.3 CORRECT the Exhauster fan rotation.

TANK FARI PLANT OPERATIONS PROCEDURE

5.2 VACUUM SAMPLE PUMP AND FAN ROTATION CHECK

(Continued)

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

5.2.4.4 POSITION 480V circuit breaker #7 K1A EXHAUSTER FAN, 2HP (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to ON.

5.2.4.5 REPERFORM steps 5.2.2 and 5.2.3 of this OTP.

5.2.4.6 GO TO step 5.2.5.

5.2.5 REINSTALL fan motor housing plug.

5.2.6 POSITION VTP-HS-3146 FAN START (located on the door of the 241-SY EF 3102 EXHAUSTER Alarm cabinet VTP-PNL-3103) to ON.

5.2.7 ENSURE the red VTP-HS-3101 PUMP START/STOP button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is NOT DEPRESSED.

5.2.8 IF VTP-YL-3150 P-3101 ON LEAD green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is NOT ILLUMINATED (ON), THEN PRESS VTP-PB-3102 PUMP SWAP yellow button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

③

Exception : Pump swap will not work. Will repair and retest later. Pump #2 rotation has been verified
JML 8-28-95 W/GP 9/28/95

TANK FARM PLANT OPERATIONS PROCEDURE

5.2 VACUUM SAMPLE PUMP AND FAN ROTATION CHECK

(Continued)

5.2.9 VERIFY VTP-MOV-3101 SAMP SYS PMP INLET ISO and VTP-MOV-3102 SAMP SYS PMP OUTLET ISO valve indicators are DIRECTED towards vacuum sample pump VTP-P-3101 SAMP PMP.

(5)

Note: Valve covers are swapped. Jim L. 9-27-95
Covers have been corrected. SK 9-27-95

5.2.10 IF VTP-MOV-3101 SAMP SYS PMP INLET ISO valve indicator and/or VTP-MOV-3102 SAMP SYS PMP OUTLET ISO valve indicator are not DIRECTED towards vacuum sample pump VTP-P-3101 SAMP PMP, THEN HALT the OTP and repair the valve(s).

(5)

Valve VTP-MOV-3101 was wired incorrectly, repaired Jim L. 9-27-95
HS Jim L. 9-27-95 SK 9-27-95

5.2.11 BUMP vacuum sample pump VTP-P-3101 SAMP PMP by PRESSING the red VTP-P-3101 PUMP START/STOP button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

(1)

5.2.12 VERIFY vacuum sample pump VTP-P-3101 SAMP PMP is ROTATING in the direction INDICATED on the pump housing.

5.2.13 IF the direction of rotation of the vacuum sample pump, VTP-P-3101 SAMP PMP, is in the incorrect DIRECTION then PERFORM the following:

5.2.13.1 DO NOT EXECUTE any further part of this OTP UNTIL steps 5.2.13.2 through 5.2.13.5 are COMPLETED.

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

5.2.13.2 POSITION 480V circuit breaker #26 K1A STACK MONITOR PUMPS 3HP (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to OFF.

TANK FARM PLANT OPERATIONS PROCEDURE

5.2 VACUUM SAMPLE PUMP AND FAN ROTATION CHECK

(Continued)

5.2.13.3 CORRECT the vacuum sample pump, VTP-P-3101 SAMP PMP, rotation. ☒

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

5.2.13.4 POSITION 480V circuit breaker #26 K1A STACK MONITOR PUMPS 3HP (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to ON. ☒

5.2.13.5 REPERFORM steps 5.2.11 and 5.2.12 of this OTP. ☒

5.2.13.6 GO TO step 5.2.14. ☒

5.2.14 VERIFY the following:

① 5.2.14.1 VTP-YL-3145 POWER ON green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED (ON). ☒
no label and wrong number Jinal 9-28-95 WCB 9/28/95

① 5.2.14.2 VTP-YL-3151 P-3101 ON green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED (ON). ☒
Not Jinal 9-28-95 OFF WCB 9/28/95

5.2.14.3 VTP-YL-3150 P-3101 ON LEAD green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED (ON). ☒

TANK FARM PLANT OPERATIONS PROCEDURE

5.2 VACUUM SAMPLE PUMP AND FAN ROTATION CHECK

(Continued)

- 5.2.14.4 VTP-YL-3152 P-3102 ON green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is NOT ILLUMINATED (OFF). *Label Jim L 9-28-95 WCB 9/28/95* ☒
- 5.2.14.5 VTP-YL-3116 COMMON FAULT red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is NOT ILLUMINATED (OFF). *Must press the data logger alarm acknowledge button first. HS Jim L 9-28-95 WCB 9/28/95* ☒
- 5.2.15 PRESS the red VTP-PB-3101 PUMP START/STOP button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104). *HS Jim L 9-28-95 WCB 9/28/95* ☒
- 5.2.16 VERIFY that Vacuum Sample pump, VTP-P-3101 SAMP PMP, continues to OPERATE by ALLOWING the pump to run for two minutes. ☒
- 5.2.17 DEPRESS the red VTP-PB-3101 PUMP START/STOP button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104). *HS Jim L 9-28-95 WCB 9/28/95* ☒
- 5.2.18 OBSERVE vacuum sample pump, VTP-P-3101 SAMP PMP, AND VERIFY it is NOT OPERATING (OFF). ☒
- 5.2.19 PRESS VTP-PB-3102 PUMP SWAP yellow button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104). *Exception: Pump swap will not work until the pump start on button is in. Jim L 9-28-95 WCB 9/28/95* ☒
- 5.2.20 VERIFY VTP-MOV-3101 SAMP SYS PMP INLET ISO and VTP-MOV-3102 SAMP SYS PMP OUTLET ISO valve indicators are DIRECTED towards vacuum sample pump VTP-P-3102 SAMP PMP. ☒

TANK FARM PLANT OPERATIONS PROCEDURE

5.2 VACUUM SAMPLE PUMP AND FAN ROTATION CHECK

(Continued)

5.2.21 IF VTP-MOV-3101 SAMP SYS PMP INLET ISO valve indicator and/or VTP-MOV-3102 SAMP SYS PMP OUTLET ISO valve indicator are not DIRECTED towards vacuum sample pump VTP-P-3102 SAMP PMP, THEN HALT the OTP and REPAIR the valve(s). ☒

5.2.22 BUMP vacuum sample pump VTP-P-3102 SAMP PMP by PRESSING the red VTP-PB-3101 PUMP START/STOP button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104). ☒

5.2.23 VERIFY vacuum sample pump VTP-P-3102 SAMP PMP is ROTATING in the direction INDICATED on the pump housing. ☒

5.2.24 IF the direction of rotation of the vacuum sample pump, VTP-P-3102 SAMP PMP, is in the incorrect DIRECTION then PERFORM the following:

5.2.24.1 DO NOT EXECUTE any further part of this OTP UNTIL steps 5.2.24.2 through 5.2.24.6 are COMPLETED. ☒

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

5.2.24.2 POSITION 480V circuit breaker #26 K1A STACK MONITOR PUMPS 3HP (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to OFF. ☒

5.2.24.3 CORRECT the Vacuum Sample pump, VTP-P-3102 SAMP PMP, rotation. ☒

TANK FARM. PLANT OPERATIONS. PROCEDURE

5.2 VACUUM SAMPLE PUMP AND FAN ROTATION CHECK (Continued)

WARNING

Energized circuits and leads are contained inside the cabinet.
Observe appropriate electrical precautions. Comply with WHC-CM-4-3,
Vol I Section E-2, ELECTRICAL HAZARDS.

5.2.24.4 POSITION 480V circuit breaker #26 K1A STACK
MONITOR PUMPS 3HP (located at 241-SY EF 3102
EXHAUSTER on panelboard EDS-DP-3107) to ON.

5.2.24.5 REPERFORM steps 5.2.22 and 5.2.23 of this OTP.

5.2.24.6 GO TO step 5.2.25.

5.2.25 VERIFY the following:

5.2.25.1 VTP-YL-3145 POWER ON green indicating light
(located on the door of the 241-SY EF 3102
EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104)
is ILLUMINATED (ON).

5.2.25.2 VTP-YL-3152 P-3102 ON green indicating light
(located on the door of the 241-SY EF 3102
EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104)
is ILLUMINATED (ON).

5.2.25.3 VTP-YL-3151 P-3101 ON green indicating light
(located on the door of the 241-SY EF 3102
EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104)
is NOT ILLUMINATED (OFF).

5.2.25.4 VTP-YL-3150 P-3101 ON LEAD green indicating light
(located on the door of the 241-SY EF 3102
EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104)
is NOT ILLUMINATED (OFF).

TANK FARM PLANT OPERATIONS PROCEDURE

5.2 VACUUM SAMPLE PUMP AND FAN ROTATION CHECK

(Continued)

5.2.25.5 COMMON FAULT red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is NOT ILLUMINATED (OFF).

①

Must push the data logger alarm acknowledge

5.2.26 PRESS the red VTP-PB-3101 PUMP START/STOP button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.2.27 VERIFY that vacuum sample pump, VTP-P-3102 SAMP PMP, continues to OPERATE by ALLOWING the pump to run for two minutes.

5.2.28 DEPRESS the red VTP-PB-3101 PUMP START/STOP button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.2.29 OBSERVE vacuum sample pump, VTP-P-3102 SAMP PMP, AND VERIFY it is NOT OPERATING (OFF).

5.2.30 POSITION VTP-HS-3146 FAN START switch (located on the door of the 241-SY EF 3102 EXHAUSTER Alarm cabinet VTP-PNL-3103) to OFF.

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

Jim Lane
Test Director Signature

9-28-95
Date

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

P. C. C. C.
QC Inspector Signature

9-28-95
Date

TANK FARM PLANT OPERATIONS PROCEDURE

5.3 HI RADIATION SHUTDOWN CHECK

WCB 9/22/95

Exception: Remote alarms are bypassed. These will be verified after the alarm is annunciated by the local alarm cabinet.

5.3.1 START the 241-SY-EF 3102 Exhauster fan by POSITIONING the VTP-HS-3146 FAN START switch to ON (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103).

5.3.2 VERIFY VTP-YL-3148 FAN RUNNING green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED.

5.3.3 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103).

(1)

Press VTP-HS-3101 to on. WCB 9/24/95 Jiml. 9-28-95

5.3.4 VERIFY that either VTP-YL-3151 P-3101 ON green indicating light or VTP-YL-3152 P-3102 ON green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED (ON).

5.3.5 ENSURE that the yellow VTP-HS-3118 HORN ALARM BYPASS button is NOT DEPRESSED.

5.3.6 ENSURE that the yellow VTP-HS-3117 BELL ALARM BYPASS button is NOT DEPRESSED.

5.3.7 PLACE the BETA FAILURE BYPASS SWITCH in the BYPASS position (located in the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

TANK FARM PLANT OPERATIONS PROCEDURE

5.3 HI RADIATION SHUTDOWN CHECK (Continued)

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

5.3.8 SIMULATE a high radiation condition by POSITIONING a radioactive source in the Beta Remote Head (located in the Stack Monitoring Station).

5.3.9 VERIFY the following:

5.3.9.1 Horn on top of the alarm cabinet, VTP-PNL-3103, is SOUNDING (ON).

5.3.9.2 PRESS the VTP-PB-3142 ALARM SILENCE red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) and SILENCE the alarm cabinet horn.

5.3.9.3 Bell on the Stack Monitoring cabinet, VTP-PNL-3104, is SOUNDING (ON).

5.3.9.4 PRESS the yellow VTP-HS-3117 BELL ALARM BYPASS button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.3.9.5 Red beacon located on top of the Stack Monitoring cabinet, VTP-PNL-3104, is ILLUMINATED (ON).

5.3.9.6 241-SY PRIMARY EXHAUST SYSTEM HIGH RADIATION RA-EXH-K1-1-1 red annunciator window #4-4, located on panel F in 242-S, is ILLUMINATED.

6

Exception: JML 9-30-85
K 9/30/85

TANK FARM PLANT OPERATIONS PROCEDURE

5.3 HI RADIATION SHUTDOWN CHECK (Continued)

5.3.9.7 PRESS the ACKNOWLEDGE pushbutton on panel F in 242-S Instrument Bldg. ☐

⑥ *Exception: Jim L. 9-30-95 K 9/30/95*

5.3.9.8 PRIMARY EXHAUST SYSTEM HIGH RADIATION RA-EXH-K1-1-1 red annunciator window, located on annunciator panel ANN-101 in Instrument Bldg. 241-SY-271, is ILLUMINATED. ☐

5.3.9.9 PRESS the ACKNOWLEDGE pushbutton on panel ANN-102 in 241-SY-271. ☐

5.3.10 VERIFY the following:

5.3.10.1 241-SY EF 3102 EXHAUSTER fan has STOPPED. ☒

5.3.10.2 VTP-YL-3149 FAN NOT RUNNING red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED (ON). ☒

5.3.10.3 VTP-YL-3114 BETA RADIATION OK green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is NOT ILLUMINATED (OFF). ☒

① *WCD 9/28/95
RAH-3114 Jim L. 9-28-95*

5.3.10.4 VTP-XA-3113 SHUTDOWN yellow indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103 directly under the BETA RADIATION OK green indicating light) is ILLUMINATED (ON). ☒

5.3.10.5 VTP-XA-3147 SYSTEM SHUTDOWN yellow indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED (ON). ☒

TANK FARM PLANT OPERATIONS PROCEDURE

5.3 HI RADIATION SHUTDOWN CHECK (Continued)

5.3.10.6 VTP-YL-3144 ALARM ON red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED (ON). ☒

5.3.10.7 Red Beacon (located at the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED (ON). ☒

5.3.11 PRESS the VTP-MON-3102 BETA MONITOR "ACK" button ~~(located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED (ON).~~ located on the front panel of the Beta Monitor. ☒
① Jim L. 9-28-95 WLB 9/28/95

5.3.12 VERIFY the following:

5.3.12.1 Vacuum sample pump has STOPPED. ☒

5.3.12.2 VTP-YL-3151 P-3101 ON and VTP-YL-3152 P-3102 ON green indicating lights (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) are NOT ILLUMINATED (OFF). ☒

5.3.12.3 COMMON FAULT ALARM red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED (ON). ☒

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

5.3.13 REMOVE the radioactive source from the Beta Remote Head (located in the Stack Monitoring Station). ☒

TANK FARI PLANT OPERATIONS PROCEDURE

5.3 HI RADIATION SHUTDOWN CHECK (Continued)

5.3.14. *Jiml 9/28/95* *WGB 9/28/95* DEPRESS the yellow BELL ALARM BYPASS button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

Move to just before step 5.3.16. Bell will ring until then

NOTE - Other alarms may have annunciated and indicated by the VTP-R-3101 SAMP SYS PROCESS RECORDER. Disregard the alarms at this time.

5.3.15 ACKNOWLEDGE the Stack Monitor alarms by PERFORMING the following:

5.3.15.1 PRESS the HOME (Δ) key on the VTP-R-3101 SAMP SYS PROCESS RECORDER keypad several times until the bottom of the display presents the top level menu, as shown:

[Operator: Select a category]				
DISPLAY	CHART	ALARM	CHANNEL	MORE

5.3.15.2 PRESS the softkey under the displayed word "ALARM" (this will change the display).

5.3.15.3 VERIFY that the top line of the display indicates a 09 (underlined in red) as shown.

I/P CHANS <u>09</u> ,				
OLDEST	NEWEST	ACK	CHANNEL	MORE

5.3.15.4 PRESS the softkey under the displayed word "ACK".

TANK FARM PLANT OPERATIONS PROCEDURE

5.3 HI RADIATION SHUTDOWN CHECK (Continued)

5.3.15.5 VERIFY that the alarm has been ACKNOWLEDGED AND
 CLEARED by EXAMINING the top line of the display
 for a 09 (not underlined) as shown.
 JimL 9/15/85
 No longer shows a 09

I/P CHANS 09,

OLDEST

NEWEST

ACK

CHANNEL

MORE

5.3.16 PRESS VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103).

5.3.17 PLACE the BETA FAILURE BYPASS SWITCH in the NORMAL position.

5.3.18 VERIFY that the 241-SY EF 3102 EXHAUSTER Fan is OPERATING (ON).

5.3.19 PRESS VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103).

5.3.20 VERIFY the following:

5.3.20.1 Vacuum sample pump VTP-P-3101 SAMP PMP or VTP-P-3102 SAMP PMP is OPERATING (ON).

5.3.20.2 VTP-YL-3151 P-3101 ON green indicating light or VTP-YL-3152 P-3102 ON green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED (ON).

TANK FARI PLANT OPERATIONS PROCEDURE

5.3 HI RADIATION SHUTDOWN CHECK (Continued)

5.3.20.3 VTP-YL-3114 BETA RADIATION OK green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED (ON). ☒

W O/B 9/28/95

① RAH-3114 Jim L. 9-28-95

5.3.20.4 VTP-XA-3113 SHUTDOWN yellow indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103 directly under the BETA RADIATION OK green indicating light) is NOT ILLUMINATED (OFF). ☒

5.3.20.5 VTP-XA-3147 SYSTEM SHUTDOWN yellow indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is NOT ILLUMINATED (OFF). ☒

5.3.20.6 VTP-YL-3144 ALARM ON red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is NOT ILLUMINATED (OFF). ☒

*Complete except steps
5.3.9.6 to 5.3.9.9.*

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

Jim Longdon

Test Director Signature

9-30-95

Date

*VERIFIED EXCEPT STEPS
5.3.9.6 TO 5.3.9.9
QC PJE 9.28.95*

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

P.J. Chandler
(WITH NOTED EXCEPTIONS)

QC Inspector Signature

9.30.95

Date

TANK FARI PLANT OPERATIONS PROCEDURE

5.4 STACK SAMPLER (BETA MONITOR) FAILURE SHUTDOWN CHECK

5.4.1 IF the 241-SY EF 3102 Exhauster fan is OFF, THEN START the 241-SY EF 3102 Exhauster fan by POSITIONING the VTP-HS-3146 FAN START switch to ON (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103). ☒

5.4.2 VERIFY VTP-YL-3148 FAN RUNNING green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED. ☒

5.4.3 VERIFY that either VTP-YL-3151 P-3101 ON green indicating light or VTP-YL-3152 P-3102 ON green indicating light (both are located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED (ON). ☒

① Verify Beta Bypass switch is in "Bypass" Normal "Jim 9-28-95" ☒
5.4.4 CLOSE valve V-3191 (located in the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104). ☒

5.4.5 WHEN VTP-FIC-3103 BETA SAMP FLO CNTRL (one of the MASSTRON instruments) INDICATES zero (no flow) THEN VERIFY the following:

5.4.5.1 Alarm cabinet (VTP-PNL-3103) Horn is SOUNDING. ☒

5.4.5.2 PRESS the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PB-3142 ALARM SILENCE red button and SILENCE the alarm cabinet horn. ☒

5.4.5.3 Stack Monitoring cabinet (VTP-PNL-3104) Horn is SOUNDING. ☒

TANK FARM PLANT OPERATIONS PROCEDURE

5.4 STACK SAMPLER (BETA MONITOR) FAILURE SHUTDOWN CHECK (Continued)

5.4.5.4 PRESS the yellow HORN ALARM BYPASS button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.4.5.5 Stack Monitoring cabinet VTP-PNL-3104 amber beacon (located on the top of the cabinet) is ILLUMINATED.

5.4.5.6 VTP-MON-3102 BETA MONITOR (located in the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is DEENERGIZED (OFF).

5.4.6 VERIFY the following:

5.4.6.1 241-SY EF 3102 EXHAUSTER fan has STOPPED.

5.4.6.2 VTP-YL-3113A STACK SAMPLER OK green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is NOT ILLUMINATED (OFF).

5.4.6.3 VTP-YL-3113B STACK SAMPLER - OK green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is NOT ILLUMINATED (OFF).

5.4.6.4 VTP-XA-3113 SHUTDOWN yellow indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103 directly under VTP-YL-3113A STACK SAMPLER OK green indicating light) is ILLUMINATED (ON).

5.4 STACK SAMPLER (BETA MONITOR) FAILURE SHUTDOWN CHECK (Continued)

5.4.6.5 VTP-XA-3147 SYSTEM SHUTDOWN yellow indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED (ON). ☒

5.4.6.6 VTP-YL-3144 ALARM ON red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED (ON). ☒

5.4.6.7 Audible horn (located at the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) has been SILENCED. ☒

5.4.6.8 Vacuum sample pump has STOPPED. ☒

5.4.6.9 COMMON FAULT ALARM red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED (ON). ☒

① Turn Fan switch to OFF

Jim L 9-29-95
K 9-29-95

5.4.7 OPEN valve V-3191 (located at 241-SY EF 3102 EXHAUSTER, in Stack Monitoring cabinet VTP-PNL-3104). ☒

①

Reset ALB 9/28/95
Jim Langdon 9-29-95

5.4.8 PUSH the BETA FAILURE SHUTDOWN RELAY button (located at 241-SY EF 3102 EXHAUSTER, in Stack Monitoring cabinet VTP-PNL-3104). ☒

TANK FARM PLANT OPERATIONS . PROCEDURE

5.4 STACK SAMPLER (BETA MONITOR) FAILURE SHUTDOWN CHECK (Continued)

NOTE - Other alarms may have annunciated and indicated by the VTP-R-3101 SAMP SYS PROCESS RECORDER. Disregard the alarms at this time.

5.4.9 ACKNOWLEDGE the Stack Monitor alarms by PERFORMING the following:

5.4.9.1 PRESS the HOME (O) key on the VTP-R-3101 SAMP SYS PROCESS RECORDER keypad several times until the bottom of the display presents the top level menu, as shown:

[Operator: Select a category]				
DISPLAY	CHART	ALARM	CHANNEL	MORE

5.4.9.2 PRESS the softkey under the displayed word "ALARM" (this will change the display).

5.4.9.3 VERIFY that the top line of the display indicates a 10 (underlined in red) as shown.

I/P CHANS <u>10</u> ,				
OLDEST	NEWEST	ACK	CHANNEL	MORE

5.4.9.4 PRESS the softkey under the displayed word "ACK".

TANK FARM PLANT OPERATIONS PROCEDURE

5.4 STACK SAMPLER (BETA MONITOR) FAILURE SHUTDOWN CHECK (Continued)

5.4.9.5 VERIFY that the top line of the display indicates a 10 (underlined in green) as shown.

①

Red. Jim L 9-29-95
OK 9-29-95

I/P CHANS <u>10</u> ,				
OLDEST	NEWEST	ACK	CHANNEL	MORE

5.4.10 DEPRESS the yellow HORN ALARM BYPASS button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

☒

①

Turn the fan switch on Jim L 9-29-95
OK 9-29-95

5.4.11 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103).

☒

5.4.12 VERIFY 241-SY EF 3102 EXHAUSTER Fan is OPERATING (ON).

☒

☒

5.4.13 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103).

☒

5.4.14 VERIFY the following:

5.4.14.1 VTP-YL-3151 P-3101 ON green indicating light or VTP-YL-3152 P-3102 ON green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED (ON).

☒

5.4.14.2 VTP-YL-3113A STACK SAMPLER OK green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED (ON).

☒

TANK FARM PLANT OPERATIONS PROCEDURE

5.4 STACK SAMPLER (BETA MONITOR) FAILURE SHUTDOWN CHECK (Continued)

5.4.14.3 VTP-YL-3113B STACK SAMPLER - OK green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED (ON). ☒

5.4.14.4 VTP-XA-3113 SHUTDOWN yellow indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103 directly under VTP-YL-3113A STACK SAMPLER OK green indicating light) is NOT ILLUMINATED (OFF). ☒

5.4.14.5 VTP-XA-3147 SYSTEM SHUTDOWN yellow indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is NOT ILLUMINATED (OFF). ☒

5.4.14.6 VTP-YL-3144 ALARM ON red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is NOT ILLUMINATED (OFF). ☒

~~Turn the fan switch to OFF. Tank 9-21-95 Jim L 9-28-95 OK 9/27/95~~ ☒

5.4.15 OPEN the BETA REMOTE HEAD door (located in the 241-SY EF 3102 EXHAUSTER Stack Monitoring Station). ☒

5.4.16 WHEN VTP-FIC-3103 BETA SAMP FLO CNTRL (one of the MASSTRON instruments) INDICATES zero (no flow) THEN VERIFY the following:

5.4.16.1 Alarm cabinet (VTP-PNL-3103) Horn is SOUNDING. ☒

5.4.16.2 PRESS the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PB-3142 ALARM SILENCE red button and SILENCE the alarm cabinet horn. ☒

5.4.16.3 Stack Monitoring cabinet (VTP-PNL-3104) Horn is SOUNDING. ☒

TANK FARM. PLANT OPERATIONS . PROCEDURE

5.4 STACK SAMPLER (BETA MONITOR) FAILURE SHUTDOWN CHECK (Continued)

5.4.16.4 PRESS the yellow HORN ALARM BYPASS button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.4.16.5 Stack Monitoring cabinet VTP-PNL-3104 amber beacon (located on the top of the cabinet) is ILLUMINATED.

5.4.16.6 VTP-MON-3102 BETA MONITOR (located in the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is DEENERGIZED (OFF).

5.4.17 VERIFY the following:

5.4.17.1 241-SY EF 3102 EXHAUSTER fan has STOPPED.

5.4.17.2 VTP-YL-3113A STACK SAMPLER OK green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is NOT ILLUMINATED (OFF).

5.4.17.3 VTP-YL-3113B STACK SAMPLER - OK green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is NOT ILLUMINATED (OFF).

5.4.17.4 VTP-XA-3113 SHUTDOWN yellow indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103 directly under VTP-YL-3113A STACK SAMPLER OK green indicating light) is ILLUMINATED (ON).

TANK FARM PLANT OPERATIONS PROCEDURE

5.4 STACK SAMPLER (BETA MONITOR) FAILURE SHUTDOWN CHECK (Continued)

5.4.17.5 VTP-XA-3147 SYSTEM SHUTDOWN yellow indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED (ON). ☒

5.4.17.6 VTP-YL-3144 ALARM ON red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED (ON). ☒

5.4.17.7 Audible horn (located at the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) has been SILENCED. ☒

5.4.17.8 Vacuum sample pump has STOPPED. ☒

5.4.17.9 COMMON FAULT ALARM red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED (ON). ☒

①
5.4.18 Turn the fan switch to OFF Jim 19-29-95 OK 9/29/95
CLOSE the BETA REMOTE HEAD door (located at 241-SY EF 3102 EXHAUSTER, in Stack Monitoring Station). ☒

5.4.19 PUSH the BETA FAILURE SHUTDOWN RELAY button (located at 241-SY EF 3102 EXHAUSTER, in Stack Monitoring cabinet VTP-PNL-3104). ☒

TANK FARM. PLANT OPERATIONS . PROCEDURE

5.4 STACK SAMPLER (BETA MONITOR) FAILURE SHUTDOWN CHECK (Continued)

NOTE - Other alarms may have annunciated and indicated by the VTP-R-3101 SAMP SYS PROCESS RECORDER. Disregard the alarms at this time.

5.4.20 ACKNOWLEDGE the Stack Monitor alarms by PERFORMING the following:

5.4.20.1 PRESS the HOME (Δ) key on the VTP-R-3101 SAMP SYS PROCESS RECORDER keypad several times until the bottom of the display presents the top level menu, as shown:

[Operator: Select a category]				
DISPLAY	CHART	ALARM	CHANNEL	MORE

5.4.20.2 PRESS the softkey under the displayed word "ALARM" (this will change the display).

5.4.20.3 VERIFY that the top line of the display indicates a 10 (underlined in red) as shown.

I/P CHANS <u>10</u> ,				
OLDEST	NEWEST	ACK	CHANNEL	MORE

5.4.20.4 PRESS the softkey under the displayed word "ACK".

TANK FARM. PLANT OPERATIONS , PROCEDURE

5.4 STACK SAMPLER (BETA MONITOR) FAILURE SHUTDOWN CHECK (Continued)

5.4.20.5 VERIFY that the top line of the display indicates a 10 (underlined in green) as shown.

I/P CHANS <u>10</u> ,				
OLDEST	NEWEST	ACK	CHANNEL	MORE

5.4.21 DEPRESS the yellow HORN ALARM BYPASS button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.4.22 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103).

5.4.23 VERIFY 241-SY EF 3102 EXHAUSTER Fan is OPERATING (ON).

5.4.24 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103).

5.4.25 VERIFY the following:

5.4.25.1 VTP-YL-3151 P-3101 ON green indicating light or VTP-YL-3152 P-3102 ON green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED (ON).

5.4.25.2 VTP-YL-3113A STACK SAMPLER OK green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED (ON).

TANK FARM. PLANT OPERATIONS , PROCEDURE

5.4 STACK SAMPLER (BETA MONITOR) FAILURE SHUTDOWN CHECK (Continued)

5.4.25.3 VTP-YL-3113B STACK SAMPLER - OK green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED (ON). ☒

5.4.25.4 VTP-XA-3113 SHUTDOWN yellow indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103 directly under VTP-YL-3113A STACK SAMPLER OK green indicating light) is NOT ILLUMINATED (OFF). ☒

5.4.25.5 VTP-XA-3147 SYSTEM SHUTDOWN yellow indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is NOT ILLUMINATED (OFF). ☒

5.4.25.6 VTP-YL-3144 ALARM ON red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is NOT ILLUMINATED (OFF). ☒

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

Jim Lopez
Test Director Signature

9-29-95
Date

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

P.J. Chandler
QC Inspector Signature

9-29-95
Date

TANK FARM PLANT OPERATIONS PROCEDURE

5.5 VACUUM SAMPLING SYSTEM CHECK

PNL 92395 WHP 4/24/15

5.5.1 VERIFY VTP-YL-3151 P-3101 ON green light is ILLUMINATED (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.5.2 IF VTP-YL-3151 P-3101 ON green light is NOT ILLUMINATED THEN PRESS VTP-PB-3102 PUMP SWAP yellow button (both are located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.5.3 ENSURE that vacuum sample pump, VTP-P-3102 SAMP PMP, has STOPPED BY VERIFYING that the green PUMP 2 ON indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is NOT ILLUMINATED (OFF).

NOTE - The switch over from vacuum sample pump VTP-P-3102 SAMP PMP to vacuum sample pump VTP-P-3101 SAMP PMP should occur automatically.

5.5.4 ENSURE that vacuum sample pump, VTP-P-3101 SAMP PMP, has STARTED BY VERIFYING that the green VTP-YL-3151 P-3101 ON indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED (ON).

5.5.5 VERIFY the following:

5.5.5.1 241-SY EF 3102 Exhauster fan has NOT SHUTDOWN.

5.5.5.2 VTP-YL-3150 P-3101 ON LEAD green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED (ON).

5.5.5.3 COMMON FAULT red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is NOT ILLUMINATED (OFF).

TANK FARM PLANT OPERATIONS PROCEDURE

5.5 VACUUM SAMPLING SYSTEM CHECK (Continued)

NOTE - The switch over from vacuum sample pump VTP-P-3101 SAMP PMP to vacuum sample pump VTP-P-3102 SAMP PMP should occur automatically.

5.5.6 PRESS VTP-PB-3102 PUMP SWAP yellow button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.5.7 VERIFY VTP-YL-3152 P-3102 ON green light is ILLUMINATED (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.5.8 ENSURE that vacuum sample pump, VTP-P-3101 SAMP PMP, has STOPPED BY VERIFYING that the green VTP-YL-3151 P-3101 ON indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is NOT ILLUMINATED (OFF).

NOTE - The switch over from vacuum sample pump VTP-P-3102 SAMP PMP to vacuum sample pump VTP-P-3101 SAMP PMP should occur automatically.

5.5.9 PRESS VTP-PB-3102 PUMP SWAP yellow button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.5.10 VERIFY VTP-YL-3151 P-3101 ON green light is ILLUMINATED (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.5.11 ENSURE that vacuum sample pump, VTP-P-3102 SAMP PMP, has STOPPED BY VERIFYING that the green VTP-YL-3152 P-3102 ON indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is NOT ILLUMINATED (OFF).

5.5.12 CLOSE valve V-3101T (located in 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

TANK FARM. PLANT OPERATIONS . PROCEDURE

5.5 VACUUM SAMPLING SYSTEM CHECK (Continued)

5.5.13 REMOVE cap on calibration port located next to valve V-3101T (located in 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

NOTE - The switch over from vacuum sampling pump VTP-P-3101 SAMP PMP to vacuum sampling pump VTP-P-3102 SAMP PMP should occur automatically.

5.5.14 ENSURE that vacuum sampling pump VTP-P-3102 SAMP PMP has STARTED BY VERIFYING that the green VTP-YL-3152 P-3102 ON indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED.

5.5.15 VERIFY 241-SY EF 3102 EXHAUSTER fan is still OPERATING.

5.5.16 REPLACE the cap on the calibration port next to valve V-3101T (located in 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.5.17 OPEN valve V-3101T (located in 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

① 5.5.18 PRESS VTP-PB-3102-PUMP-SWAP yellow button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

3103 Pump Reset
JML 9-29-95
9/29/95

5.5.19 VERIFY VTP-YL-3151 P-3101 LEAD ON green light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is NOT ILLUMINATED.

5.5.20 CLOSE valve V-3102T (located in 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

TANK FARI.. PLANT OPERATIONS . PROCEDURE

5.5 VACUUM SAMPLING SYSTEM CHECK (Continued)

5.5.21 REMOVE cap on calibration port next to valve V-3102T (located in 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

NOTE - The switch over from vacuum sample pump VTP-P-3102 SAMP PMP to vacuum sample pump VTP-P-3101 SAMP PMP will occur automatically.

5.5.22 VERIFY that vacuum sample pump VTP-P-3101 SAMP PMP has STARTED BY VERIFYING that VTP-YL-3151 P-3101 ON green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED.

5.5.23 VERIFY 241-SY EF 3102 EXHAUSTER fan is still OPERATING.

5.5.24 CLOSE valve V-3101T (located in 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.5.25 REMOVE cap on calibration port located next to valve V-3101T (located in 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.5.26 VERIFY 241-SY EF 3102 EXHAUSTER fan SHUTS DOWN within thirty (30) seconds.

Exception :

Time 9-28-95
R 9/28/95

5.5.27 ACKNOWLEDGE all alarms.

5.5.28 REPLACE caps on calibration ports next to valves V-3101T and V-3102T (located in 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

TANK FARM, PLANT OPERATIONS, PROCEDURE

5.5 VACUUM SAMPLING SYSTEM CHECK (Continued)

5.5.29 OPEN valve V-3102T (located in 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.5.30 OPEN valve V-3101T (located in 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

5.5.31 PRESS VTP-HS-3101 PUMP START/STOP red button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

(4)

Exception Jim L. 9-28-95
WCB 9/28/95

5.5.32 VERIFY VTP-YL-3150 P-3101 LEAD ON green light (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED.

(4)

Exception Jim L. 9-28-95
WCB 9/28/95

5.5.33 IF VTP-YL-3151 P-3101 ON green light is NOT ILLUMINATED THEN PRESS VTP-PB-3102 PUMP SWAP yellow button (both are located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104).

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

Jim L. 9-28-95
Test Director Signature

9-28-95
Date

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

PJ 9-28-95
QC Inspector Signature

9-28-95
Date

(WITH NOTED EXCEPTIONS)

TANK FARM, PLANT OPERATIONS, PROCEDURE

5.6 INTERLOCK CHECK

- 5.6.1 POSITION BETA FAILURE BYPASS SWITCH to BYPASS (located in the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) . ☒
- 5.6.2 CLOSE HEPA 1 valves V-3180A and V-3180B. ☒
- 5.6.3 PRESS VTP-HS-3118 HORN ALARM BYPASS button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED. ☒
- 5.6.4 PRESS VTP-HS-3117 BELL ALARM BYPASS button (located on the door of the 241-SY EF 3102 EXHAUSTER Stack Monitoring cabinet VTP-PNL-3104) is ILLUMINATED. ☒
- 5.6.5 REMOVE cap from the high calibration port (located next to valve V-3180A). ☒
- 5.6.6 REMOVE cap from the low calibration port (located next to valve V-3180B). ☒
- 5.6.7 CONNECT pressure source to the high calibration port (located next to valve V-3180A). ☒
- 5.6.8 SET pressure source pressure to 2.5 ± 0.5 in wg. ☒
- 5.6.9 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103). ☒
- 5.6.10 WAIT for the 241-SY EF 3102 EXHAUSTER fan to come up to speed. ☒

TANK FARM PLANT OPERATIONS PROCEDURE

5.6 INTERLOCK CHECK (Continued)

- 5.6.11 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103). ☒
- 5.6.12 SET pressure source pressure to approximately 4.0 in wg. ☒
- 5.6.13 VERIFY that the Alarm Cabinet Horn (located on top of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) ANNUNCIATES. ☒
- 5.6.14 PRESS the VTP-PB-3142 ALARM SILENCE red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) and SILENCE the alarm cabinet horn. ☒
- 5.6.15 SET pressure source pressure to approximately 4.5 in wg. ☒
- 5.6.16 VERIFY that 241-SY EF 3102 EXHAUSTER fan has SHUTDOWN. ☒
- 5.6.17 VERIFY VTP-PDAH-3104C HEPA 1 SHUTDOWN yellow indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED. ☒
- 5.6.18 DISCONNECT pressure source from the high calibration port (located next to valve V-3180A). ☒
- 5.6.19 REPLACE cap on the high calibration port (located next to valve V-3180A). ☒
- 5.6.20 REPLACE cap on the low calibration port (located next to valve V-3180B). ☒
- 5.6.21 OPEN HEPA 1 valves V-3180A and V-3180B. ☒

TANK FARM PLANT OPERATIONS PROCEDURE

5.6 INTERLOCK CHECK (Continued)

- 5.6.22 CLOSE HEPA 2 valves V-3181A and V-3181B. ☒
- 5.6.23 REMOVE cap on the high calibration port (located next to valve V-3181A). ☒
- 5.6.24 REMOVE cap on the low calibration port (located next to valve V-3181B). ☒
- 5.6.25 CONNECT pressure source to the high calibration port (located next to valve V-3181A). ☒
- 5.6.26 SET pressure source pressure to approximately 2.0 in wg. ☒
- 5.6.27 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103). ☒
- 5.6.28 WAIT for the 241-SY EF 3102 EXHAUSTER fan to come up to speed. ☒
- 5.6.29 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103). ☒
- 5.6.30 VERIFY that 241-SY EF 3102 EXHAUSTER fan has RESTARTED. ☒
- 5.6.31 SET pressure source pressure to approximately 4.0 in wg. ☒
- 5.6.32 VERIFY that the Alarm Cabinet Horn (located on top of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) ANNUNCIATES. ☒

TANK FARM. PLANT OPERATIONS . PROCEDURE

5.6 INTERLOCK CHECK (Continued)

5.6.33 PRESS the VTP-PB-3142 ALARM SILENCE red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) and SILENCE the alarm cabinet horn.

5.6.34 SET pressure source pressure to approximately 4.5 in wg.

5.6.35 VERIFY that 241-SY EF 3102 EXHAUSTER fan has SHUTDOWN.

5.6.36 VERIFY VTP-PDAH-3106C HEPA 2 SHUTDOWN yellow indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED.

5.6.37 DISCONNECT pressure source from the high calibration port (located next to valve V-3181A).

5.6.38 REPLACE cap from the high calibration port (located next to valve V-3180A).

5.6.39 REPLACE cap from the low calibration port (located next to valve V-3180B).

5.6.40 OPEN valves HEPA 2 V-3181A and V-3181B.

5.6.41 CLOSE valves V-3106A and V-3176.

*missing tag. Jim L 9-28-95
NAB 9/28/95*

5.6.42 REMOVE cap from the high calibration port (located next to valve V-3106A).

5.6.43 REMOVE cap from the low calibration port (located next to valve V-3176).

TANK FARM PLANT OPERATIONS . PROCEDURE

5.6 INTERLOCK CHECK (Continued)

- 5.6.44 CONNECT pressure source to the high calibration port (located next to valve V-3106A). ☒
- 5.6.45 SET pressure source pressure to approximately 2.0 in wg. ☒
- 5.6.46 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103). ☒
- 5.6.47 WAIT for the 241-SY EF 3102 EXHAUSTER fan to come up to speed. ☒
- 5.6.48 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103). ☒
- 5.6.49 VERIFY that 241-SY EF 3102 EXHAUSTER fan has RESTARTED. ☒
- 5.6.50 SET pressure source pressure to approximately 4.5 in wg. ☒
- 5.6.51 VERIFY that the Alarm Cabinet Horn (located on top of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) ANNUNCIATES. ☒
- 5.6.52 PRESS the VTP-PB-3142 ALARM SILENCE red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) and SILENCE the alarm cabinet horn. ☒
- 5.6.53 SET pressure source pressure to approximately 5.9 in wg. ☒
- 5.6.54 VERIFY that 241-SY EF 3102 EXHAUSTER fan has SHUTDOWN. ☒

TANK FARM PLANT OPERATIONS PROCEDURE

5.6 INTERLOCK CHECK (Continued)

- 5.6.55 VERIFY VTP-PAHH-3112C SYSTEM INLET SHUTDOWN yellow indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED. ☒
- 5.6.56 DISCONNECT pressure source from the high calibration port (located next to valve V-3106A). ☒
- 5.6.57 REPLACE cap from the high calibration port (located next to valve V-3106A). ☒
- 5.6.58 REPLACE cap from the low calibration port (located next to valve V-3176). ☒
- 5.6.59 OPEN valves V-3176 and V-3106A. ☒
- 5.6.60 CLOSE valves V-3178A and V-3178B. ☒
- 5.6.61 REMOVE cap from the high calibration port (located next to valve V-3178A). ☒
- 5.6.62 REMOVE cap from the low calibration port (located next to valve V-3178B). ☒
- 5.6.63 CONNECT pressure source to the high calibration port (located next to valve V-3178A). ☒
- 5.6.64 SET pressure source pressure to approximately 2.0 in wg. ☒
- 5.6.65 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103). ☒

TANK FARM. PLANT OPERATIONS . PROCEDURE

5.6 INTERLOCK CHECK (Continued)

- 5.6.66 WAIT for the 241-SY EF 3102 EXHAUSTER fan to come up to speed. ☒
- 5.6.67 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103). ☒
- 5.6.68 VERIFY that 241-SY EF 3102 EXHAUSTER fan has RESTARTED. ☒
- 5.6.69 SET pressure source pressure to approximately 4.5 in wg. ☒
- 5.6.70 VERIFY that the Alarm Cabinet Horn (located on top of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) ANNUNCIATES. ☒
- 5.6.71 PRESS the VTP-PB-3142 ALARM SILENCE red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) and SILENCE the alarm cabinet horn. ☒
- 5.6.72 SET pressure source pressure to approximately 5.9 in wg. ☒
- 5.6.73 VERIFY that 241-SY EF 3102 EXHAUSTER fan has SHUTDOWN. ☒
- 5.6.74 VERIFY VTP-PDAH-3110B SYSTEM SHUTDOWN yellow indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED. ☒
- 5.6.75 DISCONNECT pressure source from the high calibration port (located next to valve V-3178A). ☒

TANK FARM. PLANT OPERATIONS . PROCEDURE

5.6 INTERLOCK CHECK (Continued)

- 5.6.76 REPLACE cap from the high calibration port (located next to valve V-3178A). ☒
- 5.6.77 REPLACE cap from the low calibration port (located next to valve V-3178B). ☒
- 5.6.78 OPEN valves V-3178A and V-3178B. ☒
- 5.6.79 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103). ☒
- 5.6.80 WAIT for the 241-SY EF 3102 EXHAUSTER fan to come up to speed. ☒
- 5.6.81 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103). ☒
- 5.6.82 PRESS VTP-HS-3145 EMERGENCY STOP red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103). ☒
- 5.6.83 VERIFY the 241-SY EF 3102 EXHAUSTER fan has STOPPED. ☒
- 5.6.84 PULL VTP-HS-3145 EMERGENCY STOP red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) BACK OUT. ☒
- 5.6.85 Test Director SHALL VERIFY that section 5.6 is COMPLETE by SIGNING below.

Jim Langdon
Test Director Signature

9-28-95
Date

TANK FARM PLANT OPERATIONS PROCEDURE

5.6 INTERLOCK CHECK (Continued)

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

P.J. Alexander
QC Inspector Signature

9-28-95
Date

TANK FARM. PLANT OPERATIONS PROCEDURE

5.7 HEATER CHECK

WARNING

Energized circuits and leads are contained inside the cabinet.
Observe appropriate electrical precautions. Comply with WHC-CM-4-3,
Vol I Section E-2, ELECTRICAL HAZARDS.

5.7.1 POSITION 480V circuit breaker #13 K1A DUCT HEATER (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to OFF.

5.7.2 OPEN cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL.

5.7.3 CONNECT a voltmeter to terminals H1 and H2 (located in cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the 241-SY EF 3102 EXHAUSTER).

NOTE - If necessary, use pliers to close DISCONNECT switch DS-1.

5.7.4 CLOSE DISCONNECT switch DS-1 (located on the door of cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the 241-SY EF 3102 EXHAUSTER).

WARNING

Energized circuits and leads are contained inside the cabinet.
Observe appropriate electrical precautions. Comply with WHC-CM-4-3,
Vol I Section E-2, ELECTRICAL HAZARDS.

5.7.5 POSITION 480V circuit breaker #13 K1A DUCT HEATER (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to ON.

NOTE - The period of one cycle is four (4) seconds.

5.7.6 OBSERVE voltmeter for the CYCLING of voltage from 0V to 480V.

TANK FARI. PLANT OPERATIONS . PROCEDURE

5.7 HEATER CHECK (Continued)

5.7.7 POSITION VTP-HS-3146 FAN START switch (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) to OFF. ☒

5.7.8 PRESS the VTP-PB-3142 ALARM SILENCE red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) and SILENCE the alarm cabinet horn. ☒

5.7.9 VERIFY voltmeter continuously INDICATES 0V. ☒

5.7.10 POSITION VTP-HS-3146 FAN START switch (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) to ON. ☒

NOTE - The period of one cycle is four (4) seconds.

5.7.11 OBSERVE voltmeter for the CYCLING of voltage from 0V to 480V. ☒

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

5.7.12 POSITION 480V circuit breaker #13 K1A DUCT HEATER (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to OFF. ☒

5.7.13 DISCONNECT field wiring from terminals B3 and B4 for thermocouple VTP-TE-3102 VTP-TC-3102 TEMP ELEM (located in cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the 241-SY EF 3102 EXHAUSTER). ☒

TANK FARM PLANT OPERATIONS PROCEDURE

5.7 HEATER CHECK (Continued)

5.7.14 CONNECT Thermocouple Simulator to terminals B3 and B4
(located in cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL
of the 241-SY EF 3102 EXHAUSTER).

5.7.15 SET Thermocouple Simulator to 120°F.

WARNING

Energized circuits and leads are contained inside the cabinet.
Observe appropriate electrical precautions. Comply with WHC-CM-4-3,
Vol I Section E-2, ELECTRICAL HAZARDS.

5.7.16 POSITION 480V circuit breaker #13 K1A DUCT HEATER (located
at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to
ON.

5.7.17 VERIFY heater OPERATES by OBSERVING the voltmeter for the
CYCLING of voltage from 0V to 480V.

5.7.18 SET Thermocouple Simulator to 165°F.

5.7.19 VERIFY heater PRODUCES a continuous reading of 0V.

5.7.20 SET Thermocouple Simulator to 120°F.

5.7.21 VERIFY heater OPERATES by OBSERVING the voltmeter for the
CYCLING of voltage from 0V to 480V.

TANK FARM, PLANT OPERATIONS PROCEDURE

5.7 HEATER CHECK (Continued)

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

- 5.7.22 POSITION 480V circuit breaker #13 K1A DUCT HEATER (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to OFF. ☒
- 5.7.23 DISCONNECT Thermocouple Simulator from terminals B3 and B4 (located in cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the 241-SY EF 3102 EXHAUSTER). ☒
- 5.7.24 RECONNECT field wiring to terminals B3 and B4 for thermocouple VTP-TE-3102 VTP-TC-3102 TEMP ELEM (located in cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the 241-SY EF 3102 EXHAUSTER). ☒
- 5.7.25 DISCONNECT field wiring from terminals B1 and B2 for thermocouple VTP-TE-3101 VTP-TC-3101 TEMP ELEM (located in cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the 241-SY EF 3102 EXHAUSTER). ☒
- 5.7.26 CONNECT Thermocouple Simulator to terminals B1 and B2 (located in cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the 241-SY EF 3102 EXHAUSTER). ☒
- 5.7.27 SET Thermocouple Simulator to 120°F. ☒

TANK FARM PLANT OPERATIONS PROCEDURE

5.7 HEATER CHECK (Continued)

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

5.7.28 POSITION 480V circuit breaker #13 KIA DUCT HEATER (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to ON.

5.7.29 VERIFY heater OPERATES by OBSERVING the voltmeter for the CYCLING of voltage from 0V to 480V.

5.7.30 SET Thermocouple Simulator to 200°F.

5.7.31 VERIFY heater PRODUCES a continuous reading of 0V.

5.7.32 SET Thermocouple Simulator to 120°F.

5.7.33 VERIFY heater PRODUCES a continuous reading of 0V.

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

5.7.34 PRESS the reset button on VTP-TC-3101 HTR-3101 TEMP CNTRL (located in cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the 241-SY EF 3102 EXHAUSTER).

5.7.35 VERIFY heater OPERATES by OBSERVING the voltmeter for the CYCLING of voltage from 0V to 480V.

TANK FARM. PLANT OPERATIONS . PROCEDURE

5.7 HEATER CHECK (Continued)

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

- 5.7.36 POSITION 480V circuit breaker #13 K1A DUCT HEATER (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to OFF. ☒
- 5.7.37 DISCONNECT Thermocouple Simulator from terminals B1 and B2 (located in cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the 241-SY EF 3102 EXHAUSTER). ☒
- 5.7.38 RECONNECT field wiring to terminals B1 and B2 for thermocouple VTP-TE-3102 VTP-TC-3102 TEMP ELEM (located in cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the 241-SY EF 3102 EXHAUSTER). ☒

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

- 5.7.39 POSITION 120V circuit breaker #9 Press/Flow XMTR & Cont (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3108) to OFF. ☒
- 5.7.40 PRESS the VTP-PB-3142 ALARM SILENCE red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) and SILENCE the alarm cabinet horn. ☒

TANK FARM. PLANT OPERATIONS , PROCEDURE

5.7 HEATER CHECK (Continued)

5.7.41 DISCONNECT VTP-FIC-3101 MASS FLO CNTRL wires, 91 and 92, from terminals 1A and 2A respectively (located in cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the 241-SY EF 3102 EXHAUSTER).

5.7.42 CONNECT a 5V power source to VTP-FIC-3101 MASS FLO CNTRL wires 91 and 92 (located in cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the 241-SY EF 3102 EXHAUSTER).

5.7.43 SET the 5V power source to four (4) volts.

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

5.7.44 POSITION 120V circuit breaker #9 Press/Flow XMTR & Cont (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3108) to ON.

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

5.7.45 POSITION 480V circuit breaker #13 KIA DUCT HEATER (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to ON.

5.7.46 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103).

TANK FARM. PLANT OPERATIONS . PROCEDURE

5.7 HEATER CHECK (Continued)

- 5.7.47 VERIFY 241-SY EF 3102 EXHAUSTER fan STARTS AND ALLOW it to come up to speed. ☒
- 5.7.48 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103). ☒
- 5.7.49 SET the 5V power source to three (3) volts. ☒
- 5.7.50 VERIFY that the alarm cabinet Horn ANNUNCIATES (located on top of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103). ☒
- 5.7.51 PRESS the VTP-PB-3142 ALARM SILENCE red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) and SILENCE the alarm cabinet horn. ☒
- 5.7.52 VERIFY that VTP-FAL-3103 LOW STACK FLOW red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED. ☒
- 5.7.53 VERIFY that VTP-YL-3103C STACK FLOW OK green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is NOT ILLUMINATED. ☒
- 5.7.54 VERIFY heater PRODUCES a continuous reading of 0V. ☒
- 5.7.55 SET the 5V power source to four (4) volts. ☒
- 5.7.56 VERIFY that VTP-FAL-3103 LOW STACK FLOW red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is NOT ILLUMINATED. ☒

TANK FARM. PLANT OPERATIONS . PROCEDURE

5.7 HEATER CHECK (Continued)

- 5.7.57 VERIFY that VTP-YL-3103C STACK FLOW OK green indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is ILLUMINATED. ☒
- 5.7.58 PRESS the VTP-PB-3141 ALARM RESET red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103). ☒
- 5.7.59 VERIFY that VTP-YL-3144 ALARM ON red indicating light (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) is NOT ILLUMINATED. ☒
- 5.7.60 VERIFY heater OPERATES by OBSERVING the voltmeter for the CYCLING of voltage from 0V to 480V. ☒

WARNING

Energized circuits and leads are contained inside the cabinet. Observe appropriate electrical precautions. Comply with WHC-CM-4-3, Vol I Section E-2, ELECTRICAL HAZARDS.

- 5.7.61 POSITION 120V circuit breaker #9 Press/Flow XMTR & Cont (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3108) to OFF. ☒
- 5.7.62 DISCONNECT the 5V power source from VTP-FIC-3101 MASS FLO CNTRL wires 91 and 92 (located in cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the 241-SY EF 3102 EXHAUSTER). ☒
- 5.7.63 RECONNECT VTP-FIC-3101 MASS FLO CNTRL wires, 91 and 92, to terminals 1A and 2A respectively (located in cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the 241-SY EF 3102 EXHAUSTER). ☒

TANK FARM. PLANT OPERATIONS , PROCEDURE

5.7 HEATER CHECK (Continued)

WARNING

Energized circuits and leads are contained inside the cabinet.
Observe appropriate electrical precautions. Comply with WHC-CM-4-3,
Vol I Section E-2, ELECTRICAL HAZARDS.

- 5.7.64 POSITION 120V circuit breaker #9 Press/Flow XMTR & Cont
(located at 241-SY EF 3102 EXHAUSTER on panelboard
EDS-DP-3108) to ON.

WARNING

Energized circuits and leads are contained inside the cabinet.
Observe appropriate electrical precautions. Comply with WHC-CM-4-3,
Vol I Section E-2, ELECTRICAL HAZARDS.

- 5.7.65 POSITION 480V circuit breaker #13 K1A DUCT HEATER (located
at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to
OFF.

- 5.7.66 DISCONNECT the voltmeter from terminals H1 and H2 (located
in cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the
241-SY EF 3102 EXHAUSTER).

NOTE - If necessary, use pliers to open DISCONNECT switch DS-1.

- 5.7.67 OPEN DISCONNECT switch DS-1 (located on the door of cabinet
VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the 241-SY EF 3102
EXHAUSTER).

- 5.7.68 CLOSE the door of cabinet VTP-PNL-3102 DUCT HEATER CONTROL
PANEL.

TANK FARI. PLANT OPERATIONS . ROCEDURE

5.7 HEATER CHECK (Continued)

WARNING

Energized circuits and leads are contained inside the cabinet.
Observe appropriate electrical precautions. Comply with WHC-CM-4-3,
Vol I Section E-2, ELECTRICAL HAZARDS.

5.7.69 POSITION 480V circuit breaker #13 KIA DUCT HEATER (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to ON.

NOTE - If necessary, use pliers to close DISCONNECT switch DS-1.

5.7.70 CLOSE DISCONNECT switch DS-1 (located on the door of cabinet VTP-PNL-3102 DUCT HEATER CONTROL PANEL of the 241-SY EF 3102 EXHAUSTER).

5.7.71 DEPRESS the yellow VTP-HS-3118 HORN ALARM BYPASS button .

5.7.72 DEPRESS the yellow VTP-HS-3117 BELL ALARM BYPASS button.

WARNING

Energized circuits and leads are contained inside the cabinet.
Observe appropriate electrical precautions. Comply with WHC-CM-4-3,
Vol I Section E-2, ELECTRICAL HAZARDS.

5.7.73 PLACE the BETA FAILURE BYPASS SWITCH in the NORMAL position.

5.7.74 POSITION 480V circuit breaker #13 KIA DUCT HEATER (located at 241-SY EF 3102 EXHAUSTER on panelboard EDS-DP-3107) to ON.

5.7.75 Test Director SHALL VERIFY that section 5.7 is COMPLETE by SIGNING below.

Jim Anderson
Test Director Signature

9-28-85
Date

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TANK FARM PLANT OPERATIONS PROCEDURE

5.7 HEATER CHECK (Continued)

5.7.76 QC Inspector SHALL VERIFY that section 5.7 is COMPLETE by SIGNING below.

P.J. Hernandez
QC Inspector Signature

9.28.95
Date

TANK FARM. PLANT OPERATIONS PROCEDURE

5.8 FLOW RATE CHECK

- 5.8.1 BEFORE beginning flow rate check or aerosol (DOP) test, BOND all applicable equipment per Maintenance Procedure 6-TF-160, "ELECTRICAL BONDING FOR VENT AND BALANCE TESTS", REV. 0, CHG 0.
- ① A. *This step is require before S. 8.13. This step is not required until that step. JK 9/29/95 Jim L. 9-29-95* ☒
- 5.8.2 CONDUCT an in-place aerosol (DOP) test on the 241-SY EF 3102 HEPA filters by PERFORMING Maintenance Procedure 6-TF-156, "HEPA FILTER IN-PLACE LEAK TEST (AEROSOL TEST)", REV. 0, CHG 0. ☒
- 5.8.3 RECORD data on Maintenance Procedure 6-TF-156-TQ, "241-SY 296-S-25 TANK EXHAUSTER HEPA FILTER AEROSOL TEST DATA SHEETS", REV. 0, CHG A. ☒
- 5.8.4 POSITION the VTP-HS-3146 FAN START switch to OFF. ☒
- 5.8.5 OPEN Circuit Breaker K1A EXHAUSTER PANEL EDS-DP-3107 located on compartment 7FE of MCC-HMT in 241-SY-272. ☐
- 5.8.6 LOCK AND TAG Circuit Breaker K1A EXHAUSTER PANEL EDS-DP-3107 located on compartment 7FE of MCC-HMT in 241-SY-272. ☐
- 5.8.7 DISCONNECT the Inlet Test Assembly, from then 241-SY EF 3102 EXHAUSTER, per work package 2W-94-01005/M. ☐
- 5.8.8 CONNECT the 241-SY EF 3102 EXHAUSTER to the 241-SY Tank Farm Exhauster System, per work package 2W-94-01005/M. ☐
- 5.8.9 VERIFY that work packages 2W-94-01004/M and 2W-94-01005/M, for the installation of the 241-SY EF3102 EXHAUSTER, have been COMPLETED.

QC Inspector Signature

Date

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TANK FARM PLANT OPERATIONS PROCEDURE

5.8 FLOW RATE CHECK (Continued)

5.8.10 REMOVE LOCK AND TAG from Circuit Breaker KIA EXHAUSTER PANEL EDS-DP-3107 located on compartment 7FE of MCC-HMT in 241-SY-272. ☒

5.8.11 CLOSE Circuit Breaker KIA EXHAUSTER PANEL EDS-DP-3107 located on compartment 7FE of MCC-HMT in 241-SY-272. ☒

5.8.12 STARTUP 241-SY EF 3102 EXHAUSTER per procedure TO-060-230, OPERATE PRIMARY VENTILATION SYSTEM FOR 241-SY TANK FARM, REV. E-0. ☒

① Note: Perform step 5.8.1 before this step. *KG/29/95*
5.8.15 Jim L 8-29-95

5.8.13 CONDUCT an in-place aerosol test on the 241-SY EF 3102 HEPA filters by PERFORMING Maintenance Procedure 6-TF-156, "HEPA FILTER IN-PLACE LEAK TEST (AEROSOL TEST)", REV. 0, CHG 0. ☒

5.8.14 RECORD data on Maintenance Procedure 6-TF-156-TQ, "241-SY 296-S-25 TANK EXHAUSTER HEPA FILTER AEROSOL TEST DATA SHEETS", REV. 0, CHG A. ☒

5.8.15 CONDUCT a flow rate check on the 241-SY EF 3102 Stack by PERFORMING Maintenance Procedure 6-TF-155, "AIR FLOW TEST FOR TANK FARM STACKS AND DUCTS", REV. 1, CHG 0. ☒

5.8.16 RECORD data on Maintenance Procedure 6-TF-155-M, "241-SY TANK EXHAUSTER STACK 296-S-25 AIR FLOW TEST DATA SHEETS", REV. 1, CHG 0. ☒

5.8.17 IF flow rate is GREATER THAN 1000 SCFM THEN PERFORM the following:

5.8.17.1 SHUTDOWN 241-SY EF 3102 EXHAUSTER per procedure TO-060-230, OPERATE PRIMARY VENTILATION SYSTEM FOR 241-SY TANK FARM, REV. E-0. ☐ NA

5.8.17.2 RESIZE 241-SY EF 3102 EXHAUSTER sheaves. ☐ NA

TANK FARM PLANT OPERATIONS . PROCEDURE

5.8 FLOW RATE CHECK (Continued)

5.8.17.3 STARTUP 241-SY EF 3102 EXHAUSTER per procedure TO-060-230, OPERATE PRIMARY VENTILATION SYSTEM FOR 241-SY TANK FARMS.

☐ NA

5.8.17.4 REPERFORM 241-SY EF 3102 EXHAUSTER flow rate check on the 241-SY EF 3102 Stack by PERFORMING Maintenance Procedure 6-TF-155, "AIR FLOW TEST FOR TANK FARM STACKS AND DUCTS", REV. 1, CHG 0.

☐ NA

5.8.17.5 RECORD data on Maintenance Procedure 6-TF-155-M, "241-SY TANK EXHAUSTER STACK 296-S-25 AIR FLOW TEST DATA SHEETS", REV. 1, CHG 0.

☐ NA

5.8.18 IF flow rate is still GREATER THAN 1000 SCFM THEN REPERFORM steps 5.8.16.1 through 5.8.16.5.

☐ NA

5.8.19 PRESS VTP-HS-3145 EMERGENCY STOP red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103).

Exception #7 JimL 9-30-95
OK 9-30-95

☐

5.8.20 VERIFY 241-SY PRIMARY EXHAUST SYSTEM MON FAILURE XA-EXH-K1-1 amber annunciator window #4-6, located on panel F in 242-S, is ILLUMINATED.

Exception #6 JimL 9-30-95

☐

5.8.21 PRESS the ACKNOWLEDGE pushbutton on panel F in 242-S Instrument Bldg.

☐

5.8.22 VERIFY 241-SY PRIMARY EXHAUST SYSTEM MON FAIL XA-EXH-K1-1 amber annunciator window, located on annunciator panel ANN-102 in Instrument Bldg. 241-SY-271, is ILLUMINATED.

☐

5.8.23 PRESS the ACKNOWLEDGE pushbutton on panel ANN-102 in 241-SY-271.

☐

TANK FARM. PLANT OPERATIONS PROCEDURE

5.8 FLOW RATE CHECK (Continued)

- 5.8.24 PULL VTP-HS-3145 EMERGENCY STOP red button (located on the door of the 241-SY EF 3102 EXHAUSTER alarm cabinet VTP-PNL-3103) BACK OUT.

Exception #7 JNL 9-30-95
K 9-30-95

- 5.8.25 SHUTDOWN 241-SY EF 3102 EXHAUSTER per procedure TO-060-230, OPERATE PRIMARY VENTILATION SYSTEM FOR 241-SY TANK FARM, REV. E-0.

- 5.8.26 STARTUP 241-SY EXHAUSTER K-1-4-1 or P-28 per procedure TO-060-230, OPERATE PRIMARY VENTILATION SYSTEM FOR 241-SY TANK FARMS.

- 5.8.27 Test Director SHALL VERIFY that section 5.8 is COMPLETE by SIGNING below.

Jim Ford
Test Director Signature

9-30-95
Date

- 5.8.28 QC Inspector SHALL VERIFY that section 5.8 is COMPLETE by SIGNING below.

P.J. Alameda
QC Inspector Signature

9-30-95
Date

(WITH NOTED EXCEPTIONS)

TANK FARM, PLANT OPERATIONS . PROCEDURE

FIGURE 1 - INLET TEST ASSEMBLY

TANK FARM PLANT OPERATIONS PROCEDURE

OTP EXCEPTION LOG

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TANK FARM PLANT OPERATION PROCEDURE

OTP EXCEPTION RECORD

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OTP step number:	OTP Exception Log Number:
Description of Exception:	
Resolution of Exception:	
Date of Resolution:	
Test Director signature:	
Cognizant Engineer signature:	
Quality Assurance signature:	
Tank Farm Operations signature:	

TANK FARM PLANT OPERATIONS PROCEDURE

OTP ACCEPTANCE RECORD

This OTP 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 OTP results are accepted by the undersigned:

Terry D. Kaiser 9/30/95
Cognizant Engineer Date

Unbawett 9/30/95
West Tank Farm Operations Date

Steve Krogsrud per Tele Conf. TD Kaiser 9/30/95
Safety Date

P.J. Blumendy 9.30.95
Quality Control Date

Jim Langdon 9.30.95
Test Director Date

TANK FARM. PLANT OPERATIONS . PROCEDURE

PROCEDURE HISTORY SIGNATURE DATA

Procedure Signatures for WHC-SD-WM-OTR-189			TYPE OF CHANGE	IMPACT LEVEL
POSITION/ORG	DELEGATE	DATE	NEW	SQE
Cog Engineer				
Engineer				
Manager Stab/WTP0				
Manager FS/WTP0				
Engineer/TWRSQA				
Engineer/WTSS				
Engineer/WTSA				
Engineer/ALARA				
Engineering Writer				
Acceptance Review				
Approval Authority				