Tank Farm Plant Operating Procedure  

241-AW Farm Transfer

**Perform Leak Check of Components in 241-AW-03A**

**Changes “Other Than Inconsequential” Require These Additional Reviews:**

![Engineering Checker (EC)](image)

**USQ # TF-18-1454-S, Rev. 1**

### Change History (≤ Last 5 Rev-Mods)

<table>
<thead>
<tr>
<th>Rev-Mod</th>
<th>Release Date</th>
<th>Justification</th>
<th>Summary of Changes</th>
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<tr>
<td>A-1</td>
<td>11/15/2018</td>
<td>Incorporating eDARF changes</td>
<td>Power supplies for AP Tank Farm were added. Corrected label at step 5.4.9. “NOZZLE G” replaced by “TANK RETURN” at step 5.5.3. Removed the AW-B Floor Drain from Checklist 1 Sheet 3 of 6. Added open route to Checklist 3 Sheet 2 of 6. Checklist 3 Sheet 6 of 6 – Replaced Nozzle G with Tank Return E on Checklist 3 sheet 6 of 6.</td>
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<tr>
<td>A-0</td>
<td>09/06/2018</td>
<td>Operations request</td>
<td>New Procedure. This procedure provides instructions for performing a leak check of waste transfer valves in AW-103</td>
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**Document No.**: TO-232-003  
**Rev/Mod**: A-1  
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### Perform Leak Check of Components in 241-AW-03A

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Attachment 1 - AP801-RW-FIT-001 Water Meter Totalizer Reset

Checklist 1 - Safety Basis and Environmental Checks

Checklist 2 - Engineering Transfer Controls

Checklist 3 - Leak Check Valving

Checklist 4 - Leak Detectors and Power Supplies

Checklist 5 - Post-Activity Freeze Protection Evaluation

Data Sheet 1 - Information Record Sheet

Data Sheet 2 - 241-AW-03A and 241-AW-A Component Leak Check Observations

Data Sheet 3 - Raw Water Tracking

Data Sheet 4 - Alternate Leak Detection Monitoring

Data Sheet 5 – Water Additions

Signature Sheet 1 - Transfer Signature and Initials Identification Sheet
Perform Leak Check of Components in 241-AW-03A

1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides instructions for performing leak checks of waste transfer NOZZLE/jumper connections in 241-AW-03A and nozzle L14 in 241-AW-A valve pit.

1.2 Scope

This procedure applies to all tanks, pits, waste transfer lines, instrumentation and equipment that are associated with the leak check in 241-AW-03A and 241-AW-A.

This procedure does not involve transfer of tank waste. Administrative locks on any pump will not be removed. Therefore, AC 5.8.8. Waste Transfer System Freeze Protection does not apply. DID #12 Winterization/Summerization Protection also does not apply, except Checklist 5 - Post-Activity Freeze Protection Evaluation provides notification to Operations to take appropriate action if the Post-Activity Evaluation determines a future freezing hazard exists. Temperature monitoring is not required provided this procedure is performed from April through September.
2.0 INFORMATION

2.1 Terms and Definitions

2.1.1 Batch documentation: This is when a checklist or table with multiple tasks is followed but not filled out “AS-YOU-GO” to perform a task. This is not allowed. Each item on a checklist or table shall be signed off as it is completed by the performer.

2.1.2 Flow Transient: A sudden change in flow velocity and pressure.

2.1.3 Operable leak detection:
- Preventative Maintenance checks have been performed within required periodicity (PMID current) with a “satisfactory” result
- TFMCS indications associated with this procedure are not in alarm
- Devices and alarms associated with this transfer are enabled and not inhibited
- Local strobes are not required for leak detection.

2.1.4 PMID Current: Preventative Maintenance checks have been performed within required periodicity with a “satisfactory” result.

2.1.5 Transfer Valve Tamper Seal Log: Tracking system maintained at the Central Shift Office to manage tamper seal information that documents the installation on or removal from waste transfer valves.
2.2 General Information

2.2.1 Independent Verification is performed in accordance with TFC-OPS-OPER-C-34, Independent Verification.

2.2.2 Signature Sheet 1 - Transfer Signature and Initials Identification Sheet is provided for personnel who will be initialing this procedure.

2.2.3 Data Sheet 1 - Information Record Sheet is provided to record miscellaneous notes, comments, or other transfer related remarks.

2.2.4 Checklists with Tamper Seal # identification will use the following legend when identifying the origin of the Tamper Seal by circling the proper symbol:

- **I** = Installed during performance of this procedure.
- **R** = Removed during performance of this procedure.
- **L** = Currently installed and configuration maintained by the Central Shift Office Tamper Seal Log tracking system.

2.2.5 When more than one connection is being checked concurrently, a drip-wise leak at one connection does not fail the entire set of connections being checked.
3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

All activities in this procedure fall within the scope of the General Hazards Analysis.

3.2 Equipment Safety

CAUTION - Valve AP801-RW-V-015 should be throttled slowly to prevent damage to the system.

NOTE - This leak check is being performed with unheated raw water provided from Hanford Water Distribution System.

3.2.1 Flush/leak check water > 180 °F may not be used to flush safety significant waste transfer systems.

3.3 Radiation and Contamination Control

3.3.1 When this procedure is worked in radiological areas, an approved radiological work permit (RWP) is required. If radiological conditions or work performed falls outside the scope of the RWP, all work activities must be discontinued until a new or revised RWP has been issued in accordance with TFC-ESHQ-RP_RWP-C-03, ALARA Work Planning.
3.4 Environmental Compliance

3.4.1 Tanks and ancillary equipment including piping and pits/structures must be designated as RCRA compliant based on review of the current Routing Board. RCRA compliant includes the following as shown on the current Routing Board (H-14-107346):

- “Green” primary Transfer Routes and pits/structures
- “Blue Dashed” drain line - secondary containment system, non-pressurized lines from the RCRA compliant pits/structures.

3.4.2 Pit/structure leak detection on active transfer routes must have been functionally checked within the last 365 days prior to any liquid being moved/transfered.

3.4.3 Monitoring of leak detectors required during the following activities:

- Leak Check operations (when water is flowing)
- Before and after draining.

3.4.4 Shift Office(s) and Environmental On-Call must be notified per the Environmental On-Call List if any of the following occur:

- Spills or leaks to the environment
- Alarming leak detectors on the active transfer route.
3.5 Limits

TECHNICAL SAFETY REQUIREMENTS

HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements
AC 5.7 Waste Leak Evaluation Program
AC 5.8.2 Flammable Gas Controls
AC 5.9.2 Ignition Controls

HNF-IP-1266, Tank Farms Operations Administrative Controls

ENVIRONMENTAL, SAFETY, HEALTH AND QUALITY DOCUMENTS

RPP-16922 ENVIRONMENTAL SPECIFICATION REQUIREMENTS
4.0 PREREQUISITES

4.1 Special Tools, Equipment and Supplies

The following supplies may be needed to perform this procedure:
- Work gloves
- Communication devices
- Wrench Key for APFP-RW-V-133
- Heavy duty wire cutters.

4.2 Performance Documents

The following documents may be needed to perform this procedure:
- TO-020-005, Perform Pit Examinations and Leak Checks Using a Remotely Controlled Camera
- TO-020-610, Operate Tank Farms Waste Transfer System Valves
- TO-025-002, Operate Tank Farms Monitor and Control System HMIs
- TFC-OPS-OPER-C-34, Independent Verification.
5.0 PROCEDURE

Special Instruction

Shift Production Team Management/OE oversight is required for all valve manipulations and Independent Verification during the performance of this procedure, excluding valves in 241-AP-801 building.

NOTE - Sections 5.1, 5.2, and 5.3 may be performed concurrently or in any logical order.

5.1 Prepare Facility for Leak Check Configuration

NOTE - Steps 5.1.1 through 5.1.7 may be performed concurrently or in any logical order.

_____ 5.1.1 CONFIRM Transfer OE has completed a leak check limitations review for the following conditions:

- No Temporary Modification and Bypass Log bypasses that would prevent this leak check are installed
- No Standing Orders that would prevent this leak check have been issued
- No Red Arrow entries that would prevent this leak check have been logged
- No open Action Tracking Binder (ATB) items except ATB-17-001 for 241-AW-A L14 and 241-AW-03A that would prevent this leak check
- Administrative locks are hung on all physically connected transfer pumps.

_____ 5.1.2 CONFIRM Transfer OE has checked with Tank Farm Projects the Independent Qualified Registered Professional Engineer (IQRPE) has been notified.

_____ 5.1.3 IF lighting is not adequate, ENSURE lighting is staged and operable to support low-light leak check operations.

_____ 5.1.4 PERFORM required equipment checks per Checklist 1 - Safety Basis and Environmental Checks.

_____ 5.1.5 IF permanently installed pit/structure leak detectors or drain seals on the leak check route are inoperable, PERFORM the following:

- 5.1.5.1 ENSURE an approved alternate method of leak detection is installed and operable.
- 5.1.5.2 RECORD the alternate method of leak detection used on Data Sheet 1 - Information Record Sheet.
5.1 **Prepare Facility for Leak Check Configuration** (Cont.)

——— 5.1.6 **ENSURE** operable leak detectors/power supplies that are identified on Checklist 1 - Safety Basis and Environmental Checks are RESERVED per TO-025-002.

——— 5.1.7 **ENSURE** Engineering has completed and signed Checklist 2 - Engineering Transfer Controls and Checklist 5 - Post-Activity Freeze Protection Evaluation. *(AC 5.7, AC 5.8.5)*
5.2 Place the Facility into Leak Check Configuration

5.2.1 PERFORM leak check valving per Checklist 3 - Leak Check Valving.

(AC 5.8.6)

5.2.2 ENSURE the following valve lineup.

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP801-RW-V-015</td>
<td>CLOSED</td>
<td></td>
</tr>
<tr>
<td>AP801-RW-V-010</td>
<td>OPEN</td>
<td></td>
</tr>
</tbody>
</table>

5.2.3 CONFIRM AP Flush Pit hose is connected to Valve APFP-RW-V-133

OR

IF AP Flush Pit hose is not connected, CONNECT Flush Pit hose as follows:

5.2.3.1 PERFORM contamination and radiation survey of the work area during sleeving and connecting of the flush hose.

NOTE - Hose is located inside flush pit.

5.2.3.2 CONFIRM flush hose is connected to hose connection inside FLUSH PIT 241-AP.

NOTE - Clear sleeving is preferred.

5.2.3.3 ENSURE sleeving is long enough to direct any leakage into flush pit when installed on flush hose.

5.2.3.4 CONNECT flush hose to valve APFP-RW-V-133 hose connection.

5.2.3.5 SECURE sleeving above cam lock.

5.2.3.6 NOTIFY SM/OE flush hose is connected and sleeved.
5.2 Place the Facility into Leak Check Configuration (Cont.)

____ 5.2.4 ENSURE the following valve lineup is completed:

<table>
<thead>
<tr>
<th>Valve Identification</th>
<th>Valve Position</th>
<th>Operator</th>
<th>Independent Verifier</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Initials</td>
<td>Date</td>
</tr>
<tr>
<td>APFP-RW-V-133</td>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>APFP-RW-V-207</td>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Transfer OE Signature / __________________________ / __________________________ 

OE/Shift Manager Signature / __________________________ / __________________________ 

5.2.5 VERIFY APFP-RW-V-208 valve has been administrative locked in the “OPEN” position.

Transfer OE Signature / __________________________ / __________________________ 

OE/Shift Manager Signature / __________________________ / __________________________ 

5.2.6 ENSURE APFP-RW-V-209 valve handle is engaged with valve extension.

5.2.7 ENSURE the following valve lineup is complete:

<table>
<thead>
<tr>
<th>Valve Identification</th>
<th>Valve Position</th>
<th>Operator</th>
<th>Independent Verifier</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Initials</td>
<td>Date</td>
</tr>
<tr>
<td>APFP-RW-V-209(^1)</td>
<td>CLOSED</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Transfer OE Signature / __________________________ / __________________________ 

OE/Shift Manager Signature / __________________________ / __________________________ 

\(^1\) Valve APFP-RW-V-209 is a two-way ball valve without stops. Valve is CLOSED when handle is perpendicular to the pipe or pit cover schematic.

5.2.8 VERIFY APFP-RW-V-209 is in the closed position, IF valve is not in the closed position RE-PERFORM steps 5.2.6 through 5.2.8.
5.3  Place Common Area Equipment into Leak Check Configuration

Reserved for Future Use
5.4 Perform Leak Check Operation

5.4.1 Transfer OE CONFIRM with Shift Manager that the 241-AW Tank Farm in-service primary tank ventilation system is operating.

5.4.2 ENSURE cameras are operable and being monitored for 241-AW-03A pump pit and 241-AW-A valve pit throughout performance of this leak check.

5.4.3 IF permanently installed pit/structure leak detectors or drain seals on the direct route are inoperable, PERFORM the following:

5.4.3.1 ENSURE an approved alternate method of leak detection is installed and operable.

5.4.3.2 RECORD on Data Sheet 1 - Information Record Sheet.

5.4.3.3 RECORD on Data Sheet 4 - Alternate Leak Detection Monitoring.

5.4.4 MONITOR leak detectors/power supplies for this leak check from TFMCS station per TO-025-002 or at the field location for leak detectors per Operator Actions in Checklist 4 - Leak Detectors and Power Supplies “Active Leak Check”.

5.4.4.1 IF using alternate leak detection, MONITOR per the Operator Actions in Data Sheet 4 - Alternate Leak Detection Monitoring.

5.4.5 OBTAIN initial waste level in 241-AW-103.

5.4.6 RECORD tank levels in the Pre Leak Check column of Data Sheet 5 – Water Additions.

5.4.7 USE radio to make an announcement (e.g., “AW-03A leak check is about to begin”).

5.4.8 CONFIRM the following personnel received Leak Check start announcement:

- Transfer HPT
- TMACS Operator
- Camera Operator(s)
- Shift Manager(s)
- QAT
- Pipe Fitter.

5.4.9 ENSURE AP801-RW-FIT-001 water totalizer is reset. Refer to Attachment 1 - AP801-RW-FIT-001 Water Meter Totalizer Reset.

5.4.10 RECORD beginning raw water meter reading on Data Sheet 3 - Raw Water Tracking.
5.4 Perform Leak Check Operation (Cont.)

5.4.11 PERFORM the following valve lineup:

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<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
<th>Independent Verifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>APVP-WT-V-801</td>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tamper Seal #</td>
<td>I R L</td>
</tr>
</tbody>
</table>

Transfer OE Signature / ___________ / ___________ / ___________
Print (First & Last) Date

USE TO-020-610 for positioning valve and determining method.

5.4.12 PERFORM the following valve lineup:

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP801-RW-V-015</td>
<td>OPEN</td>
<td></td>
</tr>
</tbody>
</table>

5.4.13 CHECK reading on AP801-RW-PIT-004.

5.4.13.1 IF reading exceeds 105 psig, ADJUST AP801-RW-PCV-001 to between 95 psig and 105 psig.

5.4.13.2 RECORD AP801-RW-PIT-004 pressure reading.

5.4.14 CONFIRM liquid level increase of 0.05 inches in 241-AW-103 is observed at approximately 600 gallons of raw water being transferred (NTE 800 gallons)

OR

IF either of the following occur:

- liquid level increase of approximately 0.05 inches in 241-AW-103 is not observed
- greater than a drip-wise leak is observed in 241-AW-03A,

GO TO step 5.4.35.
5.4 Perform Leak Check Operation (Cont.)

5.4.15 REQUEST an operator continues to monitor total flow at AP801-RW-FIT-001 while raw water is flowing.

NOTE - Step 5.4.16 can be performed at any time during the performance of this section.

5.4.16 IF raw water exceeds 3,500 gallons, NOTIFY Transfer OE AND GO TO step 5.4.35.

5.4.17 RECORD current water meter reading from AP801-RW-FIT-001.

5.4.18 AFTER a minimum of an additional 300 gallons of raw water measured at AP801-RW-FIT-001 has flowed, PERFORM a leak test of PUMP DISCHARGE on jumper AW03A-WT-J[A-G-PUMP].

5.4.18.1 REQUEST (QAT/IQRPE) RECORD Leak Test observations as specified on Data Sheet 2 - 241-AW-03A and 241-AW-A Component Leak Check Observation.

5.4.19 RECORD flow rate from AP801-RW-FIT-001.

CAUTION
Valve AP801-RW-V-015 should be throttled slowly to prevent damage to the system.

5.4.20 Slowly THROTTLE valve AP801-RW-V-015 to obtain a flow rate less than or equal to 35 gpm as indicated on AP801-RW-FIT-001 without fully closing the valve (no flow).

5.4.20.1 RECORD flow rate from AP801-RW-FIT-001.
5.4 Perform Leak Check Operation (Cont.)

5.4.21 IF valve AP801-RW-V-015 was fully closed (no flow) during the previous step, PERFORM the following:

5.4.21.1 NOTIFY Waste Transfer Engineer to perform evaluation prior to continuing with leak test

OR

5.4.21.2 IF directed by the Transfer OE to perform drain, CLOSE APVP-WT-V-801 per TO-020-610 AND GO TO step 5.4.38.

NOTE - Valve AW03A-WT-V-603 should be positioned slowly. By positioning the valve slowly, the magnitude of a postulated flow transient will be reduced.

5.4.22 PERFORM the following valve lineup:

<table>
<thead>
<tr>
<th>241-AW TANK FARM</th>
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</thead>
<tbody>
<tr>
<td>Valve</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>AW03A-WT-V-603</td>
</tr>
</tbody>
</table>

USE TO-020-610 for positioning valves and determining method

5.4.23 RECORD 241-AW-103 tank level in the Post Pump Discharge Check column of Data Sheet 5 – Water Additions.

5.4.24 RECORD current water meter reading from AP801-RW-FIT-001.

5.4.25 FULLY OPEN AP801-RW-V-015.

5.4.26 CHECK reading on AP801-RW-PIT-004.

5.4.26.1 IF reading exceeds 105 psig, ADJUST AP801-RW-PCV-001 to between 95 psig and 105 psig.

5.4.26.2 RECORD AP801-RW-PIT-004 pressure reading.

[Blank]

[Blank] psig
5.4 Perform Leak Check Operation (Cont.)

5.4.27 **AFTER** a minimum of an additional 300 gallons of raw water measured at AP801-RW-FIT-001 has flowed, **PERFORM** a leak test of NOZZLE G on jumper AW03A-WT-J-[A-G-PUMP].

5.4.27.1 **REQUEST** (QAT/IQRPE) **RECORD** Leak Test observations as specified on Data Sheet 2 - 241-AW-03A and 241-AW-A Component Leak Check Observation.

5.4.28 **RECORD** flow rate from AP801-RW-FIT-001.

| gpm |

**CAUTION**

Valve AP801-RW-V-015 should be throttled slowly to prevent damage to the system.

5.4.28.1 Slowly **THROTTLE** valve AP801-RW-V-015 to obtain a flow rate less than or equal to 35 gpm as indicated on AP801-RW-FIT-001 without fully closing the valve (no flow).

AND

**RECORD** flow rate from AP801-RW-FIT-001.

| gpm |

5.4.28.2 **IF** valve AP801-RW-V-015 was fully closed (no flow) during the previous step, **PERFORM** the following:

5.4.28.3 **NOTIFY** Waste Transfer Engineer to perform evaluation prior to continuing with flush

OR

**IF** directed by the Transfer OE to perform drain, **CLOSE** APVP-WT-V-801 per TO-020-610 **AND**

GO TO step 5.4.38.
5.4 Perform Leak Check Operation (Cont.)

NOTE - Valve AW03A-WT-V-603 should be positioned slowly. By positioning the valve slowly, the magnitude of a postulated flow transient will be reduced.

5.4.29 PERFORM the following valve lineup:

```
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<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>AW03A-WT-V-603</td>
<td>BLOCK A</td>
<td></td>
</tr>
</tbody>
</table>
```

USE TO-020-610 for positioning valves and determining method

5.4.30 RECORD 241-AW-103 tank level in the Post Nozzle G Check column of Data Sheet 5 – Water Additions.

5.4.31 FULLY OPEN AP801-RW-V-015.

5.4.32 RECORD time AW03A-WT-V-603 was positioned.

5.4.33 WAIT a minimum of 15 minutes.

OR

IF any leak is observed GO TO step 5.4.35.
5.4 Perform Leak Check Operation (Cont.)

_____ 5.4.34 IF AP801-RW-FIT-001 indicates no flow, PERFORM the following:

_____ 5.4.34.1 PERFORM a leak test of the NOZZLE A on jumper AW03A-WT-J-[A-G-PUMP].

_____ 5.4.34.2 REQUEST (QAT/IQRPE) RECORD Leak Test observations as specified on Data Sheet 2 - 241-AW-03A and 241-AW-A Component Leak Check Observations.

_____ 5.4.34.3 PERFORM a leak test of the NOZZLE L14 on jumper AWVPA-WT-J-[L14-L15-F-(G)].

_____ 5.4.34.4 REQUEST (QAT) RECORD Leak Test observations as specified on Data Sheet 2 - 241-AW-03A and 241-AW-A Component Leak Check Observations.
5.4 Perform Leak Check Operation (Cont.)

_____ 5.4.35 IF AP801-RW-FIT-001 indicates flow, or a leak was observed, PERFORM the following:

_____ 5.4.35.1 RECORD flow rate from AP801-RW-FIT-001.

CAUTION
Valve AP801-RW-V-015 should be throttled slowly to prevent damage to the system.

_____ 5.4.35.2 Slowly THROTTLE valve AP801-RW-V-015 to obtain a flow rate less than or equal to 35 gpm as indicated on AP801-RW-FIT-001 without fully closing the valve (no flow).

_____ 5.4.35.3 RECORD flow rate from AP801-RW-FIT-001.

_____ 5.4.35.4 IF valve AP801-RW-V-015 was fully closed (no flow) during the previous step, PERFORM the following:

a. NOTIFY Waste Transfer Engineer.

b. CLOSE APVP-WT-V-801 per TO-020-610 AND GO TO section 5.5 - Drain Leak Check Route.
### 5.4 Perform Leak Check Operation (Cont.)

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>241-AP TANK FARM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AP801-RW-V-015</td>
<td>CLOSED</td>
<td></td>
</tr>
</tbody>
</table>

5.4.36 **ENSURE** the following valve lineup:

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>241-AP TANK FARM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>APVP-WT-V-801</td>
<td>CLOSED</td>
<td></td>
</tr>
</tbody>
</table>

5.4.37 **PERFORM** the following valve lineup:

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>241-AP TANK FARM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>APVP-WT-V-801</td>
<td>CLOSED</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Use TO-020-610 for positioning valve and determining method.

5.4.38 **RECORD** final raw water meter reading on Data Sheet 3 - Raw Water Tracking.

5.4.38.1 **RECORD** actual volume used on Data Sheet 3 - Raw Water Tracking.

5.4.39 **ENSURE** AP801-RW-FIT-001 water totalizer is reset refer to Attachment 1 - AP801-RW-FIT-001 Water Meter Totalizer Reset.

5.4.40 **USE** radio to make an announcement (e.g., “AW-03A leak test operations have ended.”)

5.4.41 **IF** any of the following conditions apply, **NOTIFY** Waste Transfer Engineer:

- Leak check cannot be completed
- Leak test water pressure was greater than 105 psig during valving operations under a flow condition.
5.5 Drain Leak Check Route

NOTE - NOTICE In Use tags can be removed during performance of this section per the Transfer OE.

5.5.1 IF leak check was shutdown for an out of specification condition RECORD the following on Data Sheet 1 - Information Record Sheet:

- Reason for shutdown
- Time and date of shutdown
- Out-of-specification condition(s) and actions taken.

NOTE - Leak detection monitoring is only required before and after draining activities.

5.5.2 MONITOR leak detectors/power supplies for this leak check from TFMCS station per TO-025-002 or at the field location for leak detectors per Operators Actions in Checklist 4 - Leak Detectors and Power Supplies “Draining Operations”.

5.5.2.1 IF using alternate leak detection, MONITOR per the Operator Actions in Data Sheet 4 - Alternate Leak Detection Monitoring.

5.5.2.2 IF leaks are detected, NOTIFY Transfer OE AND RECORD on Data Sheet 1 - Information Record Sheet.

5.5.3 PERFORM the following valve lineup in the order listed:

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>AW03A-WT-V-603</td>
<td>BLOCK TANK RETURN</td>
<td></td>
</tr>
<tr>
<td>AW02A-WT-V-101</td>
<td>BLOCK AW02A-WT-V-102</td>
<td></td>
</tr>
</tbody>
</table>

USE TO-020-610 for positioning valves and determining method.
5.5 Drain Leak Check Route (Cont.)

____ 5.5.4  WAIT a minimum of 10 minutes.

____ 5.5.5  PERFORM the following valve lineup in the order listed:

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2-Way Valve (OPEN or CLOSED)</td>
<td>Initials</td>
</tr>
<tr>
<td></td>
<td>3-Way Valve (BLOCK DIRECTION)</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-324</td>
<td>BLOCK AWVPA-WT-V-325</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-324</td>
<td>BLOCK AWVPA-WT-V-322</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-325</td>
<td>BLOCK AWVPA-WT-V-326</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-325</td>
<td>BLOCK BLANKED CONN</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-326</td>
<td>BLOCK AWVPA-WT-V-319</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-326</td>
<td>BLOCK AWVPA-WT-V-323</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-319</td>
<td>BLOCK AWVPA-WT-V-317</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-319</td>
<td>BLOCK AWVPA-WT-V-315</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-317</td>
<td>CLOSED</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-321</td>
<td>CLOSED</td>
<td></td>
</tr>
<tr>
<td>AW02A-WT-V-101</td>
<td>BLOCK 3” SN-267-M25 FROM AW-A VALVE PIT</td>
<td></td>
</tr>
</tbody>
</table>

USE TO-020-610 for positioning valves and determining method

____ 5.5.6  ENSURE the following valve lineup:

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Initials</td>
</tr>
<tr>
<td>AW03A-WT-V-602</td>
<td>DRAIN</td>
<td></td>
</tr>
</tbody>
</table>
**5.5 Drain Leak Check Route (Cont.)**

5.5.7 **PERFORM** the following valve lineup:

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
<th>Initials</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>APVP-WT-V-619</td>
<td>OPEN</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

USE TO-020-610 for positioning valves and determining method.

5.5.8 **WAIT** a minimum of 20 minutes and until liquid level in 241-AP-103 has stabilized.

5.5.9 **PERFORM** the following valve lineup:

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
<th>Initials</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>APVP-WT-V-802</td>
<td>CLOSED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APVP-WT-V-801</td>
<td>OPEN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APVP-WT-V-805</td>
<td>OPEN</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

USE TO-020-610 for positioning valves and determining method.

5.5.10 **ENSURE** APFP-RW-V-209 valve handle is engaged with valve extension.

5.5.11 **ENSURE** the following valve lineup:

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
<th>Initials</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>APFP-RW-V-209</td>
<td>OPEN</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Valve APFP-RW-V-209 is a two-way ball valve without stops. Valve is OPEN when handle is in-line with the pipe or pit cover schematic.

5.5.12 **VERIFY** APFP-RW-V-209 is in the open position, **IF** valve is not in the open position **RE-PERFORM** steps 5.5.10 through 5.5.12.
5.5 Drain Leak Check Route (Cont.)

5.5.13 **RECORD** time last valve was positioned.

5.5.14 **ALLOW** transfer route(s) to drain for at least 15 minutes to drain the line.

5.5.15 **PERFORM** the following valve lineup in the order listed:

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2-Way Valve (OPEN or CLOSED)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-Way Valve (BLOCK DIRECTION)</td>
<td></td>
</tr>
<tr>
<td>APVP-WT-V-801</td>
<td>CLOSED</td>
<td></td>
</tr>
<tr>
<td>APVP-WT-V-805</td>
<td>CLOSED</td>
<td></td>
</tr>
<tr>
<td>APVP-WT-V-613</td>
<td>CLOSED</td>
<td></td>
</tr>
<tr>
<td>APVP-WT-V-806</td>
<td>CLOSED</td>
<td></td>
</tr>
<tr>
<td>APVP-WT-V-615</td>
<td>CLOSED</td>
<td></td>
</tr>
</tbody>
</table>

**USE** TO-020-610 for positioning valve and determining method.

5.5.16 **RECORD** time the last valve was positioned

5.5.17 **MONITOR** leak detectors/power supplies after draining activities from TFMCS station per TO-025-002 or at the field location for leak detectors per Operator Actions in Checklist 4 - Leak Detectors and Power Supplies “Draining Operations”.

5.5.17.1 **IF** using alternate leak detection, **MONITOR** per the Operator Actions in Data Sheet 4 - Alternate Leak Detection Monitoring.

5.5.17.2 **IF** leaks are detected, **NOTIFY** Transfer OE AND **RECORD** on Data Sheet 1 - Information Record Sheet

5.5.18 **DISCONTINUE** monitoring of leak detectors/power supplies for this transfer.

5.5.19 **RECORD** tank levels in the Post Drain column of Data Sheet 5 – Water Additions.
5.6 Restoration

NOTE - Steps 5.6.1 through 5.6.11 may be performed concurrently or in any logical order.

- If performing step 5.6.3, steps 5.6.4 through 5.6.6 should be performed after hose is disconnected.

5.6.1 ENSURE post leak check valve lineup is completed as follows:

<table>
<thead>
<tr>
<th>Valve Identification</th>
<th>Valve Position</th>
<th>Operator Initials</th>
<th>Operator Date</th>
<th>Independent Verifier Initials</th>
<th>Independent Verifier Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>APFP-RW-V-133</td>
<td>CLOSED</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APFP-RW-V-207</td>
<td>CLOSED</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Transfer OE Signature / Print (First & Last) Date

5.6.2 IF AP Flush Pit hose will not be disconnected from APFP-RW-V-133 GO TO step 5.6.4.

5.6.3 CONFIRM if AP Flush Pit hose is disconnected from Valve APFP-RW-V-133

OR

IF AP Flush Pit hose is connected, DISCONNECT Flush Pit hose as follows:

5.6.3.1 PERFORM contamination and radiation survey of the work area during removal of sleeving and disconnecting of the flush hose.

5.6.3.2 DISCONNECT flush hose from valve APFP-RW-V-133 hose connection.

5.6.3.3 NOTIFY SM/OE flush hose is disconnected.
5.6 Restoration (Cont.)

NOTE - If performing step 5.6.3, steps 5.6.4 through 5.6.6 should be performed after hose is disconnected.

5.6.4 ENSURE APFP-RW-V-209 valve handle is engaged with valve extension.

5.6.5 ENSURE the following valve lineup is complete:

<table>
<thead>
<tr>
<th>Valve Identification</th>
<th>Valve Position</th>
<th>Operator</th>
<th>Independent Verifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>APFP-RW-V-209¹</td>
<td>CLOSED</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Transfer OE Signature / ___________________________ / __________
Print (First & Last) Date

¹ Valve APFP-RW-V-209 is a two-way ball valve without stops. Valve is CLOSED when handle is perpendicular to the pipe or pit cover schematic.

5.6.6 VERIFY APFP-RW-V-209 is in the closed position, IF valve is not in the closed position RE-PERFORM steps 5.6.4 through 5.6.6.

5.6.7 IF temporary lighting is no longer needed, TURN OFF AND NOTIFY Area Manager(s) that temporary lighting may be removed.

5.6.8 RELEASE reserved leak detector(s) and power supplies that are identified on Checklist 1 - Safety Basis and Environmental Checks per TO-025-002.

5.6.9 NOTIFY Central Shift Manager of the leak check results of the nozzles listed on Data Sheet 2 - 241-AW-03A and 241-AW-A Component Leak Check Observations to be incorporated into the ATB.

5.6.10 IF no longer required, REQUEST camera(s) be removed per TO-020-005.

5.6.11 ENSURE all NOTICE In Use tags that were installed during the performance of this procedure have been removed from the following.

- VALVE PIT 241-AP-VP
- PUMP PIT 241-AP-03A
- PUMP PIT 241 AP 05A
- CENTRAL PUMP PIT 241-AW-02A
- CENTRAL PUMP PIT 241-AW-03A
- 241-AW-A.
5.7 Perform Post Leak Check Activities

___ 5.7.1 **CONFIRM**
**Error! Reference source not found.** is completed by all personnel who initialed this procedure.

___ 5.7.2 **ENSURE** Engineering has completed Data Sheet 5 – Water Additions.

___ 5.7.3 Transfer OE **SCAN AND EMAIL** completed copies of following to “Process Engineering & Environmental” mailbox.

- Data Sheet 1 - Information Record Sheet
- Data Sheet 3 - Raw Water Tracking
- Data Sheet 5 – Water Additions.

___ 5.7.4 Transfer OE **ENSURE** “Inventory Update” is performed in Tank Addition eTool “TADD” for water additions using water volumes from Data Sheet 5 – Water Additions.

___ 5.7.5 **ENSURE** a work request or PER, per management direction, is submitted for any equipment or instrumentation that was unavailable or out of service during the transfer.
5.8 Records

The following records are generated during the performance of this procedure.

5.8.1 VERIFY the completed records for completion.

- This procedure in its entirety.
- Transfer OE turnover sheet(s) (A-6006-705).

FWS/OE/Shift Manager Signature / Print (First & Last) / Date

5.8.2 FWS/OE/Shift Manager SEND the completed records to the Central Shift Office for records Retention.

The record custodian identified in the Company Level Record Inventory and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.
Perform Leak Check of Components in 241-AW-03A

Attachment 1 - AP801-RW-FIT-001 Water Meter Totalizer Reset

On bottom of totalizer there are three sensors.
Pressing and holding the middle sensor for approximately 5 seconds will show the DISPLAY UNLOCK Screen.

On the DISPLAY UNLOCK Screen, the PUSH SW sequence to unlock the screen is:
Left, middle, left, middle and right.

The CNT sensor is used to go to the next screen.

Attachment 1 – Continued on Next Page
Perform Leak Check of Components in 241-AW-03A

Attachment 1 - AP801-RW-FIT-001 Water Meter Totalizer Reset (Cont.)

Pressing and holding the CLR sensor for approximately 3 seconds will prompt user to reset.

Pressing the OK sensor will reset the totalizer.

Pressing the ESC sensor returns the FIT-001 to the measurement mode.
### Checklist 1 - Safety Basis and Environmental Checks

<table>
<thead>
<tr>
<th>Instrument Identification</th>
<th>PMID</th>
<th>PMID Current (Transfer OE)</th>
<th>TFMCS Nomenclature</th>
<th>Alarm Point Operable at TFMCS</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Initials</td>
<td>Date</td>
<td></td>
<td>Initials</td>
</tr>
<tr>
<td>APFP-WT-LDE-701</td>
<td>ET-107817</td>
<td></td>
<td></td>
<td>KLD-FP</td>
<td></td>
</tr>
<tr>
<td>AP03A-WT-LDETA-207</td>
<td>ET-201178</td>
<td></td>
<td></td>
<td>AP03A-LD-207</td>
<td></td>
</tr>
<tr>
<td>AP03D-WT-LDETA-210</td>
<td>ET-201179</td>
<td></td>
<td></td>
<td>AP03D-LD-210</td>
<td></td>
</tr>
<tr>
<td>APVP-WT-LDETA-224</td>
<td>ET-201185</td>
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<td></td>
<td>APVP-LD-224</td>
<td></td>
</tr>
<tr>
<td>AW02A-WT-LDE-192A/B</td>
<td>ET-107792</td>
<td></td>
<td></td>
<td>AW02A-LD-192</td>
<td></td>
</tr>
<tr>
<td>AW03A-WT-LDE-193A/B</td>
<td>ET-107799</td>
<td></td>
<td></td>
<td>AW03A-LD-193</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-LDE-207A/B</td>
<td>ET-107786</td>
<td></td>
<td></td>
<td>AWA-LD-207</td>
<td></td>
</tr>
</tbody>
</table>

COMMENTS:

Checklist 1 Continued On Next Page
### Checklist 1 - Safety Basis and Environmental Checks (Cont.)

#### Tank Pit/Structure Power Supply

<table>
<thead>
<tr>
<th>TFMCS Nomenclature</th>
<th>PMID</th>
<th>Alarm Point Operable at TFMCS</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Initials</td>
</tr>
<tr>
<td>AP241-JAX-104</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AP241-JAX-204</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AP241-JAX-105</td>
<td>N/A</td>
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<td></td>
</tr>
<tr>
<td>AP241-JAX-205</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AW241-JAX-102</td>
<td>N/A</td>
<td>Y / N</td>
<td></td>
</tr>
<tr>
<td>AW241-JAX-202</td>
<td>N/A</td>
<td>Y / N</td>
<td></td>
</tr>
<tr>
<td>AW271-JAX-103</td>
<td>N/A</td>
<td>Y / N</td>
<td></td>
</tr>
<tr>
<td>AW271-JAX-203</td>
<td>N/A</td>
<td>Y / N</td>
<td></td>
</tr>
</tbody>
</table>

Transfer OE Signature / Print (First & Last) / Date

COMMENTS:

Checklist 1 Continued On Next Page
## Checklist 1 - Safety Basis and Environmental Checks (Cont.)

### Drain Seal Assemblies Checklist

<table>
<thead>
<tr>
<th>Location</th>
<th>Drain Seal Position*</th>
<th>Operator</th>
<th>Initials</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALVE PIT 241-AP-VP</td>
<td>CLOSED</td>
<td>YES</td>
<td>NO²</td>
<td></td>
</tr>
<tr>
<td>FDP-131 FLOOR DRAIN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PUMP PIT 241-AP-03A</td>
<td>CLOSED</td>
<td>YES</td>
<td>NO²</td>
<td></td>
</tr>
<tr>
<td>FLOOR DRAIN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRAIN PIT 241-AP-03D</td>
<td>CLOSED</td>
<td>YES</td>
<td>NO²</td>
<td></td>
</tr>
<tr>
<td>FLOOR DRAIN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CENTRAL PUMP PIT 241-AW-02A</td>
<td>CLOSED</td>
<td>YES</td>
<td>NO²</td>
<td></td>
</tr>
<tr>
<td>FLOOR DRAIN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CENTRAL PUMP PIT 241-AW-03A</td>
<td>CLOSED</td>
<td>YES</td>
<td>NO²</td>
<td></td>
</tr>
<tr>
<td>FLOOR DRAIN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>241-AW-A FLOOR DRAIN</td>
<td>INSERTED</td>
<td>YES</td>
<td>NO²</td>
<td></td>
</tr>
</tbody>
</table>

¹ IF Drain Seal Position is marked NO, alternate monitoring is required for the affected pit.

*The following criteria must be met to meet environmental requirements:

- Pit/structure drain seal must be in the “INSERTED” position
  
  OR
- Pit/structure drain seal must be in the “CLOSED” position.

  The following criteria must be met to confirm the drain seal is in the CLOSED position:

  - Handle in the upright position
  - Pin installed
  - Drain seal assembly will not move with slight upward pressure.
  
  OR
  - Wing nut is ensured to be tight/snug in the clockwise position
  - Drain seal assembly will not move with slight upward pressure.

---

COMMENTS:

Checklist 1 Continued On Next Page
Checklist 1 - Safety Basis and Environmental Checks (Cont.)

<table>
<thead>
<tr>
<th>Valve Description</th>
<th>Valve Position</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APVP-WT-V-402</td>
<td>DRAIN</td>
<td></td>
</tr>
<tr>
<td>AW02A-WT-V-401</td>
<td>D</td>
<td></td>
</tr>
</tbody>
</table>

Transfer OE Signature / Print (First & Last) / Date

COMMENTS:

Checklist 1 Continued On Next Page
Perform Leak Check of Components in 241-AW-03A

Checklist 1 - Safety Basis and Environmental Checks (Cont.)

<table>
<thead>
<tr>
<th>Instrument</th>
<th>PMID</th>
<th>Must Be Done By</th>
<th>PMID Current Transfer OE</th>
<th>Initials</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP801-RW-BFP-001</td>
<td>ET-201506</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AP801-RW-PIT-004</td>
<td>ET-201502</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COMMENTS:

Checklist 1 Continued On Next Page
## Checklist 1 - Safety Basis and Environmental Checks (Cont.)

<table>
<thead>
<tr>
<th>Waste Transfer Line Identification</th>
<th>PMID</th>
<th>Must Be Done By</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWVPA-WT-WTL-SN-263</td>
<td>ET-201999</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-WTL-SN-267</td>
<td>ET-201155</td>
<td></td>
</tr>
<tr>
<td>APVP-WT-WTL-SN-609</td>
<td>ET-201139</td>
<td></td>
</tr>
</tbody>
</table>

**COMMENTS:**

---

**Encasement Pressure Check**

**Sheet 6 of 6**

<table>
<thead>
<tr>
<th>PMID Current Transfer OE</th>
<th>Initials</th>
<th>Date</th>
</tr>
</thead>
</table>

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**Type** CONTINUOUS  
**Document No.** TO-232-003  
**Rev/Mod** A-1  
**Release Date** 11/15/2018  
**Page** 39 of 54
# Checklist 2 - Engineering Transfer Controls

**Engineer Documentation Checklist**

<table>
<thead>
<tr>
<th><strong>VERIFY</strong> transfer system components for this leak check are RCRA-compliant:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Pits identified in Checklist 1 - Safety Basis and Environmental Checks</td>
</tr>
<tr>
<td>- The following waste transfer lines:</td>
</tr>
<tr>
<td>- AWVPA-WT-WTL-SN-263</td>
</tr>
<tr>
<td>- AWVPA-WT-WTL-SN-267</td>
</tr>
<tr>
<td>- APVP-WT-WTL-SN-609</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Installed equipment used for this transfer is verified to meet ignition controls for the locations requiring ignition controls per RPP-TE-58334 or as identified in documentation for newer equipment required to meet flammable gas design criteria per TFC-ENG-STD-45. (AC 5.8.2, AC 5.9.2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes ❑</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>VERIFY</strong> waste leak path technical evaluation/screening has been completed (AC 5.7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document #</td>
</tr>
<tr>
<td>Complete ❑</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>VERIFY</strong> that ECN-713744 is field work complete and that any field modifications from the initial release do not affect the conclusions of the waste leak path and overpressure technical evaluations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete ❑</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>VERIFY</strong> Interfacing Water System Overpressure and flow Transient Protection evaluation has been completed and that any controls and recommendations from the evaluation are included in this operating procedure.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document #</td>
</tr>
<tr>
<td>Complete ❑</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Waste Transfer Engineer Signature</th>
<th>Print (First &amp; Last)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ / /</td>
<td></td>
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</tr>
</tbody>
</table>

**COMMENTS**
Perform Leak Check of Components in 241-AW-03A

Checklist 3 - Leak Check Valving

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
<th>Independent Verifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>AW03A-WT-V-603</td>
<td>BLOCK</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TANK RETURN</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tamper Seal #: I R L

Transfer OE Signature / Print (First & Last) / Date

USE TO-020-610 for positioning valve and determining method.

COMMENTS:

---

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
<th>Independent Verifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>AW03A-WT-V-602</td>
<td>TRANSFER</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Transfer OE Signature / Print (First & Last) / Date

COMMENTS:

---

Checklist 3 Continued On Next Page
## Checklist 3 - Leak Check Valving (Cont.)

### 241-AW TANK FARM

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
<th>Independent Verifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWVPA-WT-V-321</td>
<td>OPEN</td>
<td>I R L</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-322</td>
<td>CLOSED</td>
<td>I R L</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-324</td>
<td>BLOCK</td>
<td>I R L</td>
<td></td>
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<tr>
<td></td>
<td>AWVPA-WT-V-322</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-325</td>
<td>BLOCK</td>
<td>I R L</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BLANKED CONN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-326</td>
<td>BLOCK</td>
<td>I R L</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AWVPA-WT-V-323</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-323</td>
<td>CLOSED</td>
<td>I R L</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-319</td>
<td>BLOCK</td>
<td>I R L</td>
<td></td>
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<tr>
<td></td>
<td>AWVPA-WT-V-315</td>
<td></td>
<td></td>
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<tr>
<td>AWVPA-WT-V-315</td>
<td>CLOSED</td>
<td>I R L</td>
<td></td>
</tr>
<tr>
<td>AWVPA-WT-V-317</td>
<td>OPEN</td>
<td>I R L</td>
<td></td>
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<tr>
<td></td>
<td>Tamper Seal #</td>
<td>I R L</td>
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<td>Tamper Seal #</td>
<td>I R L</td>
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</tr>
</tbody>
</table>

**CONFIRM OPEN ROUTE (241-AW-A)**

FROM
3” SN-263
TO CTL PUMP PIT
241-AW-03A (A)
L14
TO
3” SN-267
TO CTL PUMP PIT
241-AW-02A (J)
L1

Transfer OE Signature / Print (First & Last) / Date

**USE TO-020-610 for positioning valve and determining method.**

**COMMENTS:**

Checklist 3 Continued On Next Page
### Checklist 3 - Leak Check Valving (Cont.)

#### 241-AW TANK FARM

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
<th>Independent Verifier</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Initials</td>
<td>Initials</td>
</tr>
<tr>
<td>AW02A-WT-V-101</td>
<td>BLOCK</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TO TANK L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AW02A-WT-V-102</td>
<td>BLOCK</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TO AW02A-WT-V-103</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AW02A-WT-V-103</td>
<td>BLOCK</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>3” SN-268-M25</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>FROM AW-B VALVE PIT H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AW02A-WT-V-104</td>
<td>BLOCK</td>
<td></td>
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<tr>
<td></td>
<td>3” SN-610-M25</td>
<td></td>
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<tr>
<td></td>
<td>FROM 241-AP VALVE PIT U</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>CONFIRM OPEN ROUTE (241-AW-02A)</strong></td>
<td></td>
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<tr>
<td></td>
<td><strong>FROM</strong></td>
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<tr>
<td></td>
<td>3” SN-609-M25</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>FROM 241-AP VALVE PIT V</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td><strong>TO</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3” SN-267-M25</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FROM AW-A VALVE PIT J</td>
<td></td>
<td></td>
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</table>

Tamper Seal #: I R L

Transfer OE Signature / Print (First & Last) / Date

**USE TO-020-610 for positioning valve and determining method.**

**COMMENTS:**

---

Checklist 3 Continued On Next Page
### Checklist 3 - Leak Check Valving (Cont.)

#### 241-AP TANK FARM

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
<th>Independent Verifier</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2-Way Valve (OPEN or CLOSED)</td>
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</tr>
<tr>
<td></td>
<td>3-Way Valve (BLOCK DIRECTION)</td>
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</tr>
<tr>
<td>APVP-WT-V-613</td>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>APVP-WT-V-603</td>
<td>BLOCK</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>APVP-WT-V-601</td>
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</tr>
<tr>
<td>APVP-WT-V-619</td>
<td>CLOSED</td>
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<tr>
<td>APVP-WT-V-801</td>
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</tr>
<tr>
<td>APVP-WT-V-802</td>
<td>OPEN</td>
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<tr>
<td>APVP-WT-V-803</td>
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<tr>
<td>APVP-WT-V-804</td>
<td>CLOSED</td>
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<tr>
<td>APVP-WT-V-805</td>
<td>CLOSED</td>
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<tr>
<td>APVP-WT-V-609</td>
<td>OPEN</td>
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<td></td>
</tr>
<tr>
<td>APVP-WT-V-806</td>
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</table>

**Tamper Seal #**

**I  R  L**

**Transfer OE Signature**

**Print (First & Last)**

**Date**

**USE TO-020-610 for positioning valve and determining method.**

**COMMENTS:**

---

Checklist 3 Continued On Next Page
**Perform Leak Check of Components in 241-AW-03A**

### Checklist 3 - Leak Check Valving (Cont.)

<table>
<thead>
<tr>
<th>241-AP TANK FARM</th>
<th>Sheet 5 of 6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
<th>Independent Verifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>APVP-WT-V-610</td>
<td>CLOSED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tamper Seal #</td>
<td>I R L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>APVP-WT-V-620</td>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tamper Seal #</td>
<td>I R L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>APVP-WT-V-606</td>
<td>BLOCK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tamper Seal #</td>
<td>I R L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>APVP-WT-V-608</td>
<td>BLOCK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tamper Seal #</td>
<td>I R L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>APVP-WT-V-607</td>
<td>BLOCK</td>
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<tr>
<td>Tamper Seal #</td>
<td>I R L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>APVP-WT-V-615</td>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tamper Seal #</td>
<td>I R L</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CONFIRM OPEN ROUTE (241-AP-VP)**

FROM
- APVP-WT-V-801
- TO
  - 3" SN-609
  - TO 241-AW-02A
  - PUMP PIT
  - 14

<table>
<thead>
<tr>
<th>Transfer OE Signature</th>
<th>Print (First &amp; Last)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>/</td>
<td>/</td>
<td></td>
</tr>
</tbody>
</table>

USE TO-020-610 for positioning valve and determining method.

**COMMENTS:**

---

Checklist 3 Continued On Next Page
### Checklist 3 - Leak Check Valving (Cont.)

#### 241-AP TANK FARM

<table>
<thead>
<tr>
<th>Credited for DVI</th>
<th>Valve</th>
<th>Desired Position</th>
<th>Operator</th>
<th>Independent Verifier</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AP05A-WT-V-105</td>
<td>BLOCK PUMP</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AP03A-WT-V-103</td>
<td>BLOCK TANK RETURN</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Operator**
  - Initials
  - Date
- **Independent Verifier**
  - Initials
  - Date

**Tamper Seal #**

**Transfer OE Signature**

**Print (First & Last)**

**Date**

USE TO-020-610 for positioning valve and determining method.

**COMMENTS:**
Operator Actions:

1. **Active Leak Check**
   - **CONTINUOUS** monitoring is required when the leak check is in operation for all leak detectors listed in the Active Leak Check rows and for all power supplies listed below.
   - **IF** transfer lines have not been drained and the leak check is not in operation, **MONITOR** all leak detectors listed in the Active Leak Check rows and all power supplies listed below at least once per 24 hours and **RECORD** results on Data Sheet 1 - Information Record Sheet.
   - **NOTIFY** Transfer OE if any leak detector, or power supply alarms.

2. **Draining Operations**:
   - **MONITOR** all leak detectors listed in the Draining Operations rows and all power supplies listed below before and after draining.
   - **NOTIFY** Transfer OE if any leak detector or power supply alarms.

<table>
<thead>
<tr>
<th>TANK/PIT/STRUCTURE LEAK DETECTOR</th>
<th>TFMCS NOMENCLATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active Leak Check</strong></td>
<td></td>
</tr>
<tr>
<td>AW03A-LD-193</td>
<td>AWA-LD-207</td>
</tr>
<tr>
<td>AW02A-LD-192</td>
<td>APVP-LD-224</td>
</tr>
<tr>
<td>KLD-FP</td>
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</tr>
<tr>
<td><strong>Draining Operations</strong></td>
<td></td>
</tr>
<tr>
<td>AW03A-LD-193</td>
<td>AWA-LD-207</td>
</tr>
<tr>
<td>AW02A-LD-192</td>
<td>APVP-LD-224</td>
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<tr>
<td>KLD-FP</td>
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<tr>
<td>AP03D-LD-210</td>
<td>AP03A-LD-207</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>TANK/PIT/STRUCTURE POWER SUPPLY</th>
<th>TFMCS NOMENCLATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AW Tank Farm</strong></td>
<td></td>
</tr>
<tr>
<td>AW241-JAX-102</td>
<td>AW241-JAX-202</td>
</tr>
<tr>
<td>AW271-JAX-103</td>
<td>AW271-JAX-203</td>
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<tr>
<td><strong>AP Tank Farm</strong></td>
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</tr>
<tr>
<td>AP241-JAX-104</td>
<td>AP241-JAX-204</td>
</tr>
<tr>
<td>AP241-JAX-105</td>
<td>AP241-JAX-205</td>
</tr>
</tbody>
</table>
Checklist 5 - Post-Activity Freeze Protection Evaluation

Transfer piping that potentially contains trapped liquid (e.g., RPP-TE-58214, insufficient draining, etc.) after this procedure is completed requires temperature monitoring during October through March. **NOTIFY** Shift Production Transfer Management Member if freeze protection action is required. **MARK** N/A if monitoring post-activity is NOT required.

<table>
<thead>
<tr>
<th>Waste Transfer Line(s)</th>
<th>Waste Transfer Structure(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Shift Production Transfer Management Member Notified?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>N/A</th>
</tr>
</thead>
</table>

**Member Name:**

_______________________________

**COMMENTS:**

__________________________________________________________________________

__________________________________________________________________________

Waste Transfer Engineer Signature / __________________________ / ____________

Print (First & Last) Date

________________________________________ / __________________________ / _________

Waste Transfer Engineer Checker Signature Print (First & Last) Date
## Data Sheet 1 - Information Record Sheet

The following shall be recorded:

- Procedure Directed
- Communication guidance to/from other orgs
- Alarm Activation/Response
- Configuration changes affecting transfer
- Equipment O/S
- Abnormal Events outside of the procedure.
- Environmental Issues
- PERs submitted

<table>
<thead>
<tr>
<th>Time/Date</th>
<th>Transfer Information Record Sheet</th>
<th>Initials</th>
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</thead>
<tbody>
<tr>
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</table>

Transfer OE Signature / Print (First & Last) / Date
## Data Sheet 2 - 241-AW-03A and 241-AW-A Component Leak Check Observations

<table>
<thead>
<tr>
<th>Components Tested</th>
<th>QAT Pass/Fail</th>
<th>IQRPE Pass/Fail</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOZZLE PUMP of Jumper AW03A-WT-J-[A-G-PUMP]</td>
<td>Pass □ Fail □</td>
<td>Pass □ Fail □</td>
<td></td>
</tr>
<tr>
<td>NOZZLE L14 of Jumper AWVPA-WT-J-[L14-L15-F-(G)]</td>
<td>Pass □ Fail □</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

QAT Signature: ___________________________ / ___________________________ / __________

IQRPE Signature: ___________________________ / ___________________________ / __________
### FLUSH VOLUMES

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME SECURED</th>
</tr>
</thead>
</table>

**TANK Farm RAW WATER IS USED:** 241-AW 103

**MAXIMUM RAW WATER VOLUME (GALLONS):** 3,500

**BEGINNING WATER METER READING**: 

**FINAL WATER METER READING**: 

**ACTUAL VOLUME USED:**

**Operator Initials:**

**Transfer OE Review Initials:**

---

**Signature** / **Print (First & Last)** / **Date**

**Transfer OE (Final Review)**

---

1 WATER METER ID (AP801-RW-FIT-001)

**COMMENTS:**
## Perform Leak Check of Components in 241-AW-03A

### Data Sheet 4 - Alternate Leak Detection Monitoring

Alternate leak detection monitoring is required if leak detector alarm(s) or pit/structure drain assemblies on the direct and physically connected transfer route is or becomes inoperable.

To ensure that any tank waste leak into pit/structure is identified, a camera will be required and pointed at the pit/structure drain to detect leaks into the pit/structure.

### Normal Operating Surveillance:
No evidence of tank waste liquid around the drain of applicable pit/structure per camera monitor. (DF 6.1.4)

Camera observations shall be monitored in order to detect leakage in the associated secondary containment pit/structure within 24 hours and prevent overflow from the secondary containment pits/structures to the environment. (RPP-16922)

### OPERATOR ACTIONS:
1. **PERFORM** the monitoring frequency per Checklist 4 - Leak Detectors and Power Supplies.
2. **IF** camera fails or becomes inoperable, (i.e., cannot perform intended function), **NOTIFY** Transfer OE immediately and attempt to regain camera operation.
3. **IF** unable to regain operation in a timely manner (≤ 60 minutes), **REQUEST** MBD Operator to shutdown leak check.
4. **IF** tank waste leak is observed, immediately **NOTIFY** MBD Operator and **REQUEST** a shutdown of the leak check.

* Data checks listed below are required to be completed once per 12 hour shift while performing monitoring.

<table>
<thead>
<tr>
<th>Pit/Structure Monitored</th>
<th>Date/Time</th>
<th>Date/Time</th>
<th>Date/Time</th>
<th>Date/Time</th>
<th>Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camera Operational (✓)</td>
<td></td>
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<tr>
<td>No leak in pit/structure (✓)</td>
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</tbody>
</table>

**Operator Initials**

Transfer OE Signature: ____________________________ / ____________________________ Date

**Comments:**
# Data Sheet 5 – Water Additions

## Tank Levels (inches)

<table>
<thead>
<tr>
<th>Tank</th>
<th>Pre Leak Check</th>
<th>Post Pump Discharge Check</th>
<th>Post Nozzle G Check</th>
<th>Post Drain</th>
<th>Operator Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>241-AW-103</td>
<td></td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>241-AW-102</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>241-AP-103</td>
<td>N/A</td>
<td>N/A</td>
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</tr>
</tbody>
</table>

Transfer OE Signature: ____________________________ / ____________________________ Date

## Water Addition (gallons)

<table>
<thead>
<tr>
<th>Tank</th>
<th>Below Waste</th>
<th>Above Waste</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>241-AW-103</td>
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<tr>
<td>241-AW-102</td>
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<td>241-AP-103</td>
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Waste Transfer Engineer Signature: ____________________________ / ____________________________ Date

**COMMENTS**

**Note 1:** For tank AW-103, the water added during the Pump Discharge Check will be below waste, the water added during the Nozzle G check will be above waste, and the water added during draining will be below waste.

**Note 2:** The water drained to AW-102 will be above waste.

**Note 3:** Approximately 40 gallons of the water drained to AP-103 will be above waste. The rest will be below waste.
Perform Leak Check of Components in 241-AW-03A

Signature Sheet 1 - Transfer Signature and Initials Identification Sheet

<table>
<thead>
<tr>
<th>SIGNATURE</th>
<th>NAME (Printed) (First &amp; Last)</th>
<th>INITIALS</th>
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