Functional Check of AEC-750 Flow Totalizing Digital Indicators

Tank Farm Maintenance Procedure

MAINTENANCE

USQ # GCX-2

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>
</tr>
</thead>
<tbody>
<tr>
<td>E-1</td>
<td>01/03/2019</td>
<td>Periodic Review</td>
<td>The Records Section has been updated.</td>
</tr>
<tr>
<td>E-0</td>
<td>03/30/2015</td>
<td>Safety Assessment</td>
<td>(Periodic Review) - Safety &amp; Health</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The hazards associated with this work has been evaluated and determined to fall</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>within the GHA.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Step 3.1.2 should be deleted since this work package most likely will not require</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>a JHA checklist in all situations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Records section was updated to remove CHAMPS.</td>
</tr>
<tr>
<td>D-1</td>
<td>01/08/2013</td>
<td>DOE Standard</td>
<td>Replaced references to document TFC-ESHQ-S-STD-03, Electrical Safety with DOE-0359,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hanford Site Electrical Safety Program.</td>
</tr>
<tr>
<td>D-0</td>
<td>12/30/2011</td>
<td>Periodic Review</td>
<td>Inconsequential changes only. Updated title of Site Form A-6004-101 (Step 3.1.2);</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>updated RadCon statement (Section 3.2) to the current statement for maintenance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>procedures.</td>
</tr>
</tbody>
</table>
1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides instructions to perform a functional check of AEC-750 Flow Totalizing Digital Indicators.

1.2 Scope

This procedure involves performing a functional check of AEC-750 Flow Totalizing Digital Indicators.

2.0 INFORMATION

NONE

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

3.1.1 Comply with DOE-0359, Hanford Site Electrical Safety Program when working with this procedure.

3.2 Radiation and Contamination Control

Work in radiological areas will be performed using a Radiological Work Permit following review by Radiological Control per ALARA work planning procedure TFC-ESHQ-RP_RWP-C-03.
4.0 PREREQUISITES

4.1 Special Tools, Equipment, and Supplies

The following supplies may be needed to perform this procedure:

- Calibrated Signal Generator
- Stopwatch.
5.0 PROCEDURE

5.1 Functional Check

NOTE - The functional check may be performed in place, or instrument may be returned to the shop for the functional check.
- Totalizing meter is used for indication only and does not require calibration.

5.1.1 RECORD indicator reading on Data Sheet.

5.1.2 DISCONNECT input leads as needed.

5.1.3 CONNECT appropriate test equipment to input into indicator.

5.1.4 APPLY input for duration indicated on Data Sheet AND RECORD indication on Data Sheet.

5.1.5 SUBTRACT readings AND RECORD value on Data Sheet.
5.2 Restoration

5.2.1 IF any problems were encountered with calibration, INFORM FWS.

5.2.2 ENSURE Test Equipment has been disconnected and removed.

5.2.3 ENSURE Test Equipment information and functional check status are recorded on Data Sheet.

5.2.4 ENSURE meter restoration by observing meter indication(s) consistent with expected conditions.

5.2.5 NOTIFY Operations that testing is complete and system may be returned to desired configuration.

5.3 Acceptance Criteria

Acceptance Criteria has been met when Steps in this procedure have been satisfactorily performed and As-Left values meet the specifications and tolerance(s) per the Data Sheet.

5.4 Review

5.4.1 INFORM FWS test is complete.

5.4.2 FWS REVIEW AND ENSURE the following:

- System Engineer is informed of test results if completed Data Sheet shows calculated value is outside of upper or lower limits.
- Comments sections are filled out appropriately.
- Work requests needed as a result of this procedure are identified and generated.
- Work request number(s) of any work documents generated as a result of this procedure are recorded in the Comments/Remarks section of the Data Sheet, as applicable.

5.5 Records

This procedure is performed within a work package, as such, the procedure in its entirety will be maintained as a record per the Work Control process.

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.
Figure 1 — Digital Indicator
Figure 2 — Pin Terminations

PIN TERMINATIONS

- Opened Pin
- Opened Pin
- Do Not Use
- 8's Test
- Built-in Battery
- Ground
- 5 Volts Output
- 12 Volts Output
- Reset
- Do Not Use (Opt. Add/Sub)
- Up Count
- Memory
- Ext. Battery Pos.
- AC Power
- AC Power

Install Battery Enable Jumper
Figure 3 – BCD Connections