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### CHANGE HISTORY (≤ LAST 5 REV-MODS)

<table>
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<tr>
<th>Rev-Mod</th>
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<tr>
<td>A-3</td>
<td>03/26/2018</td>
<td>Engineering Request</td>
<td>Addition of SDS 065467 to sub-section 4.2.</td>
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<td>A-2</td>
<td>06/26/2017</td>
<td>Maintenance Request</td>
<td>Changed Step 5.5.1 and Step 5.1.12 and Updated Record Section.</td>
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<td>A-1</td>
<td>07/20/2016</td>
<td>Correct Use Type</td>
<td>Change from continuous use to reference use per document owner’s direction.</td>
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<td>A-0</td>
<td>09/28/2015</td>
<td>Converting to WRPS Format</td>
<td>New Procedure – Supersedes ETF-PRO-MN-51405 (EL18020)</td>
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**Purpose and Scope**

ETF is a Hazard Category 3 Radiological Facility

USQ Not Required

**Tank Farm Maintenance Procedure**

**Effluent Treatment Facility**
1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides a safe, uniform method for calibration of Rosemount Solu Comp® Model SCL-C conductivity analyzers, tag numbers AIT-60G-104, 204, and 304.

1.2 Scope

This procedure provides instructions for calibrating the Rosemount Solu Comp Model SCL-C conductivity analyzer. Repair or replacement of the probe is allowed as needed during performance of this procedure (see Section 5.4).

2.0 INFORMATION

2.1 Terms and Definitions

• DI – De-ionized Water.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Radiation and Contamination Control

3.1.1 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.

3.2 Environmental Protection

3.2.1 In the event of a spill/leak/release, notify the SOM/FWS and respond per ETF-ERP-85B-003, Emergency Spill or Release at ETF.
4.0 PREREQUISITES

4.1 Special Tools, Equipment, and Supplies

NOTE - Measuring and Test Equipment used to collect acceptance criteria data during performance of this procedure shall meet the following requirements:

- Be within its current calibration cycle as evidenced by an affixed calibration label
- Be capable of desired range
- Accuracy is equal to or greater than M&TE tolerance specified on PM/S data sheet or is at least four times greater than specified device tolerance.

The following supplies may be needed to perform this procedure:

- Calibrated temperature reading device if doing cell temp calibration
- Calibrated portable conductivity analyzer capable of referencing at 25°C
- Standard solution with a known value near point of interest
- DI water.

4.2 Performance Documents

4.2.1 The following documents may be needed to perform this procedure:

- GHS-SDS and/or MSDS # 065467 for GLI, International’s Conductivity Solution, 200,000-300,000 µS/cm
5.0 PROCEDURE

Special Instructions

Repair or replacement of the probe (Section 5.4) is allowed during performance of this procedure.

Sections 5.1, 5.2, 5.3, and 5.4 of this procedure may be performed in any logical order, as required for maintenance or plant conditions.

5.1 As-Found Data Collection and Single Point Calibration

5.1.1 ISOLATE cell per PM/S datasheet and/or work instructions AND REMOVE from process, as needed.

5.1.2 RINSE cell in DI water.

NOTE - Standard solution may be a pre-mixed product or it may be mixed by combining DI water and buffer solution and then checked with M&TE to determine actual solution conductivity.

5.1.3 IF standard solution requires mixing, COMBINE DI water and buffer solution AND CHECK with M&TE to determine actual solution conductivity.

5.1.4 PLACE cell in container of standard solution with portable analyzer.

5.1.5 WAIT for cell to come to equilibrium.

5.1.6 RECORD value of standard solution as read on portable analyzer on PM/S data sheet.

5.1.7 RECORD as-found display value on PM/S data sheet.

5.1.8 IF as-found values are within tolerance per PM/S data sheet and no further adjustments are needed, GO TO Section 5.5, Restoration.

5.1.9 PRESS AND HOLD Calibrate key until display reads CAL.

5.1.10 TOGGLE Calibrate key until Cell 1, mS/cm (mS/cm), and CAL annunciators are illuminated.

5.1.11 PRESS ▲ or ▼ keys until display matches value of standard solution.
5.1 As-Found Data Collection and Single Point Calibration (Cont.)

5.1.12 PRESS Display key.

5.1.13 RECORD as-left display value on PM/S data sheet.

5.1.14 IF calibration is successful and no further adjustments are needed, GO TO Section 5.5.

5.2 Cell Temperature Calibration (Cell Removed)

NOTE - Section 5.2 is required for temperature calibration of a new cell.

5.2.1 ISOLATE cell per PM/S datasheet AND REMOVE from process.

5.2.2 RINSE cell in DI water.

5.2.3 PLACE cell and thermometer in container of DI water.

5.2.4 WAIT for cell and thermometer to reach equilibrium.

5.2.5 PRESS AND HOLD Calibrate key until display reads CAL.

5.2.6 TOGGLE Calibrate key until Cell 1, °C, and CAL annunciators are illuminated.

5.2.7 RECORD as-found display temperature on PM/S data sheet.

5.2.8 PRESS ▲ or ▼ keys until display matches thermometer.

5.2.9 PRESS Calibrate key.

5.2.10 RECORD as-left display temperature on PM/S data sheet.

5.2.11 REPEAT Section 5.1.
5.3 Cell Calibration Constant

NOTE - Section 5.3 is required when a cell is replaced.

5.3.1 OBTAINT cell constant from tag on cell or data sheet.

5.3.2 PRESS AND HOLD Calibrate key until display reads CAL.

5.3.3 TOGGLE Calibrate key until Cell 1, CONST, and CAL annunciators are illuminated.

5.3.4 ENSURE cell constant matches tag from cell.

5.3.5 IF cell constant matches, GO TO Section 5.4.

5.3.6 PRESS ▲ OR ▼ keys until display matches cell constant.

5.3.7 PRESS Calibrate key.

5.3.8 REPEAT Section 5.1.

5.4 Probe Replacement

NOTE - Section 5.4 is performed to repair or replace probes during performance of this procedure.

5.4.1 REPLACE probe using like-for-like materials.

5.4.2 PERFORM Steps 5.2.1 through 5.2.10.

5.4.3 PERFORM Steps 5.3.1 through 5.3.7.

5.4.4 REPEAT Section 5.1.

5.5 Restoration

5.5.1 RESTORE to as-found conditions.

5.5.2 ENSURE alarms are reset or cleared.

5.5.3 INFORM SOM test is complete and instrument/equipment/system may be returned to service.
5.6 **Acceptance Criteria**

Acceptance criteria has been met when steps in this procedure have been satisfactorily performed and results are recorded on the data sheet(s).

5.7 **Review**

5.7.1 **INFORM** FWS test is complete.

5.7.2 **(FWS) REVIEW AND ENSURE** the following:
- Completed data sheets meet the acceptance criteria
- 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.

5.8 **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 Records Inventory and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.