HY-CAL Model CT-829-A Humidity Transmitter

Tank Farm Maintenance Procedure

Effluent Treatment Facility

USQ Not Required – ETF is a <Hazard Category 3 Radiological Facility

<table>
<thead>
<tr>
<th>Rev-Mod</th>
<th>Release Date</th>
<th>Justification</th>
<th>Summary of Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-2</td>
<td>09/12/2018</td>
<td>Comply with writers standard.</td>
<td>Updated the procedures record section.</td>
</tr>
<tr>
<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>
</tr>
<tr>
<td>A-0</td>
<td>10/15/2015</td>
<td>Converting to WRPS Format</td>
<td>New procedure – Supersedes ETF-PRO-MN-52161 (EL18017)</td>
</tr>
</tbody>
</table>

Table of Contents

1.0 INTRODUCTION ................................................................................................................................. 2
  1.1 Purpose........................................................................................................................................... 2
  1.2 Scope............................................................................................................................................... 2

2.0 INFORMATION........................................................................................................................................ 2
  2.1 Terms and Definitions...................................................................................................................... 2

3.0 PRECAUTIONS AND LIMITATIONS................................................................................................... 2
  3.1 Equipment Safety............................................................................................................................ 2
  3.2 Radiation and Contamination Control............................................................................................ 2
  3.3 Environmental Protection.............................................................................................................. 2

4.0 PREREQUISITES.................................................................................................................................. 3
  4.1 Special Tools, Equipment, and Supplies......................................................................................... 3

5.0 PROCEDURE......................................................................................................................................... 4
  5.1 Calibration Check............................................................................................................................. 4
  5.2 Calibration....................................................................................................................................... 5
  5.3 Restoration...................................................................................................................................... 5
  5.4 Acceptance Criteria.......................................................................................................................... 5
  5.5 Review............................................................................................................................................. 6
  5.6 Records.......................................................................................................................................... 6

Figure 1 – Adjustment Locations............................................................................................................. 7
1.0 INTRODUCTION

1.1 Purpose

This procedure provides a safe, uniform method for calibration of HY-CAL model CT-829-A humidity transmitter.

1.2 Scope

This procedure provides instructions for calibrating the HY-CAL model CT-829-A humidity transmitter.

2.0 INFORMATION

2.1 Terms and Definitions
- RH - Relative Humidity.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Equipment Safety

3.1.1 To compare calibration of the CT-829-A to another RH instrument in the field, both sensors should be within two to three inches of each other with a fan blowing on both sensors for at least ten minutes. This will equalize the temperature and moisture content of both sensors.

3.1.2 Hand touching the instruments during equalization could disturb conditions as skin emits moisture and has a temperature near 100 F.

3.2 Radiation and Contamination Control

3.2.1 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.

3.3 Environmental Protection

3.3.1 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 portable humidity indicator
- Other tools, equipment and supplies identified by Shift Manager/OE/FWS/ User.
HY-CAL Model CT-829-A Humidity Transmitter

5.0 PROCEDURE

5.1 Calibration Check

5.1.1 PLACE portable RH instrument next to instrument under test.

5.1.2 ALLOW portable instrument reading to stabilize AND

RECORD indication on PM/S data sheet.

5.1.3 CALL UP current humidity indication from MCS AND

RECORD as-found reading on PM/S data sheet.

5.1.4 PERFORM calculation to determine tolerances AND

RECORD tolerances on PM/S data sheet.

5.1.5 IF as-found values are not within specified tolerance per data sheet, GO TO Section 5.2,

OR

IF as-found values are within specified tolerance, but deemed marginal, and optimization is desired, GO TO Section 5.2,

OR

IF as-found reading is within tolerance, and no adjustments are required, RECORD as-found reading in as-left portion of PM/S data sheet AND

GO TO Section 5.3.
5.2 Calibration

NOTE - The MCS computer shows the RH display.

- To adjust the calibrations of CT-829-A, only the Zero potentiometer need be adjusted. The Span control should not be adjusted.

- Figure 1 depicts the Zero potentiometer location.

5.2.1 ADJUST ZERO potentiometer to bring MCS computer RH reading into agreement with portable RH instrument reading.

5.2.2 IF reading is within tolerance, RECORD as-left values in as-left section of PM/S data sheet AND

GO TO Section 5.3.

5.2.3 IF reading cannot be adjusted within tolerance, NOTIFY FWS for need of repair AND

EXIT procedure.

5.3 Restoration

5.3.1 RESTORE to as-found conditions.

5.3.2 INFORM SOM test is complete and instrument/equipment/system may be returned to service.

5.4 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).
5.5 Review

5.5.1 INFORM FWS test is complete.

5.5.2 (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.

5.6 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.
Figure 1 – Adjustment Locations

4-20 mA TERMINAL

SPAN

ZERO

SHOWN WITH COVER REMOVED