Sensotec Model GM Signal Conditioner - Indicator Calibration

Tank Farm Maintenance Procedure

MAINTENANCE

USQ # Routine Maintenance

<table>
<thead>
<tr>
<th>CHANGE HISTORY (≤ LAST 5 REV-MODS)</th>
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<tbody>
<tr>
<td>Rev-Mod</td>
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<tr>
<td>---------</td>
</tr>
<tr>
<td>E-0</td>
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<tr>
<td>D-1</td>
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<td>D-0</td>
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<td>C-2</td>
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1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides instructions for calibration of Sensotec Model GM Signal Condition - Indicator.

1.2 Scope

This procedure is applicable to all Sensotec Model GM Signal Condition - Indicators used in tank farms.

2.0 INFORMATION

NONE

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

3.1.1 Comply with DOE-0336, Hanford Site Lockout/Tagout procedure requirements.

3.2 Radiation and Contamination Control

Work in radiological areas will be performed using a radiation work permit following review by Radiological Control per the ALARA procedure TFC-ESHQ-RP_RWP-C-03.

4.0 PREREQUISITES

4.1 Special Tools, Equipment and Supplies

The following equipment or supplies may be needed to perform this procedure:

- Calibrated pressure source
- Other tools, equipment and supplies as identified by Shift Manager/OE/FWS/User.

4.2 Field Preparation

4.2.1 CONFIRM with operations that system has been configured to allow calibration.
5.0 PROCEDURE

NOTE - If performance of any steps in this procedure is not required for procedure completion, steps not performed shall be indicated as such by entering "N/A" in appropriate Data Sheet sign-off space and explained in COMMENTS/REMARKS section of Data Sheet.

5.1 Calibrate Signal Conditioner – NO Oil Specified on Data Sheet

5.1.1 IF oil is specified on data sheet, GO TO Section 5.2.

5.1.2 IF changing plant conditions affect work or delays in work extend past end of shift, CONTACT FWS for additional instructions.

5.1.3 CLOSE block valve.

5.1.4 IF pressure transducer is installed with “Red Valve” isolating diaphragm AND

IF Oil is not specified on Data Sheet, DO NOT separate transducer from isolating diaphragm during calibration.

5.1.5 CONNECT test equipment to test connection(s),

OR

REMOVE transducer and isolating diaphragm as unit (together) AND CONNECT test equipment to transducer.

5.1.6 OPEN test valve.

5.1.7 APPLY input values per Data Sheet AND

RECORD display values in As-Found section of Data Sheet.

5.1.8 IF display readings are within tolerance per Data Sheet AND

IF no additional optimization is desired, PERFORM the following:

5.1.8.1 RECORD in As-Left section of Data Sheet

5.1.8.2 GO TO Section 5.3, Restoration.
5.1 Calibrate Signal Conditioner – NO Oil Specified on Data Sheet (Cont.)

5.1.9 IF As-Found display values are not within tolerance per Data Sheet, or optimization is desired, **PERFORM** the following:

5.1.9.1 **APPLY** minimum value per Data Sheet AND **ADJUST** Coarse/Fine ZERO to achieve value specified on Data Sheet.

5.1.9.2 **APPLY** full scale pressure per Data Sheet AND **ADJUST** Coarse/Fine SPAN to value specified on Data Sheet.

5.1.9.3 **REPEAT** Steps 5.1.9.1 through 5.1.9.2.

5.1.9.4 **INPUT** signal per Data Sheet **AND** **RECORD** display values in As-Left section of Data Sheet.
5.2 Calibrate Signal Conditioner – Oil Specified on Data Sheet

5.2.1 CLOSE block valve.

5.2.2 ENSURE oil level is above valve.

5.2.3 CONNECT test equipment to test connection,

OR

REMOVE transducer and isolating diaphragm as unit (together) AND CONNECT test equipment to transducer.

5.2.4 OPEN test valve.

5.2.5 APPLY input values per Data Sheet AND RECORD display values in As-Found section of Data Sheet.

5.2.6 IF display values are within tolerance per Data Sheet AND IF no additional optimization is desired, PERFORM the following:

5.2.6.1 RECORD in As-Left section of Data Sheet

5.2.6.2 GO TO Section 5.3, Restoration.

5.2.7 IF As-Found display values are not within tolerance per Data Sheet, or optimization is desired, PERFORM the following:

5.2.7.1 APPLY minimum value per Data Sheet AND ADJUST Coarse/Fine ZERO to achieve value specified on Data Sheet.

5.2.7.2 APPLY full scale pressure per the Data Sheet AND ADJUST Coarse/Fine SPAN to value specified on Data Sheet.

5.2.7.3 REPEAT Steps 5.2.7.1 through 5.2.7.2.

5.2.7.4 INPUT signal per Data Sheet AND RECORD display values in As-Left section of Data Sheet.
5.3 Restoration

5.3.1 DISCONNECT AND REMOVE test equipment.

NOTE - Correct oil is specified on Data Sheet.

5.3.2 ENSURE oil level is above valve,

OR

IF transducer was removed for calibration, REINSTALL.

5.3.3 REPLACE cap on test connection.

5.3.4 CLOSE test valve.

5.3.5 OPEN block valve.

5.3.6 RECORD in COMMENTS/REMARKS section of Data Sheet and Work Request number(s) of any work documents generated as a result of this activity.

5.4 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.

5.5 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

The performance of this procedure generates no records. However, PM Data Sheets associated with the procedure, are records and are maintained in the work package as record material.

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.