**PROCEDURE:** DRY FLOW METERS TROUBLESHOOT

**RISK RANKING:** LOW

**HAZARD ASSESSMENT:**

<table>
<thead>
<tr>
<th>HAZARD</th>
<th>POTENTIAL EFFECT</th>
<th>CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Flammable vapors / LEL</td>
<td>1. Vapors may ignite causing flash fire.</td>
<td>1. Monitor to be used to detect LEL. Fixed fire and LEL detection may be in place to initiate ESD. SABA/SCBA may have to be used.</td>
</tr>
<tr>
<td>2. H2S.</td>
<td>2. Exposure above OEL may cause serious personal injury, at higher concentrations; exposure will cause breathing to stop.</td>
<td>2. Monitor to be used to detect H2S. Fixed H2S detection in place to initiate ESD.</td>
</tr>
<tr>
<td>3. Pressure</td>
<td>3. May cause mechanical equipment to operate - possibly discharge carrier plate.</td>
<td>3. Assurance to be made by operator that all pressure indicators read “0” before opening up carrier bar. May have to insert grease to obtain seal.</td>
</tr>
</tbody>
</table>

**SAFETY EQUIPMENT:**
Safety Glasses with side shields, hard hat, steel toe boots, FR Clothing and personal gas monitor.

**PROCEDURES:**

**Symptom:** Low or no indication – no readings.
**Possible Cause:** Loose linkage or movement.
**Action:** Repair or replace as required.

**Possible Cause:** Out of calibration.
**Action:** Have calibrated.

**Possible Cause:** Corroded or dry mechanism.
**Action:** Clean or Replace.

Procedure: DRY FLOW METERS TROUBLESHOOT

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Date of Preparation: November 4, 2004
Date of Revision: November 4, 2004
Date of Last Review: February 15, 2010
PROCEDURE: DRY FLOW METERS TROUBLESHOOT

Possible Cause: Loose pen arm.
Action: Tighten pen arm screw.

Possible Cause: Orifice plate over-sized.
Action: Re-size orifice plate.

Possible Cause: Blocked or frozen sensing lines.
Action: Clear or thaw out lines as appropriate.

Symptom: High indication.
Possible Cause: Loose linkage or movement.
Action: Repair or replace as required.

Possible Cause: Out of calibration.
Action: Have calibrated.

Possible Cause: Orifice plate undersized.
Action: Re-size orifice plate.

Symptom: Erratic indication.
Possible Cause: Dirty or dragging linkage.
Action: Clean or adjust as required.

Possible Cause: Excessive pen to chart pressure.
Action: Adjust pen pressure.

Possible Cause: Orifice plate under-sized.
Action: Re-size orifice plate.

Possible Cause: Blocked or frozen sensing lines.
Action: Clear or thaw out lines as appropriate.

Possible Cause: Excessive liquids in gas stream.
Action: Reduce flow (if an option) or have drip pots installed.