Direct Measurement Issues in a Mandatory Reporting Environment

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Direct Measurement Topics

- Measurement Tools
- Company Data Collection
- Contractor Data Collection
- Data Collection Conclusions
<table>
<thead>
<tr>
<th>Tools</th>
<th>Vented</th>
<th>Non-Vented</th>
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<tbody>
<tr>
<td>Hi-Flow</td>
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<td>Vent Bag</td>
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<td>Insertion Meter</td>
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<td>Orifice Plate</td>
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<td>Turbine Meter</td>
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<td>Hot Wire</td>
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Company Data Collection

Conducting fugitive measurements in a mandatory reporting environment with company personnel

- Safety – new tasks for company employees
- Communication – develop and communicate internal data collection policies
- Using Portable Tools – bench test using typical process gas versus air and convert
- Using Insertion/Turbine Meters – take care if reducing vent pipe
- Meter Span Accuracy – be mindful of span of measuring device
- Data Collection System – interactive system for readings
Contractor Data Collection

Conducting fugitive measurements in a mandatory reporting environment utilizing contractors

- Safety – ensure proper safety policies are in place
- Must have a good working knowledge of site specific equipment and operation
- Must be able to trace pipe
  - Example – same measuring point for main engine fuel and block and bleed valve. (Depends on mode)
- Ensure technicians have been properly trained and contractor has internal training in place
- Ensure tool testing and calibration policies are in place
- Data System Collection System access
Did I mention SAFETY

Data collection process must be managed
Including follow up measurements
  → Process should include post reading handling after a repair

Accurate Data is NOW a Must!
  → Readings could reflect our industry

$ impact is now on the table. Thorough QA/QC is paramount!