Hg System Testing Status

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MERIT VRVS Meeting
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Ti Nozzle Installed

- Length issue corrected
  - New weld at Z=0
  - Introduced slight angle change in pipe
- Modified assembly x-rayed and pressure tested
- Nozzle length unchanged at this point
Vibration Testing Initiated

- Accelerometer placed upstream of nozzle
- Oriented for vertical measurements
- Observing effects of different velocity profiles
20 m/s Water Data

Accel-SS-Decel

- 4-4-1
- 3-4-2
- 2-5-2
- 6-2-2
- 6-2-2 force down
- 6-2-2 less force
- 6-2-2 restrain
- 6-2-2 restrain 2
- 6-2-2 w/sleeve
- 5-3-1 w/sleeve
- 4-4-2 w/sleeve
- 3-4-2 w/sleeve
- 2-5-2 w/sleeve
Observations

- Ramp-up time can affect amplitude of vibration
- Suggests less vibration issues if beam pulse occurs later on the steady-state portion of jet profile
- Comparison of diagnostic images to vibration data not yet completed
- Water vibration data is interesting for reference, but may not correlate with Hg data
Next Steps

• Observe effects of shortening nozzle tip
  – Current nozzle tip length ~70mm
  – Design length ~5mm

• Switch to Hg
  – Drain water, clean viewports, dry primary containment
  – Reassemble primary & pressure test
  – Close secondary containment and leak check