

## Catts, Michelle

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**From:** Chan, Tat  
**Sent:** Wednesday, May 11, 2011 4:18 PM  
**To:** Catts, Michelle  
**Cc:** Burroni, Richard J; Orlando, Thomas; McCaffrey, Thomas S; Gioggia, Richard; Peters, James G; Wilson, Daniel; Dewey, Donald J; dl - IP2 Ops Shift Managers; Pineda, Juan J; Manzione, Stephen J; Tesoriero, Michael V  
**Subject:** Unit Hydrogen Recombiner Update

Michelle,

### Update on the Unit 2 Passive Hydrogen Recombiner (PHR):

- RTDs and Flow Meter associated with the PHR Test Box was checked IAW with the guidance in the Technical Manual. The RTDs was in the range of 99.8 ohms at 0°C / 32°F. This represented less than 0.5°C from nominal and is consistent amount the reference RTD and the 4 measured RTDs. As for the flow meter, it was noted to be approximately 1300 l/h when compared to a calibrated digital flow meter at 1500 l/h. As such, the digital flow meter was used to supplement the test box.
- A spare plate was tested to be satisfactory (i.e. greater than 19°C temperature rise within 2 hours)
- A plate was selected from the 21 PHR and swapped with the tested plate on 5/9.
- The removed plate from the 21 PHR was tested per procedure 2-CY-3610. However, during testing, it was noted that the installed RTDs were reading lower than the supplemental calibrated contact surface pyrometer. Based on the calibrated contact surface pyrometer, the temperature rise was noted to be greater than 21°C in 1 ½ hour. The plate was deemed acceptable and was used in exchange with a plate from the 22 PHR. The deviation appeared to be the result of instrument contact with the test plate.
- The removed plate from the 22 PHR was tested per procedure 2-CY-3610 with expected temperature rise. Based on this, the plate from the 22 PHR was deemed acceptable.

### Work to be performed:

- Based on information presented, a FUNCTIONAL ASSESSMENT of the PHR will be performed to affirm that the PHRs are functional. This is currently scheduled for completion on 5/12/2011.
- The tested plate from the 22 PHR will be put back into the 22 PHR and the plate that was previously from the 21 PHR will be removed for further evaluation.
- As for the potential of instrument contact with the test plate, minor adjustment was performed on the test box RTDs to insure proper contact.
- The removed 21 PHR plate will be retained and tested when calibration gas is available in about 3 weeks.
- Once the 21 PHR plate is confirmed, it will be re-installed into the 21 PHR at that time.

Future actions would have to address the periodic functional check of the PHRs including the test box consistent with the UFSAR. Please let me know if I can be of further assistance.

Tat