Weekly Reporting

WBS 1.01.07 JLAB Management

Week of July 13-19, 2017

**Issues:**

**Accomplishments this week:**

Participated in the CP Installation FDR and began the process of closing out recommendations.

CP CAM visiting Air Liquide to witness cold compressor housing pressure testing and 4.5K cold box turbine run tests.

Continued planning efforts regarding CM testing in LERF.

Preparing 4.5K CB Mods BCR and 2+2 CMs BCR.

**Upcoming Activities:**

SRF 2017 in China July 17-21, 2017

CP Controls Review August 30, 2017

FAC at SLAC September 2017

Weekly Reporting

WBS 1.04.06 JLAB Cryomodules

Week of July 13-19, 2017

**Issues**: Expect delays in cavity shipments due to lack of availability of PICs.

**Accomplishments this week:**

Continuing to develop BCR schedule and cost for four additional (2+2) cryomodules.

LERF CM testing proposal – Discussed plan with Project Director and CS SM. Met with the head of Accelerator Ops to integrate LCLS-II testing into the FY18/19 tentative CEBAF operations plans. Revised estimate to include operations plans and eliminate Phase I low power testing.

Implementing plan to ship JLab pCM to FNAL for fast cooldown testing.

Investigating ways to increase cooldown rate in CMTF (plumbing, plant ops). Met with Cryo Group at JLab to review proposed options. Have identified a method to bypass some of the piping to increase overall flow rate. Planning to build u-tubes and test method on CM03.

Cavity Status

Updated shipping status from both vendors was provided.

pCM Status

Module is being prepared for shipment to FNAL.

Production Status

CM-02 (currently at CMTF):

Cooldown was delayed due to several problems – one with the CTF shield circuit and one with CTF primary supply. Both problems have been fixed. Preparing for u-tube installation and cooldown on Thursday evening (7/20).

CM-03 (currently at WS5):

Leak check two more warm couplers. High pressure test completed. Reverse plumbing weld in progress.

CM-04 (currently at WS3):

Alignment complete. VV degaussed and moved to WS4. Tuner installation in progress.

CM-05 (currently at WS3)

Two-phase pipe welding in progress.

CM-06 (currently at WS2)

Installed Berry bolts. Performed alignment check.

CM-07

Cavity qualification testing in progress with three cavities qualified for string and one marginal cavity. Target date for string assembly is 7-August.

Cavity 090 (NX-A) qualified with Q(16)= 2.8 e10. Admin limited at 24 MV/m no FE.

Cavity 264 (Zanon Restart), previously FE limited, subsequently rinsed qualified with Q(16)= 3.4 e10. Admin limited at 24 MV/m, no FE.

Cavity 209, previously FE limited, subsequently rinsed, did not qualify with Q(16)= 2e10; Quench limited 17.8 MV/m, no FE.

Vertical test planning

Cavities 260, 26 and 268 were cooled down in D5. Testing began yesterday and will complete on 19 July.

Cavity 244 (bare Zanon rework) tests Wed, 19 July.

**QUALITY**

Conducted a QA audit at RI on June 29 & 30 and Zanon on July 3 & 4. The visit went well. Draft internal reports are being reviewed.

Reviewing the updated information from SLAC on the new process for Equipment Transfer Verification.

**Upcoming Travel:**

E. Zanon Vendor Oversight July 17-21 (K. Wilson)

SRF 2017 Lanzhou, China July 17-22 (A. Palczewski, C. Reece, N. Huque, L. Zhao, V. Bookwalter, G. Cheng)

WXCX Vendor Visit July 24-28 (Cheng, Fischer)

E. Zanon Vendor Oversight September 2017 (C. Reece)

E. Zanon Vendor Oversight October 2017 (H. Park)

Weekly Reporting

WBS 1.04.08 JLAB Cryoplant System

Week of July 13-19, 2017

**Issues:**

**Accomplishments this week:**

CP1 lower cold box shell is ready split pending internal structural frame fabrication completion next week. CP1 upper cold box LN2 heat exchanger is being mounted onto the internal frame. 80K absorber vessels are in the process of pressure testing and MLI wrapping for installation into the upper cold box.

A cryoplant installation design FDR was held at Jefferson Lab on July 13-14th. Recommendations and final plans for readiness to release for RFP are underway for the end of the month of July.

SLAC BIO has approved the design of the GHe storage and oil removal vessels. Footings for the GHe storage tanks can now be scheduled.

Meeting continued with the cold box vendor and subcontractor to pull back the schedule slip of the 4.5K cold box.

**QUALITY**

Participated in the LCLSII CryoPlant Installation FDR at JLab on July 13 & 14.

**Upcoming Travel/Reviews:**

Vendor Visit to Air Liquide Sassenage, France July 17-21 (D. Arenius & T. Peshehonoff) to witness cold compressor housing pressure testing and 4.5K cold box turbine run tests.

CP Controls Specification Review August 30, 2017

Weekly Reporting

WBS 1.02.03.05.12 LLRF

Week of July 13-19, 2017

**Issues:** None

**Accomplishments this week at JLab:**

* LLRF Coordination/Documentation:
  + Heater: Working on software and finishing up chassis assembly.
  + LLRF Production Estimate: After discussing this with Joe Preble and Matt Boyes we will be pursuing only the JLAB designed chassis (Resonance, Interlocks and power supply) and not the full LLRF production. The plan will be presented to JLAB leadership in the coming weeks.
  + BCS: Trent and John are working on the system conceptual design.
* Resonance/Stepper Motor Board/Chassis:
  + Rama is working on chassis test procedure and test bench with RF technician.
* Interlock Board/Chassis:
  + No activity.
* Common Power Supply/Chassis/Boards:
  + Dave is researching the possibility of bumping up the current and voltage of the 6 volt power supply.
  + Sending out 5 more PS filter boards to SLAC next week.
* CMTF
  + PRC/RFS: The two computers and monitors for LLRF tests in the CMTF have been installed to support LCLSII LLRF tests. Rack for these chassis should be installed by the end of the week.
  + PRC/RFS Coupler and cable plan is waiting on Larry King for final decision. Note: this has been languishing for over almost two months and is holding up LCLSII LLRF testing on JLAB CMs.

**Upcoming Activities:**

* LLRF FDR July 27