Weekly Reporting

WBS 1.01.07 JLAB Management

Week of Dec 9-15, 2016

**Issues:**

Funding issues – JLab LLRF is running out of funds and the remaining FY17 funding and commitment profiles need to be finalized.

**Accomplishments this week:**

CP procurements; MCC proposals received, LN2 dewar final proposals received.

Several vendor visits completed and more are scheduled.

**Upcoming Activities:**

Weekly Reporting

WBS 1.04.6 JLAB Cryomodules

Week of Dec 9-15, 2016

**Issues:** Cost and schedule impacts due to cavity recipe development effort at vendors.

**Accomplishments this week:**

Preparing EAC for two WBSs – 1.04.06.05 Engineering and Design and 1.04.06.06 Prototype CM. Ready to discuss with SM.

Discussed what-if schedule for CTF down planned to start 17-FEB for discussion with SM. Reviewed potential impacts to and mitigations for CM assembly labor, testing and delivery.

Cavity Procurement

Conducted PCC meeting and reported on vendor meetings from previous week including hold point updates and expected cavity deliveries.

Conducted vendor call with RI. The vendor identified an issue with vacuum integrity of large transition joint. Transition material supplier can identify suspect part by traceability so that suspect parts can be returned. In addition, RI developed a repair method for the few that have developed leaks.

Site visit at Zanon to review first articles is continuing through Thursday 15-DEC. Process improvements for EP provided by experts are being implemented.

Awaiting resolution of design revision to split ring assemblies from FNAL. Tentative path forward defined.

RI shipped four cavities to JLab on 15-DEC (0043, 0044, 0047, 0048).

Zanon plans to ship four bare cavities to FNAL early next year. These cavities have improved EP processing.

pCM Status

Insulating vacuum leak check is complete. Waveguides field fit; waiting for modal testing to complete before final fit up.

Fabrication of U-tubes for pCM is complete including pressure testing and leak checking.

Bayonet box external circuits leak checked. Guard vacuum circuit completed.

The pCM cooldown began on 15-Dec.

Cryomodule Test Facility

SSA check-out with waveguide and controls is complete. Labview software work on-going. Cabling for sensors is completed in advance of pCM cooldown.

Production CM Activities

Reviewed charge and agenda with FNAL CM CAM in preparation for PRR in January.

Load testing of second four-post fixture is in progress.

Continuing to inspect bellows and spools and production tuner frames.

Leak checking BPM feedthroughs as part of incoming inspection.

Continuing receipt inspection on RI and Zanon cavities.

Continued to receive FPCs from CPI and RI. Jeff Tice from SLAC visited to discuss plans and logistics related to PICs.

Vertical Test RI 024 (900/200/TD) was conducted on 09-DEC – Radiation limited at 11 MV/m, Initial FE onset (sudden, >3R/hr) 8.0 MV/m, 1 mGauss field, Q0(8MV) = 3.8e10. Plan to rinse, retest date TBD.

Vertical Test EZ 225 (900/200/TD) was conducted on 013-DEC – Quench limited at 21.6 MV/m, Initial FE onset at 17.6 MV/m, Q0(16MV) = 2.7e10. Plan to rinse, retest date TBD.

Vertical Test RI 031 (900/200/TD) was conducted on 14-DEC – Limited by cable breakdown at 23 MV/m, FE free, Q0(16 MV/m) = 3.5e10.

M. McGee (FNAL) visited to review shipping fixture status and plans for shipment. Second shipping frame and set of caps will be sent directly to FNAL. Date to be confirmed after vendor visit to AES this week.

**QUALITY**

* Participating in cavity vendor visit at E. Zanon in Venice, Italy.

**Upcoming Travel:**

* Shipping Frame Vendor Visit Dec 12-13 (delayed one week later)
* Vendor Visit to Zanon to provide feedback on first articles, 14-15 Dec 2016
* PRR Follow-On Meeting, 10-Jan at JLab
* Cavity and CM Workshop 11-12 Jan at JLab

Weekly Reporting

WBS 1.04.08 JLAB Cryoplant System

Week of Dec 9-15, 2016

**Issues:**

**Accomplishments this week:**

A meeting is scheduled on Dec 7th with the Smith Group (Detroit) to discuss gap cryoplant design to advance the installation time schedule and company capabilities. Smith Group will visit JLab on Dec 20th to go over the completed design to date and the remaining work scope. This is a change from the 19th at Smith Group request. Copies which depict the current design status and work scope are scheduled to be sent to Smith Group in preparation of the meeting by Dec 15th.

4.5K cold box FDR documentation was received with the exception of 3 items scheduled for completion Dec 19th. The documentation is under technical evaluation.

An evaluation of what procurement items could possibly be deferred until May 2017 was completed with a table of options submitted to SLAC project management for review.

The December coordinated controls interface meeting has been postponed.

The design of the transfer line interface boxes and related transfer line continued through the week. A review of the interface box design and connected transfer line remains set for January 2017.

Technical bid evaluations for the oil removal vessels and helium storage vessels was submitted to the SOTR and has been summarized. A number of site visits were completed to evaluate vendor capabilities and facilities.

A LCLSII commissioning meeting was held at JLab on 14/15th of December. Topics included the serial sequence of cryoplant commissioning coupled with dates and readiness reviews required.

**QUALITY**

* No report.

**Upcoming Activities:**

* Smith Group Visit to JLab, Dec 20th
* Controls Integration Meeting, at SLAC, TBD moved from Dec 9th
* 2K Cold Compressor Design Review Part 2, Jan 11, 2017
* Interface Box/Transfer Line PDR January 2017

Weekly Reporting

WBS 1.02.03.05.12 LLRF

Week of Dec 2-8, 2016

**Issues:** None

**Accomplishments this week at JLAB:**

* LLRF Coordination/Documentation:
  + Heater: Board is in fabrication. The plan is to have it assembled by 1/15/17.
  + Production cost estimate: Sent to JLAB project management for final cost review.
  + Buncher Interlocks: Reviewing the I/O document sent by Gang.
* Resonance/Stepper Motor Board/Chassis:
  + Garth/Rama/George: On hold as the team works on the interlocks.
  + Software/Firmware is being developed.
* Interlock Board/Chassis:
  + 2nd Chassis is being readied for installation into CMTF.
  + All chassis are assembled.
  + George/Garth/Rama are working on the soft IOC and EPICS interface.
* Common Power Supply/Chassis:
  + Five power supplies are complete.
  + Production mods being acquired.
  + Gun PS Chassis: Waiting power/ current for the custom RFS and PRC chassis for the Gun (Gang).
* CMTF
  + All 8 SSAs and JLAB LLRF systems have been tested into shorts.
  + Interlock cables have not been pulled (not our responsibility).
  + Clyde is developing RF/Temp/Rad screens for the pCM tests.

**Upcoming Activities:**

* + Team Meeting moved to January (FNAL/JLAB), 3rd week.
  + JLAB/FNAL pCM tests in January