Weekly Reporting

WBS 1.01.07 JLAB Management

Week of Sep 9-15, 2016

**Issues:**

**Accomplishments this week:**

Participated in the Cryomodule Production Readiness Review.

Developing the BCR files for the cavity contract mods.

**Upcoming Activities:**

Weekly Reporting

WBS 1.04.6 JLAB Cryomodules

Week of Sep 9-15, 2016

**Issues:** Efficient transfer of lessons learned from FNAL pCM assembly in order to reduce JLab pCM assembly duration. Funding mechanism for spare CM components needs to be clarified. Cost and schedule impacts due to cavity recipe development effort at vendor.

**Accomplishments this week:**

Participated in CM PRR at FNAL (Preble, Daly, Reilly, Legg, Wilson, Leung on-site, other JLab staff joined remotely).

BCR for cavity development that includes increased EP, increased baking temperature and four development cavities has been added to the working list. Planned for presentation in September. Approximate cost impact ~$1.1M.

Started preparations for OPA review at FNAL in mid-October.

Cavity Procurement

RI - The two bare cavities will ship from RI on 20-Sep and the two dressed cavities will ship 4-Oct. Two bare cavities were high-temperature baked with Nb caps. JLab shipped revised copper tips (total 24) for input couplers, majority of balance of PICs. Only remaining items, fasteners, will ship in October to vendors. RI has an issue with CTM motor controller – the component has been shipped to DESY for repair. Vendor visit planned for 5-6 October – initial agenda has been circulated. SLAC, JLab and FNAL colleagues will attend.

Zanon – Updated shipping schedule shows four cavities shipping to JLab next week and four to FNAL the following week. All of these cavities have baseline recipe. Three cavities have received 200 microns & 900 deg C bake and are being tuned. Four cavities from the second batch are at HP #2. Received proposal for modified schedule. Deliveries tend to spread out due to increase EP processing time. Final cavities about 2 months later than current p6 schedule.

Single cell testing is on-going - results are reported in collaboration cavity status spreadsheet.

Continuing first article inspections at JLab - CAV0010 was re-tested and experienced field emission in final power rise. The cavity will be re-rinsed (second time) and is currently scheduled for testing on 16-Sep.

Awarded CMTF HX to Eden Cryogenics. Planning for kick-off visit in the near future.

Removed parts in circulation from five sets of couplers and returned to CPI.

Preparing cost estimate for RF processing of 4 sets of FPCs for SLAC.

Production plating vendor is in process of plating first two production sets. Plater is recommending changes to surface finish on spools to improve process. Plan to talk with stainless steel parts supplier to investigate impact. In addition, there are some minor quality issues with weld finish that are being discussed.

Received JT vale and cooldown valve stem assemblies for production CMs.

CM assembly activities:

RF cables are being measured. Instrumentation routing/harnessing is on-going. Completed adding Metglas caps to the bearing block assemblies. Currently blanking off VV ports in preparation for leak check. Preparing for leak check of pCM vacuum vessel. Fit check of the lower shield has begun.

Cryomodule Test Facility

Currently pulling heliax cables. In cave work is temporarily stopped due to Quarter Cryomodule Testing preparations. Testing is planned for about 7 working days beginning Friday 16-Sep.

Production team plans to start string assembly start during week of 19-Sep.

**QUALITY**

* Presented the QA talk at the CM Production Readiness Review at Fermilab on Sep 13 & 14.

**Upcoming Travel:**

* + LCLS2 Collaboration Meeting 11 Oct 2016
  + DOE Status Review 12-14 Oct 2016
  + Cavity Vendor Visit to RI – First Article Review – 5-6 Oct 2016

Weekly Reporting

WBS 1.04.08 JLAB Cryoplant System

Week of Sep 9-15, 2016

**Issues:**

**Accomplishments this week:**

The 2K cold compressors reviews of the design are tentatively set for October and December 2016.

The FDR date for the 4.5K cold box was 7-8th September. Topics of the review included QA/QC, operation, process design, manufacturing plan, mechanical and electrical design, and P&IDs. Membership of the review included SLAC/JLab procurement, SLAC/JLab engineering, and SLAC project management.

Work continued on the PDR 2K cold box assembly design documentation. A date for the PDR design review has been set for 27 Sep 2016.

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.

The installation/BIO design review has now been set for 18 Oct 2016.

Review of the Director’s Review cryoplant recommendations started.

Preparation for the OPA/DOE Project Status Review began.

**QUALITY**

* No Report.

**Upon coming Activities:**

2K Cold Box PDR 27 Sept 2016

DOE Status Review 12-14 Oct 2016

Installation Design Package PDR 18 Oct 2016

Interface Box/Transfer Line PDR January 2017

Weekly Reporting

WBS 1.02.03.05.12 LLRF

Week of Sep 9-15, 2016

**Issues:** None

**Accomplishments this week at JLAB:**

* LLRF Coordination/Documentation:
  + We are updating as needed board and chassis documentation to the SLAC website.
  + Heater: Documentation is in CAD. We will send to SLAC when its complete.
  + Buncher Interlocks: Needs discussion (Gang/Rama).
  + JLAB had a EPICS Server and switch discussion. Plan is for JLAB to buy a server using LCLSII funds.
* Resonance/Stepper Motor Board/Chassis:
  + 2nd Resonance chassis: Ready to be installed/shipped.
  + 3rd Resonance Chassis: Ready to be installed/shipped.
  + Updated Resonance FMC board: In third chassis and running.
  + Chassis four and five are assembled and waiting for test.
  + Rama is working on register table for Garth.
* Interlock Board/Chassis:
  + Interlock Chassis: Schedule is 10/1/16 for chassis completion.
  + FEP Board: It is being assembled. Start testing end of next week.
  + ARC/IR boards: Tested and ready for chassis install.
  + Interlock FMC connector board (interlocks): Out for assembly. Should be back next week.
  + Power supply board: In assembly. Tested next week.
  + Five Chassis are in partial assembly.
* Common Power Supply/Chassis:
  + All five chassis are complete. Last three waiting for tests.
  + Ordered electronic load for PS test bench.

**Upcoming Activities at JLAB:**

* + Continue prototype tests and assembly (resonance, interlocks, power supply)
  + Next week: pCM LLRF FNAL installation. Rama plans to attend.
  + DOE Review (October)