Weekly Reporting

WBS 1.01.07 JLAB Management

Week of Sep 16-22, 2016

**Issues:**

**Accomplishments this week:**

Completed accrual updates

Updated PMCS slides for DOE OPA presentations.

Completed variance reports.

**Upcoming Activities:**

Weekly Reporting

WBS 1.04.6 JLAB Cryomodules

Week of Sep 16-22, 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. Need license for Beamline Absorbers to progress with the procurement.

**Accomplishments this week:**

Updated accruals with JLab PMO.

Received request from SM to arrange for SOTR training at FNAL. Began initial plans.

Presented BCR for cavity development that includes increased EP, increased baking temperature and four development cavities at Special CCB. BCR was approved.

Conducted technical meeting to discuss technical issues driving need for caps. Direction from SM is to investigate cost and options for including caps. Estimate from one vendor is $60K to include caps on all remaining cavities. Assuming same cost from second vendor, total impact would be $120K.

Cavity Procurement

RI - The two bare cavities will ship from RI in a few days – specific date TBD. The two dressed cavities have a ship date of 4-Oct. HP#3 data has been reviewed for these four cavities.

Zanon - the first four first articles will ship from Zanon by the end of this week, 23-Sep, destined for JLab. The next four first articles will ship the first week of October to FNAL. These eight units have the baseline recipe (140/800) and have NX cell material. All sixteen first articles have passed HP#2.

Single cell testing is on-going - results are reported in collaboration cavity status spreadsheet. Latest single cell test at JLab (RDTTD-03) showed excellent Q0 with 110 microns and 900 deg. C annealing. Possible path to eliminating need for increased EP.

Qualified CAV0010 with following results: Q0 = 2.5 x 10^10 @ 16 MV/m, Emax > 24 MV/m.

Awarded CMTF HX. Delivery date is April 2016.

Continued to receive FPCs from CPI and RI. Removing parts in circulation, storing couplers in cabinets and returning PICs to vendors.

Prepared cost estimate for RF processing of 4 sets of FPCs for SLAC at JLab.

Conducted internal training with SOTRs and work center leads on Pansophy tools available for reporting, analyzing and dispositioning travelers and NCRs.

CM assembly activities:

GHRP 2 phase clamps have been modified and shoulder bolts added. MLI on fill lines has been added. Metglas caps have been installed. Accelerometers have been installed in advance of modal tests. Continuing to monitor flux gates during assembly. Shields are being test fit, clearance holes being added where necessary. Magnet leads were re-bent due to interference.

Magnet leads developed a short during shield installation. The problem was found at the 50K thermal intercept and fixed. Assembly has continued.

PHPK VV was leak checked. Leak found in weld at #5 coupler port, repaired in house.

(2e-7 leak size).

Cryomodule Test Facility

Remainder of lead bricks needed for shielding fan stack has been ordered and due in early October. Several sets of LLRF components have been installed in racks in control room. Cable pulling work has been interrupted by testing of an upgraded injector cryomodule. Work to recommence late next week.

Production team has started string assembly start during week on 20-Sep. First subassembly (gate valve/magnet spool/bpm) is going together. Plan to have string under vacuum by 27-Sep.

**QUALITY**

* Continued to follow up on NCRs in the incoming inspection and assembly processes. Work with SOTRs to determine if any need to be elevated to a Significant Level.
* Participated in the Cu-plated bellows and spools vendor discussion for components in the supply chain.
* Reviewed of internal process and inter-connects between closing of work center travelers and NCRs.

**Upcoming Travel:**

* DOE Status Review 12 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 16-22, 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. A review of the seismic analysis calculation documentation indicated corrections were warranted and was discussed with the vendor.

The vendor kick off meeting for the 2K cold compressors was successfully held. Design review dates for the 2K cold compressors has been set for November 6, 2016 and January 11, 2017.

Work continued on the PDR 2K cold box assembly design documentation. A date for the PDR design review has been set for 27 Sept 2016. An agenda and committee charge was developed. Reviewers include Matt Howe (SNS, chair), Jay Theilacker (FNAL), and Kelly Dixon (JLab).

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. The review charge, committee members, and agenda are under development.

Preparation for the OPA/DOE Project Status Review continued with dry presentations due at the end of the week.

**QUALITY**

* No Report.

**Upon coming Activities:**

2K Cold Box PDR 27 Sept 2016

LCLSII Collab Meeting, 11 Oct 2016

DOE Status Review 12-14 Oct 2016

Installation Design Package PDR 18 Oct 2016

2K Cold Compressor Design Review, Nov 6 2016

2K Cold Compressor Design Review, Jan 11, 2017

Interface Box/Transfer Line PDR January 2017

Weekly Reporting

WBS 1.02.03.05.12 LLRF

Week of Sep 16-22, 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 still in CAD. We will send to SLAC when it’s complete.
  + Buncher Interlocks: Needs discussion (Gang/Rama). Not sure the cryomodule system interlocks is a fit. Discuss at weekly meeting.
  + JLAB server: PO is written. Waiting for 10/1 (new fiscal year to order).
  + Dave has been updating the BOMs.

Resonance/Stepper Motor Board/Chassis:

* + Chassis four and five are assembled and waiting for test.
  + Rama is working on register table for Garth.
* Next week install pCM adapter board for limit switches in chassis.

Interlock Board/Chassis:

* + Interlock Chassis: Schedule is 10/1/16 for chassis completion.
  + FEP Board: In testing.
  + ARC/IR boards: Tested and ready for chassis install.
  + Temp Boards: One board assembled the others are in assembly.
  + Interlock FMC connector board (interlocks): In Friday.
  + Power supply board: In testing.
  + Five Chassis are assembled waiting for boards.

Common Power Supply/Chassis:

* + All five chassis are complete. Last three waiting for tests with electronic load.

**Upcoming Activities at JLAB:**

* + Continue prototype tests and assembly (resonance, interlocks, power supply)
  + Next week: pCM LLRF FNAL operation. Rama plans to attend.
  + DOE Review (October), working on updating LLRF presentation.
  + Working on test benches.