Weekly Reporting

WBS 1.01.07 JLAB Management

Week of Oct 28 – Nov 3, 2016

**Issues:**

**Accomplishments this week:**

Updated monthly progress for October

Preparing for a cryoplant schedule review.

Working on BCRs - cryoplant installation scope transfer, bellows plating, beamline absorbers, additional shipping fixture and caps.

**Upcoming Activities:**

Director’s Review 4.5 K Cold Box Schedule 16 November

Weekly Reporting

WBS 1.04.6 JLAB Cryomodules

Week of Oct 28 – Nov 3, 2016

**Issues:** Efficient transfer of lessons learned from FNAL pCM assembly in order to reduce JLab pCM assembly duration. Cost and schedule impacts due to cavity recipe development effort at vendor.

**Accomplishments this week:**

BCR is under development for beamline bellows plating schedule adjustment. Incorporating vendor milestones and deliveries.

Ready to discuss BCR for addition of caps to cavities during processing at next facilitation meeting.

Ready to discuss BCR for RF processing of 4 sets of FPCs for SLAC at JLab at next BCR facilitation meeting.

Developing cost and schedule input for BCR for another shipping frame for on-site transport at FNAL and two sets of caps for leak-checking and on-site storage at SLAC.

Implementing modified procurement strategy for BLA to support installation schedule – ordered long lead ceramics to and supply to vendor. Preparing BCR to request additional funds for BLA procurement. BLA PRR is planned for 10-November.

Cavity Procurement

Attended PCC meeting and reported on vendor meetings from previous week including hold point updates and expected cavity deliveries. Conducted weekly vendor calls with RI and Zanon. Eight cavities shipped from Zanon on 2-NOV – four destined for each lab. Four cavities shipped from RI – destined for JLab. Sent draft agenda to vendor for review and feedback. Awaiting resolution of design revision to split ring assemblies from FNAL.

Participated in discussion on routing of cavities from RI to partner labs and plans for use in CMs. Lack of deliveries to JLab within November combined with potential CTF down (3-4 months) could impact long term CM delivery schedule.

Attended PCC discussion regarding use of cavities with NX material and routing of cavities with TD materials. We are now very concerned with lack of early cavity deliveries to build tested cavity inventory at JLab. This would impact the long-term CM testing and delivery schedule when considering the potential CTF down planned for early January.

pCM assembly activities at Work Station 5:

Installation of warm couplers continues. Additional tooling was fabricated to assist in installation with berry bolts in place. JT Actuators are installed and operational. Completed assembly of slow bleed-up/pumpdown system. Pressure testing documentation for CM, heat exchanger, and u-tubes has been completed and approved. Pressure testing of “Line A” has begun. Bayonet box 01 instrumentation has been completed. Second bayonet box guard vacuum being welded.

Current CM completion date is 22-NOV in P6.

Production CM Activities

PRR scheduled for 10-January at JLab to review test results from JLab pCM.

Continuing to inspect bellows and spools and production tuner frames. Continued to receive FPCs from CPI and RI.

The CM02 string assembly was restarted on 01-NOV. Expect to pump and leak check string by 7-NOV. Currently six of eight cavities are on the assembly rail.

Vertical Testing for Zanon Cavities made from NX material:

200 – Qo = 2.5 x 10^10, quench limited at 14.5 MV/m.

203 – Qo = 2.7 x 10^10, quench limited at 20.1 MV/m. Qualified for string assembly.

202 – Qo = 2.9 x 10^10, quench limited at 19.6 MV/m. Qualified for string assembly.

201 – Planned for testing late on 2-NOV.

Visited magnetic shield vendor - discussed parts tolerances, shield assembly and shipping. Performed magnetic field measurement on one assembled shield. The next 16 sets of magnetic shields are planned to ship out early in the week of 10/31.

JLab SOTR is visiting superconducting magnet vendor along with FNAL colleagues.

UCM004 incoming inspection has started. Visual inspection is ongoing –found scratches on knife-edge sealing surfaces. Dimensional inspection is expected to start in this week. Magnetic hygiene control (survey & demag if necessary) will follow and leak check of cryo pipes will also be performed.

UCM006 and VV006 will come in one container to JLab around mid-November.

Preparing the demag coils for VV004. Plan to visit WXCX next week for QC of VVs and UCMs in fabrication.

Completed the fit test of the shipping frame.

Cryomodule Test Facility

Enhanced shielding of the fan stack has been completed. Epics screens are now functional for the SSA's. Provided signals required by the safety systems group to be able to complete the CMTF Personnel Safety System (PSS) certification. PSS certification will allow SSA testing into shorts that have been installed on WG's in Cave. CMTF field control chassis (FCC) signals are now resolving in Epics. Can start moving forward on Labview screens. SLAC visitor arriving to help with coding for one of the new SSA control chassis.

**QUALITY**

* On Nov 2nd, Mike Skonicki conducted a weld assessment at JLab of the LCLSII CMs. Key JLab participants included Mike Martin (CWI) and Gary Cheng (SOTR). The JLab Pressures Systems, Vacuum Systems, Welding and Brazing programs and processes were presented. The assessment went well. Mike will provide a draft report for review in 2 to 3 weeks.
* The Significant NCR Dashboard was submitted for the data month of October.
* Participated in the post-PRR follow-up review of the Fermilab CM test results.

**Upcoming Travel:**

* Vacuum Vessel Visit (Gary Cheng, Kurt Macha) to China 7-11 Nov 2016
* Ed Daly, Ari Palczewski to visit Cornell 10 Nov 2016 to discuss possible cavity testing
* Visit Zanon to provide feedback on first articles, 14-15 Dec 2016

Weekly Reporting

WBS 1.04.08 JLAB Cryoplant System

Week of Oct 28 – Nov 3, 2016

**Issues:**

The 4.5K Cold Box vendor reported a 12-week delay in the delivery during the FDR. JLab has requested the vendor to recover the delay time in accordance with the contract. JLab met with both the vendor (Air Liquide) and subcontractor (PHPK) on Nov 3rd to develop a plan.to recover the delay and the prevention of further schedule slip.

A 2K cold compressor review is scheduled for Nov 8th at JLab. JLab has received all pre-review documentation from the vendor (Air Liquide) in advance of the review.

The final cryoplant installation PDR report was received and work continued on the 10 recommendations.

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 continued for the oil removal vessels and helium storage vessels.

A BIO visit to JLab to discuss the cryoplant documentation, standards, ES&H coupled with a tour of the CHL is planned for November 15th.

**QUALITY**

* Provided Installation QA Spec in for to Cryo-Plant team and SLAC counterparts.
* Provided the Construction Specification Institute (CSI) format to the CryoPlant team and SLAC Counterparts.
* Working with CryoPlant and Procurement staff on 4.5K Cold Box traceability and documentation.

**Upcoming Activities:**

2K Cold Compressor Design Review Part 1, Nov 8, 2016

BIO Visit to JLab, November 15th

4.5K Cold Box Schedule Presentation to Directors @ JLab, Nov 16

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 Oct 28 – Nov 3, 2016

**Issues:** None

**Accomplishments this week at JLAB:**

On Travel - No report.

**Upcoming Activities:**

* + Continue prototype tests and assembly (resonance, interlocks, power supply)