Weekly Reporting

WBS 1.01.07 JLAB Management

Week of Sep 30 to Oct 6, 2016

**Issues:**

**Accomplishments this week:**

Completed monthly schedule progress.

Approved APPs for HOM BLA, Transfer Lines, and LN2 dewar.

CC kick-off meeting.

Looking forward to getting the license agreement from DESY for the HOM BLAs.

Bellows and Spools plating vendor visit here at JLab.

Continue to work on BCRs.

Prepare for OPA review next week.

**Upcoming Activities:**

Weekly Reporting

WBS 1.04.6 JLAB Cryomodules

Week of Sep 30 to Oct 6, 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. Need license for Beamline Absorbers to progress with the procurement.

**Accomplishments this week:**

Preparing presentations for OPA review.

BCR is under development for beamline bellows plating schedule adjustment.

Received response from second vendor regarding cost impact of caps. BCR is being prepared.

CAM (acting as review chair) finalized reports for Accelerator Systems Injector Systems Mechanical FDR and Accelerator Systems Cryomodule Installation Planning Peer Review.

Cavity Procurement

RI - The two bare cavities will ship from RI on 6-Oct. The two dressed cavities have a ship date of 18-Oct. Vendor visit was held on 5-6 October and included review of first article data, cavity performance and monitoring of clean room procedures.

Zanon - The first four first articles arrived in Norfolk on 5-October and being processed through customs, destined for JLab. The next four first articles will ship by the end of the first week of October to FNAL. No weekly meeting due to travel to other cavity vendor.

Continued to receive FPCs from CPI and RI. Removing parts in circulation, storing couplers in cabinets and returning PICs to vendors. Warm coupler storage area contains 15 warm units.

Reviewed cost estimate for RF processing of 4 sets of FPCs for SLAC at JLab and updated list of procurements.

Inspecting bellows and spools received from Nomura – results are very good and plating is excellent quality. These components will be used on CM04 & CM05.

Received the first shipping fixture and set of caps from vendor. Plan is to receive / inspect fixture and begin preparations for shipping test. The shipping caps will be leak checked.

CM assembly activities:

50K MLI installation was completed. Cold mass has been installed into the vacuum vessel. Supports have been insulated and re-installed. Alignment of the cold mass has been completed. Fluxgate measurements taken before and after installation show slight fluctuations. This is indicative of changes in ambient conditions and not magnetization of components.

Current CM completion date is 22-NOV in P6.

First production vacuum vessel has been blanked off and evacuated. Rough spray has been done. Currently testing pump configurations to achieve maximum sensitivity.

Magnet lead flanges have been modified and are currently being leak checked.

MC line has been shipped back to the vendor for repair of out of tolerance issues.

2nd set of lollipops for the next string (CM03) has been installed on the spare cavity assy rail.

The BPM sub-assembly has been completed. We are currently working on the first two cavities for the string. We encountered a tooling interference issue yesterday that has set us back one day. The tooling interference was known and addressed prior to string assembly. Unfortunately, there is a weld seam on the cavity that lines up with the notch location in a cradle which prevented the cavity from completely seating in the cradle. All the cradles had to be further modified. Current plan is to have six cavities assembled onto the rail by COB Saturday. We will take Sunday off, then assemble the last two cavities on Monday. Start the pump down on Monday evening, through Tuesday then leak check on Wednesday if all goes well.

Cryomodule Test Facility

Cable pulling work has been interrupted by testing of an upgraded injector cryomodule. Work to recommence after completion of QCM testing.

CM02 string assembly - Plan to have string under vacuum by 10-Oct.

**QUALITY**

* Mike Skonicki will visit JLab in November to conduct an assessment on welding of the LCLSII CMs. Date and agenda are forth coming.
* Nomura Plating expert visited JLab Oct 3 – 5. First production lot of copper-plated components by Nomura had arrived. Provided QA/QC support on initial inspection checking for general surface and plating quality and looked for signs of potential shipping damages. The outcome of the initial checks was very positive. Initial results are very promising. A more vigorous inspection per the prescribed traveler will follow, plus a few units will go thru additional assurance checks to add confidence.
* Compiled and submitted Significant NCR Dashboard for reporting month of September. Marc Ross had follow-on questions regarding the Dashboard data, which the questions were subsequently answered by JLab folks.
* Completed a QA slide for Mike Skonicki on current QA Practices in preparation for the upcoming LCLSII Collaboration meeting on Oct 11, 2016.
* On-going communication and information exchange with Fermilab on the practices of Lessons-learned conducted by both partner labs.

**Upcoming Travel:**

* LCLS-II Collaboration Meeting 11 Oct 2016
* DOE Status Review 12-14 Oct 2016
* Vacuum Vessel Visit to China 7-11 Nov 2016

Weekly Reporting

WBS 1.04.08 JLAB Cryoplant System

Week of Sep 30 to Oct 6, 2016

**Issues:**

**Accomplishments this week:**

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.

The 2K Cold Box PDR was held on 27 September at JLab. SLAC participants included David Schultz, Greg Hays, Hongyu Bai, Viswanath Ravindranath, and Antonio DeLira. Committee recommendations are currently being addressed.

A BCR presentation was developed in support of transferring the cryoplant installation effort from JLab to SLAC.

Dry run presentations in support of the 12-14th October 2016 DOE review were completed with final presentations posted.

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.

**QUALITY**

* Reviewed and approved for QA on the Warm Helium Purifier Spec.
* There were some questions from Barry Miller and Mike Skonicki with the 30K Gallon LN2 Dewar Spec. The questions were subsequently addressed.

**Upcoming Activities:**

Vendor Visit to Air Liquide 10 Oct 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 Part 1, Nov 6 2016

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 Sep 30 to Oct 6, 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: Schematic is in review. We will send documentation to SLAC when it’s complete.
  + Buncher Interlocks: JLAB/Rama to start on this 1/17.
  + JLAB CMTF server: On order.
  + Preparing for DOE review next week.

Resonance/Stepper Motor Board/Chassis:

* + All five chassis are assembled and waiting to test.
  + Garth is working with register table and developing the EPICS interface.

Interlock Board/Chassis:

* + Interlock Chassis: First chassis is in final assembly.
  + FEP Board: Analog circuit has been tested. ADCs are being tested.
  + ARC/IR boards: One assembled the other boards are in assembly.
  + Temp Boards: One board assembled the others are in assembly.
  + Interlock FMC connector board (interlocks): Needs to be tested.
  + Power supply board: Tested. Boards being assembled.
  + Five Chassis are partially assembled. First chassis is being assembled with boards.

Common Power Supply/Chassis:

* + All five chassis are complete.

**Upcoming Activities:**

JLAB:

* + Continue prototype tests and assembly (resonance, interlocks, power supply).
  + Next week DOE Review.
  + Garth to travel to JLAB (10/17).