Weekly Reporting

WBS 1.01.07 JLAB Management

Week of May 27-Jun 2, 2016

**Issues:** Some material remains to be delivered to the cavity vendors; sheet material from DESY, non-sheet material from FNAL.

**Accomplishments this week:**

Conducted HazOp meeting with 4.5K cold box vendor at JLab.

Submitted May progress to JLab PMO for internal review.

Continue to support finalization of the P6 re-plan.

**Upcoming Activities:**

Weekly Reporting

WBS 1.04.6 JLAB Cryomodules

Week of May 27-Jun 2, 2016

**Issues:** Project schedule currently contains best production cavity delivery from vendors. Niobium tubes are on the critical path for RI and Zanon cavity production. Other areas in the project need to investigate other ways to recover float beyond CM production. Lack of resources (subject matter experts) for CTM refurbishment activities planned in June could delay cavity production. Efficient transfer of lessons learned from FNAL pCM assembly in order to reduce JLab pCM assembly duration.

**Accomplishments this week:**

The following list of BCRs has been discussed with the SM and are in progress: Production CM Cancellation Coils (in preparation), HX for Testing Production CMs (in preparation), Reduction of Number of Shipping Frames (in preparation), and Fundamental Power Couplers Storage including circulated parts (in preparation). The following items require updates at award and should be viewed as cost only - Cavity Incentives. The following should be viewed as schedule only - Cu-Plated Bellows/Spools, and End Lever Tuners Frames. The Beamline Absorbers (BLA) cost-only BCR is delayed until October.

Held meeting to review cost and quantity for shipping frames in advance of BCR presentation.

Submitted EV progress to JLab PMO.

Cavity Procurement

Planning for visit to DESY on June 10 to discuss CTM contract technical scope and responsibilities currently in place between cavity vendors and DESY.

RI and ZANON are making good progress on single parts fabrications. Lack of connection tube material may cause a schedule delay.

See FNAL weekly report for status of material shipments. Currently connection tube materials are critical path for cavity vendors.

RI has identified issue with helium vessel bellows supplier as possible schedule impact, and is investigating alternates to avoid first article delay.

Flux expulsion tests are in progress. Ninxia single cell cavities have had initial tests showing poor flux expulsion. Tokyo Denkai is planned for next week. Discussing options for investigating new cavity recipe proposed by FNAL and potential impact on production process.

RI received first sets of PICs to RI sufficient for 16 cavities.

Discussed possibility of travel by FNAL SOTRs and SMEs to JLab in order to witness pCM assembly steps as part of the effort to provide efficient transfer of lessons learned from FNAL pCM assembly. List of requested FNAL personnel transmitted to FNAL CAM and STL.

JLab staff (Daly, Cheng, Fischer) traveled to FNAL to witness CM assembly steps, participate in 3.9 CM status review meetings. Received update on status of turn-key degaussing system from Saravan while at FNAL.

First tuner frame received at JLab has been inspected. Awaiting AES018 from FNAL in order to begin tuner installation practice. Awaiting final drawings for production tuner assemblies.

CM assembly activities: Center support post received from Meyer. UCM re-assembly complete and hung on four poster. Split Quad Magnet has been reinstalled, shimmed and aligned. Two-phase pipe - Leak check of two-phase piping is in progress. Helium Vessel instrumentation is on-going. Repair weldment of vacuum vessel end caps in progress. Magnetic shielding modifications are in process. Kit Lists are identifying missing parts - working with FNAL to get parts in house.

Continuing to update Bill of Materials in order to highlight missing items. Working with FNAL staff to identify and procure missing items so as not to delay pCM assembly.

CMTF: SSA are all in final positions. LCW connections are completed to SSAs. Hard-line coax continues to be installed in Cave. Started fabricating u-tubes for bayonet box.

**QUALITY** –

1. Continue to QA/QC review the various 40+ manufacturing documents provided by Zanon for the production of dressed cavities.
2. There are on-going discussions within JLab about storing vendor supplied documents on the M:drive, as opposed to storing in the receiving traveler of Pansophy or in DocuShare.
3. Fermilab staff have reviewed JLab’s consolidated list of comments on the Delivery Document List and QAPs for the vacuum vessel & upper cold mass assy. Fermilab would like JLab to further condense the list. JLab staff will review and respond. Gary Cheng is coordinating the information exchange with Tug Arkan.
4. JLab SOTR, CAM & QA discussed the issue on the cavity string survey holes and decided to treat it as a regular NCR since there are no significant costs or schedule impact.
5. JLab reports no new Significant NCRs for the month of May.

**Upcoming Activities:**

In mid-June, JLab staff (SOTR, SO & QA) will visit two potential plating vendors for the production bellows and spools. One vendor is located in Osaka, Japan, and the other in Santa Clara, CA.

DESY CTM Discussion June 10

Weekly Reporting

WBS 1.04.08 JLAB Cryoplant System

Week of May 27-Jun 2, 2016

**Issues:**

**Accomplishments this week:**

The vendor proposals for the procurement of 2K cold compressors for both CP1 and CP2 cryogenic plants were received on May 31, 2016.

Provided feedback to vendor on documentation for 4.5K cold box PDR action items.

Consolidating comments from warm helium compressor CrDR that was held on May 25.

Procurement specifications for the MCCs, oil removal vessels and instrument air are in final editing prior to release to procurement.

Provided comments on the updated vendor P&ID for the 4.5K cold box.

Conducting HazOp meeting on June 1-2 at JLab with 4.5K cold box vendor.

**QUALITY**

No report.

**Upcoming Activities:**

Cryoplant BIO Review 9 Aug 2016

Weekly Reporting

WBS 1.02.03.05.12 LLRF

Week of May 27-Jun 2, 2016

**Issues:** Manpower availability due to competing lab priorities may delay completion of chassis and hardware for pCM CMTF tests.

**Accomplishments this week:**

JLAB

* LLRF Coordination/Documentation:
  + Working on chassis, components and board procurements
  + CMTF Network waiting on next move by JLAB.
* Resonance/Stepper Motor Board/Chassis:
  + Stepper board has been fully tested.
  + Chassis power distribution power board: Additional boards are in assembly. The board is being modified to make the +/- 48 break out for the interlock chassis capable of higher current. The board still is fine for the RF station, PRC and resonance chassis.
  + FMC breakout board: Board should be back next week from the assembly house. A SNAFU with a foreign vendor held up the connector order.
  + Resonance chassis: Chassis is in assembly. Fabrication may be slow because of competing priorities (see issues).
* Interlock Board/Chassis:
  + FEM: Tests continue. Board is slated for a re-spin in mid-June after tests are completed.
  + Temp board is ready to test.
  + ARC/IR boards: Still in design for small modification (small change to connector).
  + Interlock chassis front panels have been ordered.
* Common Power Supply/Chassis:
  + Additional chassis and boards are in the assembly queue with EES fabrication. All parts have been ordered.

**Upcoming Activities:**

* JLAB:
  + Continue prototype tests and assembly (resonance, interlocks, power supply)
  + CMTF: Continue working on documentation, installation and instrumentation.
  + June 22/23 Rack assembly, test and shake down (JLAB).