Weekly Reporting

WBS 1.01.07 JLAB Management

Week of Jun 3-9, 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.

Received and reviewed the FY16 Q4 funding proposal.

May progress review with SLAC/LCLS II.

SOTR training completed with SLAC staff attendance

Prepared 2 level 4 BCR

**Upcoming Activities:**

BESAC meeting

Weekly Reporting

WBS 1.04.6 JLAB Cryomodules

Week of Jun 3-9, 2016

**Issues:** Niobium tubes are on the critical path for RI and Zanon cavity 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.

Reviewed EV progress with JLab PMO. Added steps to selected activities in P6.

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 resolved issue with helium vessel bellows supplier; minor risk that these components would cause first article delay.

Zanon QA plan was reviewed by JLab QA lead. Awaiting responses from FNAL SMEs.

DESY experts are refurbishing CTM at Zanon. Expect to complete by 10-JUN.

Flux expulsion tests are in progress on Tokyo Denkai single cell cavities.

Plan to ship first sets of PICs to Zanon sufficient for 16 cavities by 25-JUN. RI has received enough PICs for 16 cavities.

Made plans for 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. FNAL Piping and magnetic shielding SMEs will visit JLab next week.

Copper plating vendors are working on qualification articles for bellows and spools. First samples expected by end of June.

Twenty parts have been plated at SLAC and are undergoing cold shock then blister testing.

Awaiting shipment of AES018 from FNAL in order to begin tuner installation practice. Awaiting final drawings for production tuner assemblies.

CM assembly activities:

Leak check completed on 2 phase piping. MLI installation is on-going. Magnetic shield installation started; Magnetic shield modifications are on-going. Received magnet connectors and lead parts. HOM clamps have been modified to Rev A. CPI cold coupler items have been test fit on cavities 1 and 2. UCM has been re-assembled, hung, and aligned. Kit list generation is on-going.

Support post alignment holes may need to be reamed, currently 6mm, should be ¼”. Cavity 2-CPI cold coupler 50k heat station part test fit up was done with s/s hardware. Four M6 bolts galled badly and will require thread repair. Lack of updated electrical procedures from FNAL and possible delay in wire delivery may delay instrumentation work at WS2.

CM Assembly completion in P6 – 20 OCT; CM Testing start in P6 – 7-NOV.

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: Continuing fabrication of u-tubes for bayonet box. Continuing with coax waveguide installation. VV set to 0.5% grade in order to measure locations for waveguides and u-tubes.

**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.

Planned Travel:

* DESY CTM Discussion 10-JUN
* Copper Plating Vendor Visits 14-22 JUN
* RI Vendor Visit w/Galayda 24-JUN

Weekly Reporting

WBS 1.04.08 JLAB Cryoplant System

Week of Jun 3-9, 2016

**Issues:**

**Accomplishments this week:**

Vendor proposals for the procurement of 2K cold compressors for both CP1 and CP2 cryogenic plants were received by May 31, 2016. Technical review of the offers were conducted and questions/clarifications have been presented to the vendors

A 4.5K cold box HazOp coordination meeting was held at JLab on June 1-2. The topics included the safety shutdowns, pressure relief value, and control loops associated with the operation of the cold box and integration with the interconnecting subsystems. The HazOp analysis results will be part of the upcoming FDR for the cold box.

Warm helium compressor skid control panel assemblies have been delivered to PHPK for the upcoming compressor skid assembly.

CDR comments for the warm helium compressor have been gathered and are being addressed with the vendor.

**QUALITY**

JLab staffs completed the review and provided QA/QC/Welding comments on the Air Liquide 2K Cold Compressor Technical Proposal documents.

**Upcoming Activities:**

Cryoplant BIO Review 9 Aug 2016

Weekly Reporting

WBS 1.02.03.05.12 LLRF

Week of Jun 3-9, 2016

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

**Accomplishments this week:**

**JLAB**

* LLRF Coordination/Documentation:
  + Dave is exchanging cable information with Andre.
  + Dave continues to working on chassis, components and board procurements.
  + Working on team meeting agenda
  + CMTF Network waiting on next move by JLAB.
* Resonance/Stepper Motor Board/Chassis:
  + Chassis power distribution power board: Additional boards are in assembly for RF Station and PRC.
  + FMC breakout board: Board should be back Friday June 10.
  + Resonance chassis: Once FMC board is here, chassis will be complete and ready for test. A chassis alignment issue will need to be solved after it is tested for final production.
* Interlock Board/Chassis:
  + FEM: Tests continue. Board is slated for a re-spin in mid-June after tests are completed.
  + ARC/IR boards: Design mod almost complete. It should go out for manufacture next week.
  + FMC connector board will be started next week (should be reduced version of the resonance FMC connector).
  + Interlock chassis front panels on order.
* 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)
  + Resonance chassis tests start next week.
  + CMTF: Continue working on documentation, installation and instrumentation.
  + June 22/23 Rack assembly, test and shake down (JLAB).