Weekly Reporting

WBS 1.01.07 JLAB Management

Week of February 26-March 3, 2016

**Issues:**

Need Nb/NbTi material to be delivered to the cavity vendors. Some Nb sheet material has been delivered and we need to make sure the remainder goes in a timely fashion.

**Accomplishments this week:**

Hongyu Bai as started work here at JLab. A very welcome addition to our cryo plant team.

Progressed P6 schedules.

Preparation of BCR and EAC files.

Continued negotiations with cavity vendors for an accelerated first article delivery schedule.

**Upcoming Activities:**

41/2K CB PDR 10 March 2016

Warm helium compressor CDR 25 April 2016

Weekly Reporting

WBS 1.04.6 JLAB Cryomodules

Week of February 26-March 3, 2016

**Issues:** JLab pCM schedule is driven by the availability of parts including GHRP assembly. Need to ship cavity materials to one vendor. Project schedule driven by production cavity delivery schedule – need to recover float. Need final drawings for shipping caps.

**Accomplishments this week:**

The following list of BCRs have been discussed with the SM and are in preparation: Cavity Tuning Machine (CTM) Cost, (status: proceed with refurbishment of CTMs, represent 3/17), Production Tuner Schedule (planned for CCB 3/4). JLab has provided input and review of Cancellation Coils (status: proceed as of 2/25).

EAC for infrastructure will represented at CCB on 3/10. Further info is required from the project before re-presenting.

EAC for pCM was discussed at CAM meeting this week, was added to tracking list and is being prepared (~$560k VAC as of end of January).

After conducting internal meeting with SOTRs, production leads, QA/Pansophy team and procurement staff, potential areas were identified for improving collaboration’s communication and effectiveness. Initial feedback was shared with Preble, Stanek and Ginsburg. Next proposed step is to circulate recommendations to larger group at PLs.

Cavity Procurement

Actively working cavity production schedule issues in order to recover schedule float by accelerating vendor delivery rates. Current vendor feedback is not consistent with accelerating schedule – negotiations are on-going with both cavity vendors. One vendor has proposed additional cost to recover two months. The other vendor awaits cavity materials before providing another update to the delivery schedule. The best understanding is currently reflected in the forecast P6 schedule.

RI has first article production is underway – pressing of half cells, machining of end group parts.

ZANON first article production is underway – pressing of half cells.

RI has 100% of materials needed except half cells (67%) and beam tubes (~15%).

ZANON currently has Nb materials for half cells (67%). A shipment is expected to arrive at ZANON Monday 3/7. At that time, ZANON will have 100% of materials needed except for beam tubes (~15%).

RI has developed manufacturing drawings for the helium vessel and components in collaboration with their subcontractor. They have provided critical drawings that concentrate on the weld joint design. FNAL has provided feedback on these design issues. Verbal approval of the HV design has been provided to RI from JLab.

ZANON provided the revised drawing package that needs to be reviewed JLab and FNAL for acceptance.

Cavity string assembly: Completed exterior cleaning and venting cavities using slow bleed-up system. Completed magnetic screening and degaussing of string hardware. First cavity HPR is planned for Friday 3/4.

Completed re-processing of two FPCs, inspected two RI production FPCs for string. Build 10 was acceptably cleaned and re-baked and both couplers will be used for the string. One of the prototype couplers in Build 7 (CP3C103) developed a leak during baking, localize to the ceramic-copper braze joint. A production coupler received from CPI will be used for the pCM cavity string.

Installed heat stationing straps on Bayonet Boxes.

Modification of parts and assembly of UCM (GHRP) is ongoing - currently positioning pipes, installing MLI, and welding shield connectors.

Received vacuum vessel for pCM from PHPK.

Received LL and JT valve hardware for pCM from FNAL. Received end lever tuners for pCM from FNAL.

Pressure testing of GHRP end caps is complete. One set was sent to FNAL to support testing.

K. Wilson and T. Peshehonoff visited production bellows vendor on 3/1 along with A. Burrill. Some SLAC staff attended a conference call at the end of the day to close-out the visit.

Initial planning is on-going for vendor visit to production VV manufacturer – tentatively late April. JLab staff are planning a coordination meeting with FNAL colleagues in advance of the trip.

CMTF coax waveguide installation in mezzanine is completed – represents about 25% of the total effort. Coax near SSAs and pCM will be installed after those components arrive.

Cable tray parts purchased for new cable tray run from Control Room to mezzanine.

**QUALITY**

* Internal planning meetings are taking place for the upcoming trip to WXCX, the manufacturer in China for the production vacuum vessels. Since this is a FNAL led procurement, JLab will provide QA representation and technical support to FNAL. Discussions with FNAL will take place to establish a common agenda for the visit.
* We had another QA coordination meeting with FNAL last week. Per Jamie Blowers, a meeting took place with Mike Skonicki on the topic of SLAC approval of major NCRs. The outcome of the discussion was positive. Mike Skonicki has agreed that SLAC would NOT be required in the approval of the major NCRs. The authority to approve major NCRs falls within the responsibility of JLab and FNAL. SLAC would still be notified of major NCRs, but the signoffs are done by the partner labs.
* In the QA coordination meeting with FNAL we also discussed the component serialization and the level of traceability of components and subassemblies that go into a cryomodule. At the moment, there is no definitive answer on the extent required of component serialization. In the next meeting, Jamie Blowers and Jan Szal will illustrate the process of traceability in the FNAL system. Meanwhile, Anne McEwen and Valerie Bookwalter are looking into the JLab traceability process as well.
* JLab conducted a training exercise in magnetic hygiene led by Gary Cheng with Ari Palczewski and Kirk Davis. Participants included production team members Jim Follkie, Danny Forehand, Mike Dickey from inventory and Johnny Leung from QA. Subsequently, the cavity string hardware (nuts, bolts, pins, Gate valves) was checked for residual magnetism. Some of the hardware were found higher than the requirement and had to be de-magnetized. The results were captured in the production documentation for review.
* JLab SOTR and Procurement staff, along with a SLAC representative, visited Ameriflex the bellows manufacturer on March 1, 2016. An end of day wrap up teleconference was held with remote tie-in for other members to participate at JLab and SLAC.

**Upcoming Activities:**

* Vendor Visit to Bellows Manufacturer in California March 1 2016
* Vendor Visit to China April 24-29, 2016

Weekly Reporting

WBS 1.04.08 JLAB Cryoplant System

Week of February 26-March 3, 2016

**Issues:** Need2K Cold Box Design Manpower.

**Accomplishments this week:**

The weekly design coordination meeting was held with the 4.5K cold box vendor (Air Liquide). Action items are being addressed in preparation of a preliminary design review for 9-10 March 2016. Modes 1-5 and 7 vendor submittals were checked using the UAs and turbine coefficients. The results agreed with the vendor’s calculations. A plan to witness a performance test of the turbine brake system is also being schedule for 17 March, shortly after the PDR.

A presentation of the 2K cold box assembly plan follow up was presented for the cryogenic cryoplant meeting. Additional JLab meetings were held to investigate joint FRIB 2K cold box design as a means of combining a common design between FRIB and LCLSII. The next meeting is scheduled for 8 March 2016 at JLab.

Hongyu Bai joined the cryoplant design team at JLab on March 1, 2016. He will be working with the design team on P&IDs and cold transfer line components

Specifications for the warm helium oil removal vessels, gaseous helium storage vessels, and final charcoal vessel are being circulated for approval.

The compressor room warm helium gas piping installation design drawings are being reviewed. Completion remains set for March 2016.

**QUALITY**

No Report.

**Upcoming Activities:**

Warm Helium Compressor CDR, 25 April 2016

4.5K Cold Box PDR, 9-10 March 2016

4.5K Cold Box Turbine Brake Operations Demonstration, Post PDR, 17 March 2016

Weekly Reporting

WBS 1.02.03.05.12 LLRF

Week of February 26-March 3, 2016

**Issues:** None

**Accomplishments this week:**

* + On travel this week – The JLab LLRF RF Team will be presenting at the LLRF PDR this week at SLAC and holding a team meeting next week at LBNL.

**Upcoming Activities:**

* + Continue prototype tests and assembly (resonance, interlocks, power supply)
  + Team Meeting at LBNL next week.
  + CMTF: Continue working on documentation, installation and instrumentation.