Weekly Reporting

WBS 1.01.07 JLAB Management

Week of March 4-10, 2016

**Issues:**

Some Nb sheet material has been delivered and we need to make sure the remainder goes in a timely fashion. There are problems with the paper work that went with Nb material to Zanon that needs to be fixed.

**Accomplishments this week:**

Agreed with RI on a cavity first article acceleration plan, continued negotiations with Zanon for schedule acceleration.

Held 4.5 K CB PDR at JLab.

Participation in LLRF PDR

**Upcoming Activities:**

Warm helium compressor CDR 25 April 2016

Weekly Reporting

WBS 1.04.6 JLAB Cryomodules

Week of March 4-10, 2016

**Issues:** JLab pCM schedule is driven by the availability of parts including a completed GHRP assembly. 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 3/10). 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.

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).

E. Daly participated in CM Installation Planning Review conducted by LCLS-II Accelerator Systems team.

Cavity Procurement

Actively working cavity production schedule issues in order to recover schedule float by accelerating vendor delivery rates. One vendor has agreed to incentives and shows early dates of 1-July for first eight cavities and 1-August for second eight cavities. The other vendor has received cavity materials and is developing an update to the delivery schedule which is expected by next Tuesday.

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 has Nb materials for half cells (67%) and received a shipment last Monday 3/7. ZANON now has 100% of materials needed for first articeles (~15%).

RI has developed manufacturing drawings for the helium vessel and components in collaboration with their subcontractor. We await the final drawings from the HV subcontractor for formal review and approval.

DESY colleagues are at RI for initial visit to refurbish cavity production tools (HAZEMEMA, CTM). Visit to ZANON is pending negotiations.

ZANON provided the revised drawing package that needs to be reviewed JLab and FNAL for acceptance. Verbal approval has been given by JLab. We await final drawings for formal review and approval.

Cavity vendor visit planning is on-going – tentative dates are 10-19 May to ZANON and RI respectively.

Cavity string assembly: Completed exterior cleaning and venting cavities using slow bleed-up system. As of Wednesday evening, five cavities are on the assembly rail. Expect to complete assembly on Saturday 3/12. Roll-out of string planned for 3/17.

Modification of parts and assembly of UCM (GHRP) ongoing - positioning pipes, welding shield offset panels, installation instrumentation. Upper cold mass supports were sent to machine shop for match drilling.

Received warm FPC components.

Production CM lead and work area lead planning to travel to FNAL to witness installation of upper cold mass onto cavity string next week Monday-Wednesday.

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: Hardline Coax installation continuing (~33% complete) - middle sections of all 8 hardline installed. Completed cutting hole in roof of CMTF control room for cables and cable tray routing. Three on-site SSAs have been moved into final positions.

**QUALITY**

* Mike Skonicki will visit JLab on March 17 to discuss the Dashboard process for significant NCRs. The discussion will include expectations and requirements, process steps, roles & responsibilities, and etc. Mike would like to have the first official reporting from the partner labs starting on April 1st. In the visit Mike would also like to review Quality documents for the pCM including ACs, Travelers, NCRs, & etc.
* Additional progress was made on ACS submittals. The ACS documents for the cavity string bellows and spools were signed and submitted to Mike Skonicki. Changes were made to the draft for the HOMFTs and subsequently forwarded to Fermilab for comments. JLab is working on the Tuner Assembly and the HOM Absorber. The draft for the HOM Absorber is being reviewed at JLab.

**Upcoming Activities:**

* + Visit FNAL to witness cold mass assembly March 13-16 2016
  + Mike Skonicki visit to JLab – March 17, 2016
  + Vacuum Vessel Vendor Visit to China April 24-29, 2016

Weekly Reporting

WBS 1.04.08 JLAB Cryoplant System

Week of March 4-10, 2016

Week of March 4-10, 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.

An additional JLab meetings was held to investigate joint FRIB 2K cold box design as a means of combining a common design between FRIB and LCLSII on March 8.

The 4.5K Cold Box PDR is currently underway at JLab, March 10.

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

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, 10 March 2016, currently underway

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

Weekly Reporting

WBS 1.02.03.05.12 LLRF

Week of March 4-10, 2016

**Issues:** None

**Accomplishments this week:**

* LLRF Coordination/Documentation:
  + Presented at PDR presentations (Curt and Rama).
  + Purchased proto-case
  + Had team meeting at LBNL
* Resonance/Stepper Motor Board:
  + Stepper motor board is being modified for correct connector.
  + Chassis design is being laid out.
  + FNAL sending piezo boards (4)
* Interlock Board/Chassis:
  + FEM: Board is being laid out.
* Common Power Supply: Chassis is with designer.
* CMTF
  + Waveguide and Coax: All 10 of the middle section coaxs are installed.
  + Cable Tray: Instataltion delay with electricians who have been assigned elsewhere.
  + Documentation: System block diagram is being updated weekly.
  + LLRF: All Chassis are assembled. They are being tested and calibrated now.
  + SSAs: The three were moved into their final position.

**Upcoming Activities:**

* + Continue prototype tests and assembly (resonance, interlocks, power supply)
  + CMTF: Continue working on documentation, installation and instrumentation.