Weekly Reporting

WBS 1.01.07 JLAB Management

Week of March 11-17, 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:**

We are hosting the project QA manager to review status at JLab.

Pre-baseline schedule reviews ongoing.

PRR presented and approved for the cavity string bellows and spool pieces.

Integrating the schedules for the test plans for LLRF and the pCM.

Several people are participating in a vendor visit to France for 4.5 K cold box turbine variable break demonstration.

**Upcoming Activities:**

Warm helium compressor CDR 25 April 2016

Weekly Reporting

WBS 1.04.6 JLAB Cryomodules

Week of March 11-17, 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.

**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 was represented at CCB on 3/10. Plan to complete EAC by 3/25.

EAC for pCM is being prepared for presentation at CCB in April.

E. Daly participated in follow up discussion of draft committee report for 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. RI has agreed to incentives and shows early dates of 1-July for first eight cavities and 1-August for second eight cavities. These cavities will be used for first production CMs at each lab.

Zanon has received cavity materials and is developing an update to the delivery schedule which is expected by 3/22. Current P6 what-if reflects JLab’s best estimate showing -62 days of float. This will be updated after vendor response is received.

RI has first article production is underway – continuing with pressing of half cells (288 mid-cells & 30 end cells complete 3/14), began pulling short beam tube ports, and continuing machining of end group parts.

ZANON first article production is underway – continuing with pressing of half cells (128 mid-cells & 20 end cells complete 3/10).

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

ZANON has 100% of materials needed except half cells (67%), HOM housings and rods (83%) and beam tubes (~15%).

Remainder of HOM housings and rods, inadvertently omitted from FNAL shipment to DESY, will be shipped from FNAL as an expedited shipment.

Remaining tube materials from ATI are being inspected at FNAL and will be shipped upon completion (date TBD).

Remaining cell material has been inspected at DESY and is expected to ship to both companies in Mid-April.

RI plans to send the final drawings from the HV subcontractor for formal review and approval by end of next week.

DESY colleagues visited RI for to refurbish cavity production tools. Cell tuning device (HAZEMEMA) has been refurbished. The CTM will be done at a later visit. Visit to ZANON is pending negotiations between DESY & Zanon.

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

Cavity string assembly: As of Wednesday evening, string is fully assembled and slow pump down have been started. Roll-out of string planned for early next week, 3/22.

Modification of parts and assembly of UCM (GHRP) ongoing - 5K Cu straps are still being reworked at vendor (Expected delivery week of 3-21). Installation of instrumentation continues on GHRP. Upper cold mass supports sent to Machine shop for match drilling. Gate valve weldment weld sizes in question – JLAB/FNAL SOTR and experts working on solution.

The SC Quad magnet was unpacked - BPM end plate modifications were started.

We received final drawings for shipping frames and end caps, and are proceeding with RFP for these items.

We shipped (6) magnetic shield end caps set to FNAL to replace damaged units that were received at FNAL.

Production CM lead and work area lead traveled to FNAL to witness installation of upper cold mass onto cavity string.

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.

**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 ACSs, Travelers, NCRs, & etc.
* Zanon provided a package detailing the manufacturing and process steps for the LCLSII cavity production. A prescreening of the documents indicated that a team effort would be required to successfully evaluate the paperwork. Ed Daly will take lead in coordinating this effort.
* JLab SOTR and QARs have compiled a draft list of topics for which JLab could provide functional support to Fermilab in the up-coming trip to WXCX in China. WXCX is the manufacturer for the LCLSII vacuum vessels. Gary Cheng will schedule a coordination meeting with Fermilab to discuss the plan.

**Upcoming Activities:**

* Visit FNAL to observe cryomodule alignment process March 2016
* Mike Skonicki (SLAC-LCLSII QA Mgr) 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 11-17, 2016

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

**Accomplishments this week:**

The weekly design coordination meeting was held with the 4.5K cold box vendor (ALATUS). Several members of the cryoplant design team are currently in Sassenage France at Air Liquide headquarters to witness a performance test of the turbine brake system.

The 4.5K Cold Box PDR was held at JLab on March 10. Comments from reviewers are being consolidated for transmittal to ALATUS.

The weekly coordination meeting with the warm compressor vendor (PHPK) was held. PHPK presented their proposed modifications to the cooler skid frames to meet the seismic requirements.

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

The compressor room warm helium gas piping installation design drawings are being reviewed.

Substantial progress was made on the preliminary design of the LN2 transfer lines and associated P&ID drawing.

**QUALITY**

JLab QARs participated in the 4.5K Cold Box PDR on Mar 10, 2016.

**Upcoming Activities:**

* Warm Helium Compressor CDR, 25 April 2016

Weekly Reporting

WBS 1.02.03.05.12 LLRF

Week of March 11-17, 2016

**Issues: None**

**Accomplishments this week:**

**JLAB**

* LLRF Coordination/Documentation:
  + Held meeting on the CMTF EPICS interface (JLAB and SLAC participated).
  + Contacted Alex Ratti (LBNL) to get a BMB7 FPGA board for the resonance and interlock chassis.
* Resonance/Stepper Motor Board:
  + Received the four piezo boards from FNAL.
  + Chassis is with designer.
  + Chassis power boards being laid out.
* Interlock Board/Chassis:
  + FEM: Board is in lay out.
* Common Power Supply: Chassis is with designer.
* CMTF
  + Cable Tray: Installation has been contracted out.
  + Documentation: System block diagram is being updated weekly.
  + LLRF: All Chassis are assembled and tested.
  + Cabling: The team met to decide what to do with the cable needs. We will use existing trunk cables where appropriate and pull new cables (electron probe, temp sensors etc.) when needed.

**Upcoming Activities:**

* JLAB:
  + Continue prototype tests and assembly (resonance, interlocks, power supply).
  + CMTF: Continue working on documentation, installation and instrumentation.
  + May 9/10 Team meeting (Tentative)
  + June 6-8 Rack assembly, test and shake down (JLAB)