Weekly Reporting

WBS 1.01.07 JLAB Management

Week of March 24-30, 2017

**Issues:**

**Accomplishments this week:**

Participated in the Cryoplant installation vendor day and 75% design review.

The accruals were submitted.

We are preparing April BCR for Beamline absorber procurement.

We submitted the procurement package to DOE for modifying vendor contact to include additional cavity material.

**Upcoming Activities:**

Director’s Review at SLAC 3-5 May 2017

International Particle Accelerator Conference 14-19 May

 DOE Status Review at SLAC 13-15 June 2017

 SRF 2017 in China July 2017

FAC at SLAC Late Summer 2017

Weekly Reporting

WBS 1.04.6 JLAB Cryomodules

Week of March 24-30, 2017

**Issues:** Cost and schedule impacts due to cavity recipe development effort at vendors. Impact on cryomodule assembly due to design changes and parts availability associated with microphonics.

**Accomplishments this week:**

CTF down is in progress and currently on schedule to complete work on 7-April. Two cavities (048, 049) are loaded in dewars 7&8 awaiting cold helium. VTA will resume testing on 10-April.

Met with JLab DOE site office to discuss procurement package related to BCR-040.

Continuing to develop proposal for possible additional CM design verification and acceptance testing at JLab.

Beamline Higher Order Mode Absorber contract was executed.

Cavity Status

Prepared several change requests for Zanon including modified processing and movement of excess material. Developing plans for evaluation of bare cavity recovery steps at FNAL.

Reviewed assembly methods at RI to improve cleanliness and reduce field emission.

PCCM was held this past week with a focus on developing rework path and testing of cavities.

Second four RI cavities (057, 060, 061, 062) were qualified via testing at DESY.

A shipment of six cavities, four untested (070, 072, 073, 075) and two from first tests at DESY(0053, 0054), are en route to JLab. A shipment of four cavities (074, 076, 077, 078) are en route to FNAL.

pCM Status

GHRP and helium lines leak checked after caps reinstalled. New coupler tuning knobs received and awaiting installation. Clean beam tube installation completed. End cap installed. Expecting new JT stems for pCM from FNAL for test.

First Bayonet box welding is complete. Instrumentation and MLI were installed. Preparing to install bayonet box on pCM next week.

New HX from Eden arrived 27-March. Receipt inspection activities including leak check and instrumentation checks are in progress.

Production Status

Jlab and FNAL are working through kit lists for workstations to ensure identical parts used and to identify any shortfalls in components.

Design changes associated with microphonics have required some new parts. Parts for JT piping modifications are needed in several weeks prior to J1.3-2 at WS5. Parts for further piping modifications are needed now for J1.3-3 at WS2.

CM-02 currently at WS3:

Installing thermal straps. Installing instrumentation. Continuing with implementing changes from FNAL to reduce microphonics - G10 bushings on JT line and nomex tie backs of invar rods are in progress.

CM-03 currently at WS1:

Bellows covers in place. Fiducialization of string complete. Heaters glued to helium vessels in anticipation of welding titanium sheets and 2 phase pipes this week. Coupler 50K heat stationing installed. Berry bolts installed. Magnet has arrived but had uneven mating surfaces and epoxy in lifting tapped holes. FNAL has given Jlab instructions for corrective action before use. Magnet has been inspected and completed hi-pot test.

CM-04:

Six cavities qualified for string. Two more plan for testing in VTA week beginning 10-April.

**QUALITY**

Submitted the initial NCR & Incident Report to SLAC on the issue of the compressed CM3 cavity string.

Continue to review the new SLAC QA procedure and process on Equipment Transfer & Verification, along with other draft Equipment Hand-off documents from SLAC.

**Upcoming Travel:**

E. Zanon Vendor Oversight Mar 16-27 (A. Palczewski)

E. Zanon Vendor Oversight Mar 26-31 (C. Reece)

RI Vendor Oversight Mar 28-31 (A. Palczewski)

E. Zanon Vendor Oversight Apr 3-11 (K. Macha)

E. Zanon Vendor Oversight Apr 7-15 (H. Park)

HOM BLA Vendor Kick-Off Mtg – May (H. Park, E. Daly, T. Peshehonoff)

Weekly Reporting

WBS 1.04.08 JLAB Cryoplant System

Week of March 24-30, 2017

**Issues:**

**Accomplishments this week:**

Prepared and presented the 2K cold box assembly design review on 9 March. The agenda, charge, and supportive materials was provided to three reviewers from three different laboratories. Final report pending. Continued work plan for completion of the design.

Preparation for delivery and storage of the compressor skids are underway at SLAC.

Assembly work continued on the fabrication of the CP1 Upper Cold Box assembly. Delivery of the lower HCB was received at PHPK. See photo below



A BCR was presented to cover unexpected custom charges for 4.5K cold box heat exchangers and turbines on 23 February. The request was held by SLAC management until SLAC/DOE discussion was completed. Custom duties were avoided for cold box shipment #4.

A Vendor Day was held at SLAC on March 29 to introduce construction firms of the upcoming RFQ for the installation of the cryogenic plant and answer questions.

A 75% mechanical, electrical, and installation construction review was held at SLAC on March 30. The installation documentation package was reviewed. Comments and recommendations pending. Documentation packages were available for the reviewers as page turners.



75% Installation Design Review

A cryoplant Strategy and Procurement Modification BCR was developed for remaining work for presentation to SLAC management.

**QUALITY**

Provided feedback on the 2K Cold Box FDR, including information on shipping.

Plans underway to support Warm Helium Compressor shipping from vendor.

Reviewing the draft technical specification for the Instrument Air Receivers.

**Upcoming Travel/Reviews:**

Directors Review, SLAC, May 3-5th 2017

100% Installation Design Review, May 8, 2017

 DOE Review, SLAC, June 13-15th 2017

 FAC Review, SLAC, late summer 2017

Weekly Reporting

WBS 1.02.03.05.12 LLRF

Week of March 24-30, 2017

**Issues:** None

**Accomplishments this week at JLAB:**

LLRF Coordination/Documentation:

* + Heater: The FPGA board needs to have part placement checked and then it can be sent out.
	+ Active Compensation: Participated in discussions with the LCLSII SRF community.
	+ CMTF EPICS software continues with checkout of all the features.
	+ Discussing internally, JLAB taking on full production of LLRF.

Resonance/Stepper Motor Board/Chassis:

* + Received updated firmware from Josh (FNAL) to test.
	+ We need to have a meeting between Larry, Josh and Rama to get communication between RFS and resonance chassis working.
	+ Test bench design continues.
	+ Making production modifications to the pc boards, including SLAC ID.
	+ Resonance chassis was shipped to FNAL along with PS retro kit.

Interlock Board/Chassis:

* + Test bench design continues.
	+ Making production modifications to the pc boards.
	+ Question about the Arc interlock for production still not resolved.

Common Power Supply/Chassis/Boards:

* + Gun PS Chassis/Board: This CAD is complete. Files will be sent to Gang/Kerry for review.
	+ Power Distribution Investigation: Complete LLRF system with modifications, the voltages at the RF board is 5 volts (6.2 volts before RF board LDO). 6 volt power supply is adjusted at 6.85 vdc.

CMTF

* + Preparing for the pCM re-test in April ongoing. pCM will be cold on April 22.

**Upcoming Activities:**

* Prepare for SLAC controls review in April
* Prepare for Directors Review and FDR in May