Weekly Reporting

WBS 1.01.07 JLAB Management

Week of Feb 3-9, 2017

**Issues:**

**Accomplishments this week:**

Beamline HOM procurement package was sent to DOE for approval.

Award the Ambient Heat Exchanger this week.

Vendor visit to Eden Cryogenics, the CMTF heat exchanger looks good.

Extended vendor visit to EZ is continuing

Routine vendor visit to Namura plating, work looks good.

Developing the cost estimate for additional cryomodules.

**Upcoming Activities:**

TESLA Technology Collaboration 21-24 Feb

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

FAC at SLAC Late Summer 2017

Weekly Reporting

WBS 1.04.6 JLAB Cryomodules

Week of Feb 3-9, 2017

**Issues:** Cost and schedule impacts due to cavity recipe development effort at vendors. Planning and execution of CTF down activities.

**Accomplishments this week:**

CTF down is planned to start 17-FEB. Associated work on improvements in the vertical testing area are being planned including preparing dewar 5 for testing three cavities in one cooldown.

Concluded visit to potential niobium material supplier on 4-Feb to review and discuss specification. Request for quotation from potential cavity supplier that includes niobiujm materials is expected by 11-Feb.

Productive meeting at copper plating vendor on 6-Feb. Reviewed current processes and schedule. Discussed plans for plating of interconnect bellows parts.

Developing strategy to restart Zanon. Experts concluded visit at Zanon on 8-Feb. Zanon has been directed to stop fabrication work and focus on development of written procedures to be evaluated by project experts prior to any work restarting. PCCM held meetings to continue developing path forward including rework of existing cavities.

First batch of RI cavities have arrived at DESY. A. Palczewski and D. Gonella are at DESY on 9-Feb for a meeting to discuss testing details. Testing will begin with two weeks.

Plan to send 5 to 6 untested cavities from JLab inventory to FNAL. Need date from FNAL is required.

pCM Status

Conducted performance tests on superconducting magnet. Magnet was ramped in steps to 20 A, and quenched after 33 minutes at 20 A.

Average Qo value for two cavities measured at 16 MV/m was 3.3 x 10^10.

Started warm up of pCM on 02-Feb, Thursday during swing shift. Disconnected the supply u-tubes on Sunday. Removed pCM from test cave on 06-Feb.

Planning for follow up videoconference to closeout PRR during the week beginning 27-Feb.

Developed plans for re-work of FPC adjusting rods after pCM warm up. Removed and re-installed FPC connecting rods on cavities 2, 6, 7 and 8.

Continuing with preparations for shipping test. Detailed plans were presented at SRF weekly meeting. Removal of bayonet box and end cap is in progress. Leak check of shipping caps was completed. Alignment group is verifying positions of gate valves, internal flanges and vacuum vessel fiducials this week.

Production Status

CM-04:

Cavity 022 qualified for string assembly on initial test. Admin limited at 24 MV/m, FE free, tested in 5-8 mGauss field, Q0(16MV) = 3.6e10. Next four cavity tests are 046 (Tuesday, 7 Feb), 048 (Thursday, 9 Feb) and 043, 044 week of 13-Feb.

CM-03:

Cavity 033 qualified for string assembly on initial test. Admin limited at 24 MV/m, FE free, tested in 5-8 mGauss field, Q0(16MV) = 4.0e10.

Qualified cavity is scheduled to test Thursday 2/2.

Cavity 022 is scheduled to test Friday 2/3.

Completed preparations of kit, tooling and hardware needed for string assembly.

UCM004 Magnetic field survey ongoing. Demagnetized to all GHRP hanger pads. Small Parts in process of inspection and kitting prior to assembly.

CM-02:

Two-phase welding completed and inspected. Leak check of the piping is complete except for segment with JT piping. Decision to use original design for JT line size in order to hold schedule was given by SM.

Instrumentation is in progress; however we need some modified procedures from FNAL.

Magnet incoming QC is complete. Minor mods to installation tooling have been made.

Upper cold mass UCM006 - Incoming QC is in progress.

Vacuum vessel VV006 - Incoming QC is in progress.

Continuing inspections on beamline bellows and spools prior to shipment to plating vendor.

**QUALITY**

SLAC LCLSII Project QA is implementing a new procedure to define the process of Equipment Transfer & Validation to SLAC. Mike Skonicki and Stefanie Smitherum (SLAC LCLSII Document Coordinator) plan to visit JLab in the near future to provide an information session about the new process. At the same time, Stefanie would like to learn about the workings of the JLab Pansophy traveler system from a documentation standpoint.

**Upcoming Travel:**

E. Zanon Vendor Visit January 28 - Feb 8 (Palczewski, Reece)

E. Zanon Vendor Oversight Feb 15-Mar 8 (Macha)

Vendor Visit to CPI, Thales, RI February 16-25

TTC at MSU/FRIB Feb 20-24

Vendor Visit to Wuxi March 20-24

Weekly Reporting

WBS 1.04.08 JLAB Cryoplant System

Week of Feb 3-9, 2017

**Issues:**

**Accomplishments this week:**

A Smithgroup report meeting was held at Jefferson Lab on January 25th to review their analysis of the current installation design package and the recommendations to complete the cryoplant installation documentation package. Final report was received by SLAC on Friday, 27 January. First controls documentation to support Smithgroup scope of work was submitted Friday, 3 February. Second set of documentation release is schedule by Wednesday, 15 February.

Fabrication of the CP1 warm helium compressor skids at PHPK continued to be on schedule with indications of substantial progress in both the HP and LP compressor skid assemblies. First shipments to SLAC is scheduled for April 2017. Preparation for delivery and storage of the compressor skids are underway at SLAC.

The technical evaluation of the purifier bid proposals were completed. To be combined with the commercial offer for determination of best value.

Upper 4.5K cold box shipping saddles and CP1 upper cold box head assembly continued throughout the week.

MCC procurement specification has been released for approval.

An Integrated Controls Workshop to be held at SLAC on February 8th in support of review recommendation to ensure continuity of design between the various labs for the cryogenic plants, cryogenic distribution system and cryomodules.

**QUALITY**

Reviewing the Inspection & Test Plans (ITPs) for the 2K Cold Compressor submitted by Air Liquide.

Reviewed and approved the Technical Specification for Diesel Standby Power Generator System.

PHPK presented their internal QA/QC plan during the ITP review at PHPK on January 31. The ITP was reviewed by JLab QA/QC during the past week.

SLAC Systems Integration requested a system-by-system breakdown of applicable CryoPlant design codes. Discussions are to continue.

**Upcoming Travel/Reviews:**

Directors Review, SLAC, May 3-5th 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 Feb 3-9, 2017

**Issues:** None

**Accomplishments this week at JLAB:**

* LLRF Coordination/Documentation:
  + Attended LLRF team meeting last week at FNAL.
  + Sent full JLAB production cost estimate to the SLAC CAM.
  + Heater: Drawings are in the SLAC box.
  + Buncher Interlocks: Discuss with Gang at Thursday meeting.
  + Interlock and power supply chassis are on the way to SLAC.
* Resonance/Stepper Motor Board/Chassis:
  + Planning code-a-thon with Garth, Josh, Rama and George at the end of February.
* Interlock Board/Chassis:
  + 3rd Chassis was checked out and sent to SLAC.
* Common Power Supply/Chassis:
  + We will investigate the 16.3 volt ps when it returns from FNAL. Ordered a replacement and shipped one to FNAL.
  + Gun PS Chassis/Board: Received some info from LBNL Need to discuss this more with LBNL at Thursday meeting.
* CMTF
  + Testing and replacing SSA2 with the spare.

**Upcoming Activities:**

* + Interlock meeting to discuss which ones we keep for production (A. Burill to convene a meeting).
  + Prepare for FDR in April.