Weekly Reporting

WBS 1.01.07 JLAB Management

Week of Feb 17-23, 2017

**Issues:**

**Accomplishments this week:**

Held a contract status meeting at JLab with E. Zanon project manager.

BCRs for vendor oversight at E. Zanon.

Awarded oil compressor contract.

Reviewed EACs with SM.

Conducted monthly accruals.

Several staff members attended TTC at MSU.

STL at BESAC meeting.

**Upcoming Activities:**

2k Cold Box FDR at JLAB March 9

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 17-23, 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 in progress.

Reviewed EAC with Jlab STL and PMO, System Manager, deputy and project analyst.

Developed BCR form and presentation on Cavity Vendor Support for CCB on 23-Feb.

Received quotation from potential cavity supplier that includes 32 spare cavities and niobium materials. In addition, we received updated pricing for optional cavities. Vendor can produce two more cavities with remaining material at option pricing.

Developing strategy to restart Zanon. Zanon has been directed restart fabrication work on material for 67 cavities. Written procedures for machining, grinding and handling activities have been reviewed and approved by project experts. JLab cavity fabrication expert is onsite and supervising procedure development and on-going work.

Zanon project manager visited JLab on 21-Feb to discuss contract status. The discussion included cost, technical and schedule aspects. Notes and actions from the meeting were distributed.

There was no PCCM held this past week. Preparing for flash BCP of 202 (dressed cavity) and 240 (bare cavity) to investigate remediation of Q-slope in Zanon cavities.

Two bare and two dressed cavities made from NX material are in route from RI to FNAL. Four more cavities will ship from RI to FNAL early next week.

Collecting up parts in circulation from FNAL and JLab.

A total of 9 RI cavities have arrived at DESY. The first four have been inspected and installed onto a vertical test stand. These will be tested next week. The remaining five have received receipt inspection. One had a bad pin on the field probe feedthrough and will be returned to RI. The remaining four are receiving electrical inspection and will be tested 7 to 10 days later. Qualified cavities are planned for use in CM04.

Three untested cavities from JLab inventory were shipped to FNAL.

pCM Status

Continued preparations for shipping tests. M. McGee (FNAL) on-site to assist with shipping fixture preparation and check out. Installed accelerometers and geophones onto cryomodule, frame and trailer bed. Loaded CM into shipping fixture and onto trailer. Drove shipping fixture around site to check-out instrumentation and confirm data acquisition.

Production Status

CM-04:

Four qualified cavities are stored in the cleanroom. Expect four more from successful DESY testing.

CM-03:

Four cavities are installed on the rail. String assembly will be complete by Saturday. Leak checking will occur next week. Roll-out projected by 3-MAR.

Upper cold mass UCM006 – Reworked the tee and leak checked. Conducting magnetic hygiene pass.

Vacuum vessel VV006 - Incoming QC is complete.

CM-02:

Heat stationing items are being prepared for installation. Adding shrink tubing, Mylar and indium foil. Tuner arm slots have been opened up. Bearing blocks have been installed. Helium pipe welding is on-going. We have added three Assembly Techs on Feb 20th. We are awaiting parts from FNAL - G-10 flux gate holders between HV mag

shield layers and connecting plates (2) and associated hardware for the SC magnet.

Received VV010 and UCM010 at off-site storage facility.

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

**QUALITY**

Reviewed the Zanon manufacturing procedure for the Control of Nonconforming and Corrective Action.

Participated in the discussions in the E. Zanon visit to JLab on Feb 21st.

Reviewed the QC and welding documents from WXCX for UCM # 12 and VV # 12.

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.

A Significant NCR for the warm coupler installation on the pCM will be submitted to SLAC.

**Upcoming Travel:**

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

Vendor Visit to CPI, Thales, RI February 16-25 (Stirbet)

TTC at MSU/FRIB Feb 20-24 (Wilson, Palczewski, Drury, Reece, Powers)

E. Zanon Meeting March 17 (J. Galayda, J. Preble)

Vendor Visit to Wuxi March 20-24 (Cheng, Fischer)

Weekly Reporting

WBS 1.04.08 JLAB Cryoplant System

Week of Feb 17-23, 2017

**Issues:**

**Accomplishments this week:**

Smithgroup is at JLab for an electrical/controls design coordination meeting at JLab (Thursday, Feb 23) followed by mechanical on Friday, Feb 24.

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. A pre-shipment meeting is to take place at PHPK on March 14th. Mike Bevins and Dirk Pfluekhaln (SLAC) will attend the planning meeting.

The helium purifier ordered was placed.

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

A BCR was developed to cover unexpected custom charges for 4.5K cold box heat exchangers and turbines. Project Management presentation was developed for Feb 23.

The draft cryoplant EAC was delivered to SLAC on Friday, Feb 17. A meeting to discuss the draft EAC was held on Wednesday, Feb 22.

**QUALITY**

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

**Upcoming Travel/Reviews:**

Smithgroup controls/electrical/mechanical coordination meeting, Feb 23/24

2k Cold Box FDR, JLAB, March 9 in JLab CEBAF Center, L102

Warm Helium Compressor Shipping Plan Meeting, PHPK, March 14

75% CP Installation Design Review, SLAC, March 28-29

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 17-23, 2017

**Issues:** None

**Accomplishments this week at JLAB:**

* LLRF Coordination/Documentation:
  + Heater: Analog board is tested. The FPGA board is in CAD.
* Resonance/Stepper Motor Board/Chassis:
  + Code-a-thon with Garth, Josh, Rama and George starts Tuesday next week.
  + We have started designing the production test bench for the chassis.
* Interlock Board/Chassis:
  + George is working on save, restore and archiver EPICS software.
  + Similarly we have started designing the interlock chassis production test bench.
* Common Power Supply/Chassis:
  + 16.3 volt ps sense line was flaky. The subject of what to do with the PS sense wires is an ongoing discussion.
  + Gun PS Chassis/Board: We have the connector information. Now waiting on size information from LBNL.
  + Power Distribution Investigation: We are focusing on the distribution cable and the connector contacts where most of the loss appears to be. We are modifying a PS for four conductor operation.
* CMTF
  + Replaced SSA2 with the spare and tested it into a waveguide short to 4 kW.

Upcoming Activities:

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

Test Bench draft block diagrams due next week.