Weekly Reporting

WBS 1.01.07 JLAB Management

Week of June 14-20, 2018

**Issues:**

Need to finalize shipping plans and hardware so we can ship CMs.

**Accomplishments this week:**

Preparing June CP BCR for several May awards.

Preparing June CM BCR for several May awards and other actions. This will require an EAC for the CM procurement WBS.

Evaluating potential scope reductions and cost-cutting measures.

**Upcoming Activities:**

19-21 June – LCLS-II HE CD-1 Review

Weekly Reporting

WBS 1.04.06 JLAB Cryomodules

Week of June 14-20, 2018

**Issues**:

Risk of lack of high-performing cavities to finish CM assembly. Possible delay of first shipment from JLab due to availability of modified shipping caps.

**Accomplishments this week:**

Revised EAC on quick turn-around and provided input to SLAC.

Preparing bundled cavity BCR that will include give-back of $1.8M for cancelling 32 new cavities and instead reworking 27 cavities at RI.

LCLS-II-HE CD-1 Review – Daly attending.

Participated in shipping review held at FNAL. JLab staff attended remotely.

Procurement for additional shipping caps is on hold pending decisions on design and use of modified DESY shipping caps.

Next deliveries of cavities from RI and EZ are en route to both labs.

J1.3-01, J1.3-03 and J1.3-04 - @ Storage; Idle; Waiting to move to WS4 for VV removal

J1.3-02 – @ Stored; no further work planned.

J1.3-05 - @ LERF; Used for fit up of waveguide.

J1.3-07 - @ WS6 ; Prep for rework.

J1.3-08 - @ CMTF; Obtained Emax and FE on all 8 cavities after tuning cavities to resonance and setting FPC Qext. Instrumentation checked out. Excellent vacuum levels. All cavities show quench as limit on gradient. Max gradient is 147 MV. Plan to verify end group quenches on several cavities.

CTF was shut down to warm up CB3 to remove contamination on 14-Jun. CTF was online Monday morning. Priority given to VTA R&D testing including HE single cells. Plan to re-cool CM on 20-June, soak for 24 hrs at 4K, pumpdown to 2K then perform fast cooldown on 22-June. Qo measurement to begin Friday 22-June on second shift.

J1.3-09 @ WS5 – Warm coupler install in progress. End cap installation in progress. Prep’ing for delivery to the LERF in two weeks.

J1.3-10 @ WS5 – Moved to WS5. Cold mass aligned to VV. Fastener checklist complete. Final Assembly in progress.

J1.3-11 @ WS3 – Retrofit work complete. Two-phase pipes leak check complete. Magnet leads in progress.

J1.3-12 @ WS3 – Moved to WS3. Cold Gate valve support in progress. Mate to UCM complete.

J1.3-13 – String prep began 4 June. String build began 11 June. All cavities on the assembly rail as of end of day 14-June. Slow-pumped system and began leak check 18-June. String is leak tight as of 19-June. String rollout by 22 June.

J1.3-14 – All cavities qualified. String prep begins 2 July. String build begins 8 July. String rollout by 20 July.

J1.3-15 - 4 of 8 cavities qualified for the string.

Cavity Tests – CMTF CM-08 cooldown Wed., 20 June. Plan for cavity 025 - first test Tue., 19 June. Plan for cavity 056 (from string 6) retest Wed., 20 June.

**QUALITY**:

Site CWI conducted receipt inspection and document review for LERF return end caps from AES. Rejected both caps for missing welds and missing AES CWI inspections; JLab to repair.

**Upcoming Travel/Meetings:**

LCLS-II-HE CD-1 Review 19-21 June (E. Daly)

TTC 26-29 June (K. Wilson, A. Palczewski)

EZ Vendor Visit July 9-13 (H. Park)

LINAC 2018 Sep 14-19 (A. Solopova)

Weekly Reporting

WBS 1.04.06 Cryomodules - LERF Conversion

Week of June 14-20, 2018

**Issues:** None

**Accomplishments this week:** No report.

**Upcoming Travel/Meetings:** None

Weekly Reporting

WBS 1.04.08 JLAB Cryoplant System

Week of June 14-20, 2018

**Issues:**

1. Resolution of interferences created during the design of the platforms and cable trays support systems (identified in 2017).
2. Installation of the LN2 Dewar and helium ‘tank farm’ foundations. The warm helium tanks have been in storage for several months awaiting completion of these supports.
3. Changing the LN2 piping design from a build-to-print to an unidentified source and fabrication.

**Accomplishments this week:**

**2K Cold Box**

1. Top plate manufacturing re-awarded to expedite delivery to 2K CB vendors
2. Details on fabrication plans are being received this week and next.
3. Delivery scheduled for February 2019.

**4.5K Cold Box Status**

1. UCB1
   1. Platform scheduled for early July shipment to SLAC.
2. LCB1
   1. Ongoing wiring and instrumentation Checkout.
   2. Helicoflex seals installed on 20K Adsorber, no leaks detected on MSLD after seal installation.
3. UCB2
   1. Wiring complete; final inspection in progress.
   2. Lower shell installation scheduled for June 25th.
4. LCB2
   1. Preparing to paint shell this week.
   2. Painting scheduled to be completed by June 25th.

**Interface Boxes**

1. Interferences created by platform design need to be mitigated.
2. Preliminary design review scheduled for July 2018.

**Venturi & Control Valves**

1. Venturi awarded.
   1. Expediting venture for critical cold box systems.
2. Control valves award delayed on technical response.
   1. Award expected this week.
   2. Priority shall be coordinated with installation schedule.

**Deliveries & Installation**

* First phase of controls enclosures delivered and received @SLAC.
  + Second phase of enclosures scheduled for delivery next month.

**Procurement Status**



**Quality**: Coordinated 2K Cold box top plate and skirt weldment requirements with Procurement and Craft after PR was issued. Site CWI traveling to AES on Friday, 6-22 for LN2 Dewar piping inspection per previously agreed hold point.

**Upcoming Travel/Reviews:**

* Oil processing training for SLAC (PHPK) 25-June-2018
* SLAC I&C staff @ JLab (coordination meeting) 27-28-June-2018
* 4.5K cold box monthly scheduling meeting 27-June-2018
* ALATUS-vendor site visit to SLAC (Reassembly) Week of 9-July-2018
* 4.5K cold box re-assembly meeting @SLAC Late-July-2018

Weekly Reporting

WBS 1.02.03.05.12 LLRF

Week of June 14-20, 2018, 2018

**Issues:** None

**Accomplishments this week at JLab:**

* Resonance/Interlock Chassis:
  + Chassis are installed in LERF Racks.
  + Rama was able to test the firmware from the code repository. All of the steppers and piezos were tested. Next is to move this to 1.5 which I believe Larry will do. This is good progress!
* LERF
  + LERF LLRF instrumentation cables: RF cables are being installed slowly due to competing priorities.
  + HOM Measurement: No change from last week.
  + Reference system and LO: CM1 is now on the LO distribution and working with the RFS and PRC chassis.
  + SSAs: In CM1 tested the last four SSAs to 4 kWs using the RFS chassis. Everything went smooth.
* CMTF
  + The next CM is cold we are waiting for a chance to complete the resonance control firmware.
* Interlock Board/Chassis:
  + Work at this time is on hold until needed for 3.9 GHz.
* Common Power Supply/Chassis/Boards:
  + Work Done.

**Upcoming Activities:**