

Weekly

HIGHLIGHTS



The PPPL Highlights for the week ending September 9, 2016 are as follows:

U.S. ITER FABRICATION (C. NEUMEYER):

Steady State Electric Network (SSEN):

Uninterruptible Power Supply (UPS) system and DC Distribution: Contract award recommendation memos have been issued. All issues with terms and conditions have been resolved. PPPL Procurement will perform internal review of award recommendation packages and draft contracts, then pass to DOE for their review and approval. ITER IO has approved all documents (tender lists, tender documents, and revised specification). Our objective is to award the contracts before September 30.

Arrangement for UPS + DC Distribution Battery Banks and for LV Distribution & Sub-Distribution Panels: An “Arrangement” will be used to transfer these items for future procurement by the ITER Organization because the storage life of the battery banks is limited and because the distribution panel requirements are not yet mature. A draft Arrangement document has been reviewed by US ITER and is now in final review by the ITER Organization. A memo establishing the cost basis has been uploaded for review by the ITER Organization. Our objective is to sign the Arrangement as soon as the contracts for the UPS and DC Distribution are signed.

Power Transformers: Shipment of Group 1 and 2 transformers (that comprise shipping lots 1 and 2) shipment continues to be delayed. Convened a videocon with all parties involved and developed action plan. Issues relate to the shipment of transformers accessories, which may be shipped separately from main transformer bodies but must follow the same modality and route and customs points, according to Turkish regulations. It was agreed that one Group 1 transformer will be shipped per lowboy truck (total 8 trucks for 8 units), two Group 2 transformers will be shipped per standard truck (total 2 trucks for 4 units), and the accessories will be shipped in trucks following the same routes. Packing lists and pro forma invoices must be prepared for each truck. Trucking will be scheduled so that all main bodies arrive at ITER site in a single day, and all accessories on another day. Earliest shipping dates will be week of 26 September.

NSTX-U (M. ONO):

Brian Wirth (UT-K/ORNL) and Zhehui Wang (LANL) visited PPPL to discuss ongoing collaborations on both the NSTX-U and EAST devices.

Preparations for an NSTX-U vacuum vessel entry continued this past week. Lockout and tagout of hazardous energy sources is about 90% complete, and the initial vessel entry for photographs and inspections could be next week. Neutral Beam (NB) pumps/purges are nearing completion, and the removal of the NB#1 to torus duct should begin early next week. Also, both NB calorimeters will be removed for maintenance. Radiography of the failed PF1aU coil has been completed, and analysis of the results continue. The PF1aU coil will be returned to PPPL next week for dissection and boroscope inspections as part of the ongoing forensics. The first of two orders for the copper conductor for a new PF1aU coil has been placed, and the set-up of the coil winding facility continues. A preliminary plan and schedule for the removal of the NSTX-U center column to allow the replacement of both the PF1a Upper and Lower coils has been developed and is under review. Also this week, analysis of the data taken during the in-situ post-run verifications of the TF coil system electrical joints was completed, and all measurements were found to be consistent with pre-op tests. Field Coil Power Conversion (FCPC) systems are being set-up for a power test of ITER Magnetic Diagnostics scheduled for next week. This FCPC test stand will be used later this year for power testing of the new PF1a coil.

This report is also available on the following web site:

<http://www.pppl.gov/publication-type/weekly-highlights>