NSTX-U Assessment and Recovery

Terry Brog

FESAC

February 1, 2017

PPPL
U.S. DEPARTMENT OF ENERGY | Office of Science
PRINCETON UNIVERSITY

Overview

- 10 run-weeks in FY2016
- Initial engineering and physics results encouraging
- June, 2016 failure of the NSTX-U PF1A-U caused a shutdown of experimental operations. This led to a full review of all systems, sub-systems, and components.
- Reorganization of PPPL management structure began September, 2016

Management Changes

- Terry Brog – Interim Director
- Stacia Zelick – Interim COO
- Valeria Riccardo –Engineering & Infrastructure
- Rich Hawryluk – NSTX-U Recovery Project Head
  - Charlie Neumeyer – NSTX-U Engineering Director, Systems Engineering & Integration
- Raffi Nazikian – ITER & Tokamaks
- Hutch Neilson – ITER Fabrication
- Marc Cohen – Interim CIO
- Andrew Zwicker – Communications and Public Outreach
- QA/QC reports to PPPL Director

DOE Notable Outcomes Are Near-term Focus

Extent of Condition

- Identify all design, construction, and operational issues
- Prepare correction action plan (CAP) to include cost, schedule, scope, and technical specifications of actions
- Provide an interim progress report by March 31, 2017
- Complete the CAP review and send the final report to DOE by September 30, 2017

Design Verification & Validation Review

- DVVR's scheduled and resource loaded
- First three DVVR's were successful

Extent of Condition Review Committee to Review Corrective Action Plan

- Support from ORNL, GA, MIT, US ITER
- Support from DOE Laboratories
- Experts from national and international institutions
- Experts from PPPL and Princeton University

Highest Quality Program Management

EXTENT OF CAUSE

- Review of policies and procedures for design, construction, installation, commissioning and operations of NSTX-U and other construction activities and projects

- Develop corrective actions to ensure the highest quality project management across the lab

Summary

- PPPL is committed to a complete evaluation of NSTX-U (design, fabrication, construction, operations)
- NSTX-U recovery actions will enable reliable and predictable operations for a predetermined period of time