

# NSTX-U OH Fault

## NSTX U Activity Certification Committee (ACC)

**C.A. Gentile on behalf of the ACC**

**May 28, 2015**

*Coll of Wm & Mary*  
*Columbia U*  
*CompX*  
*General Atomics*  
*FIU*  
*INL*  
*Johns Hopkins U*  
*LANL*  
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*Lodestar*  
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*Old Dominion*  
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*Princeton U*  
*Purdue U*  
*SNL*  
*Think Tank, Inc.*  
*UC Davis*  
*UC Irvine*  
*UCLA*  
*UCSD*  
*U Colorado*  
*U Illinois*  
*U Maryland*  
*U Rochester*  
*U Tennessee*  
*U Tulsa*  
*U Washington*  
*U Wisconsin*  
*X Science LLC*

*Culham Sci Ctr*  
*York U*  
*Chubu U*  
*Fukui U*  
*Hiroshima U*  
*Hyogo U*  
*Kyoto U*  
*Kyushu U*  
*Kyushu Tokai U*  
*NIFS*  
*Niigata U*  
*U Tokyo*  
*JAEA*  
*Inst for Nucl Res, Kiev*  
*loffe Inst*  
*TRINITY*  
*Chonbuk Natl U*  
*NFRI*  
*KAIST*  
*POSTECH*  
*Seoul Natl U*  
*ASIPP*  
*CIEMAT*  
*FOM Inst DIFFER*  
*ENEA, Frascati*  
*CEA, Cadarache*  
*IPP, Jülich*  
*IPP, Garching*  
*ASCR, Czech Rep*



# Charge to NSTX-U ACC

Charge to the NSTX-U ACC.

In light of the current work for completing NSTX-U CD-4 I am directing the committee to evaluate and confirm the four items listed below. The expectation is that the ACC committee will provide a recommendation to the ES&H Executive Safety Board following the projects work for making revisions to the NSTX-U CS.

1. Confirm that the re-assembly of the NSTX-U has been completed appropriately and has not impacted or changed the previous recommendation for issuance of a Safety Certificate,
2. Evaluate the new items designed and installed and confirm they do not impact the April 10, 2015 ACC recommendation for issuance of a Safety Certificate,
3. Confirm that the appropriate actions have been taken to establish and install electrical grounding prior to energizing the coils,
4. Assess the start-up process to confirm that we have needed checks-and-balances to ensure proper conduct of operations.

# NSTX-U CS – Documentation Package Items

- NEPA 1466
  - Work Package 9417 \*\*\*\* 8250
  - Work Planning Form 1672
  - Final Design Review Committee Report for the National Spherical Torus Experiment (NSTX) Upgrade Project
  - Engineering Work Package 229M
  - Procedure # D-NSTX-IP-3572 “Final Center Stack Installation Activities”
  - Lift Procedure Number D-L-NSTX-1047
  - NSTX Failure Modes & Effect Analysis / NSTX-FMEA-71-10
  - ISTP-001 – copy of run copy with external review committee
  - NSTX-02, Rev 14 – copy of run copy with external review committee
- Documentation package is fairly comprehensive. Some technical details could be improved – in the works

- Run Copy of ISTEP-01 – Approved and in place
- Run Copy of NSTX-02 – Approved and in place
- Blue Folder Package

# Documentation

- There is a well documented (blue folder) work package for the installation of “ Final Center Stack Installation Activities”
- Design reviews appear to be comprehensive , but lacks details associated with coil grounding strategy
- ECN’s appear to be well documented in the drawing(s) package
- No details associated with the OH Ground Plane Braid are depicted in system engineering drawings. The Ground Plane Braid is not shown on Center Stack drawings. While detailed mechanical drawings exist, there is only an old drawing ( from the first center stack ) to show the electrical grounding in the CS.

## Final Conditions / Actions

- NSTX-U ACC will convene to review those actions performed to address the OH fault issue(s)
- ACC will perform a physical walk-down of the center stack and associated areas.
- Report, post ACC review will be sent to Deputy Director of Operations