

## DESIGN REVIEW DOCUMENTATION – RESULTS

Title: NSTX-U OUTER PF Inspection and Repair \_\_\_\_\_

WP#: 2338 (ENG-032)

CAT: xA1 ☐ A2 ☐ A3

Type of Review: ☐ Peer ☐ CDR ☒ PDR ☐ FDR

Cognizant Individual: J. Petrella \_\_\_\_\_

Date of Review: 3/13/18

### Review Board Members:

Chair: T. Stevenson \_\_\_\_\_

RE J. Petrella

TA (Elect) R. Camp \_\_\_\_\_

TA (Mech) L. Dudek \_\_\_\_\_

TA (Mags) S. Raftopoulos

TA ( ) \_\_\_\_\_

QA A. Amaya \_\_\_\_\_

ESH J. Levine \_\_\_\_\_

### Attendees:

M. Cropper \_\_\_\_\_

C. Neumeyer \_\_\_\_\_

P. Titus \_\_\_\_\_

D. Loesser

S. Gerhardt \_\_\_\_\_

X. Zhao \_\_\_\_\_

V. Riccardo

J. Dellas

### Attendees:

K. Lamb (remote) \_\_\_\_\_

J. King DOE-FES (remote) \_\_\_\_\_

J. Menard (remote)

### Items Reviewed:

	Sat.	Unsat.	Comments or n/a if not applicable
Appropriate requirements identified	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Various _____
Development plans and schedules	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Reg. compliance incl. USI/USID and NEPA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NSTXU; no issues with SAD _____
Disposition of CHITS from previous reviews	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Cost objectives	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Other review objectives addressed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FMEA update _____

### SUMMARY OF RESULTS:

This review discussed the inspection of the outer PF coils PF2U&L, PF3U&L, PF4U&L & PF5U&L. This review did not introduce new design. This review covered legacy, requirements, performance, existing condition, and assessment of existing repairs. This review included analysis of the outer PF coils for copper stress, insulation, thermal, and usage. This review concluded that visual testing was not sufficient and recommended high potential and impedance testing to yield multiple metrics with use of OH heater. Local surface repairs to ground wrap can be performed per existing procedures. Costs and schedule have been developed. This review generated 11 chits; 3 were out of scope for this review but will be retained and moved to correct area of responsibility.

### Disposition: [check one]

\_\_\_\_\_ **Acceptable**

X \_\_\_\_\_ **Acceptable pending resolution of concerns**- CHITS identified above must be resolved prior to installation.

\_\_\_\_\_ **Incomplete** - Additional design work is required prior to another design review.

\_\_\_\_\_ **Unsuccessful** - Corrective actions must be taken and another review process must be initiated.

Responsible Engineer Joseph R. Petrella Jr. \_\_\_\_\_ Date: 3/26/18

Digitally signed by Joseph R. Petrella Jr.  
DN: cn=Joseph R. Petrella Jr., o=Engines, email=jrp@engines.com  
Reason: I have reviewed this document  
Location  
Date: 2018.03.26 15:47:01

Timothy N. Stevenson

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email=tstevens@pppl.gov, c=US  
Date: 2018.03.27 14:37:15 -05'00'

DRC Concurrence

**Distribution:** Review Board Members, Operations Center, Responsible Engineer, Cognizant Individuals, Project Manager, Project Director, relevant Technical Authorities, Chief Engineer, Fire Protection Engineer, Attendees, QA, ES&H, Security, Requesting & Performing Dept. Head