

# NATIONAL COMPACT STELLARATOR PROJECT Engineering Change Proposal (ECP)

## COVER PAGE

*(TO BE COMPLETED BY SYSTEMS ENGINEERING SUPPORT MANAGER)*

**Originator:** Bob Simmons

**Date:** December 5, 2006

**ECP No:** 051

**ECP Title:** Miscellaneous TF Coil Design Changes That Impact Fabrication

### Required Reviewers

**Required Reviewers for this ECP:** Mike Kalish, Joe Rushinski, Brad Nelson, Wayne Reiersen, Judy Malsbury, Jerry Levine, Ron Strykowski

### ECP Approval Level

**Expedited ECP?**  Yes  No

**Change Level:** 3 Project

**Approving Official:** 3 Reg ECP - Project Manager

### Actions

- (1) Update CSPEC-131-01 to reflect updated drawing list
- (2) Update drawings per ECN-5178R1

## APPROVALS

*(TO BE COMPLETED BY APPROVING OFFICIALS)*

Change Level	Approving Official	Approval?	Signature
3	NCSX Project Manager	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3a (Expedited ECP)	NCSX Engineering Manager	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2	NCSX Federal Project Director	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1	Associate Director OFES	<input type="checkbox"/> Yes <input type="checkbox"/> No	
0	Deputy Secretary of Energy	<input type="checkbox"/> Yes <input type="checkbox"/> No	

# NATIONAL COMPACT STELLARATOR PROJECT

## Engineering Change Proposal (ECP)

*PART I*  
*(TO BE COMPLETED BY ORIGINATOR)*  
**ECP-051**

**Originator:** Bob Simmons

**Date:** December 5, 2006

### Overview of Change

**Type of ECP:**       EXPEDITED       STANDARD

**Type of Change:**     TECHNICAL     COST     SCHEDULE     EDITORIAL

(Check all that Apply)

**Reason for Change:** Both Everson Tesla and PPPL personnel identified several changes in the design that will facilitate fabrication. RFD-13-001 reflects the background of these changes and ECN-5178 documents the specific drawings impacted.

**Impacted WBS Elements:** WBS 131

**Impacts of Change (Briefly Describe):** There is no anticipated cost or schedule impacts. The following technical changes are proposed by this ECP:

- Add notch to the front edge of the Wedge Casting to make the glass tape wrap under-flush on SE131-085. The notch is added to make tape on wedge under flush in VPI mold to enhance manufacturability.
- Add 1/8" radius at the top and bottom edges of the Wedge Casting sheet 1 of SE131-085, zones K4 and B4. This external radius is added to wedge to enhance manufacturability of mold which needs an inside radius.
- Update the assembly drawing SE131-035 to show the boot at the top and the bottom of the Wedge Casting Blended in. The epoxy glass boot which pins the wedge structure in place will be feathered into the ground wrap instead of having a step to enhance manufacturability of the VPI mold.
- Update the TF Flag Drawings to correct flat pattern so that it matches the model for Long Lead Right SE131-082 and Long Lead Right Bent SE131-053. These changes correct errors on the original flat pattern and bent TF Flag drawings.
- Change Reference dimension on drawing SE131-035 Sheet 2 in zone C3 From: 27.428 To: 27.433. This corrects the original dimensions.
- Add precise dimension to front face of wedge on Sheet 3 of Drawing SE131-003. This precise dimension added to front face to allow front face to be used as a datum.
- In Final Assembly Drawing SE131-003 added clearance holes for metrology reference points designated in the TF Assembly Specification. These access holes on front face of wedge are added for metrology and assembly purposes.

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*PART I*  
*(TO BE COMPLETED BY ORIGINATOR)*  
**ECP-051**

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Does this Change Impact Material Already Procured or Parts/Assemblies Already Assembled/Manufactured using this Material:  Yes  No

If "Yes", what is the recommended disposition of this material/part/assembly?

**Assessment of Other Options:**

**List Attachments, Impacted Documents, etc.**

- (1) Draft Rev 2 to NCSX-CSPEC-131-01-02
- (2) ECN-5178R1