

NATIONAL COMPACT STELLARATOR PROJECT

Engineering Change Proposal (ECP)

COVER PAGE

(TO BE COMPLETED BY SYSTEMS ENGINEERING SUPPORT MANAGER)

Originator: Bob Simmons

Date: July 30, 2007

ECP No: 055

ECP Title: Updated Modular Coil and GRD Requirements

Required Reviewers

Required Reviewers for this ECP: J.L. Anderson, Hutch Neilson, W. Reiersen, B. Nelson, L. Dudek, A. vonHalle, E. Perry, M. Zarnstorff, J. Levine, J. Malsbury, D. Williamson, J. Chrzanowski

ECP Approval Level

Expedited ECP? ☐ Yes ☒ No

Change Level: 3 Project

Approving Official: 3 Reg ECP - Project Manager

Actions

Update:

- CSPEC-142-05 - will be Rev 1;
- CSPEC-185-01 – will be Rev 1; and
- GRD (ASPEC-GRD) – will be Rev 5.

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- 055

Originator: Bob Simmons

Date: July 30, 2007

Overview of Change

Type of ECP: ☐ EXPEDITED ☒ STANDARD

Type of Change: ☒ TECHNICAL ☐ COST ☐ SCHEDULE ☐ EDITORIAL

(Check all that Apply)

Reason for Change: Updated GRD requirements to reflect most recent design requirements and updated Modular Coil Assembly CSPEC to include Type A and Type B modular coil requirements.

Impacted WBS Elements: All

Impacts of Change (Briefly Describe):

- CSPEC-142-05 to add in Type A and B Modular Coil Assembly requirements.
- CSPEC-185-01 to reflect disposition of NCR3715 to accept changes to Sections 4.2.2.1.2 (Electrical Isolation) to 600V vs. original 5000V and to Section 4.2.5.1 (Temperature Sensing) to change to 1.5 Mohms at 500V vs. the original 1.0 Mohms at 5000V.
- GRD to:
 - Section 3.2.3.1.1 - Increased maximum lift from 30 tons to 45 tons to reflect the crane upgrade in the test cell;
 - Section 3.2.1.5.3.3.2 – modified requirements to reflect use of PF1A in the initial configuration.
 - Appendix A – revised technical data sheet for initial operation consistent with the use of PF1A coils, limiting the power supply I^2t to less than 1.5s.
 - Section 3.3.1.1 – added permeability requirements for materials, welds, and attaching hardware outside the cryostat.

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? Use as is. Specs updated to reflect designs already implemented.

Assessment of Other Options: None

NATIONAL COMPACT STELLARATOR PROJECT
Engineering Change Proposal (ECP)
ECP-055

PART I
(TO BE COMPLETED BY ORIGINATOR)

Originator: Bob Simmons

Date: July 30, 2007

Detailed Description of the Change:

(Use Continuation Sheets and/or Attach Information/Sketches, As Needed)

List Attachments, Impacted Documents, etc.

- **CSPEC-142-05-01**
- **CSPEC-185-01-01**
- **ASPEC-GRD-05**