

# NATIONAL COMPACT STELLARATOR PROJECT

## Engineering Change Proposal (ECP)

### COVER PAGE

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

Originator: Paul Goranson

Date: 11/04/2004

ECP No: ECP-017

ECP Title: Modification of Vacuum Vessel Subassembly (VVSA) Inner Support Bosses to Utilize Simplified Hangers

#### Required Reviewers

Required Reviewers for this ECP: WBS Manager, WBS 1 Project Engineer, Engineering Manager, QA, Project Manager

#### ECP Approval Level

Expedited ECP?  Yes  No

Change Level: 3 Project

Approving Official: 3 Reg ECP - Project Manager

#### Actions

Update listed documents to reflect approved changes.

### 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	Under 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)*

Originator: Paul Goranson

Date: 11/04/2004

Overview of Change

Type of ECP:         EXPEDITED         STANDARD

Type of Change:     TECHNICAL     COST     SCHEDULE     EDITORIAL

(Check all that Apply)

**Reason for Change:** To incorporate a new support design which will streamline assembly and installation procedures for VVSA, and incorporate editorial changes and vendor recommendations.

**Impacted WBS Elements:** 1202

**Impacts of Change (Briefly Describe):**

The change will reduce complexity and cost of VVSA handling and installation.

**Assessment of Other Options:** None

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## Engineering Change Proposal (ECP)

### *PART I* *(TO BE COMPLETED BY ORIGINATOR)*

**Originator:** Paul Goranson

**Date:** 11/04/2004

**Detailed Description of the Change:**

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

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

**Ref : ECN-4933**

SE120-002	Vacuum Vessel Subassembly (VVSA)
SE120-004	Vacuum Vessel Period Inspection and Leak Check Assembly
SE122-018	Vacuum Vessel Port 12 Flange Detail
SE122-019	Vacuum Vessel Port 12 Seal Retainer
SE122-049	Vacuum Vessel Port 4 Flange Detail
SE120-057	Vacuum Vessel Port 4 Seal Retainer Detail
SE120-072	Vacuum Vessel Port NB Flange Detail
SE120-104	Vacuum Vessel Port 12 Cover Test Flangs Weldment
SE120-105	Vacuum Vessel Leak Test Block
SE120-172	Vacuum Vessel NB Port Cover Test Flange
SE120-173	Vacuum Vessel Port NB Seal Retainer

NCSX-CSPEC-121-02-03 Product Specification for the Vacuum Vessel Subassembly

**Description of Change:**

<b>SE120-002</b>	<b>Editorial change to BOM</b>
<b>SE120-004, sht 1</b>	<b>Editorial change to BOM</b>
<b>SE120-004, sht 15</b>	<b>Editorial change to callouts</b>
<b>SE120-004, sht 18</b>	<b>Design change to inner weld bosses to accommodate new support interface, including change in location, thread size and orientation.</b>
<b>SE122-018</b>	<b>Relax in tolerance</b>
<b>SE122-019</b>	<b>Relax in tolerance</b>
<b>SE122-049</b>	<b>Relax in tolerance</b>
<b>SE122-057</b>	<b>Add missing dimension, relax tolerance</b>
<b>SE122-072</b>	<b>Add missing true position callout, relax tolerance</b>
<b>SE122-104</b>	<b>Add missing port dimension</b>
<b>SE122-105</b>	<b>Change recess to full radius per contractor request</b>
<b>SE122-172</b>	<b>Relax tolerances, add missing stock thickness</b>
<b>SE122-173</b>	<b>Relax tolerances</b>