

<b>NATIONAL COMPACT STELLARATOR PROJECT</b> <b>Engineering Change Proposal (ECP)</b>			
<b>COVER PAGE</b> <i>(TO BE COMPLETED BY SYSTEMS ENGINEERING SUPPORT MANAGER)</i>			
<b>Originator: Ron Strykowski</b>		<b>Date: July 25, 2006</b>	
<b>ECP No: 049</b>		<b>ECP Title: Risk Retirement - FY06 Work Scope Completions.</b>	
<b><u>Required Reviewers</u></b>			
<b>Required Reviewers for this ECP: Hutch Neilson, Wayne Reiersen, Brad Nelson, Larry Dudek, Mike Williams. Al vonHalle; Judy Malsbury, Jerry Levine</b>			
<b><u>ECP Approval Level</u></b>			
<b>Expedited ECP?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<b>Change Level: 2</b>			
<b>Approving Official: 2 Federal Project Director</b>			
<b><u>Actions</u></b>			
<b>Update PMB by July 31,2006</b>			
<b>APPROVALS</b> <i>(TO BE COMPLETED BY APPROVING OFFICIALS)</i>			
<b>Change Level</b>	<b>Approving Official</b>	<b>Approval?</b>	<b>Signature</b>
<b>3</b>	<b>NCSX Project Manager</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>3a (Expedited ECP)</b>	<b>NCSX Engineering Manager</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>2</b>	<b>NCSX Federal Project Director</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>1</b>	<b>Associate Director OFES</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>0</b>	<b>Deputy Secretary of Energy</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	

# NATIONAL COMPACT STELLARATOR PROJECT

## Engineering Change Proposal (ECP)

**PART I**  
**(TO BE COMPLETED BY ORIGINATOR)**  
**ECP-049**

**Originator: Ron Strykowski**

**Date: July 25, 2006**

### Overview of Change

Type of ECP: ☐ EXPEDITED ☒ STANDARD

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

(Check all that Apply)

**Reason for Change: Completion of FY06 work scope and reconciliation of cost over-runs for selected cost accounts consistent with risk retired.**

**Impacted WBS Elements:**

**WBS 14 - Job 1414 Coil testing**

**WBS 17 - Job 1701 Cryostat and base support structure design**

**WBS 4 - Electrical power systems**

**Impacts of Change (Briefly Describe): Drawdown contingency to recognize cost over-runs for risk retired. Contingency will be applied to scope completed by adjusting the BCWP already reported. Drawdown \$297k of contingency from \$8,171k to \$7,874k.**

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

# **NATIONAL COMPACT STELLARATOR PROJECT**

## **Engineering Change Proposal (ECP)**

### **PART I** **(TO BE COMPLETED BY ORIGINATOR)** **ECP-049**

**Originator: Ron Strykowski**

**Date: July 25, 2006**

#### **Detailed Description of the Change:**

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

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

- 1) ECP-45 vs. ECP-49 Budget Comparison Table**

**Description of Change:**

#### **1) WBS 14 - Job 1414 Coil Testing**

Work scope has been completed includes the preparation of the cryogenic test facility, safety and readiness reviews and cold testing of the C-1 modular coil. Major reasons for the variance include the safety related design features, system startup de-bugging, and operations support staff necessary to execute the test plan. This cost account has been closed and no further testing is required. Total net cost over-run reported is \$114k.

#### **2) WBS 17 - Job 1701 Cryostat and Base Support Structure Design**

Work to update the conceptual design has been completed. Preliminary design activities will resume in FY07 following completion of the integrated modeling analysis being performed under WBS 82. Preliminary and final design reviews will be planned in FY07. Unrecoverable cost variances in this job relate to the investigation and update of conceptual design architectures in response to changes in other subsystems. Total cost over-run reported is \$49k.

#### **3) WBS 4 Electrical power systems (Jobs 4301 DC systems, 4401 Control and Protection, and 4501 Power Systems Design & Integration)**

Work to update the conceptual design has been completed. Preliminary design activities will resume in FY07 following documentation of final machine sub-system electrical requirements. Unrecoverable cost variances to date relate to conceptual design updates in response to changes in other subsystems (e.g., the central solenoid) and scenarios. Total cost over-run reported is \$134k.