

**NATIONAL COMPACT STELLARATOR PROJECT
Engineering Change Proposal (ECP)
ECP-52**

COVER PAGE

(TO BE COMPLETED BY SYSTEMS ENGINEERING SUPPORT MANAGER)

Originator: Ron Strykowski	October 25, 2006
ECP No: 052	ECP Title: FY2007 Replanning, Risk Retirement, and Estimate Updates.

Required Reviewers

Required Reviewers for this ECP: Hutch Neilson, Wayne Reiersen, Brad Nelson, Larry Dudek, Mike Williams, Judy Malsbury, Jerry Levine

ECP Approval Level

Expedited ECP? Yes No

Change Level: 2

Approving Official: 2 Federal Project Director

Actions

Update PMB by October 31,2006

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 checked="" 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)
ECP-52

PART I
(TO BE COMPLETED BY ORIGINATOR)
ECP-052

Originator: Ron Strykowski

October 25, 2006

Overview of Change

Type of ECP: EXPEDITED STANDARD

Type of Change: TECHNICAL COST SCHEDULE
EDITORIAL

(Check all that Apply)

Reason for Change: Replanning and estimating of project scope.

Impacted WBS Elements: ALL

Impacts of Change (Briefly Describe):

Drawdown contingency to recognize cost over-runs for risk retired in FY06 as well as re-estimated work scope for the completion of the project. Contingency will be applied to jobs whose risks have been retired by adjusting the BCWP already reported. All uncompleted work will be rescheduled into FY07, 08 and 09 thus adjusting the BCWS profile.

- 1) Drawdown \$374k of contingency for retired work scope.
- 2) Drawdown \$873 of contingency due to estimate growth for remaining work scope.

Total drawdown of contingency is \$1,247k. Contingency has been reduced from \$7,874k to \$6,627k. Based on the budgeted cost of work remaining (\$29,726) this represent a gross contingency balance of 22%. Actual contingency free balance including a carried over cost variance of \$1,398k equals \$5,229 or 17.6%.

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)
ECP-052

PART I
(TO BE COMPLETED BY ORIGINATOR)

Originator: Ron Strykowski

October 25, 2006

Unrecoverable Cost Variances

<u>WBS</u>	<u>Cost increment</u>	<u>Description</u>
12	\$126	Vacuum vessel sectors delivered on schedule. Work scope completed. Cost overrun attributed to dispositioning NCR's and resolving fabrication issues. (Job 1250 closed)
12	-\$30	Vacuum vessel final design complete. Job 1203 closed
13	\$32	TF coil final design completed. Job 1301 closed.
18	\$12	Health physics oversight of fabrication activities in the TFTR test cell. Required coverage higher than planned.
8	\$233	Project management and engineering management and integration LOE support during FY06. Major increases seen in systems engineering to support integrated modeling and analysis.
	<hr style="width: 100px; margin-left: 0;"/>	
	\$374	

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PART I
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Originator: Ron Strykowski

October 25, 2006

Estimate updates

<u>WBS</u>	<u>Cost</u>	<u>Description</u>
	increment	
12	\$82	vac vessel hardware cost for cooling tube clamps and saddles. (Job1204)
	-\$22	VVSA final assy dwgs moved to WBS 18.
	\$59	
13	-\$22	misc replanning and estimating
14	\$54	Ancillary mod coil hardware designs (ie shear plate test and design, clamp modifications, fiber optic strain gage qualification. (Job 1403 & 1416)
	\$88	Modified clamp hardware, strain gages, data acquisition controllers, and thermocouples. (Job 1408)
	\$259	Additional MCWF vendor incentives consistent with EIO's faster delivery rate. Increase ORNL title III. (Job 1411)
	\$63	3rd winding fixture (Job 1460)
	\$329	Modular coil winding operations including ORNL Title III (\$22), fully fund estimates through February (\$73), and additional punch list task for coil completion (\$234). (Job 1451 & 1459)
	\$162	Modular coil interface design tasks. Test bladder concept and design, bolt reaming concept and design, shear plate/shim testing and design, insulation over wings, and 3 point positioning H/W test and design. (Job 1421)
	\$955	
15	-\$42	Reduced coil structure procurement oversight. (Job 1550)
16	\$11	misc replanning and estimating
17	-\$288	Re-estimated cryostat design and procurement based upon simpler design concept. (Job 1701 & 1751)
18	\$8	Field period assembly fixture design and fabrication . (Job1803 & 1805)
	\$315	Field period assembly specifications and assembly drawings. (Job 1806)
	\$95	Reduced health physics req'd coverage (-\$80), reduced metrology supervision support (-\$45). Increased cost for field period fixture installation (\$27) and ORNL title III during assembly (\$193). (Job1802)
	\$227	increased station 1,2&3 estimates including pre-fit of modular coils. (Job 1810)
	\$645	
19	-\$151	Reduced LOE support of general stellarator core management. Re-allocated to WBS 14 and 18.

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PART I
(TO BE COMPLETED BY ORIGINATOR)

Originator: Ron Strykowski

October 20, 2006

Estimate updates

<u>WBS</u>	<u>Cost increment</u>	<u>Description</u>
2	\$2	misc replanning and estimating
3	\$34	Increased general diagnostic integration support req'd in FY07
4	\$47	misc replanning and estimating
5	\$2	misc replanning and estimating
6	\$1	misc replanning and estimating
7	-\$569	Reduced support crew coverage and supervision as a result of tightening the final machine assembly schedule. (Job 7401 & 7501)
	\$36	misc replanning and estimating (Job 7503)
	<u>-\$533</u>	
8	\$132	Re-estimated req'd engineering management & system engineering support (Job 8202)
	\$14	Re-estimated Design integration, system analysis and dimensional control coordination. (Jobs 8203, 8204, & 8205)
	\$7	misc replanning and estimating
	<u>\$152</u>	
	<u><u>\$873</u></u>	

Attachments:

- (1) Updated Bar Charts**
- (2) ECP Details**