

NATIONAL COMPACT STELLARATOR PROJECT

Engineering Change Proposal (ECP)

COVER PAGE

(TO BE COMPLETED BY SYSTEMS ENGINEERING SUPPORT MANAGER)

Originator: Ron Strykowski

Date: March 22, 2006

ECP No: 043

ECP Title: March 2006 PMB Update

Required Reviewers

Required Reviewers for this ECP: Dave Williamson, Brad Nelson, Larry Sutton, Wayne Reiersen, Jerry Levine, Judy Malsbury, Jim Chrzanowski, Hutch Neilson, Phil Heitzenroeder

ECP Approval Level

Expedited ECP? ☐ Yes ☒ No

Change Level: 2 Federal Project Director

Approving Official: 2 Federal Project Director

Actions

Update PMB by March 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)

PART I *(TO BE COMPLETED BY ORIGINATOR)* **ECP-043**

Originator: Ron Strykowski

Date: March 22, 2006

Overview of Change

Type of ECP: ☐ EXPEDITED ☒ STANDARD

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

(Check all that Apply)

Reason and Description of the Proposed Change:

MCWF Modification #11 incorporated technical requirements changes in the MCWF fabrication work as approved by ECP-038, resulting in a price increase of \$356.09K (due to both the technical changes, the decision by the NCSX Project to have MTM purchase replacement bolts, and an extension to the MCWF delivery schedule by 15 weeks - interim delivery dates revised and final delivery date extended from September 15th, 2006 to December 29th, 2006). ECP-038 only addressed the technical changes.

MCWF Modification #12 reflected the renegotiated a revised delivery schedule (replaced the revised schedule in Amendment #11) and provided delivery price incentives for the MCWF contract. In addition, the technical changes (i.e., relaxation of tolerances) reflected in ECP-042 were also part of this amendment. The project schedule was revised to incorporate a delivery schedule that is more conservative than the contract schedule (see discussion that follows). This ECP requests and additional \$535.88 of budget to cover the amount that EIO would earn if the remaining MCWFs are delivered according to the *Project* schedule.

Impacted WBS Elements: 14, 18

Impacts of Change (Briefly Describe):

Approval of this ECP will require a reduction in contingency by \$892K from \$9,612K to \$8,720K. The Level II Milestone, "Last MCWF Delivered" is re-scheduled from June 2007 to September 2007. Accommodating this change in the schedule required the field period assembly plan to incorporate some parallel operations as well as employ 2 shift operations on the last field period final assembly. Schedule contingency remains unchanged at 5 months.

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? There are two impacts:

- Casting C-3 comes under the incentive program implemented by Amendment #12; and
- Castings C-1 through C-3 will need hardware modifications (i.e., replacement of bolts).

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Originator: Ron Strykowski

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Discussion of Schedule and Potential Additional Cost Risk:

Amendment 12 to the EIO contract laid out a planned delivery of MCWF's for which EIO and MTM have committed to. Their incentive payments are tied to these dates. However, PPPL has determined that EIO's delivery schedule still contains schedule risks. Required learning curves improvements during MTM machining operations, while showing signs of improvement, have not yet been realized. In recognition of these risks PPPL has established a more likely delivery schedule that calls for winding form delivery every 4.8 weeks vs. the 4 week interval that EIO has promised. The project thinks it prudent to adopt this more conservative schedule as one that is more likely to be achieved. As such the projected incentives covered in this ECP are based on this more conservative schedule. The project recognizes an additional cost risk exists should EIO deliver on their new contract dates.

In recognition of the phased delivery of the MCWF's by the vendor, ECP-043 does not request funds to cover all additional performance payments. Thus, there is additional cost risk to the project should the vendor meet all delivery milestones which will be addressed in a future ECP if necessary.

List Attachments, Impacted Documents, etc.

- (1) Revised Bar Charts showing updated PMP.
- (2) Reconciliation of Former PMB (ECP-039) and this ECP-043.
- (3) MCWF Amendment #12 Projected Delivery Dates and Payment Schedule