CONTRACT PERFORMANCE REPORT
FORMAT 5 - Explanations and Problem Analysis

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR	2. CONTRACT		3. PROGRAM		4. REPORT PERIOD
a. NAME Princeton University-Plasma Physics Lab	a. NAME DOE-SC-OFES-NSTX Upgrade		a. NAME NSTX Upgrade Project		a. FROM (YYYYMMDD) 2012 / 04 / 01
b. LOCATION (Address and ZIP Code) Princeton, New Jersey	b. NUMBER DE-AC02-09CH11466		b. PHASE CD-3		b. TO (YYYYMMDD) 2012 / 04 / 30
	c. TYPE M&O	d. SHARE RATIO	c. EVMS ACCEPTANCE No X Yes (YYYYMMDD) 2011 / 12 / 20		

5. Evaluation

1.4 / 4500 MPTS VV Modification

	Budget	Earned	Actuals	SV in $	SV in %	CV in $	CV in %	SPI	CPI
Cumulative:	806	647	881	-159	-20%	-234	-36%	0.80	0.73

Explanation of Variance/Description of Problem:

The early stages of the design resulted in a significant cost and schedule variance (complexity from over constrained geometry including a conscious choice to include vacuum interfaces for future diagnostics). Stress and eddy current force analysis was performed to determine reinforcement needs. MPTS paid for the development of the global analysis model since it was not in a completed form when MPTS required results. These costs cannot be recovered., There have been a number of problems with parts of the very large Pro E model after the Windchill drawing file system was adapted, which along with the general complexity of the design has resulted in a longer time frame to complete the detail drawings.

Impact:

Added cost and schedule. Additional resources must be expended to complete the job. The Bay L fabrication has started and is expected to be completed in the July 2012. The Bay FG fabrication is expected to be completed in the August 2012 time frame. The installation of the vacuum interfaces is on track to be installed in the October -Nov 2012 time frame. The vessel reinforcements are on schedule to be installed in the Nov-Dec 2012 time frame.

Corrective Action:

Non anticipated at this time. The remaining vacuum interface detail drawings should be completed witin 2 weeks. The detail drawing of the Bay L faceplate was released for fabrication and stock material is in place for PPPL to begin machining. The machinist assigned to the Bay L fabrication is scheduled to start machining the week of 5/29/12.

Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s):

The job underwent expanded scope by adding vacuum interfaces for future diagnostics. A global analysis model was developed for NSTX and charged only to the MPTS VV cost account. The overconstrained location resulted in extraordinary effort to define a suitable reinforcement scheme at Bay L due to the proimity of the Bay J K cap. The detail drawings are close to being completed so no corrective action is anticipated yet.

Prepared by: George Jabit **Date:** 5/25/12 **Approved by:** Ron Strykowsky Digitally signed by Ron Strykowsky DN: cn=Ron Strykowsky, o, ou=PPPL, email=rstrykow@pppl.gov, c=US Date: 2012.05.29 07:43:48 -04'00' **Date:**