CLASSIFICATION (When Filled In)

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) 2013 / 04 / 01
b. LOCATION (Address and ZIP Code) Princeton, New Jersey	b. NUMBER DE-AC02-09CH11466		b. PHASE CD-3		b. TO (YYYYMMDD) 2013 / 04 / 30
	c. TYPE M&O	d. SHARE RATIO	c. EVMS ACCEPTANCE No X Yes (YYYYMMDI 2011 / 12 / 20		

5. Evaluation

1.1 / 1200 Structures & Supports

	Budget	Earned	Actuals	SV in $	SV in %	CV in $	CV in %	SPI	CPI
Current:	51	8	13	-43	-85%	-5	-65%	0.15	0.60
Cumulative:	3,428	3,540	4,298	111	3%	-758	-21%	1.03	0.82
	BAC	**EAC**	**VAC in $**	**VAC in %**	**TCPI to BAC**	**TCPI to EAC**			
At Complete:	3,773	4,416	-642	-17%	-	1.98			

Explanation of Variance/Description of Problem:
(1) Analysis, design validation, and documentation efforts were underestimated. Additional man-hours for analysis and design finalization were needed.
(2) Some analyses and documentation was incomplete or lacking detail. When resolved these produced design changes requiring significant increased M&S.
(3) Man-hour crossover with title 3 engineering has occurred: (a) due to machine access field data/measurements, (b) Feedback received from vendors/fabrication. These produced design modifications.
(4) CAD models and detailed drawings required rework - (a) per PPPL procedures (b) due to model functionality: These required additional designer man-hours.
(5) Individuals working on multiple, simultaneous, and unrelated tasks produced rework and efficiency. These required additional engineering and designer man-hours.
(6) Some components were fabricated on-site vs external vendors. On-site labor rates are often higher resulting in higher M&S.
(7) Unplanned in-house labor needed for reworking of components.

Impact:
Cost and schedule variances until CA is completed.

Corrective Action:
All analysis efforts are concluded. The design effort is completed. However, the cumulative variance reflects the increased costs due to higher than budgeted M&S and in-house unplanned labor needed for rework. Since this CA is almost concluded, little can be done to recovery the cost. The ETC reflects these variances.

Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s):
This CA is almost completed and little can be done to recovery the cost. The ETC reflects the variances. Additional cost associated with using in-house labor to complete the fabrication is expected. No negative schedule impact.

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Approved by: Ron Strykowsky — Digitally signed by Ron Strykowsky DN: cn=Ron Strykowsky, o, ou=PPPL, email=rstrykow@pppl.gov, c=US Date: 2013.05.30 12:12:21 -04'00' **Date:**