

and Problem Analysis

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT

FORMAT 5 - Explanations and Problem Analysis

FORM APPROVED
OMB No. 0704-0188

4. REPORT PERIOD

a. FROM (YYYYMMDD)

2012 / 02 / 01

b. TO (YYYYMMDD)

2012 / 02 / 29

1. CONTRACTOR

a. NAME

Princeton University-Plasma Physics Lab

2. CONTRACT

a. NAME

DOE-SC-OFES-NSTX Upgrade

3. PROGRAM

a. NAME

NSTX Upgrade Project

b. LOCATION (Address and ZIP Code)

Princeton, New Jersey

b. NUMBER

DE-AC02-09CH11466

b. PHASE

CD-3

c. TYPE

M&O

d. SHARE RATIO

c. EVMS ACCEPTANCE

No

X

Yes

(YYYYMMDD)

2011 / 12 / 20

5. Evaluation

1.2 / 2470 2nd NBI Power

	Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Cumulative:	259	460	303	201	78%	156	34%	1.78	1.52

Explanation of Variance/Description of Problem:

A positive schedule variance exists due to performance at an accelerated rate.

Impact:

This has a positive impact by way of getting the job done earlier.

Corrective Action:

No corrective action required at this time. Schedule will self-correct.

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

A positive schedule variance exists due to working at an accelerated pace. There are no technical issues or adverse impacts.

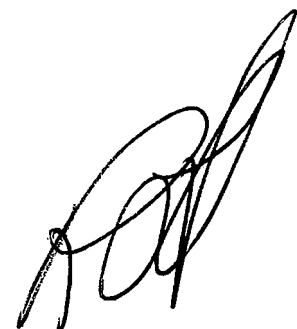
Prepared by:

S. Ramakrishnan

Date:

3/23/2012

Approved by:



Date:

3/26/2012

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5. Evaluation

1.2 / 2490 NTC Equipment Relocations

	Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Cumulative:	686	1,267	925	580	85%	341	27%	1.85	1.37

Explanation of Variance/Description of Problem:

Removals were performed at an accelerated rate while the field crews wait for the new coil supports to be designed and fabricated.

Impact:

Increased schedule contingency for field work.

Corrective Action:

None required.

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

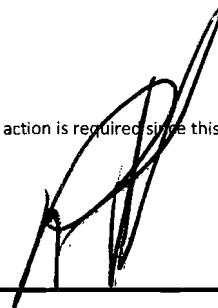
Removals are being performed at an accelerated rate while the field crews wait for the new coil supports to be designed and fabricated. No corrective action is required since this will just increase the schedule contingency for the field work.

Prepared by: **Erik D. Perry**

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Date:

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Date:

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5. Evaluation

1.3 / 3200 Water Cooling System Mods

	Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Cumulative:	74	68	38	-6	-8%	30	45%	0.92	1.81

Explanation of Variance/Description of Problem:

Positive cost variance due the fact that the original design assumed replacement of water pumps; however, pump replacement was not necessary which led to less time being required for design.

Impact:

Other than the cost savings to the project there are no impacts.

Corrective Action:

No corrective action required at this time.

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

A positive cost variance has been realized due to savings in system design. There are no corrective actions required at this time.

Prepared by: **MARTIN DENAULT**

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Date: 3/26/12

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(YYYYMMDD) 2011 / 12 / 20

5. Evaluation

1.3 / 3300 Bakeout System Mods CSU

	Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Cumulative:	5	55	0	50	1050%	55	100%	11.50	-

Explanation of Variance/Description of Problem:

A positive schedule variance exists due to the bake out power supply was specified and procured much ahead of schedule to facilitate tasks under WBS1 for welding the TF conductors using this supply.

Impact:

WBS1 will use the supply to facilitate fabrication of TF coils.

Corrective Action:

No corrective action required. The schedule will self-correct.

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

Bake out supply has been procured ahead of schedule leading to a positive schedule variance.

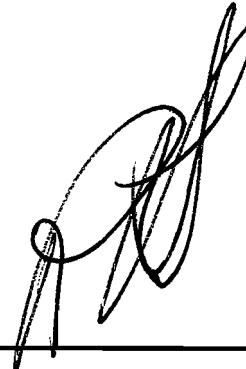
Prepared by:

S. Ramakrishnan

Date:

3/23/2012

Approved by:



Date:

3/24/2012

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d. SHARE RATIO

c. EVMS ACCEPTANCE

No

X

Yes

(YYYYMMDI

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:	744	619	814	-125	-17%	-195	-31%	0.83	0.76

Explanation of Variance/Description of Problem:

This job is behind baseline schedule and over budget. The design was more complex than anticipated influenced by the overconstraint of the MPTS system. Much more complex analysis was required than planned. The analysis model developed benefited the global model. Large Pro E models were difficult for the computer hardware in use and switching to Windchill exacerbated the problem costing us weeks of designer time.

Impact:

The design effort has us behind baseline schedule but the fabrication is projected to be ready in time for installation on time to support project goals.

Corrective Action:

The labor has been expended on analysis and design and the cost variance cannot be appreciably corrected.

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

Design complexity is very high. The system is overconstrained requiring a complex reinforcement of the vacuum vessel at Bay L and more routine reinforcement at Bays F&G. There were many iterations required during the analysis. Analysts were assigned to the task on a continuous basis, as well as a senior mechanical designer. The fabrication is being planned to be performed at PPPL anticipating a saving of total time.

Prepared by:

G. Labit

Date:


3/23/12

Approved by:


[Signature]

Date:

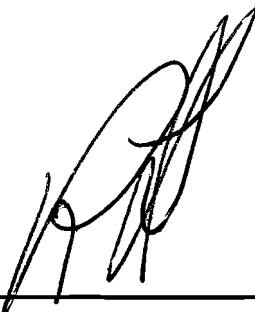
3/26/2012

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		c. TYPE M&O	d. SHARE RATIO	c. EVMS ACCEPTANCE No X Yes						(YYYYMM 2011/12/20)
5. Evaluation										
1.6 / 6100 Control Sys Data Acquisition										
	Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI	
Cumulative:	121	192	184	71	59%	8	4%	1.59	1.05	
Explanation of Variance/Description of Problem: A positive SV has occurred because work was started earlier than scheduled. The CV has also been positive for these activities.										
Impact: Completing the work early has retired risk and moved WBS6 ahead of schedule. The scope and resources for the work are not substantial.										
Corrective Action: Work with management to monitor the impact on FY12 costs, and if directed, cease work.										
Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s): Variance will be corrected as the baseline schedule catches up to accelerated schedule										
Prepared by: P. Sichta		Paul Sichta <small>Digitally signed by Paul Sichta DN: cn=Paul Sichta, o=PPPL, email=psichta@pppl.gov, ou=PPPL Date: 2012.03.14 10:40:24 -0400</small>		Date: 16-Mar-12		Approved by: 		Date: 3/24/12		

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5. Evaluation									
1.8 / 8200 CS & Coil Sprt Structure Install									
	Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Cumulative:	867	1,232	1,155	365	42%	77	6%	1.42	1.07
Explanation of Variance/Description of Problem: Removal procedures being combined (fewer to prepare and review) and field removals being completed more quickly than estimated.									
Impact: None									
Corrective Action: None required									
Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s): Removal procedures being combined (fewer to prepare and review) and field removals being completed more quickly than estimated.									
Prepared by: Erik D. Perry		Digitally signed by Erik D. Perry DN: cn=Erik D. Perry, o, ou, email=eperry@pppl.gov, c=US Date: 2012.03.16 10:31:11 -04'00'		Date:		Approved by: 		Date: 3/24/12	

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Princeton, New Jersey		DE-AC02-09CH11466		CD-3						2012 / 02 / 29								
		c. TYPE	d. SHARE RATIO	c. EVMS ACCEPTANCE														
		M&O		No		X		Yes		(YYYYMMDD)	2011 / 12 / 20							
5. Evaluation																		
1.8 / 8210 Field Supervision and Oversight (Perry)																		
	Budget		Earned		Actuals		SV in \$		SV in %		CV in \$		CV in %		SPI		CPI	
Cumulative:	303		350		245		47				105		30%		1.15		1.43	
Explanation of Variance/Description of Problem:																		
Work planning not costing as much as anticipated during first months due to time being spent on procedure preparation.																		
Impact:																		
None																		
Corrective Action:																		
None required.																		
Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s):																		
Work planning not costing as much as anticipated during first months due to time being spent on procedure preparation.																		
Prepared by:	Erik D. Perry			Digitally signed by Erik D. Perry DN: cn=Erik D. Perry, o, ou, email=eperry@pppl.gov, c=US Date: 2012.03.16 12:27:05 -04'00'		Date:				Approved by:				Date:		3/26/2012		