CLASSIFICATION (When Filled In) CONTRACT PERFORMANCE REPORT FORM APPROVED FORMAT 5 - EXPLANATIONS AND PROBLEM ANALYSES OMB No. 0704-0188 1. CONTRACTOR 2. CONTRACT 3. PROGRAM 4. REPORT PERIOD a. NAME a NAME a. NAME a. FROM (YYYYMMDD) Princeton University-Plasma Ph DOE-SC-OFES-NSTX Upgrade 2011/04/01 NSTX Upgrade Project b. LOCATION (Address and Z b. NUMBER b. PHASE DE-AC02-09CH11466 CD-2 b. TO (YYYYMMDD) Princeton, New Jersey c. TYPE d. SHARE RATIO c. EVMS ACCEPTANCE (YYYYMMDI 2011/04/30 M&O ио х YES 1.3 Auxiliary Systems BCWP SV in % CV % **BCWS** ACWP SPI CPI SV in \$ CV in \$ Current: 23 0 0 -23 -100% 0 0% 0.00 1.00 28 23 -52 Cumulative: 80 -65% 21% 0.35 1.26 BAC EAC VAC in \$ VAC in % TCPI to BAC TCPI to EAC 377 375 At Complete: 0.98 0.99 Thresholds Exceeded: Current Period Schedule, Cumulative Schedule, Cumulative Cost, At Complete Cost Explanation of Variance/Description of Problem: Water systems design is limited to AutoCAD designer which has been working on NSTX Operations tasks. They are ow available to work on this work scope. Gas Injection work has been impacted by NST Moly Divertor tile work. Now that that work is done this will get priority Impact: None, this should be corrected in the next accounting period or two **Corrective Action:** Evaluate need and assign designer to work on this scope. Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s): Primary cause of the schedule variance was the diversion of designer resources NSTX operations activities which are now complete. The designer is now back on this work scope. Prepared by: Date: Approved by Date:

Deltek Cobra (R) Legend: Red = threshold exceeded

Report in Thousands of \$

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CLASSIFICATION (When Filled In) CONTRACT PERFORMANCE REPORT FORM APPROVED FORMAT 5 - EXPLANATIONS AND PROBLEM ANALYSES OMB No. 0704-0188 1. CONTRACTOR 2. CONTRACT 3. PROGRAM 4. REPORT PERIOD a. NAME a. NAME a. NAME a. FROM (YYYYMMDD) Princeton University-Plasma Ph DOE-SC-OFES-NSTX Upgrade NSTX Upgrade Project 2011/04/01 b. LOCATION (Address and Zb. NUMBER b. PHASE CD-2 b. TO (YYYYMMDD) Princeton, New Jersey DE-AC02-09CH11466 d. SHARE RATIO c. EVMS ACCEPTANCE c. TYPE **(YYYYMMDI)** 2011/04/30 м&О ио х YES 1.4 Plasma Diagnostics BCWS **BCWP** ACWP SV in \$ SV in % CV % SPI CPI CV in \$ Current: 19 12 62 -7 -38% -50 -430% 0.62 0.19 476 576 -39 -7% -100 Cumulative: 515 -21% 0.93 0.83 BAC EAC VAC in \$ VAC in % TCPI to BAC TCPI to EAC 1.785 1,901 -6% 0.99 At Complete: -116 1.08 Thresholds Exceeded: Current Period Schedule, Current Period Cost, Cumulative Cost, At Complete Cost Explanation of Variance/Description of Problem: This variance was caused by the additional analysis required to redesign the new MPTS VV access ports. This was underestimated but is now nearing completion for the MPTS FDR. Optical layout of the external optics was also required but not planned for and added cost to the design. Impact: Will increase cost to provide the VV port modification design, no significant schedule impact. Corrective Action: None required. Much of the additional cost is expected to be offset by lower installation cost of plasma cutting of the VV openings when compared to the estimated machined holes. Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s): Primary cause was the unexpected cost of laying out the optical system and the interiors of the analysis to achieve a workable VV desian. Prepared by: Date: Approved by: 7.0 W

Deltek Cobra (R) Legend: Red = threshold exceeded

Report in Thousands of \$

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			CLASSIFIC	ATION (Wh	en Filled In)			·			
		CONTRA	CT PERF	ORMANCE	REPORT			FORM APP	ROVED		
FORMAT 5 - EXPLANATIONS AND PROBLEM ANALYSES									OMB No. 0704-0188		
1. CONTRACTO	R	2. CONTRA	СТ		3. PROGRAM			4. REPORT	PERIOD		
a. NAME		a. NAME			a. NAME			a. FROM (YYYYMMDD)			
Princeton Univers	sity-Plasma Ph	DOE-SC-OF	ES-NSTX Upg	grade_	NSTX Upgrade F	Project		2011/04/01			
b. LOCATION (Address and 2		b. NUMBER	}		b. PHASE						
Princeton, New J	ersey	DE-AC02-09	CH11466		CD-2			b. TO (YYYYMMDD)			
		c. TYPE d. SHARE RATIO			c. EVMS ACCE	PTANCE	(YYYYMMDI	2011/04/30			
		M&O			NO X	YES		<u> </u>			
1.5 Power Syste											
	BCWS	BCWP	ACWP	SV in \$	SV in %	CV in \$	CV %	SPI	CPI		
Current:	111	168	56	57	51%	113	67%	1.51	3.02		
Cumulative:	2,071	1,968		-103		206		0.95	1.12		
	BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC					
At Complete:	9,360	9,327	34	0%	0.97	0.98					
Thresholds Ex	κceeded: Cι	ırrent Perio	d Schedul	e, Current l	Period Cost, C	Sumulative Sc	hedule, Cu	mulative C	Cost, At Complete Cost		
of the design	oehind last : effort which	statusing p erroneous	eriod, but v ly included	vill be caug resources	for the Firing	Generator and	d Fault Det	ector whicl	buted to an overestimate h were taken out of this ssigned temporarily to		
Impact: None this sho	uld be corre	ected in the	next acco	unting perio	od		II				
Corrective Ad Job 5000 Des		s been ass	igned to wo	ork on this	scope. Job 52	200 Code eng	ingeris ba	ck on this	work.		
Monthly Sum Primary cause working on th	e of the sch	edule varia							S code engineer is back		
Prepared by:	XIII		5/2	Date: 7/2011	Approved by			Date:	6/2/2011		

Deltek Cobra (R) Legend: Red = threshold exceeded Report in Thousands of \$ Page 3

			ACT PERF		the state of the s			FORM APPROVED OMB No. 0704-0188 4. REPORT PERIOD		
				S AND PROE	LEM ANALYSES	<u> </u>				
1. CONTRACTOR		2. CONTRA	СТ		3. PROGRAM					
a. NAME		DOE-SC-OFES-NSTX Upgrade b. NUMBER DE-AC02-09CH11466			a. NAME NSTX Upgrade Project			a. FROM (YYYYMMDD)		
								2011/04/01		
b. LOCATION (Ad	Idress and Z				b. PHASE					
Princeton, New Jer	sey				CD-2			b. TO (YY	YYMMDD)	
			d. SHARE F	RATIO	c. EVMS ACCE	PTANCE	(YYYYMMDI	2011/04/30		
		M&O			NO X	YES				
1.6 Central Instru										
	BCWS	BCWP	ACWP	SV in \$	SV in %	CV in \$	CV %	SPI	CPI	
Current:	6	9					-42%	1.67		0.
Cumulative:	143					11	12%	0.62		1,
	BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC				
At Complete:	918	916	2	0%	0.99	0.99				
Thresholds Exc	ceeded: Cu	rrent Perio	d Schedule	e, Current l	Period Cost, C	umulative Sc	hedule, Cu	mulative C	Cost, At Con	nplete Cos
real-time plasm cover for the do (training), as w	na control e eparted en	engineer. K gineer. The	ey NSTX-L new/repla	J engineers cement sta	iff has been ta	take on unant axing the curre	icipated wo			
real-time plasm cover for the de	na control e eparted en ell as being	engineer. K gineer. The g less effec	ey NSTX-Le new/replactive than the	dule. The public dule. The public dule. The public dule dule dule dule dule dule dule dule	s have had to liff has been ta experienced e	take on unant axing the curre ngineer.	icipated wo			
real-time plasm cover for the do (training), as w Impact: Impact: Low in Corrective Ac Re-evaluate sta designer.	na control e eparted engell as being npact. The tion: aff work loa	engineer. K gineer. The gless effec general d ads and pri	ey NSTX-Le new/replactive than the esign appropriates and	dule. The public dule. The public dule. The public dule dule dule dule dule dule dule dule	s have had to a off has been ta experienced e ar, the scope of staff. Review of	take on unant axing the curre ngineer. of work relativ	ely minor.	ork to		
real-time plasm cover for the de (training), as w Impact: Impact: Low in Corrective Ac Re-evaluate statesigner. Monthly Summary ca work areas. Till clear, so there prior to the FD	na control e eparted engell as being npact. The tion: aff work load mary (to in use is the ne scope of is little imp	engineer. Kegineer. The gless effect e general de ads and principal departure of work that	ey NSTX-Le new/replactive than the esign appropriate and enrical cause of key persis behind s	dule. The pure purchase description of the purchase descri	s have had to to aff has been ta experienced ear, the scope of staff. Review of the has caused relatively smadesign is experienced to the staff.	take on unant axing the currence of work relative design needs and Corrective all. The design ected to be do	ely minor. and assign Action(s it into other	s): r		
real-time plasm cover for the do (training), as w Impact: Impact: Low in Corrective Ac Re-evaluate statesigner. Monthly Summary ca work areas. Till clear, so there	na control e eparted engell as being npact. The tion: aff work load mary (to in use is the ne scope of is little imp	engineer. Kegineer. The gless effect e general de ads and principal departure of work that	ey NSTX-Le new/replactive than the esign appropriate and enrical cause of key persis behind s	dule. The public dule. The public dule dule dule dule dule dule dule dule	s have had to the fifth has been to the sexperienced enter the scope of the staff. Review of the scaused relatively small to the scaused relatively small to the scaused relatively small the scaused the scaused relatively small the scaused the scaused relatively small the scause the scatter than the scause the scatter than the scause the scause the scause the scause the scause	take on unant axing the currence of work relative design needs and Corrective all. The design ected to be do	ely minor. and assign Action(s it into other	s):	uhi	724

			CLASSIFIC	ATION (Who	en Filled In)					_	
		CONTR	FORM APPR	FORM APPROVED							
	F	ORMAT 5 - E	OMB No. 076	_							
1. CONTRACTOR		2. CONTRA	СТ		3. PROGRAM			4. REPORT PERIOD			
a. NAME a. NAME					a. NAME	_		a. FROM (Y	YYYMMDD)	1	
Princeton University-Plasma Phys DOE-SC-OFES-NSTX Upgrade					NSTX Upgrade P	roject_		2011/04/01	2011/04/01		
b. LOCATION (Ad	Idress and ZIF	b. NUMBER			b. PHASE						
Princeton, New Jers	sey	DE-AC02-09	CH11466		CD-2			b. TO (YYY	YMMDD)	1	
					c. EVMS ACCEPTANCE (YYYYMMDD NO X YES			2011/04/30			
2485 Vacuum Pun	nping System	(Blanchard)			•					1	
	BCWS	BCWP	ACWP	SV in \$	SV in %	CV in \$	CV %	SPI	CPI] .	
Current:	1	2	19	1	55%	-17	-922%	1.55	0.10)	
Cumulative:	64	59		-5	9,0		-54%	0.92	0.65	5	
	BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC	•]	
At Complete:	388			-9%		0.00]	
Thresholds Exc	ceeded: Cur	rent Period	Schedule, C	urrent Peri	od Cost, Cumu	ulative Schedu	le, Cumulat	ive Cost, At	Complete Cost]	
Explanation of \	Variance/De	escription of	Problem:		•	_			_	1	
SCOP	E OF	PROJ	FCT I	5 GA	EATER	THAN	0816	NAL	ESTIMATE		
Impact:					.	•				1	
\mathcal{N}	o im	PACTS	DTH	ER C	OST OF	ADDIT	TIDNA	L 50	OPE		
Corrective Action	on:	"	_	_	,					1	
	SPE A			Com	7 1 2 - 5	- 1 1 . 13-	- KEW	(3)		سے مرسوم [
1 44	ene m	ne run	uke	ewale	0031	SAVING	7 417	13) (A.	AT SHOKLD	AFF SEE	
Monthly Summa	ary (to inclu	de technica	I causes of	VARs, Impa	acts) and Corre	ective Action(s)	: [[]		AT SHOULD	1/ATIANCA	
	E ABOU		•		٠	× X			S.	VAICITIES	
Prepared by:	W. Blo	Enellick	2	Date: ב. או.ك.	Approved by:	1)	U	Date:	wh how]	

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		CONTR	ACT PERF	ORMANCE	REPORT		•	FORM APPR	OVED		
	· F	ORMAT 5 - E	XPLANATION	S AND PROB	LEM ANALYSES		_	OMB No. 070	04-0188_		
1. CONTRACTOR 2. CONTRACT 3. PROGRAM								4. REPORT PERIOD			
a. NAME		a. NAME			a. NAME	-		a. FROM (YYYYMMDD) 2011/04/01			
Princeton Universit	y-Plasma Phys	DOE-SC-OFE	ES-NSTX Upgr	ade	NSTX Upgrade P	roject _					
b. LOCATION (Ad	idress and ZiP	b. NUMBER			b. PHASE						
Princeton, New Jer	sey	DE-AC02-090	CH11466		CD-2			ь. то (үүү	YMMDD)		
		c. TYPE d. SHARE RATIO			C. EVMS ACCEPTANCE (YYYYMMDI NO X YES			2011/04/30			
3400 Gas Delivery	/ System Mods	s (Blanchard)			· · · · · · · · · · · · · · · · · · ·						
	BCWS	BCWP	ACWP	SV in \$	SV in %	CV in \$	CV %	SPI	CPI		
Current:	17	0	0	-17	-100%	0	0%	0.00			
Cumulative:	32			-29	4 1 70		-26%	0.09	0.79		
	BAC	EAC			TCPI to BAC						
At Complete:	102	106		. ,,			1				
Thresholds Exc	ceeded: Cur	rent Period	Schedule, 0	Cumulative :	Schedule, Cum	nulative Cost, A	At Comple <u>te</u>	Cost			
Explanation of YORK FOR Impact: NON	THE V	escription of PEW DO MOST	Problem: PART.	May	'11 AND	WILL C	enREC.	THI	S VARIAN		
Corrective Action	Wo	,) AT PI		W_				
Monthly Summ	0 1				·	ective Action(s)		Data: /	-		
Prepared by:	W. Sla	culium	<u>l</u>	Date:	Approved by:		<u> </u>	Date:	2 Will		

		·	CLASSIFIC	ATION (Who	en Filled In)					
	FORM APPROVED									
	OMB No. 0704-0188									
1. CONTRACTOR		2. CONTRAC	т		3. PROGRAM			4. REPORT PERIOD a. FROM (YYYYMMDD) 2011/04/01		
a. NAME		a. NAME			a. NAME					
Princeton Universit	y-Plasma Phys	DOE-SC-OFE	S-NSTX Upgr	ad <u>e</u>	NSTX Upgrade P	roject				
b. LOCATION (Ad	dress and ZIF	b. NUMBER			b. PHASE					
Princeton, New Jer	sey	DE-AC02-090	H11466		CD-2			b. TO (YYYYMMDD)		
		c. TYPE	d. SHARE R	ATIO	c. EVMS ACCE	PTANCE	(YYYYMMDE	2011/04/30		
		M&O			NO X	YES				
5200 DCPS (Hatch	ner)						_			
	BCWS	BCWP	ACWP	SV in \$	SV in %	CV in \$	CV %	SPI	CPI	
Current:	40	41	28	. 2	4%	13	32%	1.04	1.48	
Cumulative:	388	312	245	-76	-20%	67	21%	0.80	1.27	
-	BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC				
At Complete:	2,493			1%		0.98				
Thresholds Exc	eeded: Cur	rent Period	Schedule, C	Current Peri	od Cost, Cumi	lative Sched	lę, Cumulati	ve Cost, At	Complete Cost	
Explanation of '	Variance/De	scription of	Problem:				1			
Variance is due	to unavaila	bility of nece	essary pers	onnel due t	o schedule con	iflicts and ∮ aca	ation schedu	ıles.		
					_		<u></u>			
Impact:	Should not	impact com	pletion of F	PDR						
Corrective Action	on:	None					<i>;</i>			
Monthly Summ				•	ncts) and Corre	1 W P 1		ner action re	quired.	
Prepared by:	R.E. Hatch	ier		Date: 6/6/2011	Approved by		10/01	Date:		
						<i>√</i>	V	_		