

**PrincetonUniversity Plasma Physics Laboratory
PPPL COST PERFORMANCE REPORT WORKBREAKDOWN STRUCTURE**

NCSX

****** Cumulative to date FY03, FY04 & FY05******

OCTOBER

		CUMULATIVE TO DATE (from 4/1/03) (k)							ECP39 Budget Thru FY06	Variance Explanation	
		Budgeted Cost		ACWP	VARIANCES					Schedule	Cost
		BCWS	BCWP		Sch Var	SPI	Cst Var	CPI			
1 - Stellarator Core Systems		31,414	30,962	30,944	-452	.99	18	1.00	44,349		
12 Vacuum Vessel Systems		7,061	6,821	6,859	-240	.97	-38	.99	9,159		
CLOSED	1201 - Vacuum Vessel Prelim Dsn	424	424	424		1.00	0	1.00	424	Final assy requirements, drawings and specification behind. Final closeout FDR planned for Dec 15th.	
CLOSED	1202 - Vacuum Vessel R&D	1,770	1,770	1,771		1.00	-1	1.00	1,770		
	1203 - Vacuum Vessel Final Dsn	1,001	969	969	-32	.97	0	1.00	1,098		
	1204-VV Sys Procurements (non VVSA)	1		4	-1		-4		193		
CLOSED	1206 - VV Field Weld Joint R&D	16	16	16		1.00	0	1.00	16	One month behind on the 3rd vessel segment. SPI's for the 3 segments are .99, .92, and .13.PPPL Forecast delivery for the first segment is mid January 2006.	
	1250 - Vacuum Vessel Fabrication	3,849	3,642	3,674 (1)	-207	.95	-32	.99	5,658		
13 Conventional Coils		1,571	1,606	1,585	35	1.02	21	1.01	2,765		
	1301 - TF Design	946	944	945	-2	1.00	-1	1.00	946		
	1302 - PF and CS Design	3			-3				11		
	1350 - TF Coil Fabr Prep	432	476	443	44	1.10	34	1.08	743		
	1351 - TF Coil Fabr Supplies	190	180	197	-10	.95	-17	.91	811		
	1361 - TF Fabrication		6						254		
14 Modular Coils		19,414	19,163	19,117	-251	.99	46	1.00	27,311		
CLOSED	1401 - Mod Coil Prel.Dsn	304	304	304		1.00	0	1.00	304		
CLOSED	1402 - Mod.Coil Analyses	239	239	239		1.00	0	1.00	239		
	1403 - Modular Coil Final Design (includes job 1421 coil interface hw dsn)	3,237	3,163	3,250	-74	.98	-86	.97	3,339	Type C assy dwgs 1 1/2 months late. Final closeout of Type C design slipped from Nov 1 to mid December. Type A cladding and MCWF mods behind.	Unanticipated winding form revisions and changes to terminal dwgs.
CLOSED	1404-MCWF R&D & 1st Prod Casting	2,544	2,544	2,544		1.00	0	1.00	2,544		
CLOSED	1405-Mod Coil Winding R&D Prep	168	168	168		1.00		1.00	168		
CLOSED	1406 - Mod. Coil Winding Facility	2,247	2,247	2,247		1.00	0	1.00	2,247		
CLOSED	1407 -Mod Coil Winding Facility	2,546	2,546	2,546		1.00	0	1.00	2,546		
	1408-Mod Coil Winding Supplies	666	642	605	-24	.96	37	1.06	1,638	Lead blocks behind. Stereo lithographic models being used as temporary place holders.	
CLOSED	1409 - Mod. Coil Test Stand	916	916	916		1.00	0	1.00	916		
CLOSED	1410 MC Twisted Racetrack Fabr	1,050	1,050	1,050		1.00	0	1.00	1,050		
	1411-MCWF Fabrication S005242	4,302	4,180	4,114 (2)	-122	.97	66	1.02	8,098	C6 casting to be re-poured.	
CLOSED	1412 - Complete Winding Facilities	537	537	537		1.00	0	1.00	537		
CLOSED	1413 - Mod Coil Fracture Analysis	28	28	28		1.00	0	1.01	28		
	1414 - Coil Testing	164	164	174		1.00	-10	.94	276		
CLOSED	1415 - Dimensional Control Testing	24	24	24		1.00	0	1.00	24		

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	1416 - Mod Coil Type A&B Final Design	135	87	35	-48	.65	52	2.47	756		
CLOSED	1419 - Winding Facility Modification	48	48	48		1.00	0	.99	48		
	1451 - Mod Coil Winding	259	275	287	16	1.06	-12	.96	2,553		
15	Structures	78	78	75		1.00	3	1.05	208		
	1501 - Structures Design	78	78	75		1.00	3	1.05	208		
16	16 - Coil Services								-		
17	Cryostat and Base	374	372	388	-2	.99	-16	.96	377		
	1701-Cryost&Base Sprt Strct Dsn	374	372	388	-2	.99	-16	.96	377		
18	Field Period Assembly	1,381	1,394	1,396	13	1.01	-3	1.00	2,526		
CLOSED	1801-Field Period Assly	61	61	61		1.00	0	1.00	61		
	1802 - FP Assy Oversight&Support	380	380	382		1.00	-2	1.00	718		
	1803- FP Assy Toolg/Constructability	501	515	506	14	1.03	9	1.02	933		
	1804-FP Assy Measurement	439	438	447	-1	1.00	-10	.98	452		
	1810 - Field Period Assembly								362		
19	1901 - Stellarator Core Mngtt&Integr	1,535	1,529	1,525	-6	1.00	3	1.00	2,003		
2	2 - Plasma Heating,Fueling & Vac Sys	349	349	347		1.00	2	1.01	349		
CLOSED	2001-VPS Gas& Cond Sys Oversight	64	64	63		1.00	1	1.02	64		
CLOSED	2501 - Neutral Beam Refurbishment	285	285	284		1.00	1	1.00	285		
3	3 - Diagnostics	458	431	433	-27	.94	-2	1.00	770		
31	3101 Magnetic Diagnostics	177	150	152	-27	.85	-2	.99	425	VV saddle loop Pro-E model and template fabrication one month behind.	
39	3901 - Diagnostics sys Integration	281	281	281	0	1.00	0	1.00	345		
4	4 - Electrical Power Systems	554	541	574	-13	.98	-33	.94	742		
41	4101 - AC Power	107	107	107		1.00	0	1.00	107		
43	4301 - DC Systems	240	240	262		1.00	-22	.92	314		
44	4401 - Control & Protection	55	55	65		1.00	-10	.85	55		
45	4501 - Power Sys Dsn & Integr	151	138	138	-13	.91	0	1.00	265		
46	4601 - FCPC Bldg Mods	1	1	1		1.00	0	.77	1		
5	5 - Central I&C Svstems	33	33	33		1.00	0	1.00	33		
58	5801 -Central I&C Integr	33	33	33		1.00	0	1.00	33		
6	6 - Facility Systems	24	24	24		1.00	0	.99	24		
	6163 - Facility Systems Support FY04	15	15	15		1.00	0	1.01	15		
	62 - Cryogenic Systems								-		
	63 - Utility Systems								-		
CLOSED	6501 - Facility Systems Integration	9	9	9		1.00	0	.96	9		
7	7 - Test Cell Prep & Machine Assy	897	899	912	2	1.00	-13	.99	915		
CLOSED	7101 - Shield Wall Modif	32	32	32		1.00	0	1.00	32		
	7201 - Control Room Walls&Floors								-		
	7301 - Platform Design &	71	72	74	1	1.01	-2	.97	71		
	7401 - TC Prep & Mach Assy Planninc	794	795	805	1	1.00	-10	.99	812		

VV saddle loop Pro-E model and template fabrication one month behind.

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8 - Project Oversight & Support	6,543	6,543	6,533							
81 Project Management and Control	3,084	3,084	3,075							
8101 - Project Management & Control	2,007	2,007	2,008		1.00	-1	1.00			
8102 - NCSX MIE Management ORNL	270	270	272		1.00	-2	.99			
8998 - Allocations	807	807	796		1.00	11	1.01			
82 Project Engineering	2,989	2,989	2,988		1.00	1	1.00			
8202 - Engr Mgmt & Sys Eng Support	1,668	1,668	1,670		1.00	-2	1.00			
8203 - Design Integration	698	698	697		1.00	1	1.00			
8204 - Systems Analysis	518	518	531		1.00	-13	.98			
8205 - Dimensional Control Coord.	105	105	90		1.00	15	1.17			
84 Project Physics	470	470	470		1.00	0	1.00			
CLOSED 8401 - Project Physcis	324	324	324		1.00	0	1.00			
CLOSED 8402 - Project Physics MIE ORNL	146	146	146		1.00	0	1.00			
Subtotal	40,272	39,782	39,799	-490	.99	-17	1.00		55,848	
Contingency/Management Reserve									1,295	
Anticipated Incremental Funding									1,370	
Anticipated 3% hold back on FY06 BA									(518)	
DCMA QA Inspection services									75	
TOTAL PROJECT									58,070	

(1) Reflects accrual increase of \$ 107k based on MTM's June earned value report

(2) Reflects accrual reduction of \$ 211 k based on EIO's June earned value report

Thru FY2004	20,640	19,652	19,744	-988	0.95	-92	1.00
Thru Oct	20,637	20,832	20,917	195	1.01	-85	1.00
Thru NOVEMBER	21,812	21,906	22,158	94	1.00	-252	0.99
Thru DECEMBER	23,813	23,042	23,434	-771	0.97	-392	0.98
Thru JANUARY (ecp-21)	25,866	24,310	24,639	-1556	0.94	-329	0.99
Thru Feb (ecp-24)	26,637	25,856	26,285	-781	0.97	-429	0.98
Thru Mar (ecp-29)	28,440	27,282	28,004	-1158	0.96	-722	0.97
Thru Apr (ecp-30)	29,588	28,736	29,416	-852	0.97	-680	0.98
Thru May (ecp-30)	31,301	29,903	30,889	-1398	0.96	-986	0.97
Thru June (ecp-30)	32,740	31,362	32,719	-1378	0.96	-1357	0.96
Thru July (ecp-36)	35,206	33,682	34,276	-1524	0.96	-594	0.98
Thru Aug (ecp-36)	36,914	35,480	36,416	-1434	0.96	-936	0.97
Thru Sep (ecp-36)	38,562	36,721	38,314	-1841	0.95	-1593	0.96