

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

NCSX

**** Cumulative to date FY03, FY04 , FY05 & FY06****

MAY 2006

		CUMULATIVE TO DATE (from 4/1/03) (k)								ECP 45
		Budgeted Cost			VARIANCES				Budget Thru FY06	
		BCWS	BCWP	ACWP	Sch Var	SPI	Cst Var	CPI		
1 - Stellarator Core Systems		39,970	39,387	40,349	-583	.99	-961	.98	45,244	
12 Vacuum Vessel Systems		8,534	8,418	8,453	-116	.99	-35	1.00	9,413	
	CLOSED 1201 - Vacuum Vessel Prelim Dsn	424	424	424	0	1.00	0	1.00	424	
	CLOSED 1202 - Vacuum Vessel R&D	1,770	1,770	1,771	0	1.00	0	1.00	1,770	
	1203 - Vacuum Vessel Final Dsn	1,270	1,234	1,148	-37	.97	85	1.07	1,270	
	1204-VV Sys Procurements (non VVSA)	165	182	226	17	1.10	-44	.81	249	
	CLOSED 1206 - VV Field Weld Joint R&D	16	16	16	1	1.03	0	1.00	16	
	1250 - Vacuum Vessel Fabrication	4,889	4,792	4,868	-98	.98	-77	.98	5,683	
13 Conventional Coils		2,198	2,177	2,211	-21	.99	-34	.98	3,023	
	1301 - TF Design	966	965	973	-1	1.00	-8	.99	966	
	1302 - PF Design			21			-21		11	
	1303 - Central Solenoid Support Design	103	96	102	-8	.93	-7	.94	117	
	1350 - TF Coil Fabr Prep	547	547	549		1.00	-2	1.00	547	
	1351 - TF Coil Fabr Supplies	443	450	442	7	1.02	8	1.02	470	
	1361 - TF Fabrication	140	120	125	-19	.86	-4	.96	913	
	1352 - PF Coil Procurement								-	
	1353 - CS Structure Procurement								-	
	1354 - Trim Coil Procurement								-	
	1355 - WBS 13 I&C Proc & Coil Assy								-	
14 Modular Coils		25,045	24,602	25,380	-443	.98	-778	.97	27,789	
	CLOSED 1401 - Mod Coil Prel.Dsn	304	304	304	0	1.00	0	1.00	304	
	CLOSED 1402 - Mod.Coil Analyses	239	239	239	0	1.00		1.00	239	
	1403 - MoCoil Final Dsn (incl job	3,579	3,481	3,465	-98	.97	16	1.00	3,688	
	1416 - Mod Coil Type A&B Final Design	328	281	284	-47	.86	-3	.99	446	
	CLOSED 1404-MCWF R&D & 1st Prod Casting	2,544	2,544	2,544	0	1.00	0	1.00	2,544	
	CLOSED 1405-Mod Coil Winding R&D Prep	168	168	168	0	1.00	0	1.00	168	
	CLOSED 1406 - Mod. Coil Winding Facility	2,264	2,264	2,264		1.00	0	1.00	2,264	
	CLOSED 1407 -Mod Coil Winding Facility	2,571	2,571	2,571		1.00	0	1.00	2,571	
	1408-Mod Coil Winding Supplies	1,496	1,333	1,364	-163	.89	-31	.98	1,767	
	CLOSED 1410 MC Twisted Racetrack Fabr	1,050	1,050	1,052	0	1.00	-2	1.00	1,050	
	1411-MCWF Fabrication S005242	7,161	6,982	7,024	-179	.98	-42	.99	8,195	
	CLOSED 1412 - Complete Winding Facilities	541	541	542		1.00	-1	1.00	541	
	CLOSED 1413 - Mod Coil Fracture Analysis	28	28	28	0	1.01	0	1.01	28	
	CLOSED 1409 - Mod. Coil Test Stand	916	916	862	0	1.00	54	1.06	916	
	1414 - Coil Testing	382	375	493	-8	.98	-118	.76	471	
	CLOSED 1415 - Dimensional Control Testing	24	24	24	0	.99	0	.99	24	
	CLOSED 1419 - Winding Facility Modification	55	55	56		1.00	-1	.98	55	
	1421 - Mod Coil Interface Hardware									
	1451 - Mod Coil Winding (incl 1459 unplanned work)	1,394	1,446	2,096	52	1.04	-649	.69	2,517	
15 Structures		82	93	113	11	1.13	-20	.82	139	
	1501 - Structures Design	82	93	109	11	1.13	-16	.86	139	

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	1550 - Structures Procurement			4			-4		-
16	16 - Coil Services	3	3	3		1.00	0	1.00	3
17	Cryostat and Base	371	368	420	-2	.99	-52	.88	438
	1701-Cryostat&Base Sprt Strct Dsn	371	368	420	-2	.99	-52	.88	438
	1751 - Cryostat Procurement								-
	1752 - Base Support Structure Procurement								-
18	Field Period Assembly	1,905	1,894	1,953	-11	.99	-60	.97	2,433
<i>CLOSED</i>	1801-Field Period Assly	61	65	65	4	1.06	0	1.00	65
	1802 - FP Assy Oversight&Support	533	533	557	0	1.00	-25	.96	664
	1803- FP Assy Tooling/Constructability	729	726	768	-4	1.00	-42	.94	954
	1804-FP Assy Measurement	542	541	532	0	1.00	9	1.02	549
	1808 - TF/Mod Coil Sub-Assembly								-
	1810 - Field Period Assembly	40	29	31	-11	.73	-2	.94	200
19	1901 - Stellarator Core Mngtt&Integr	1,832	1,833	1,815	0	1.00	17	1.01	2,007
2	2 - Plasma Heating, Fueling & Vac Svs	348	349	348	1	1.00	1	1.00	348
	21 - Fueling Systems								-
	22 - Torus Vacuum Pumping Systems								-
<i>CLOSED</i>	2001-VPS Gas& Cond Sys Oversight	64	64	63	1	1.01	1	1.02	63
<i>CLOSED</i>	2501 - Neutral Beam Refurbishment	285	285	285	1	1.00	0	1.00	285
3	3 - Diagnostics	640	641	741	1	1.00	-100	.87	694
31	3101 Magnetic Diagnostics	318	320	431	1	1.00	-111	.74	349
36	36 - Edge and Divertor Diagnostics								-
38	38 - Electron Beam (EB) Mapping								-
39	3901 - Diagnostics sys Integration	321	321	310	0	1.00	11	1.04	345
4	4 - Electrical Power Svstems	622	587	720	-34	.94	-133	.82	622
41	4101 - AC Power	107	108	107	1	1.01	0	1.00	107
43	4301 - DC Systems	276	276	382	1	1.00	-106	.72	276
44	4401 - Control & Protection	58	59	83	0	1.01	-24	.71	58
45	4501 - Power Sys Dsn & Integr	179	143	146	-36	.80	-3	.98	179
46	4601 - FCPC Bldg Mods	1	1	1		1.00		1.00	1
5	5 - Central I&C Systems	36	36	33		1.00	3	1.10	46
51	51 - TCP/IP Infrastructure Systems								-
52	52 - Central Instrumentation & Control								-
53	53 - Data Acquisition & Fac Computing								-
54	54 - Facility Timing & Synchronization								-
55	55 - Real Time Plasma & Power Supply Ctrl								-
56	56 - Central Safety Interlock Systems								-
58	5801 -Central I&C Integr	36	36	33		1.00	3	1.10	46
6	6 - Facility Systems	24	24	24		1.00	0	.99	24

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	61 - Water Systems								
	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 - Test Cell Prep & Machine Assv	938	941	944	4	1.00	-3	1.00	938
CLOSED	7101 - Shield Wall Modif	32	32	33		1.00	-1	.98	32
	7201 - Control Room Walls&Floors								-
	7301 - Platform Design &	75	76	76	1	1.02	0	1.00	75
	7401 - TC Prep & Mach Assy Planning	831	833	835	2	1.00	-2	1.00	831
	75 Machine Assembly								-
	7501 - Construction Support Crew								-
	7502 - Test Cell Facility Preparations								-
	7503 - Machine Assembly								-
	76 7601 - Tooling Design & Fabrication								-
	8 - Project Oversight & Support	7,918	7,919	8,246	1	1.00	-327	.96	8,766
	81 Project Management and Control	3,737	3,738	3,825	1	1.00	-87	.98	4,126
	8101 - Project Management & Control	2,371	2,372	2,418	0	1.00	-46	.98	2,588
	8102 - NCSX MIE Management ORNL	369	369	383	0	1.00	-14	.96	429
	8998 - Allocations	997	997	1,024	0	1.00	-27	.97	1,109
	82 Project Engineering	3,710	3,711	3,951	1	1.00	-241	.94	4,171
	8202 - Engr Mgmt & Sys Eng Support	2,027	2,028	2,073	0	1.00	-45	.98	2,241
	8203 - Design Integration	779	779	796		1.00	-18	.98	826
	8204 - Systems Analysis	690	690	865	0	1.00	-175	.80	826
	8205 - Dimensional Control Coord.	214	214	217	0	1.00	-3	.99	278
	84 Project Physics	470	470	470	0	1.00	0	1.00	470
CLOSED	8401 - Project Physics	324	324	324		1.00	0	1.00	324
CLOSED	8402 - Project Physics MIE ORNL	146	146	146	0	1.00	0	1.00	146
	85 - Integrated Systems Testing								-
	Subtotal	50.495	49.885	51.405	-610	.99	-1.520	.97	56,682
	Contingency/Management Reserve								461
	Incremental Fundina								1,291
	1% hold back on FY06 BA								(172)
	DCMA QA Inspection services								75
	TOTAL PROJECT								58,337
	(1) Reflects accrual DECREASE of \$143.7 k based on MTM's earned value report								
	(2) Reflects accrual INCREASE of \$ 132.74 k based on EIO's earned value report								