PrincetonUniversity Plasma Physics Laboratory
PPPL COST PERFORMANCE REPORT WORKBREAKDOWN STRUCTURE
NCSX
******* Cumulative to date FY03 & FY04 *******
APRIL FY04

	CURRENT MONTH			CUMULATIVE TO DATE (from 4/1/03) (k)							ECP 6	EAC (k)		Prelim	
				Budgeted Cost			VARIANCES				Budget	Through		TEC	
	BCWS	BCWP	ACWP	BCWS	BCWP	ACWP	Sch Var	SPI	Cst Var	CPI	Baseline (k)	FY04	Vari	EAC	
1 - Stellarator Core Systems	1,473	1,575	1,458	10,262	9,676	9,971	-586	.94	-295	.97	15,717	15,411	223		
12 Vacuum Vessel Systems	424	478	285	2,619	2,524	2,361	-95	.96	164	1.07	3,622	3,093			
1201 - Vacuum Vessel Dsn				424	424	424	0	1.00	0	1.00	424	424			
1202- Vacuum Vessel R&D	230	288	180	1,643	1,585	1,536	-57	.97	49	1.03	1,859	1,928	69	69	
1203- Vacuum Vessel Final Dsn	195	190	105	553	515	400	-38	.93	115	1.29	652	561	-91	-91	
1204- WBS 12 Procure/Fab/Title III											687	180	-507	300	VVSA $150 predicted to cost this year
13 Conventional Coils	36	9	29	339	320	255	-20	.94	65	1.26	562	580	18		Add'l ports +$300k
1301- Convential Coils Prel Design	36	9	29	339	320	255	-20	.94	65	1.26	462	446	-16		
1303- TF/PF Coil Final design											100	134	34		
1304 - WBS 13 Procure/Fab/Title III															
14 Modular Coils	822	785	906	6,021	5,720	6,390	-301	.95	-670	.90	9,057	9,718	661		
1401 - Mod. Coil Design (casting&win				303	303	304	0	1.00	-1	1.00	303	303			
1402 - Mod.Coil Analyses		0		239	239	239	0	1.00	0	1.00	239	239			
1403- Mod. Coil Final Design	261	204	168	871	706	1,008	-165	.81	-302	.701	1,067	1,565	498	498	Re-estimate of dsn rqmnts&analysis
1404- Mod Coil Winding Form R&D	205	158	243	1,444	1,243	1,502	-202	.86	-259	.83	2,256	2,178	-78	-78	Vendor forecast less than budgeted
1405- Mod. Coil R&D prep		0		168	168	168		1.00	0	1.00	168	168	0		
1406- Mod. Coil Winding R&D	37	103	167	1,496	1,391	1,482	-105	.93	-90	.94	1,612	2,158	546	546	OT plus expanded scope TRC/cond te
1407- MC Winding Facilities	250	235	280	1,154	1,346	1,399	192	1.17	-53	.96	1,981	2,156	175	175	OT plus cost variance
1408-Mod Coil Winding Supplies				30	30	30	0	1.00		1.00	216	213	-3		
1409- Mod. Coil Test Stand	53	85	49	298	294	252	-5	.98	41	1.16	481	459	-22		
1410- Mod Coil Prototype Winding	16			18		6	-18		-6		175		-175	-262	Full prototype winding eliminated
1411- Mod Coil Winding Form Fab											559	279	-280	none	MCWF only $200k predicted this year
15 1501 - Structures Design	9			68	54	15	-15	.79	38	3.47	241	171	-70	none	Prelim Design reforecast to FY05
16 1601 - Coil Services Design															
17 1701 - Cryostat & Base Support St		32	19	12	44	58	32	3.63	-13	.77	173	134	-39		
18 Field Period Assembly	102	202	160	546	353	265	-193	.65	88	1.33	1,100	779	-321		
1801 - Field Period Assembly Design		0		61	61	61	0	1.00	0	1.00	61	61	0		
1802- FP Assy Oversight&Support	25	22	18	98	88	49	-10	.90	39	1.80	219	149	-70	-70	LOE oversight less than anticipated
1803- FP Assy Tooling /Constructabilit	44	0	4	162	4	8	-158	.02	-4	.48	522	368	-154	none	Mockups $124k now forecast for FY05
1804- FP Assy Measurement Systs	32	180	139	226	201	147	-25	.89	53	1.36	299	201	-98	none	Metrology software forecast for FY05
19 1901 - Stellarator Core Manageme	80	69	59	656	662	628	6	1.01	33	1.05	962	936	-26		
2 - Plasma Heating, Fueling & Vac	14	14	13	277	278	248	1	1.00	30	1.12	308	531	224		
2001 - VPS,Gas & Cond sys Design/C				60	60	63	0	1.00	-3	.96	60	60			
2501 - Neutral Beam Refurbishment	14	14	13	217	218	185	1	1.01	33	1.18	247	471	224	none	Accelerated pwr sys testing. Layouts
3 - Diagnostics	7	7	9	200	200	203		1.00	-2	.99	234	239	5		
39 3901 - Diagnostics systems Integra	7	7	9	200	200	203		1.00	-2	.99	234	239	5		
4 - Electrical Power Systems	57	48	8	287	219	213	-68	.76	7	1.03	683	1,566	883		
41 4101- AC Power	1	27	9	4	28	9	25	7.89	19	3.12	10	273	264	none	Accelerated AC power distr $150k
43 4301- DC Systems	13	20	18	82	64	66	-18	.78	-2	.96	343	1,024	681		
44 4401- Control & Protection	15	0		31	5		-26	.15	5		89	94	5		
45 4501- Power Sys Dsn & Integr	19	1	-19	162	121	136	-41	.75	-15	.89	216	158	-58		
46 4601- FCPC Bldg Mods	8			10	1	1	-8	.14		1.00	25	17	-8		
5 - Central I&C Systems	1	1		19	19	28	0	.99	-9	.69	13	34	21		
58 5801 - Central I&C Integration & O	1	1		19	19	28	0	.99	-9	.69	13	34	21		
6 - Facility Systems	3	3		28	28	24	0	1.01	4	1.14	41	31	-10		
61 6163- Facility Systems FY04 supp	3	3		19	19	15		1.00	3	1.23	32	22	-10		
65 6501 - Facility Sys Integration FY0				9	9	9	0	1.02	0	1.00	9	9	0		
7 - Test Cell Preparation and Mach	25	15	51	351	335	325	-16	.96	10	1.03	599	566	-33		
71 7101 - Shield Wall Modifications D		0		32	32	32		1.00	0	1.00	32	32	0		
72 7201- Control Room Walls/Floors											48	46	-2		
73 7301- Platform Design&Fab				7			-7				90	65	-25		
74 7401- TC Prep & Mach Assy Planr	25	15	51	312	303	293	-9	.97	10	1.04	429	423	-6	200	TC Crane Upgrades
8 - Project Oversight and Support	197	188	210	2,680	2,691	2,815	11	1.00	-124	.96	3,647	4,081	434		
81 Project Management and Control	92	92	38	1,178	1,178	1,186	0	1.00	-8	.99	1,623	1,745	122		
8101 - Project Management and Contr	59	59	77	832	832	911	0	1.00	-78	.91	1,117	1,224	107	107	Project oversight increase
8102 - NCSX MIE Management ORNL	10	10	9	129	129	126	0	1.00	3	1.03	179	176	-3		
8998 - Allocations	23	23	-49	217	217	149	0	1.00	67	1.45	327	345	18		
82 Project Engineering	91	82	148	1,156	1,167	1,233	11	1.01	-66	.95	1,611	1,867	256		
8202 - Engineering Mgmt & Sys Engr S	54	54	58	663	663	678	0	1.00	-15	.98	923	928	5		
8203 - Design Integration	22	22	40	329	330	407	0	1.00	-78	.81	436	587	151	151	Design support greater than planned
8204 - Systems Analysis	15	6	50	164	175	148	11	1.07	26	1.18	253	352	99	99	Increased analysis effort req'd.
84 Project Physics	14	14	24	346	346	396	0	1.00	-50	.87	413	469	56		
8401 - Project Physcis	9	9	12	269	269	287		1.00	-18	.94	310	335	25		
8402 - Project Physics MIE ORNL	5	5	12	77	77	109	0	1.00	-33	.70	103	134	32		
Subtotal	1,776	1,851	1,749	14,105	13,448	13,827	-657	.953	-379	.973	21,241	22,460	1,219	1,643	

Management Reserve Plan

BA setaside for VVSA and MCWF contracts	400	427
Accelerated Scope	720	
Insititutional Carryover	800	800
Free balance retained	657	131

TOTAL PPPL/ORNL FUNDING FY03 cost of 5,942 + FY03 carryover of 1,955 + FY04 BA of 15,921 = **23,818** **23,818**