

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

**NCSX**

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

**NOVEMBER**

		CUMULATIVE TO DATE (from 4/1/03) (k)							ECP39
		Budgeted Cost		ACWP	VARIANCES				Budget
		BCWS	BCWP	ACWP	Sch Var	SPI	Cst Var	CPI	Thru FY06
<b>1</b>	<b>- Stellarator Core Systems</b>	<b>32,783</b>	<b>31,775</b>	<b>31,993</b>	<b>-1,008</b>	<b>.97</b>	<b>-218</b>	<b>.99</b>	<b>44,349</b>
<b>12</b>		<b>7,633</b>	<b>7,037</b>	<b>7,059</b>	<b>-596</b>	<b>.92</b>	<b>-21</b>	<b>1.00</b>	<b>9,159</b>
	1201 - Vacuum Vessel Prelim Dsn	424	424	424		1.00	0	1.00	424
	1202 - Vacuum Vessel R&D	1,770	1,770	1,771		1.00	-1	1.00	1,770
	1203 - Vacuum Vessel Final Dsn	1,060	995	984	<b>-65</b>	<b>.94</b>	<b>11</b>	<b>1.01</b>	1,098
	1204-VV Sys Procurements (non VVSA)	1		12	-1		-12		193
	1206 - VV Field Weld Joint R&D	16	16	16		1.00	0	1.00	16
	1250 - Vacuum Vessel Fabrication	4,363	3,833	3,852 (1)	<b>-530</b>	<b>.88</b>	<b>-19</b>	<b>1.00</b>	5,658
<b>13</b>		<b>1,676</b>	<b>1,624</b>	<b>1,659</b>	<b>-52</b>	<b>.97</b>	<b>-35</b>	<b>.98</b>	<b>2,765</b>
	1301 - TF Design	946	944	949	-2	1.00	-5	.99	946
	1302 - PF and CS Design	3			-3				11
	1350 - TF Coil Fabr Prep	528	487	489	<b>-41</b>	<b>.92</b>	<b>-3</b>	<b>.99</b>	743
	1351 - TF Coil Fabr Supplies	199	180	215	<b>-19</b>	<b>.91</b>	<b>-35</b>	<b>.84</b>	811
	1361 - TF Fabrication		13	6					254
<b>14</b>		<b>19,982</b>	<b>19,648</b>	<b>19,785</b>	<b>-335</b>	<b>.98</b>	<b>-137</b>	<b>.99</b>	<b>27,311</b>
	1401 - Mod Coil Prel.Dsn	304	304	304		1.00	0	1.00	304
	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)	3,246	3,186	3,274	<b>-60</b>	<b>.98</b>	<b>-89</b>	<b>.97</b>	3,339
	1416 - Mod Coil Type A&B Final Design	255	131	75	<b>-125</b>	<b>.51</b>	<b>55</b>	<b>1.73</b>	756
	1404-MCWF R&D & 1st Prod Casting	2,544	2,544	2,544		1.00	0	1.00	2,544
	1405-Mod Coil Winding R&D Prep	168	168	168		1.00	0	1.00	168
	1406 - Mod. Coil Winding Facility	2,247	2,247	2,247		1.00	0	1.00	2,247
	1407 -Mod Coil Winding Facility	2,546	2,546	2,546		1.00	0	1.00	2,546
	1408-Mod Coil Winding Supplies	740	645	654	<b>-95</b>	<b>.87</b>	<b>-9</b>	<b>.99</b>	1,638
	1409 - Mod. Coil Test Stand	916	916	916		1.00	0	1.00	916
	1410 MC Twisted Racetrack Fabr	1,050	1,050	1,050		1.00	0	1.00	1,050
	1411-MCWF Fabrication S005242	4,573	4,510	4,465 (2)	<b>-62</b>	<b>.99</b>	<b>46</b>	<b>1.01</b>	8,098
	1412 - Complete Winding Facilities	537	537	537		1.00	0	1.00	537
	1413 - Mod Coil Fracture Analysis	28	28	28		1.00	0	1.01	28
	1414 - Coil Testing	164	164	180		1.00	-16	.91	276
	1415 - Dimensional Control Testing	24	24	24		1.00	0	1.00	24
	1419 - Winding Facility Modification	48	48	48		1.00	0	.99	48
	1451 - Mod Coil Winding	354	361	449	<b>8</b>	<b>1.02</b>	<b>-88</b>	<b>.80</b>	2,553
	1459 - MC Unplanned rework			37			<b>-37</b>		
<b>15</b>		<b>78</b>	<b>80</b>	<b>82</b>	<b>2</b>	<b>1.03</b>	<b>-2</b>	<b>.97</b>	<b>208</b>
	1501 - Structures Design	78	80	82	2	1.03	-2	.97	208

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		Budgeted Cost		ACWP	VARIANCES				Budget
		BCWS	BCWP	ACWP	Sch Var	SPI	Cst Var	CPI	Thru FY06
<b>16</b>	<b>16 - Coil Services</b>								-
<b>17</b>		<b>376</b>	<b>372</b>	<b>388</b>	<b>-4</b>	<b>.99</b>	<b>-16</b>	<b>.96</b>	<b>377</b>
	1701-Cryost&Base Sprt Strct Dsn	376	372	388	-4	.99	-16	.96	377
<b>18</b>		<b>1,462</b>	<b>1,444</b>	<b>1,445</b>	<b>-19</b>	<b>.99</b>	<b>-1</b>	<b>1.00</b>	<b>2,526</b>
	1801-Field Period Assly	61	61	61		1.00	0	1.00	61
	1802 - FP Assy Oversight&Support	392	392	398	0	1.00	-6	.98	718
	1803- FP Assy Toolg/Constructability	558	548	538	-10	.98	10	1.02	933
	1804-FP Assy Measurement	440	438	447	-2	.99	-10	.98	452
	1810 - Field Period Assembly	12	6		-6	.47	6		362
<b>19</b>	<b>1901 - Stellarator Core Mngtt&amp;Inte</b>	<b>1,576</b>	<b>1,570</b>	<b>1,575</b>	<b>-6</b>	<b>1.00</b>	<b>-5</b>	<b>1.00</b>	<b>2,003</b>
<b>2</b>	<b>2 - Plasma Heating,Fueling &amp; Va</b>	<b>349</b>	<b>349</b>	<b>347</b>		<b>1.00</b>	<b>2</b>	<b>1.01</b>	<b>349</b>
	2001-VPS Gas& Cond Sys Oversight	64	64	63		1.00	1	1.02	64
	2501 - Neutral Beam Refurbishment	285	285	284		1.00	1	1.00	285
<b>3</b>	<b>3 - Diagnostics</b>	<b>504</b>	<b>444</b>	<b>485</b>	<b>-60</b>	<b>.88</b>	<b>-40</b>	<b>.92</b>	<b>770</b>
<b>31</b>	<b>3101 Magnetic Diagnostics</b>	<b>217</b>	<b>158</b>	<b>199</b>	<b>-60</b>	<b>.73</b>	<b>-41</b>	<b>.79</b>	<b>425</b>
<b>39</b>	<b>3901 - Diagnostics sys Integration</b>	<b>286</b>	<b>286</b>	<b>286</b>		<b>1.00</b>	<b>1</b>	<b>1.00</b>	<b>345</b>
<b>4</b>	<b>4 - Electrical Power Systems</b>	<b>627</b>	<b>589</b>	<b>632</b>	<b>-38</b>	<b>.94</b>	<b>-43</b>	<b>.93</b>	<b>742</b>
<b>41</b>	<b>4101 - AC Power</b>	<b>107</b>	<b>107</b>	<b>107</b>		<b>1.00</b>	<b>0</b>	<b>1.00</b>	<b>107</b>
<b>43</b>	<b>4301 - DC Systems</b>	<b>254</b>	<b>277</b>	<b>315</b>	<b>24</b>	<b>1.09</b>	<b>-38</b>	<b>.88</b>	<b>314</b>
<b>44</b>	<b>4401 - Control &amp; Protection</b>	<b>55</b>	<b>59</b>	<b>70</b>	<b>4</b>	<b>1.07</b>	<b>-11</b>	<b>.85</b>	<b>55</b>
<b>45</b>	<b>4501 - Power Sys Dsn &amp; Integr</b>	<b>210</b>	<b>145</b>	<b>138</b>	<b>-65</b>	<b>.69</b>	<b>7</b>	<b>1.05</b>	<b>265</b>
<b>46</b>	<b>4601 - FCPC Bldg Mods</b>	<b>1</b>	<b>1</b>	<b>1</b>		<b>1.00</b>	<b>0</b>	<b>.77</b>	<b>1</b>
<b>5</b>	<b>5 - Central I&amp;C Systems</b>	<b>33</b>	<b>33</b>	<b>33</b>		<b>1.00</b>	<b>0</b>	<b>1.00</b>	<b>33</b>
<b>58</b>	<b>5801 -Central I&amp;C Integr</b>	<b>33</b>	<b>33</b>	<b>33</b>		<b>1.00</b>	<b>0</b>	<b>1.00</b>	<b>33</b>
<b>6</b>	<b>6 - Facility Systems</b>	<b>24</b>	<b>24</b>	<b>24</b>		<b>1.00</b>	<b>0</b>	<b>.99</b>	<b>24</b>
	6163 - Facility Systems Support FY04	15	15	15		1.00	0	1.01	15
	<b>62 - Cryogenic Systems</b>								-
	<b>63 - Utility Systems</b>								-
	6501 - Facility Systems Integratio	9	9	9		1.00	0	.96	9
<b>7</b>	<b>7 - Test Cell Prep &amp; Machine Ass</b>	<b>897</b>	<b>899</b>	<b>928</b>	<b>2</b>	<b>1.00</b>	<b>-29</b>	<b>.97</b>	<b>915</b>
	7101 - Shield Wall Modif	32	32	32		1.00	0	1.00	32
	7201 - Control Room Walls&Floors								-
	7301 - Platform Design &	71	72	76	1	1.01	-4	.95	71
	7401 - TC Prep & Mach Assy Plan	794	795	820	1	1.00	-25	.97	812
<b>8</b>	<b>8 - Project Oversight &amp; Support</b>	<b>6,728</b>	<b>6,728</b>	<b>6,751</b>	<b>0</b>	<b>1.00</b>	<b>-23</b>	<b>1.00</b>	<b>8,665</b>
<b>81</b>		<b>3,175</b>	<b>3,175</b>	<b>3,185</b>		<b>1.00</b>	<b>-10</b>	<b>1.00</b>	<b>4,126</b>
	8101 - Project Management & Control	2,057	2,058	2,068	0	1.00	-11	.99	2,588
	8102 - NCSX MIE Management ORNL	284	283	286	0	1.00	-2	.99	429
	8998 - Allocations	834	834	831	0	1.00	3	1.00	1,109
<b>82</b>		<b>3,083</b>	<b>3,084</b>	<b>3,096</b>	<b>0</b>	<b>1.00</b>	<b>-13</b>	<b>1.00</b>	<b>4,069</b>
	8202 - Engr Mgmt & Sys Eng Support	1,718	1,718	1,739		1.00	-21	.99	2,241

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		Budgeted Cost		ACWP	VARIANCES				Budget	
		BCWS	BCWP		Sch Var	SPI	Cst Var	CPI	Thru FY06	
	8203 - Design Integration	709	709	701		1.00	8	1.01	826	
	8204 - Systems Analysis	536	536	558	0	1.00	-22	.96	724	
	8205 - Dimensional Control Coord.	120	121	98	0	1.00	22	1.23	278	
<b>84</b>		<b>470</b>	<b>470</b>	<b>470</b>		<b>1.00</b>	<b>0</b>	<b>1.00</b>	<b>470</b>	
	8401 - Project Phycis	324	324	324		1.00	0	1.00	324	
	8402 - Project Physics MIE ORNL	146	146	146		1.00	0	1.00	146	
	<b>Subtotal</b>	<b>41,945</b>	<b>40,842</b>	<b>41,193</b>		<b>-1,103</b>	<b>.97</b>	<b>-351</b>	<b>.99</b>	<b>55,848</b>
	<b>Contingency/Management Reserve</b>									<b>1,295</b>
	<b>Anticipated Incremental Funding</b>									<b>1,370</b>
	<b>Anticipated 3% hold back on FY06 BA</b>									<b>(518)</b>
	<b>DCMA QA Inspection services</b>									<b>75</b>
	<b>TOTAL PROJECT</b>									<b>58,070</b>
	(1) Reflects accrual increase of \$ 39k based on MTM's June earned value report									
	(2) Reflects accrual increase of \$ 47 k based on EIO's June earned value report									