

**NCSX**

**COST and SCHEDULE**

**PERFORMANCE REPORTS**

**NOVEMBER 2007**

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## NCSX Summary Overview

**NOVEMBER 2007**

### Cost Performance

	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>
Cumulative from May 1st, 2007 =	<b>\$8,925</b>	<b>\$8,089</b>	<b>\$7,235</b>
Cost Through April 2007 =			<b>\$67,178</b>
Cost to date =			<b>\$74,413</b>
BCWR (work to go) =		\$42,764	
Contingency =		\$14,380	
Total TEC =		\$132,411	

<b>CPI = 1.12</b> 1.15 last month	Cost Variance =	854	<b>Major Cost Variances</b>	
<b>SPI = 0.91</b> .91 last month	Schedule Variance =	-836	Mod Coil Punch List	CPI = .76
			FP Assy tooling (job 1803)	CPI = .38
			Systems Analysis (job 8204)	CPI = .72
			Allocations (job 8998)	CPI = .69
				-87 (.5 last month)
				-111 (.44 last month)
				-88 (.76 last month)
				-95 (.78 last month)

<b>EAC= \$1,782</b>	<b>Scope Add-backs = \$5,309</b>
<b>\$1,277</b> re-estimate \$500 WBS 82 project engineering management \$106 Plant Design \$100 Field Period Assembly \$438 Systems analysis \$398 Project management -\$708 Stellarator core mgt \$245 mc punch list \$198 other <b>\$505</b> stretch-out cost	scope add-back and 40% contingency \$1,701 Trim coils incl coil services & install \$985 VPS (incl NB ducts, pumps, instl, water systems) \$189 Injectors \$35 Diagnostics \$882 I&C \$1,517 Contingency @40%

### Cost/Schedule Uncertainties and Opportunities

<u>Uncertainties</u>	<u>Opportunities</u>
Field period assy Trim coil and PF coil fabrication schedule from vendors MCI hardware (cost variance, ETC cost, and schedule delivery)	G&A/Burden rates ~\$1M

### Critical path assessment

- #1 Issue MC shim and puck drawings, fab shims and pucks by 1/10/08, start station 2 assy  
Current critical path = -53 days (-2.5 months) as measured against preliminary assembly schedule (undergoing revision-action Viola/Strykowski)  
The schedule impact has increased from -1.9 mos last month to -2.5 mo. due to recent revision in station 2 task durations.
- #2 Trim coil design, fabrication required for assembly in station 5.  
First trim coils req'd end January 2009  
zero float

### Level II milestone status (near term)

<u>Design Reviews</u>	<u>Baseline</u>	<u>Forecast</u>	<u>DOE Commitr</u>	<u>Float (mos.)</u>
PF Coils - PDR	11-Dec-07	14-Dec-07		2.1
Coil Support Structures - FDR	21-Sep-07	14-Dec-07		4.6
Prepare Type-ABC closeout FDR	14-Jan-08	30-Jan-08		1.2
PF Coils - FDR	24-Mar-08	5-Feb-08		1.7
Base support - PDR	26-Nov-07	7-Feb-08		1.5
Station 5 FDR	21-Nov-07	19-Feb-08		3.0
Base Support Structure FDR	4-Feb-08	13-Mar-08	May-08	1.5
LN2 manifolds&piping- PDR	2-Apr-08	2-Apr-08		4.3
** Trim Coil PDR **		16-Apr-08		-0.1
** Trim Coil + Structure FDR **		3-Jun-08		-0.1
<u>Fabrication/Assembly</u>				
Shims required for 1st 3 pack MC assy	20-Sep-07	11-Jan-08	Dec-07	-2.0
PF Coils Awarded	27-May-08	25-Apr-08	Sep-08	1.7
Complete 1st MCHP Assy (Sta 2)	9-May-08	3-Jun-08	Sep-08	-2.0
Remove from stand Move A2-B2-C2 to holding area	19-Jun-08	1-Jul-08		-2.5
COMPLETE VPI OF 18th MOD COIL	15-Jul-08	30-Jun-08	Nov-08	1.6

### Contingency

	<u>BCWR</u>	
Planned =	14,380	50,853 28%
Drawdown to date =	0	
EAC (overrun)/underrun =	-1277	
Cost Variance (overrun)/underrun =	854	
Schedule Slip (@\$202k/mo.) =	-505	
	13,452	42,764 31%
<b>Current free balance contingency on remaining scope =</b>		<b>31%</b>

### Risks (from updated risk registry)

2 risk retired; #4 MC interface design and #19 Viola/Perry cross utilization

### ISSUES

- 1) Uncertainty in the component fabrication schedules requires urgency in meeting upcoming design review dates for the Trim Coils, PF coils, Base support structure, and Coil support structure
- 2) The coil services lead design and fabrication schedule should be accelerated into FY08 to ensure supporting the field period assembly schedule. (requires add'l \$231k in FY08)  
Additional candidates for acceleration include the cryogenic systems and cryostat design. (Requires add'l \$405k in FY08)

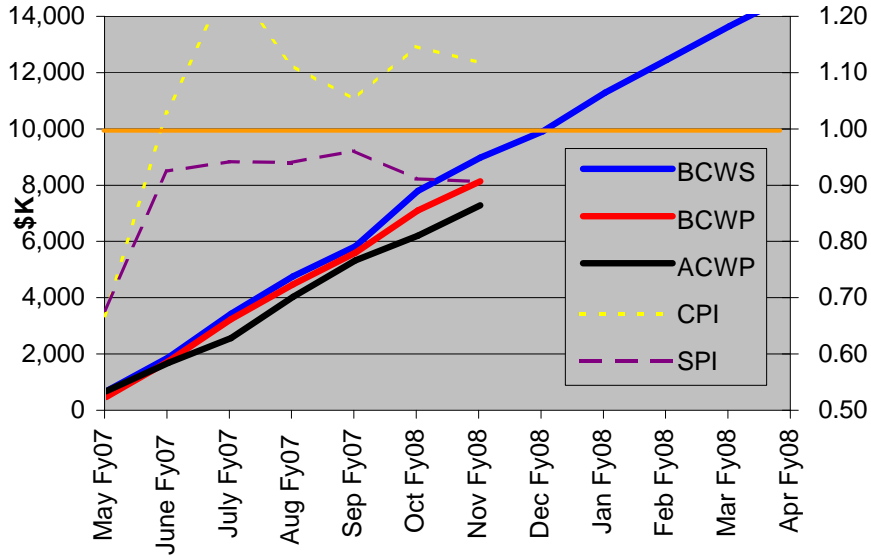
**NCSX Cost Performance Report**  
**Period May 1, 2007 through November 30, 2007**  
**(Measured against unofficial proposed baseline)**

RLM	JOB	CUMULATIVE							MONTHLY					BUDGET to COMPLETE (from May 1,2007)	EAC	C=calculated JM=Job Mgr estimate	increase/(decrease)	
		BCWS	BCWP	ACWP	SPI	CPI	schedule variance	cost variance	BCWS	BCWP	ACWP	sched variance	cost variance					
Jim Anderson	Job: 8101 - Project Management &Control-ANDERS	455	455	392	1.00	1.16	-	63	83	82	52	-1.25	29	3,843	4,158	Strykowski	315	
	Job: 8102 - NCSX MIE Management ORNL-LYON	88	88	137	1.00	0.64	(0)	-49	13	13	13	(0)	0	499	499	Lyon	-	
	Job: 8998 - Allocations-STRYKOWSKY	212	212	307	1.00	0.69	-	-95	31	33	78	2	(46)	1,453	1,536	Strykowski	83	
	<b>Total Jim Anderson</b>	<b>755</b>	<b>755</b>	<b>837</b>	<b>1.00</b>	<b>0.90</b>	<b>(0)</b>	<b>-82</b>	<b>127</b>	<b>127</b>	<b>143</b>	<b>0</b>	<b>(16)</b>	<b>5,795</b>	<b>6,193</b>		<b>398</b>	
Larry Dudek	Job: 1204 - VV Sys Procurements (nonVVSA)-DUD	102	141	185	1.38	0.76	39	-44	29	22	19	(7)	3	408	916 *	goranson	508	scope add-back
	Job: 1250 - Vacuum Vessel Fabrication**CLOSED**	(252)	(252)	(252)	1.00	1.00	0	0	-	0	-	0	0	(252)	(252)	JM	-	
	Job: 1408 - MC Winding Supplies-CHRZANOWSKI	225	226	117	1.01	1.94	1	110	22	22	12	0	11	350	350	JM	-	
	<b>Job: 1431 - Mod. Coil Interface Hardware-DUDEK</b>	<b>879</b>	<b>636</b>	<b>371</b>	<b>0.72</b>	<b>1.71</b>	<b>(243)</b>	<b>265</b>	<b>64</b>	<b>46</b>	<b>67</b>	<b>(18)</b>	<b>(21)</b>	<b>1,039</b>	<b>1,039</b>	<b>JM</b>	<b>-</b>	
	Job: 1451 - Mod Coil Winding-CHRZANOWSKI	1,358	1,546	1,436	1.14	1.08	188	110	188	107	191	(81)	(85)	2,867	2,867	JM	-	
	Job: 1459 - Mod Coil Fabr.Punch List-CHRZANOWSKI	190	283	370	1.49	0.76	93	-87	43	115	31	72	84	501	746	Dudek	245	Lifts, transportation, add'l re-work
	Job: 1802 - FP Assy Oversight&Support-VIOLA	390	354	432	0.91	0.82	(36)	-78	58	47	56	(11)	(9)	1,989	1,989	JM	-	
	<b>Job: 1803/1805- FPA Tooling/Constr-BROWN/DUDEK</b>	<b>184</b>	<b>69</b>	<b>180</b>	<b>0.37</b>	<b>0.38</b>	<b>(115)</b>	<b>-111</b>	<b>24</b>	<b>0</b>	<b>23</b>	<b>(24)</b>	<b>(23)</b>	<b>522</b>	<b>522</b>	<b>JM</b>	<b>-</b>	
	<b>Job:1810-Field Period Assy -Station 1 2 3 VIOLA</b>	<b>1,608</b>	<b>1,424</b>	<b>1,011</b>	<b>0.89</b>	<b>1.41</b>	<b>(185)</b>	<b>413</b>	<b>186</b>	<b>130</b>	<b>160</b>	<b>(56)</b>	<b>(30)</b>	<b>5,745</b>	<b>5,845</b>	<b>strykowski</b>	<b>100</b>	re-estimate
	Job: 1815 - Field Period Assy	-	-	-	-	-	-	0	-	-	-	-	-	1,334	1,334	C	-	
	Job: 2101 - Fueling Systems-BLANCHARD	-	-	-	-	-	-	0	-	-	-	-	-	69	258 *	blanchard	189	scope add-back
	Job: 2201 - Vacuum Pumping Systems-BLANCHARD	-	-	-	-	-	-	0	-	-	-	-	-	172	575 *	blanchard	403	scope add-back
	Job: 3101 - Magnetic Diagnostics-STRATTON	263	193	124	0.73	1.55	(70)	69	24	46	1	22	45	291	326 *	stratton	35	scope add-back
	Job: 3601 - Edge Divertor Diagnostics-STRATTON	-	-	-	-	-	-	0	-	-	-	-	-	31	31	C	-	
	Job: 3801 - Electron Beam Mapping-STRATTON	-	-	-	-	-	-	0	-	-	-	-	-	263	263	C	-	
	Job: 3901 - Diagnostics sys Integration-STRATTON	16	16	27	1.03	0.60	0	-11	2	2	4	0	(2)	132	219	C	87	
	Job: 6101 - Water Systems-DUDEK	-	-	-	-	-	-	0	-	-	-	-	-	46	95 *	C	49	scope add-back
	Job: 6201 - Cryogenic Syst-GETTELFINGER	-	-	-	-	-	-	0	-	-	-	-	-	655	655	C	-	
	Job: 6301 - Utility Systems-DUDEK	-	-	-	-	-	-	0	-	-	-	-	-	105	105	C	-	
	Job: 6401 - PFC/VV Htng/Cooling(bakeout)- KALISH	-	-	-	-	-	-	0	-	-	-	-	-	573	573	C	-	
Job: 7301 - Platform Design &	-	3	-	-	-	3	3	-	0	-	0	0	204	204	C	-		
Job: 7401 - TC Prep & Mach Assy Planning-PERRY	(304)	(304)	(275)	1.00	1.10	(0)	-29	2	2	7	(0)	(5)	1,417	1,417	RLS	-		
Job: 7501 - Construction Support Crew-PERRY	-	-	-	-	-	-	0	-	-	-	-	-	1,407	1,407	C	-		
Job: 7503 - Machine Assembly (station 6)-PERRY	-	-	-	-	-	-	0	-	-	-	-	-	4,511	4,603 *	strykowski	92	scope add-back	
Job: 7601 - Tooling Design & Fabrication-PERRY	-	-	-	-	-	-	0	-	-	-	-	-	412	412	C	-		
<b>Total Larry Dudek</b>	<b>4,659</b>	<b>4,334</b>	<b>3,727</b>	<b>0.93</b>	<b>1.16</b>	<b>(326)</b>	<b>607</b>	<b>642</b>	<b>539</b>	<b>572</b>	<b>(103)</b>	<b>(33)</b>	<b>24,791</b>	<b>26,499</b>		<b>1,708</b>		

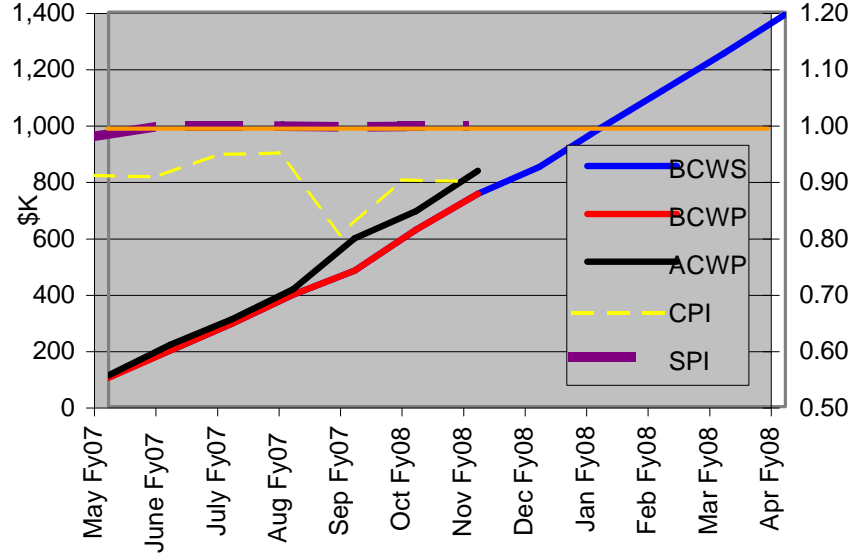
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RLM	JOB	CUMULATIVE							MONTHLY					BUDGET to COMPLETE (from May 1,2007)	EAC	C=calculated JM=Job Mgr estimate	increase/ (decrease)	
		BCWS	BCWP	ACWP	SPI	CPI	schedule variance	cost variance	BCWS	BCWP	ACWP	sched variance	cost variance					
Phil Heitzenroeder	Job: 1302 - PF Design -KALISH	104	62	55	0.59	1.11	(42)	6	25	1	8	(24)	(7)	257	257	JM	-	
	Job: 1352 - PF Coil Procurement-KALISH	-	-	-	-	-	-	0	-	-	-	-	-	1,630	1,630	C	-	
	Job: 1353 - CS Structure Procurement-DAHLGREN	-	-	-	-	-	-	0	-	-	-	-	-	337	337	C	-	
	Job: 1354 - Trim Coil Design & Procurement-KALISH	30	1	18	0.05	0.08	(28)	-17	30	1	8	(28)	(7)	162	1,516 *	kalish/strykow	1,354	scope add-back
	Job: 1355 - WBS 13 I&C Proc and Coil Assy-KALIS	-	-	-	-	-	-	0	-	-	-	-	-	73	73	C	-	
	Job: 1361 - TF Fabrication-KALISH	348	364	385	1.04	0.94	16	-22	59	32	45	(27)	(12)	1,003	1,003	JM	-	
	Job: 1404 - MCWF R&D 1st Prod	(36)	(36)	(35)	1.00	1.03	0	-1	-	-	-	-	-	(36)	(36)	JM	-	
	Job: 1411 - MCWF Fabr. S005242-HEITZENROED	(84)	(80)	(65)	0.96	1.23	4	-15	-	(0)	-	(0)	(0)	(80)	(80)	JM	-	
	Job: 1416 - Mod Coil Type AB Fnl Dsn-WILLIAMS	242	113	122	0.47	0.92	(129)	-9	56	9	35	(47)	(26)	280	280	JM	-	
	Job: 1421 - Mod Coil Interface Design-WILLIAMS	1,140	1,034	864	0.91	1.20	(106)	170	26	93	95	67	(1)	1,207	1,207	JM	-	
	Job: 1429 - MC Interface R&D-GETTELFINGER	118	78	87	0.66	0.90	(40)	-9	-	0	1	0	(0)	118	118	JM	-	
	Job: 1501 - Coil Structures Design-DAHLGREN	186	145	183	0.78	0.79	(41)	-38	-	0	23	0	(23)	186	186	JM	-	
	Job: 1550 - Coil Struct. Procurement -DAHLGREN	-	-	-	-	-	-	0	-	-	-	-	-	1,076	1,076	C	-	
	Job: 1601 - Coil Services Design-GORANSON	6	23	-	3.83	-	17	23	-	8	-	8	8	861	1,141 *	goranson/stryl	280	scope add-back
	Job: 1701 - Cryostat Design-GETTELFINGER	-	-	5	-	0.00	-	-5	-	-	-	-	-	207	207	JM	-	
	Job: 1702 - Base Support Struct Design-DAHLGRE	79	11	32	0.14	0.35	(68)	-21	36	(0)	(1)	(36)	1	163	163	JM	-	
	Job: 1751 - Cryostat Procurement-GETTELFINGER	-	-	-	-	-	-	0	-	-	-	-	-	325	325	C	-	
	Job: 1752 - Base Support Proc-DAHLGREN	-	-	-	-	-	-	0	-	-	-	-	-	89	89	C	-	
	Job: 1806 - FP Assembly specs	139	106	3	0.76	36.72	(33)	103	19	66	1	47	65	514	514	JM	-	
	Job: 1901 - Stellarator Core Mngt&Integr-COLE	233	232	131	1.00	1.78	(1)	101	33	33	11	0	22	1,620	912	C	(708)	
	Job: 8202 - Engr Mgmt & Sys Eng Support-REIERS	457	457	428	1.00	1.07	(0)	29	53	54	55	1	(1)	2,649	3,149	simmons	500	re-estimate
	Job: 8203 - Design Integration-BROWN	226	225	76	1.00	2.97	(1)	149	30	31	20	1	11	1,408	1,408	JM	-	
	Job: 8204 - Systems Analysis-BROOKS	231	231	319	1.00	0.72	0	-88	24	24	47	0	(23)	1,154	1,592	C	438	
	Job: 8205 - Dimensional Control Coordin-ELLIS	143	101	113	0.70	0.89	(42)	-13	20	13	17	(7)	(4)	598	672	C	74	
	Job: 8210 - FY07 Rebaseling tasks	19	19	54	1.00	0.35	0	-35	-	0	7	0	(7)	19	55	C	36	
	Job: 8215 Plant Design	21	5	-	0.26	-	(16)	5	3	2	-	(1)	2	121	227	strykowsky/br	106	re-estimate
<b>Total Phil Heitzenroeder</b>	<b>3,601</b>	<b>3,091</b>	<b>2,776</b>	<b>0.86</b>	<b>1.11</b>	<b>(510)</b>	<b>315</b>	<b>414</b>	<b>369</b>	<b>372</b>	<b>(44)</b>	<b>(2)</b>	<b>15,941</b>	<b>18,022</b>			<b>2,081</b>	
Al vonHalle	Job: 4101 - AC Power-RAMAKRISHNAN	(104)	(104)	(104)	1.00	1.00	(0)	0	-	-	-	-	-	55	55		0	
	Job: 4301 - DC Systems-RAMAKRISHNAN	2	2	-	0.95	-	(0)	2	1	2	-	1	2	603	603		-	
	Job: 4401 - Control & Protection-RAMAKRISHNAN	-	-	-	-	-	-	0	-	-	-	-	-	1084	1,084		-	
	Job: 4501 - Power Sys Dsn & Integr-RAMAKRISHN	-	-	(1)	-	0.00	-	1	-	-	-	-	-	683	683		-	
	Job: 5101 - Network and Fiber	-	-	-	-	-	-	0	-	-	-	-	-	150	226 *	sichta	76	scope add-back
	Job: 5201 - I&C Systems-SICHTA	-	-	-	-	-	-	0	-	-	-	-	-	196	432 *	sichta	236	scope add-back
	Job: 5301 - Data Acquisition-SICHTA	-	-	-	-	-	-	0	-	-	-	-	-	165	179 *	sichta	14	scope add-back
	Job: 5401 - Facility Timing &	-	-	-	-	-	-	0	-	-	-	-	-	205	376 *	sichta	171	scope add-back
	Job: 5501 - Real Time Control	-	-	-	-	-	-	0	-	-	-	-	-	129	349 *	sichta	220	scope add-back
	Job: 5601 - Central Safety & Interlock Sys-SICHTA	-	-	-	-	-	-	0	-	-	-	-	-	222	387 *	sichta	165	scope add-back
Job: 5801 - Central I&C Integr& Oversight-SICHTA	11	11	-	1.00	-	(0)	11	2	2	-	(0)	2	69	69 *	sichta	-	scope add-back	
Job: 8501 - Integrated Systems Testing-GENTILE	-	-	-	-	-	-	0	-	-	-	-	-	765	765		-		
<b>Total Al vonHalle</b>	<b>(91)</b>	<b>(91)</b>	<b>(105)</b>	<b>1.00</b>	<b>0.87</b>	<b>(0)</b>	<b>14</b>	<b>3</b>	<b>4</b>	<b>-</b>	<b>1</b>	<b>4</b>	<b>4,326</b>	<b>5,208</b>			<b>882</b>	
<b>Project stretch-out cost (@\$202k/mo.) =</b>													<b>505</b>			<b>505</b>		
<b>Total project (May 1 through completion)</b>		<b>8,925</b>	<b>8,089</b>	<b>7,235</b>	<b>0.91</b>	<b>1.12</b>	<b>(836)</b>	<b>854</b>	<b>1,185</b>	<b>1,039</b>	<b>1,087</b>	<b>(146)</b>	<b>(47)</b>	<b>50,853</b>				
													Contingency =	14,380				
													Cost through April 30,2007=	67,178				
													<b>TOTAL TEC =</b>	<b>132,411</b>				
													EAC Growth =	1,782				
													Scope Add backs=	3,792				
													Contingency on scope add-backs=	1,517				
													<b>Projected new baseline =</b>	<b>139,502</b>				

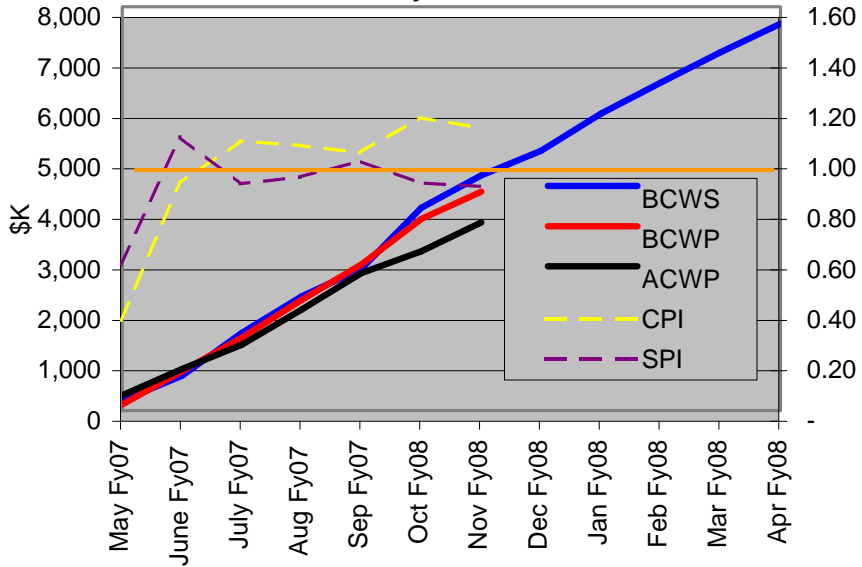
**Total Project**



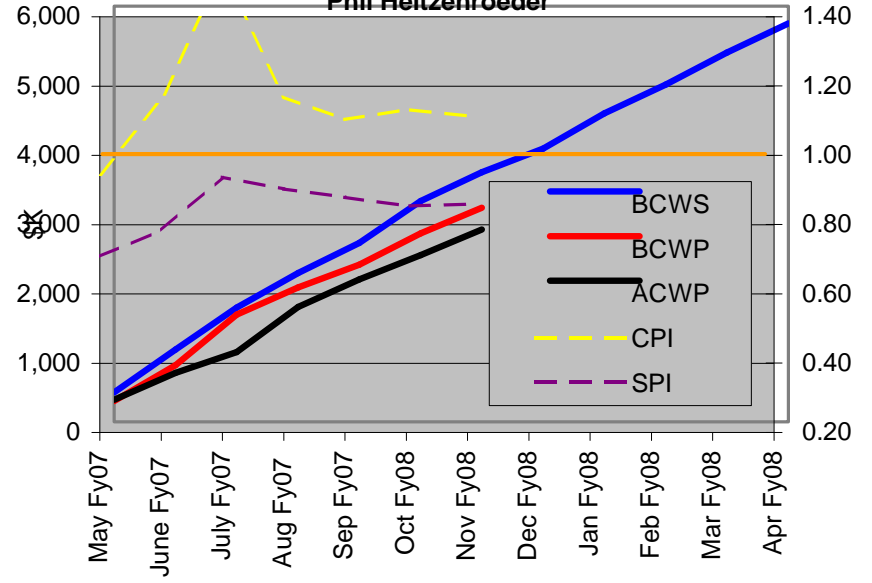
**Project Management and Oversight  
Jim Anderson**



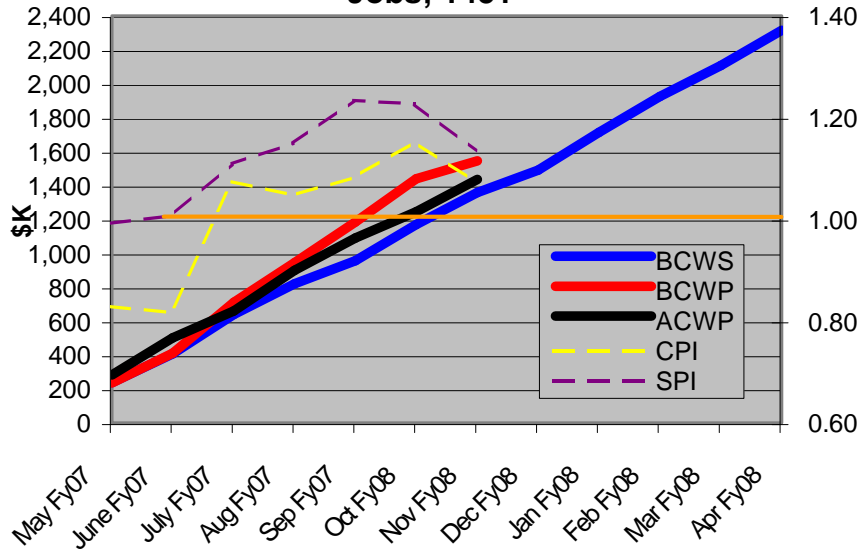
**Construction  
Larry Dudek**



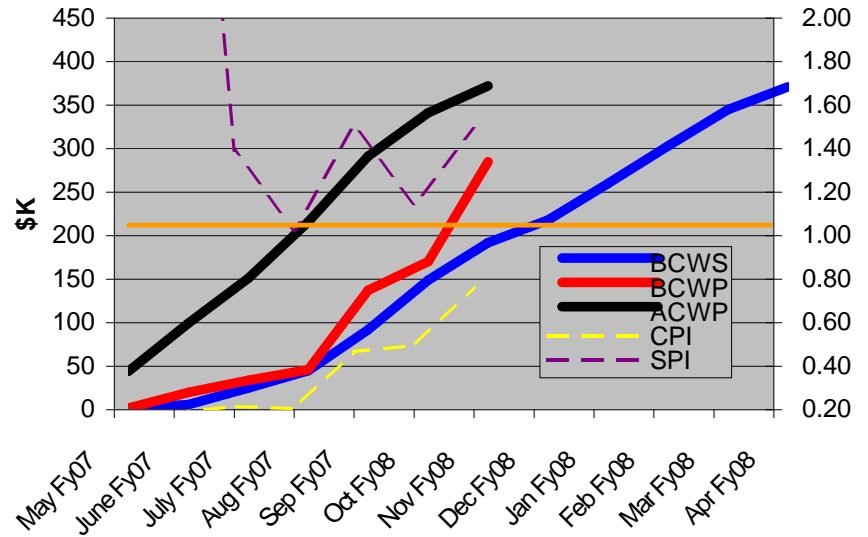
**Stellarator Design and Procurement  
Phil Heitzenroeder**



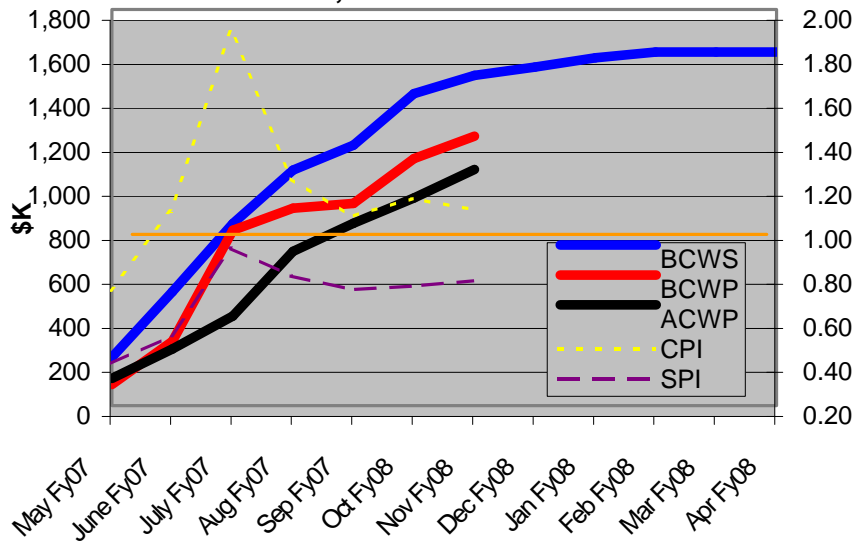
**Mod Coil Winding Ops**  
Jobs; 1451



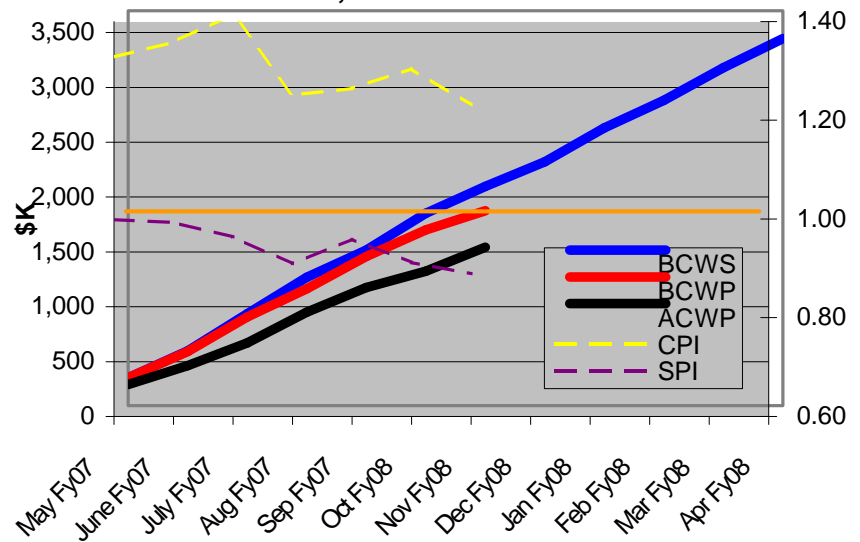
**Mod Coil Punch List**  
Jobs; 1459



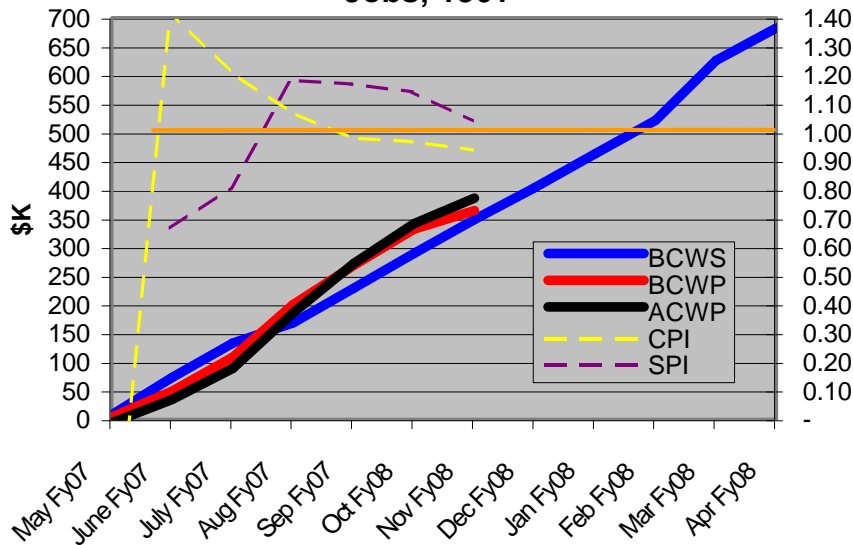
**Mod Coil Design**  
Jobs; 1416/1421/1429



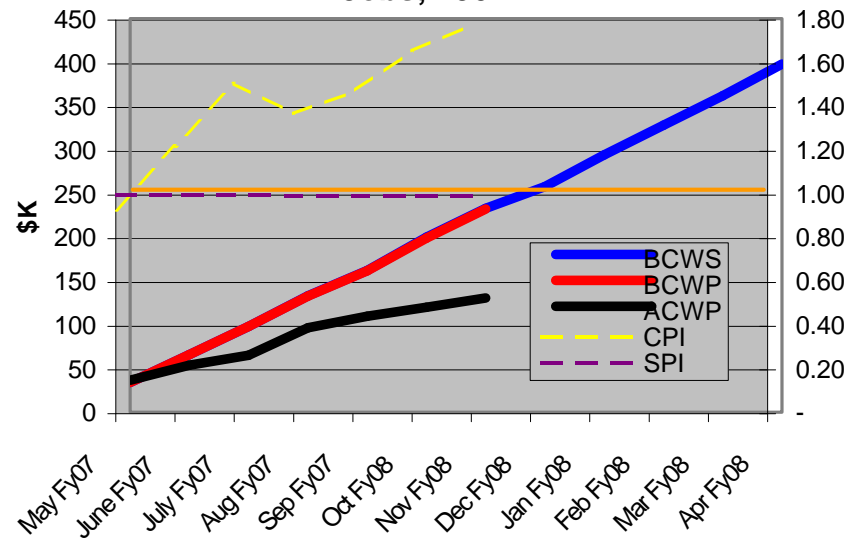
**Field Period Assy**  
Jobs; 1802/1810/1815



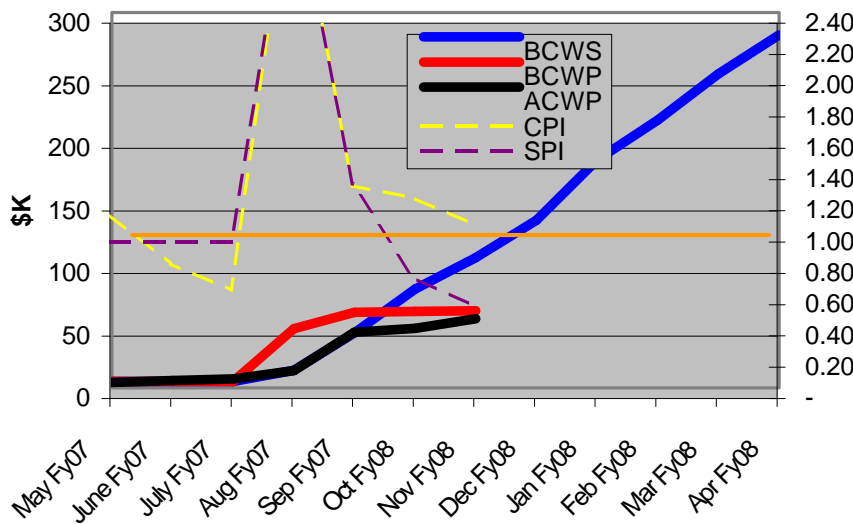
**TF Fabrication  
Jobs; 1361**



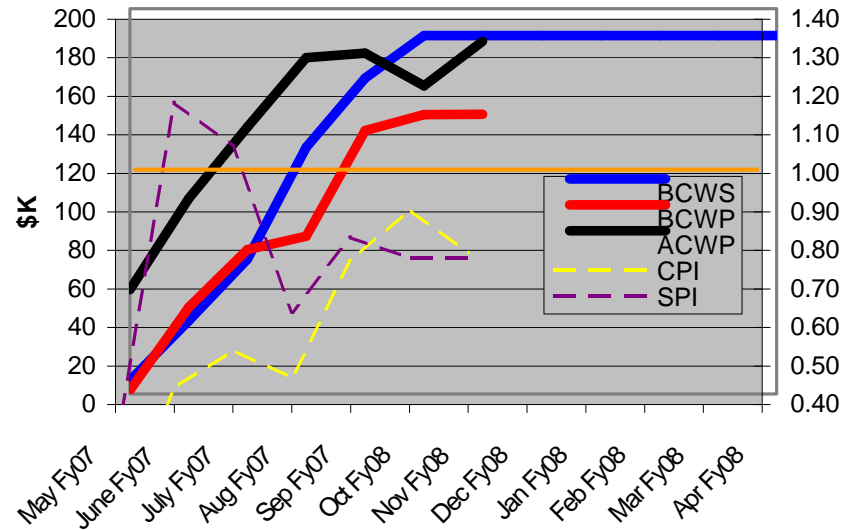
**Stellarator Core Mngtt&Integr  
Jobs; 1901**



**PF Coil Design/procurement  
Jobs; 1302/1352**

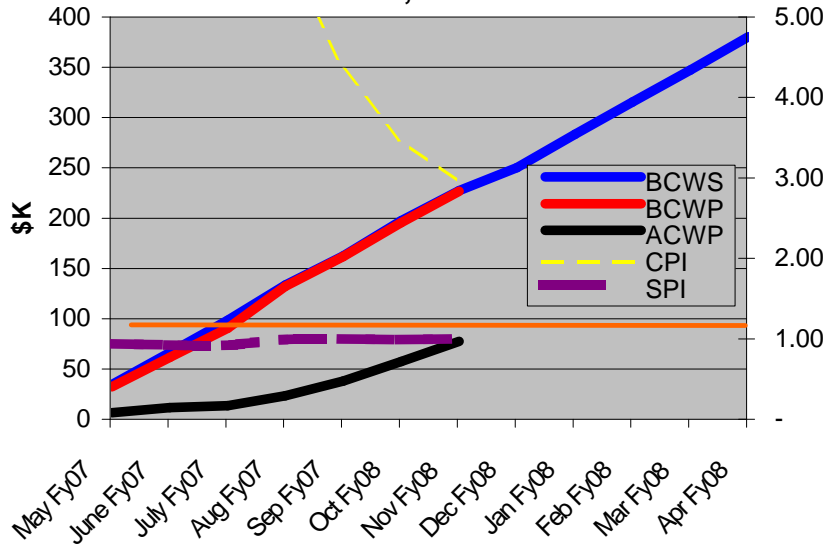


**Coil Structure Dsn/Proc  
Jobs; 1501/1550**

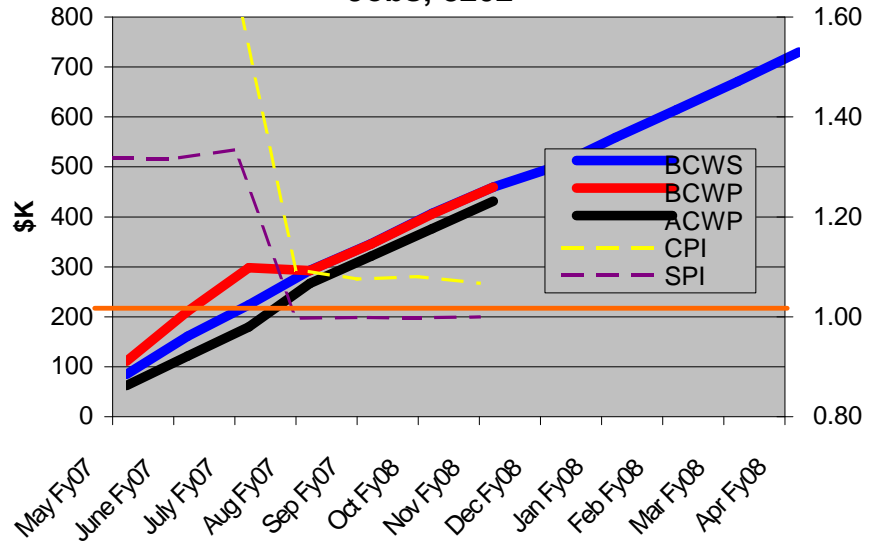




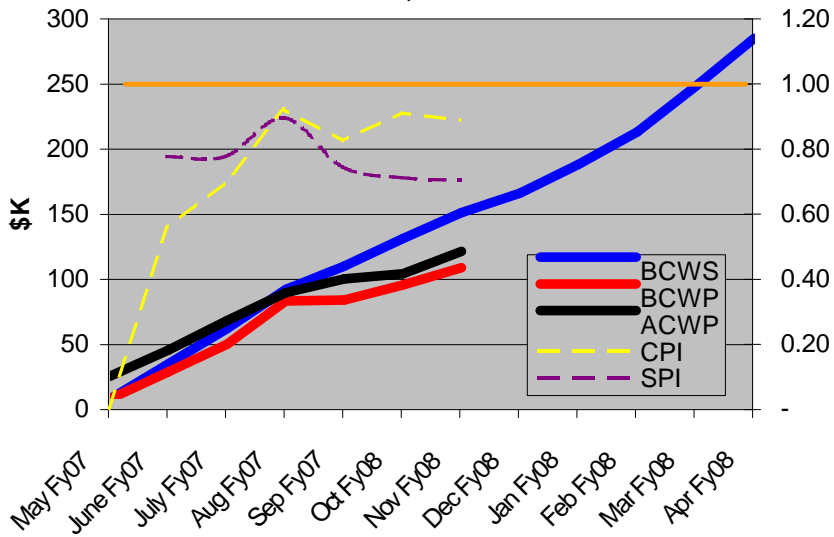
**Design Integration  
Jobs; 8203**



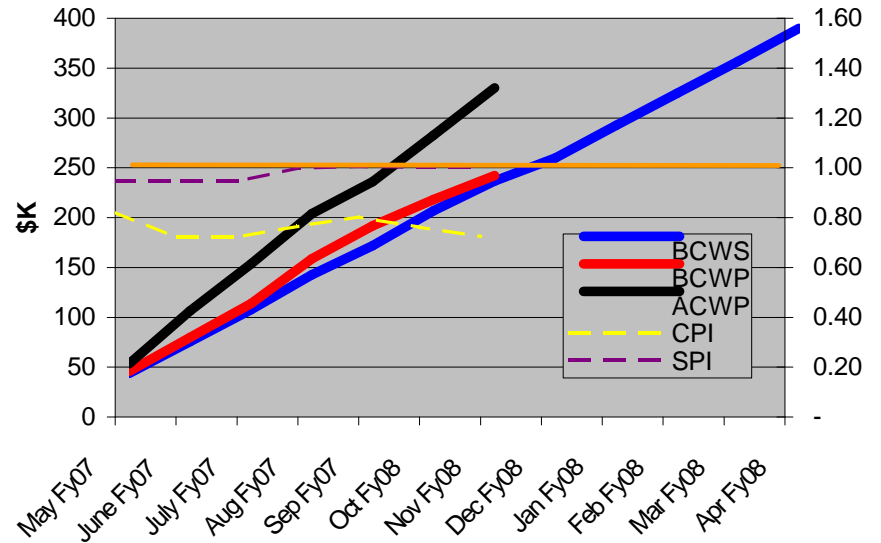
**Engr Mgmt & Sys Eng Support  
Jobs; 8202**



**Dimensional Control Coordin  
Jobs; 8205**



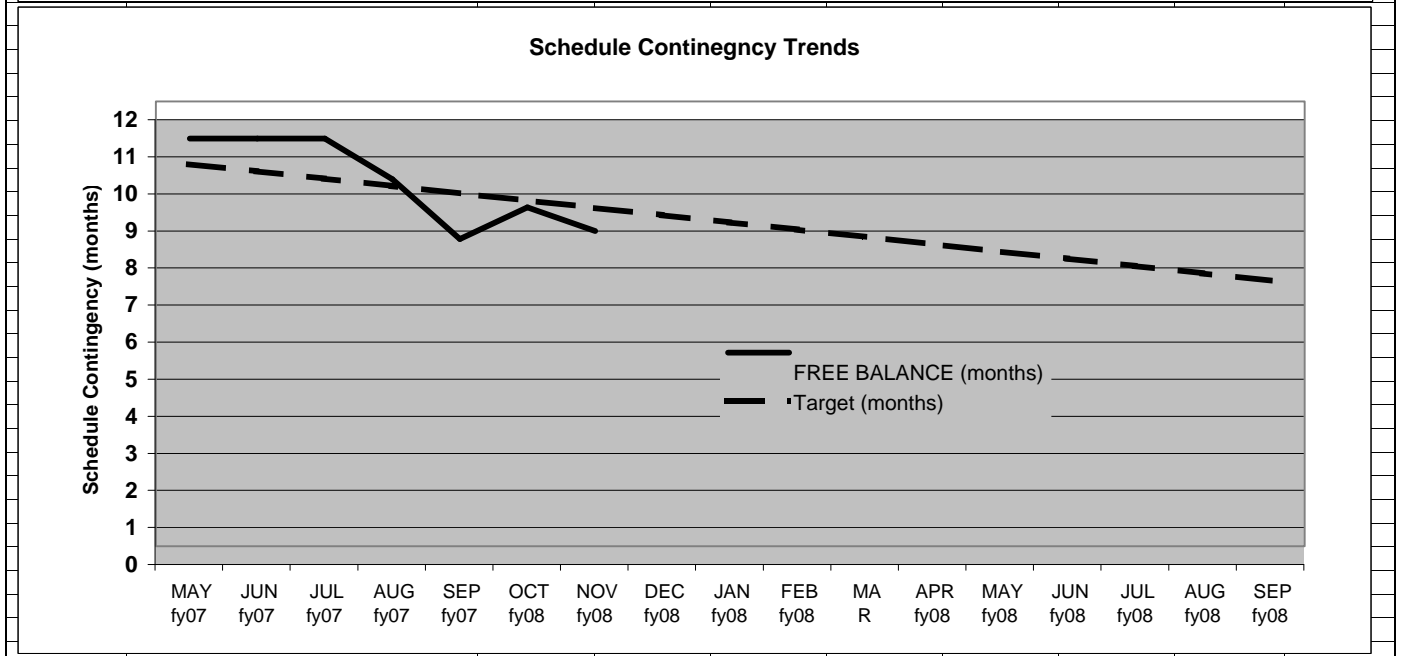
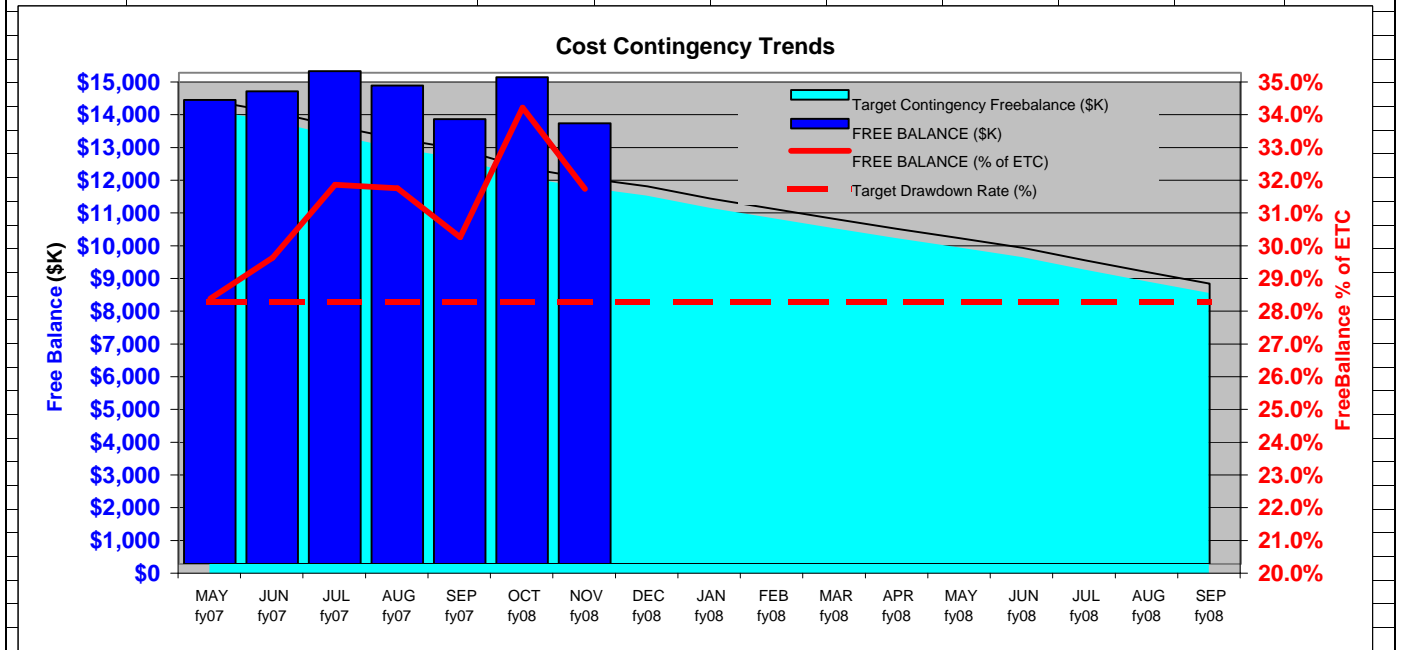
**Systems Analysis  
Jobs; 8204**







Cost	period ending	MAY fy07	JUN fy07	JUL fy07	AUG fy07	SEP fy07	OCT fy08	NOV fy08	DEC fy08
Baseline		14,380	14,380	14,380	14,380	14,380	14,380	14,380	
ECP drawdown		-	-	-	-	-	-	-	
	(ECP Number)	none	none	none	none	none	none	none	
EAC (overrun)/underrun		-	-	-	-	(531)	(43)	(1,277)	
Cost Variance (overrun)/underrun		(209)	49	672	452	278	901	854	
Schedule Slip (@\$202k/mo.)		-	-	-	(221)	(548)	(375)	(505)	
<b>FREE BALANCE (\$K)</b>		<b>14,171</b>	<b>14,429</b>	<b>15,052</b>	<b>14,611</b>	<b>13,579</b>	<b>14,863</b>	<b>13,452</b>	
BCWR		50,433	49,162	47,668	46,424	45,299	43,803	42,764	
<b>FREE BALANCE (% of ETC)</b>		<b>28.1%</b>	<b>29.4%</b>	<b>31.6%</b>	<b>31.5%</b>	<b>30.0%</b>	<b>33.9%</b>	<b>31.5%</b>	
Target Drawdown Rate (%)		28.3%	28.3%	28.3%	28.3%	28.3%	28.3%	28.3%	28.3%
BCWR		50004	48796	47244	45880	44747	42784	41635	40752
BCWS		621	1208	1552	1364	1133	1963	1149	883
Target Contingency Freebalance (\$K)		14,151	13,809	13,370	12,984	12,663	12,108	11,783	11,533
<b>Schedule</b>									
Baseline		11	11	11	11	11	11	11	
ECP Schedule Drawdown		0	0	0	0	0	0	0	
Critical path Schedule Slip (months)		0	0	0	-1.1	-2.7	-1.857	-2.5	
<b>FREE BALANCE (months)</b>		<b>11.0</b>	<b>11.0</b>	<b>11.0</b>	<b>9.9</b>	<b>8.3</b>	<b>9.1</b>	<b>8.5</b>	
Target (months)		10.80	10.61	10.41	10.21	10.02	9.82	9.63	9.43



Activity ID	Activity Description	Forecast Start	Forecast Finish	Baseline Finish	Total Float (work days)	FY08												FY09												FY10												FY11																																																																																
						ND			J			F			M			A			M			J			J			A			S			O			N			D			ND			J			F			M			A			M			J			J			A			S			O			N			D			ND			J			F			M			A			M			J			J			A			S			O			N			D		
						N	D	J	F	M	A	M	J	J	A	S	O	N	D	N	D	J	F	M	A	M	J	J	A	S	O	N	D	N	D	J	F	M	A	M	J	J	A	S	O	N	D	N	D	J	F	M	A	M	J	J	A	S	O	N	D																																																													
<b>cc 9450 - NCSX Fabrication (MIE)</b>																																																																																																																										
<b>13 - Conventional Coils</b>																																																																																																																										
<b>+ Job: 1354 - Trim Coil Design &amp; Procurement-KALISH</b>																																																																																																																										
		17DEC07	29MAY09		-3																																																																																																																					
<b>14 - Modular Coils</b>																																																																																																																										
<b>Job: 1421 - Mod Coil Interface Design-WILLIAMSON</b>																																																																																																																										
<b>Inboard Interface-AB/BC/AA</b>																																																																																																																										
1421-3	Resolve issues, release assembly spec&drawings	03DEC07	14DEC07	11SEP07	-52	ORNLEM =240hr ;																																																																																																																				
<b>Job: 1431 - Mod. Coil Interface Hardware-DUDEK</b>																																																																																																																										
<b>+ MIG Welding</b>																																																																																																																										
		01NOV07A	22JAN08		-17																																																																																																																					
<b>+ Pucks</b>																																																																																																																										
		12DEC07	10JAN08		-42																																																																																																																					
<b>+ Shims-Outboard</b>																																																																																																																										
		19NOV07A	11JAN08	20SEP07	-43																																																																																																																					
<b>+ Shims-Inboard</b>																																																																																																																										
		17DEC07	09JAN08		-41																																																																																																																					
<b>18 - Field Period Assembly</b>																																																																																																																										
<b>Job: 1806 - FP Assembly specs and drawings-COLE</b>																																																																																																																										
<b>+ Station 2-Modular Coil Sub- Assembly</b>																																																																																																																										
		11JUN07A	11DEC07	11SEP07	-27																																																																																																																					
<b>+ Station 3-Modular Coil to VVSA Assembly</b>																																																																																																																										
		02JUL07A	31JAN08	22NOV07	-10																																																																																																																					
<b>Job:1810-Field Period Assy -Station 1,2,3 VIOLA</b>																																																																																																																										
<b>+ Station 2-MC Sub Assy A1-B1-C1</b>																																																																																																																										
		14JAN08	03JUN08	09MAY08	-43																																																																																																																					
<b>+ Station 2 MC Sub Assy A2-B2-C2</b>																																																																																																																										
		21JAN08	01JUL08	19JUN08	-53																																																																																																																					
<b>+ Station 2-Modular Coil Subassembly-FP#2</b>																																																																																																																										
		04JUN08	22DEC08	26NOV08	-26																																																																																																																					
<b>+ Station 2-Modular Coil Subassembly-FP#3</b>																																																																																																																										
		01OCT08	30APR09	25MAR09	-41																																																																																																																					
<b>+ Station 3-Assemble Mod Coils and VVSA-FP#1</b>																																																																																																																										
		20MAR08	15JAN09	29OCT08	-53																																																																																																																					
<b>+ Station 3-Assemble Mod Coils and VVSA-FP#2</b>																																																																																																																										
		16JAN09	28APR09	11MAR09	-53																																																																																																																					
<b>+ Station 3-Assemble Mod Coils and VVSA-FP#3</b>																																																																																																																										
		29APR09	07AUG09	08JUN09	-53																																																																																																																					
<b>Job: 1815 - Field Period Assy -Station 5-VIOLA</b>																																																																																																																										
<b>+ Station 5- Final FP Assy -FP#1 (in NCSX TC)</b>																																																																																																																										
		16JAN09	05AUG09	29MAY09	-51																																																																																																																					
<b>+ Station 5- Final FP Assy -FP#2 (in NCSX TC)</b>																																																																																																																										
		29APR09	20NOV09	05OCT09	-25																																																																																																																					
<b>+ Station 5- Final FP Assy -FP#3 (in NCSX TC)</b>																																																																																																																										
		10AUG09	10FEB10	13NOV09	-53																																																																																																																					
<b>75 - Test Cell and Basement Assembly Operations</b>																																																																																																																										
<b>+ Job: 7503 - Machine Assembly (station 6)-PERRY</b>																																																																																																																										
		06AUG09	17MAR11	03JAN11	-53																																																																																																																					
<b>85 - Integrated Systems Testing</b>																																																																																																																										
<b>+ Job: 8501 - Integrated Systems Testing-GENTILE</b>																																																																																																																										
		19JAN11	14APR11	31JAN11	-53																																																																																																																					