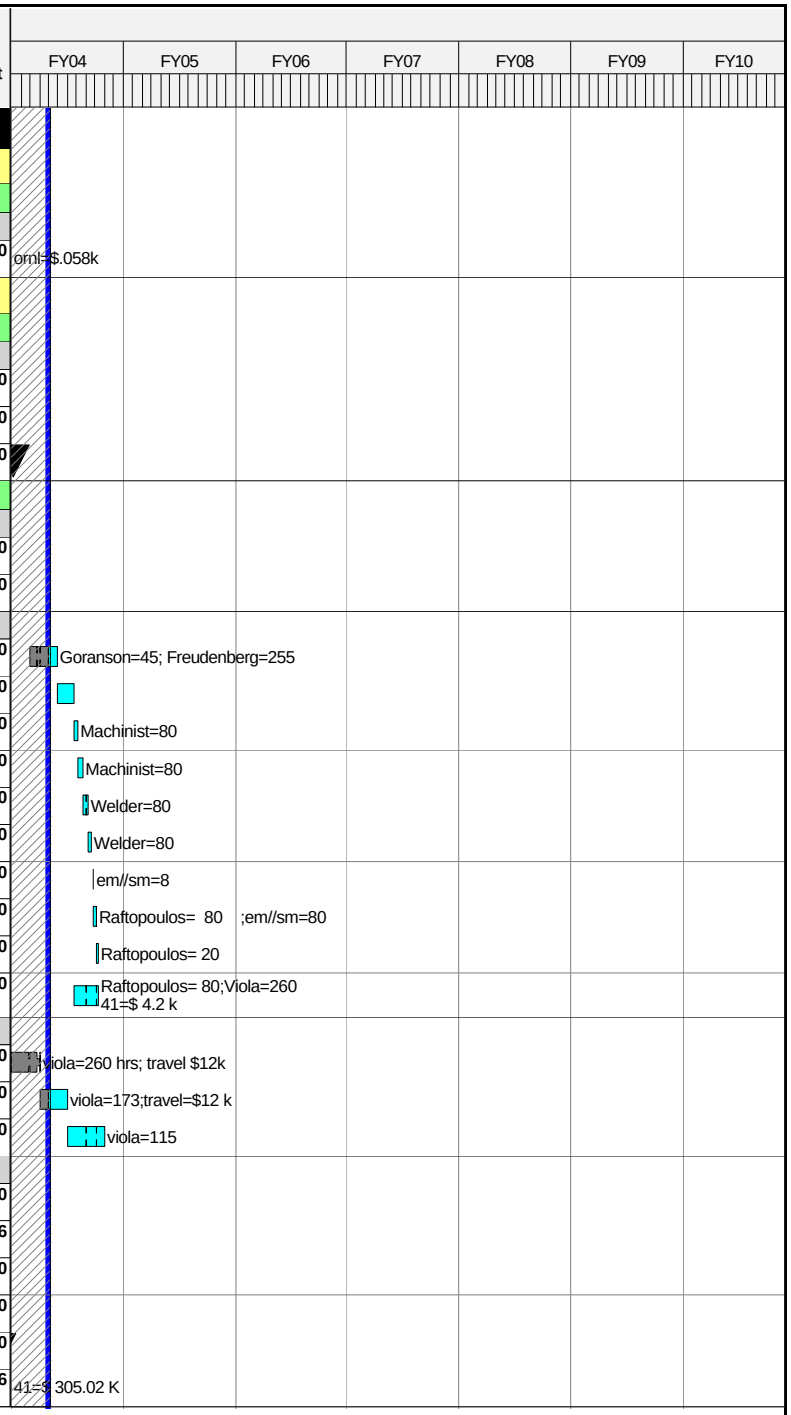
Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
cc 9450 - NCSX Fabrication (MIE)								
11 - In-Vessel Components								
Job: 1101 - Limiter Adv Conc/Prel Dsn-GORANSON								
FY03 Actual Cost								
1101-100	Update Conceptual Design	78*	15JUL03A	30SEP03A		100	60.00	**60.00**
12 - Vacuum Vessel Systems								
Job: 1201 - Vacuum Vessel Prelim Dsn-GORANSON								
FY03 Actual Cost								
1201-002	Apr-Sept MIE Cost ORNL	47	01APR03A	30SEP03A		100	319,050.00	**319,050.00**
1201-003	Apr-MSept MIE Cost PPPL	47	01APR03A	30SEP03A		100	105,370.00	**105,370.00**
1201-500	WBS 12 & 14 PDR	0		07OCT03A			0.00	**0.00**
Job: 1202 - Vacuum Vessel R&D - VIOLA								
FY03 Actual Cost								
1202-002	Apr-Sept MIE Cost ORNL	47	01APR03A	30SEP03A		100	60.00	**60.00**
1202-003	Apr-Sept MIE Cost PPPL	47	01APR03A	30SEP03A		100	128,340.00	**128,340.00**
Vessel Weld Joint R&D								
1203-405	Field Weld joint design and Specific spool piece	61*	01DEC03A	26FEB04	201	15	5,791.05	**38,607.00**
1202-690	Purchase Spool piece	40	27FEB04*	22APR04	201		0.00	**0.00**
1202-700	Machine pipe	10	23APR04*	06MAY04	201		0.00	**8,424.00**
1202-702	Machine Flanges	10	07MAY04	20MAY04	201		0.00	**8,424.00**
1202-704	Weld Flanges	10	21MAY04	04JUN04	201		0.00	**8,424.00**
1202-706	Perform Test Welds	10	07JUN04	18JUN04	201		0.00	**8,424.00**
1202-708	Install Thermocouples	1	21JUN04	21JUN04	201		0.00	**842.40**
1202-709	Measure Distortion & temp on backside weld	10	22JUN04	06JUL04	201		0.00	**21,280.00**
1202-710	Prepare Report	4	07JUL04	12JUL04	201		0.00	**3,214.00**
1202-711	Supervision/QA	55*	23APR04	12JUL04	201		0.00	**60,196.80**
VV Subcontractor Oversight								
1202-400	Oversight and Contract Management	79*	01OCT03A	02JAN04A		LOE	62,738.00	**62,738.00**
1202-401	Oversight and Contract Management	63*	05JAN04A	31MAR04	1,387	LOE	15,433.94	**48,687.50**
1202-402	Oversight and Contract Management	85*	01APR04*	30JUL04	1,302	LOE	0.00	**18,572.50**
Major Tool Subcontract (S04344F)								
1202-303	MT-Issue VVSA MIT/QA plans and C&S Est (3.1)	0*	02JUN03A	13JUN03A		100	17,153.60	**17,153.60**
1202-305	MT-Issue Draft MIT/QA plan (3.2.1)	15	13JUN03A	27JUN03A		100	10,050.56	**10,050.56**
1202-310	MT-Incorp Comments & Reissue MIT/QA Plan (3.2.1)	0*	10JUL03A	17JUL03A		100	0.00	**0.00**
1202-315	Fiinalize SOW/contract & Release MT for PVVS Fab	52*	18JUL03A	15AUG03A		100	0.00	**0.00**
1202-320	MT-PPPL Fabrication Release	0		15AUG03A		100	0.00	**0.00**
1202-324	MT-PVVS Begin Fabrication (3.2.2)	56*	18AUG03A	30SEP03A		100	368,464.16	**368,464.16**



Run Date 24FEB04 10:53

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

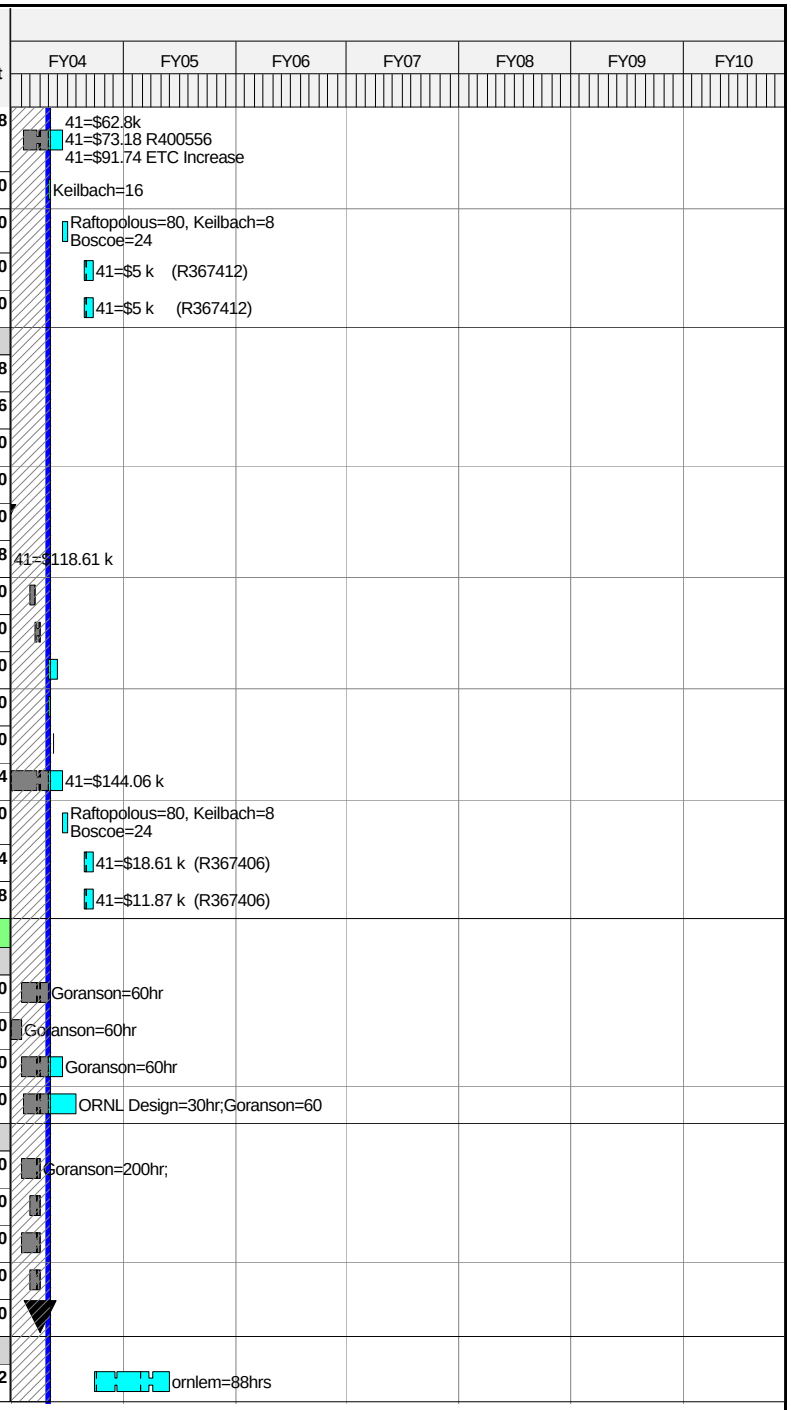
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 1 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
1202-325	MT-PVVS Complete Fabrication (3.2.2) [A/ 1]	90*	10NOV03A	17MAR04	222	85	246,597.99	**290,115.28**
1202-325A	Vist MT for welding	3	02FEB04*	04FEB04	1,446		0.00	**2,584.00**
1202-327	PPPL Receipt Inspection of MT PVVS	10	18MAR04	31MAR04	218		0.00	**14,148.00**
1202-330	MT-Final MIT/QA plans for VVSA (3.3.1)	19	27MAY04	23JUN04	197		0.00	**6,370.00**
1202-335	MT-Firm Fixed Price Proposal for VVSA (3.3.2)	19	27MAY04	23JUN04	197		0.00	**6,370.00**
Rohwedder Subcontract (S04345F)								
1202-403	RW-Issue VVSA MIT/QA plans and C&S Est (3.1)	0*	02JUN03A	13JUN03A		100	71,888.08	**71,888.08**
1202-405	RW-Issue Draft MIT/QA plan (3.2.1)	76*	13JUN03A	27JUN03A		100	19,352.16	**19,352.16**
1202-410	RW-Incorp Comments&Reissue MIT/QA Plan (3.2.1)	0*	10JUL03A	17JUL03A		100	0.00	**0.00**
1202-415	Fiinalize SOW/contract & Release MT for PVVS Fab	52*	18JUL03A	15AUG03A		100	0.00	**0.00**
1202-420	RW-PPPL Fabrication Release	0		15AUG03A		100	0.00	**0.00**
1202-424	RW-PVVS Begin Fabrication (3.2.2)	131*	18AUG03A	30SEP03A		100	143,280.88	**143,280.88**
1202-424A	RW identify fabricator	1	01DEC03A	15DEC03A		100	0.00	**0.00**
1202-424B	PPPL approve new fabricator	1	16DEC03A	31DEC03A		100	0.00	**0.00**
1202-424C	PPPL review fabricator QA	20*	02FEB04*	27FEB04	1,429	80	0.00	**0.00**
1202-424D	PPPL visit fabricator (Jan)	2	02FEB04*	03FEB04	1,447		0.00	**0.00**
1202-424E	PPPL visit fabricator (Feb)	2	16FEB04*	17FEB04	1,437		0.00	**0.00**
1202-425	RW-PVVS Complete Fabrication (3.2.2)	118*	01OCT03A	17MAR04	222	38	69,742.33	**183,532.44**
1202-427	PPPL Receipt Inspection of RW PVVS	10	18MAR04	31MAR04	218		0.00	**14,148.00**
1202-430	RW-Final MIT/QA plans for VVSA (3.3.1)	19	27MAY04	23JUN04	197		0.00	**23,709.14**
1202-435	RW-Firm Fixed Price Proposal for VVSA (3.3.2)	19	27MAY04	23JUN04	197		0.00	**15,122.38**
Job: 1203 - Vacuum Vessel Final Dsn-GORANSON								
Closeout PDR Design Deliverables								
1203-101	Prepare documents for PDR closeout	62*	03NOV03A	30JAN04A		100	7,721.40	**7,721.40**
1203-111	Response to chits, prepare FY04 WP/WAF/Checklist	25	01OCT03A	31OCT03A		100	7,721.40	**7,721.40**
1203-121	Review, revise, and approve SRD	93*	01NOV03A	15MAR04	1,423	60	4,632.84	**7,721.40**
1203-131	Complete preliminary design of insulation and he	122*	10NOV03A	30APR04	1,389	95	7,275.21	**11,582.10**
PDR Recommendations								
1203-400	350c Bakeout Study	94*	03NOV03A	31DEC03A		100	25,738.00	**25,738.00**
1203-401	Analysis & testing of tube attachment method	20	01DEC03A	31DEC03A		100	0.00	**0.00**
1203-402	Determine thermal expansion vv to mcc clearance	39*	01NOV03A	31DEC03A		100	0.00	**0.00**
1203-403	Determine cost of fabrication	20	01DEC03A	31DEC03A		100	0.00	**0.00**
1203-404	DECISION TO PROCEED WITH 350c BAKEOUT	0		31DEC03A		100	0.00	**0.00**
Final Design Tasks								
121-000	Evaluate port ext & welding**PDR #10 & 11 &24	162	01JUL04*	28FEB05	1,161		0.00	**11,973.12**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

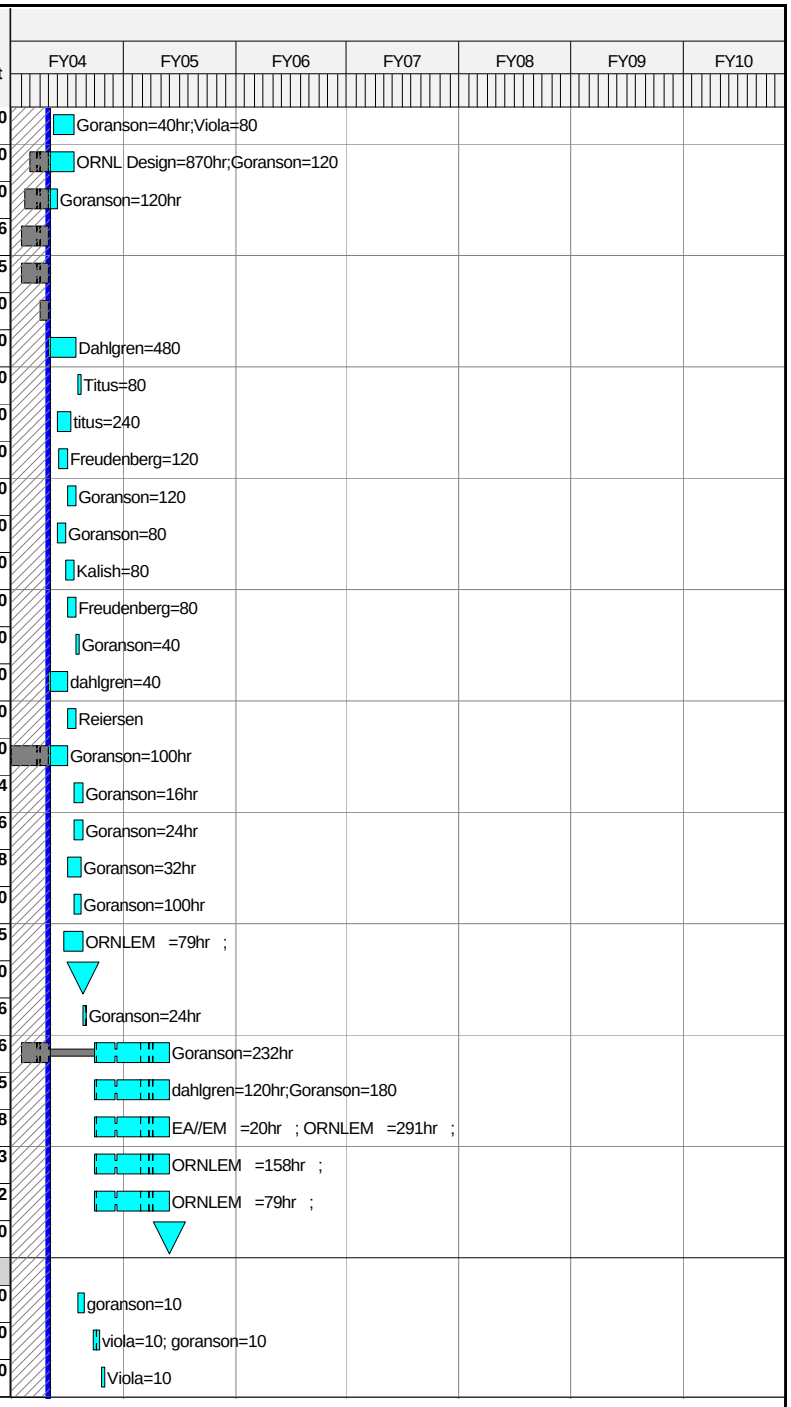
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 2 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
1203-141	Finalize Spec for VVSA	50	16FEB04*	23APR04	96		0.00	**18,067.60**
1203-151	Update VVSA Drawings	102*	01DEC03A	23APR04	96	25	31,850.78	**127,403.10**
1203-161	Finalize & Sign All ICDs	71*	17NOV03A	26FEB04	132	25	3,860.70	**15,442.80**
1203-181	Start Thermal Analyses	82*	01NOV03A	30JAN04A		100	23,012.76	**23,012.76**
1203-191	Start Eddy Current Analyses	87*	03NOV03A	30JAN04A		100	3,536.05	**3,536.05**
1203-202	Start Port Nozzle Analysis	63*	02JAN04A	30JAN04A		100	5,142.40	**5,142.40**
1203-232	Structural Analysis of Vac Vsl	65	02FEB04	30APR04	96		0.00	**77,136.00**
1203-233	Check structural analysis	10	03MAY04	14MAY04	96		0.00	**12,856.00**
1203-234	Perform Global Seismic Analysis	30	01MAR04*	09APR04	1,404		0.00	**38,568.00**
1203-235	Perform Local Thermal Analysis	20	02MAR04*	29MAR04	110		0.00	**15,442.80**
1203-236	Checdk Local Thermal Analysis	20	30MAR04	26APR04	110		0.00	**15,442.80**
1203-237	Perform Thermal-Hydraulic Analysis VV htg/clng	20	01MAR04*	26MAR04	111		0.00	**10,295.20**
1203-238	Check Thermal-Hydraulic Analysis VV htg/clng	20	29MAR04	23APR04	111		0.00	**12,856.00**
1203-239	Perform Analysis of VV Supports	20	30MAR04*	26APR04	100		0.00	**10,295.20**
1203-240	Check Analysis of VV Supports	10	27APR04	10MAY04	100		0.00	**5,147.60**
1203-201	Update/Perform FMECA Analyses	44*	02FEB04*	01APR04	107		0.00	**6,428.00**
1203-241	Check FMECA Analyses	20	02APR04*	29APR04	107		0.00	**0.00**
1203-261	Provide Input to FP assy, Install & Startup Plan	128*	01OCT03A	31MAR04	1,401	75	9,651.75	**12,869.00**
1203-291	Update Design Basis Document	20*	21APR04*	18MAY04	94		0.00	**2,059.04**
1203-301	Update Cost and Schedule Estimates	20*	21APR04*	18MAY04	94		0.00	**3,088.56**
1203-321	Assemble FDR Drawing Package, Check & Promote	32*	01APR04*	14MAY04	96		0.00	**4,118.08**
1203-331	Prepare Presentations	15	26APR04*	14MAY04	96		0.00	**12,869.00**
125-001	Title I design WBS 125 local I&C	43	22MAR04*	19MAY04	93		0.00	**10,192.25**
1203-341	Conduct VVSA FDR	0		19MAY04	93		0.00	**0.00**
1203-311	Prepare Final Design ECP	10	20MAY04*	03JUN04	1,366		0.00	**3,088.56**
1203-361	Final Design of Insulation and Heating/Cooling	230*	03NOV03A	28FEB05	265	30	9,338.12	**31,127.06**
1203-271	Develop Assembly & Installation Procedures	167*	01JUL04*	28FEB05	265		0.00	**44,133.45**
122-011	Title II design WBS 122 Thermal insulation	167*	01JUL04*	28FEB05	265		0.00	**42,921.58**
124-011	Title II design WBS 124 VV supports	167*	01JUL04*	28FEB05	265		0.00	**21,574.43**
125-011	Title II design WBS 125 local I&C	167*	01JUL04*	28FEB05	265		0.00	**10,787.22**
1203-900	Compreshensive WBS 12 FDR	0		28FEB05	265		0.00	**0.00**
Vacuum Vessel Vendor Selection								
121-6-6	Finalize tech Doc package & Resolve chits	15	06MAY04	26MAY04	193		0.00	**1,286.90**
121-6-8	Evaluate and Select VV Production Vendor	16	24JUN04	16JUL04	193		0.00	**2,901.90**
121-6-83	Negotiate with vendor	9	19JUL04	29JUL04	193		0.00	**1,615.00**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

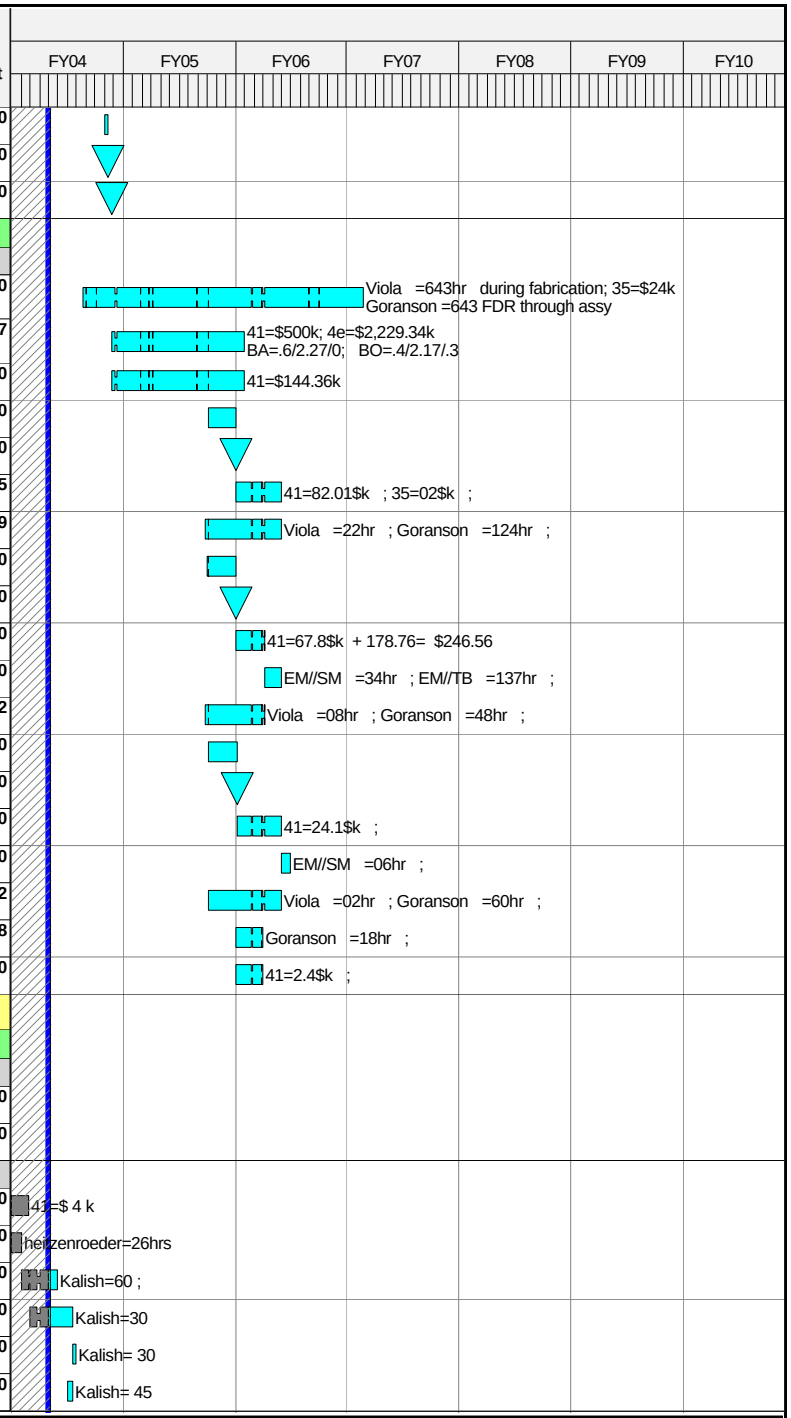
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 3 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
121-6-85	DOE Approve VV Selection & contract	11	30JUL04	13AUG04	193		0.00	**0.00**
121-6-9	Award VV Production Vendor (Phase funded)	0		13AUG04	193		0.00	**0.00**
121-36-9.2	Release for Fabrication	0		20AUG04	193		0.00	**0.00**
Job:1204 - WBS 12 Title III, Procure,Fabricate								
121-031	VVSA Title III engr	639*	21MAY04*	22NOV06	736		0.00	**238,831.20**
121-038	FAB VVSA ba=.6/2.27/0 BO=.4/2.17/.3	303	23AUG04	28OCT05	198		0.00	**2,955,260.87**
121-038P	FAB VVSA NB ports	303	23AUG04	28OCT05	314		0.00	**150,367.60**
122-030	SPEA VV Thermal Insulation	65	05JUL05	03OCT05	112		0.00	**0.00**
122-036.9	Award VV Insulation	0		03OCT05*	112		0.00	**0.00**
122-037	VV Insulation Procurement WBS 122	105	04OCT05*	03MAR06	112		0.00	**110,493.05**
122-031	Title III engr WBS 122	176	24JUN05	03MAR06	922		0.00	**21,460.89**
123-030	SPEA VV Heating & Cooling	65	01JUL05	30SEP05	113		0.00	**0.00**
123-036.9	Award VV Heating/Cooling Distribution	0		30SEP05	113		0.00	**0.00**
123-037	VV Heating/Cooling Distr Procurement WBS 123	65	03OCT05*	05JAN06	113		0.00	**321,760.80**
123-041	VV Heating/Cooling Fab/Assy WBS 123	40	06JAN06	02MAR06	113		0.00	**14,744.50**
123-031	Title III engr WBS 123	135	24JUN05	05JAN06	963		0.00	**8,194.72**
124-030	SPEA VV Supports	65	08JUL05	06OCT05	138		0.00	**0.00**
124-036.9	Award VV Supports	0		06OCT05	138		0.00	**0.00**
124-037	VV Supports Procurement WBS 124	100	07OCT05*	01MAR06	138		0.00	**31,450.50**
124-041	VV Supports Fab/assy WBS 124	20	02MAR06	29MAR06	138		0.00	**660.60**
124-031	Title III engr WBS 124	165	08JUL05	01MAR06	924		0.00	**8,940.72**
125-015	Title III design Local I&C	61	03OCT05*	29DEC05	238		0.00	**2,608.38**
125-037	Procurement Local I&C	60	04OCT05*	29DEC05	238		0.00	**3,132.00**
13 - Conventional Coils								
Job: 1301 - Convential Coils Prel Design-KALISH								
FY03 Actual Cost								
1301-0002	Apr-Sept MIE Cost ORNL	64*	01APR03A	30SEP03A		100	0.00	**0.00**
1301-0003	Apr-Sept MIE Cost PPPL	64*	01APR03A	30SEP03A		100	91,660.00	**91,660.00**
1402-004	Subcontract analysis upport for PDR	41*	01OCT03A	26NOV03A		100	5,096.00	**5,096.00**
1402-005	VV/MCC PDR support	37*	01OCT03A	31OCT03A		100	4,178.20	**4,178.20**
1301-100	Prepare Scope Sheet to define interfaces	76*	03NOV03A	27FEB04	1,410	10	964.20	**9,642.00**
1301-105	Prepare Interface Dwgs for ICD's	92	01DEC03A	15APR04	140	50	2,410.50	**4,821.00**
1301-110	Finalize ICDs	10	16APR04	29APR04	140		0.00	**4,821.00**
1301-115	Update design Basis Document	11	01APR04*	15APR04	150		0.00	**7,231.50**



Run Date 24FEB04 10:53

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

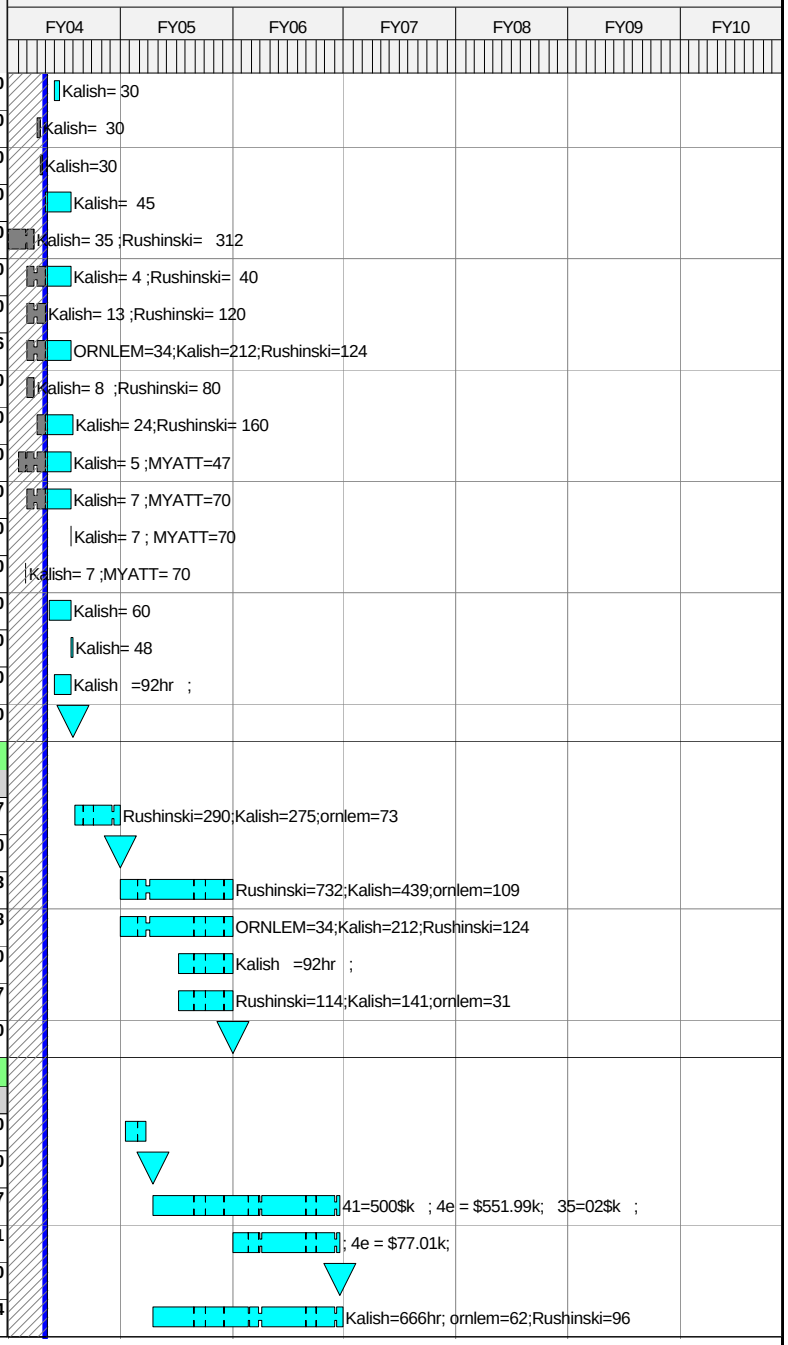
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 4 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
1301-120	Finalize SRD	11	01MAR04*	15MAR04	173		0.00	**4,821.00**
1301-140	Complete Draft SOW	10	02JAN04A	15JAN04A		100	4,821.00	**4,821.00**
1301-145	Post Draft SOW on WEB to Solicit Vendr Input	2	16JAN04A	19JAN04A		100	1,285.60	**1,285.60**
1301-150	Vendor Responses	60*	02FEB04*	23APR04	144		0.00	**7,231.50**
1301-155	Trim Coil Layouts	59*	01OCT03A	23DEC03A		100	55,762.90	**55,762.90**
1301-160	Trim Coil Leads	98*	01DEC03A	23APR04	144	100	2,743.47	**7,070.80**
1301-165	PF1-PF3 Support System Layouts	15	01DEC03A	30JAN04A		100	21,373.10	**21,373.10**
163-001	Title I design CS sprt struc	98*	01DEC03A	23APR04	144		22,647.82	**58,370.66**
1301-170	New Lead Details	10	01DEC03A	23DEC03A		100	14,141.60	**14,141.60**
1301-175	Iterate & Finalize Design	86*	02JAN04A	30APR04	139	30	8,870.64	**29,568.80**
1301-180	Update ANSYS model & structure	113*	03NOV03A	20APR04	144	50	4,178.20	**8,356.40**
1301-185	FEA Analysis Coils,Stress deflection	98*	01DEC03A	23APR04	144	50	6,186.95	**12,373.90**
1301-190	FEA Analysis PF Supports,Stress Deflection	3*	21APR04	23APR04	144		0.00	**12,373.90**
1301-195	Seismic Analysis	15	26NOV03A	26NOV03A		N/R	12,373.90	**12,373.90**
1301-125	Update Cost and Schedule	55*	09FEB04*	23APR04	144		0.00	**9,642.00**
1301-130	Prepare for PDR	6	23APR04	30APR04	139		0.00	**7,713.60**
133-010	Title I design WBS 134 Conv Coil I&C	40	01MAR04*	23APR04	422		0.00	**14,784.40**
1301-135	PDR	0		30APR04*	139		0.00	**0.00**
Job: 1303 - WBS 13 Final Design -KALISH								
131-011	Title II design WBS 131 TF coils	106*	03MAY04*	30SEP04	139		0.00	**100,189.87**
131-012	WBS 13 TF FDR	0		30SEP04	139		0.00	**0.00**
141-011	Title II design WBS 132 PF coils	249	01OCT04*	30SEP05	187		0.00	**167,006.83**
163-011	Title II design CS sprt struc	249	01OCT04*	30SEP05	187		0.00	**53,216.38**
133-011	Title II design WBS 134 Conv Coil I&C	125	06APR05	30SEP05	187		0.00	**15,198.40**
184-011	Title II design WBS 133 Ext trim coils	125	06APR05*	30SEP05	259		0.00	**39,983.57**
141-012	WBS 13 PF/CS SPRT FDR	0		30SEP05	187		0.00	**0.00**
Job: 1304 - WBS 13 Procure/Fab/Title III-KALISH								
TF Coils								
131-034	Bid & Award TF Coils	45	20OCT04*	23DEC04	126		0.00	**0.00**
131-035	TF Coils Awarded	0	17JAN05*		117		0.00	**0.00**
131-037	TF Coil Procurement [A/1]	425	17JAN05	15SEP06	117		0.00	**1,233,928.97**
131-037A	TF Coil cost correction	241	06OCT05	15SEP06	117		0.00	**81,707.61**
131-038	All TF Coils Delivered	0		15SEP06	117		0.00	**0.00**
131-031	Title III engr	433*	13JAN05*	29SEP06	761		0.00	**130,456.04**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

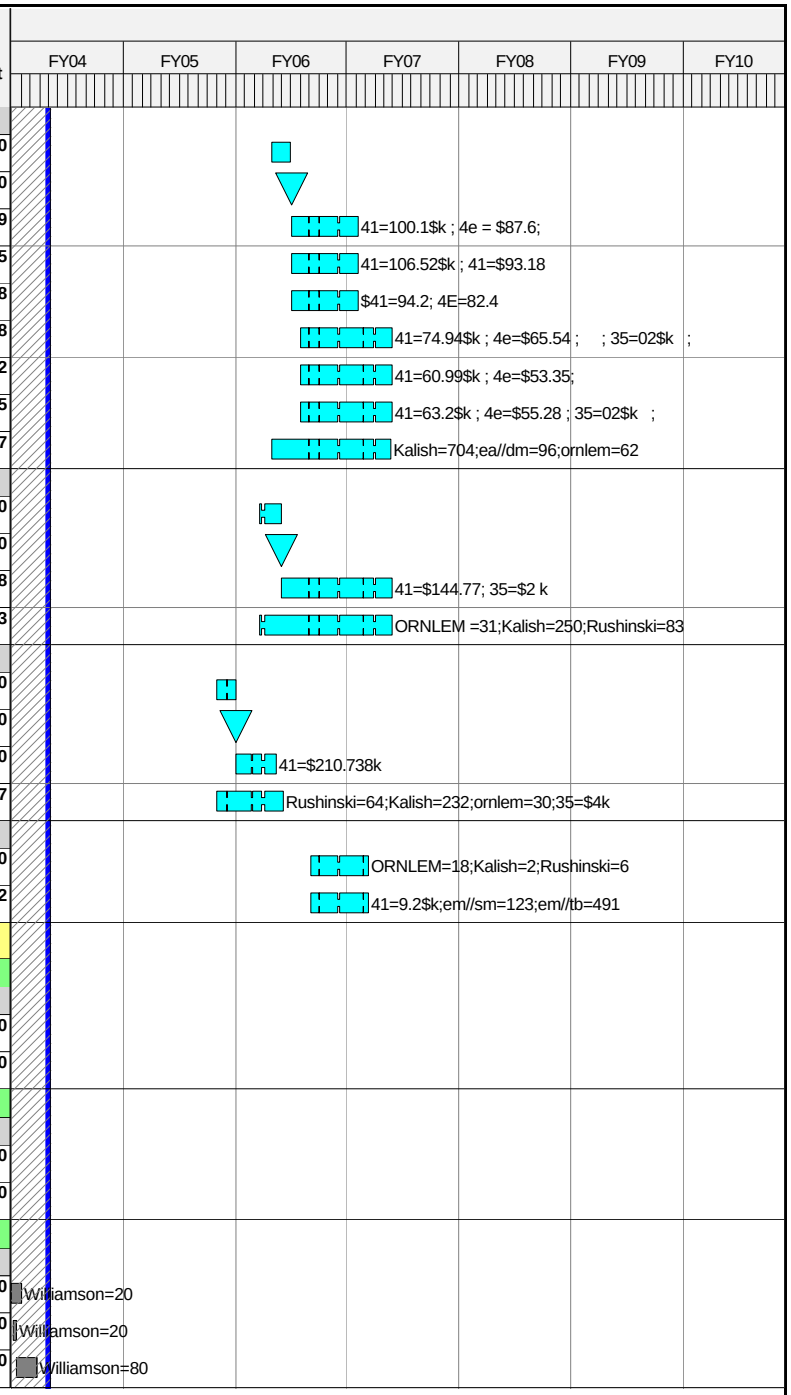
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 5 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
PF Coils								
141-035	Bid & Award PF Coils	45	30JAN06	31MAR06	154		0.00	**0.00**
141-036	PF Coils Awarded	0	03APR06*		154		0.00	**0.00**
143-037	PF 4 Procurement [A/1]	155	03APR06	08NOV06	158		0.00	**224,756.29**
144-037	PF 5 Procurement [A/1]	155	03APR06	08NOV06	158		0.00	**239,130.45**
145-037	PF 6 Procurement [A/1]	155	03APR06	08NOV06	158		0.00	**211,469.78**
141-037	PF OH Solenoid Procurement PF1 [A/1]	205	01MAY06*	26FEB07	134		0.00	**173,241.98**
141B-037	PF OH Solenoid Procurement PF2 [A/1]	205	01MAY06*	26FEB07	134		0.00	**138,102.22**
142-037	PF OH Solenoid Procurement PF3 [A/1]	205	01MAY06*	26FEB07	134		0.00	**146,668.65**
141-031	Title III engr WBS 132	268	30JAN06*	22FEB07	665		0.00	**141,578.37**
CS Support Structure								
163-035	Bid & Award CS Support Struct	45	21DEC05	01MAR06	132		0.00	**0.00**
163-036.9	Award CS Support Structure	0		01MAR06*	132		0.00	**0.00**
163-037	CS Support Structure Procurement/Fab	249	02MAR06*	28FEB07	132		0.00	**195,207.78**
163-015	Title III design CS sprt struc	294	21DEC05	28FEB07	661		0.00	**57,061.93**
Trim Coils								
184-035	Bid & Award Ext Trim Coils	45	01AUG05	03OCT05	258		0.00	**0.00**
184-036	Award External Trim Coils	0		03OCT05*	258		0.00	**0.00**
184-037	External Trim Coil Procurement/Fab	87	04OCT05	13FEB06	258		0.00	**275,015.70**
184-015	Title III WBS 133 Rxt Trim Coils	147	01AUG05	06MAR06	907		0.00	**57,039.77**
TF/PF Loacl I&C								
133-015	Title III WBS 134 Conv Coil I&C	130	05JUN06*	07DEC06	714		0.00	**3,696.20**
133-037	Conv Coil I&C WBS 134 Proc & Install	130	05JUN06*	07DEC06	185		0.00	**66,610.52**
14 - Modular Coils								
Job: 1401 - Mod Coil Prel.Dsn-WILLIAMSON								
FY03 Actual Cost								
1401-002	Apr-Sept MIE Cost ORNL	64*	01APR03A	30SEP03A		100	303,040.00	**303,040.00**
1401-003	Apr-Sept MIE Cost PPPL	64*	01APR03A	30SEP03A		100	0.00	**0.00**
Job: 1402 - Mod.Coil Analyses-WILLIAMSON								
FY03 Actual Cost								
1402-002	Apr-Sept MIE Cost ORNL	64*	01APR03A	30SEP03A		100	84,220.00	**84,220.00**
1402-003	Apr-Sept MIE Cost PPPL	64*	01APR03A	30SEP03A		100	154,920.00	**154,920.00**
Job: 1403 - WBS 14 Final Design-WILLIAMSON								
PDR/PBR Prep								
1403-04	Plan response to PDR chits	23	01OCT03A	31OCT03A		100	2,573.80	**2,573.80**
1403-05	Prepare FY04 WP / WAF / Checklists	21	08OCT03A	14OCT03A		100	2,573.80	**2,573.80**
1403-06	Prepare documents for PDR closeout	52*	15OCT03A	24DEC03A		100	10,295.20	**10,295.20**



Run Date 24FEB04 10:53

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

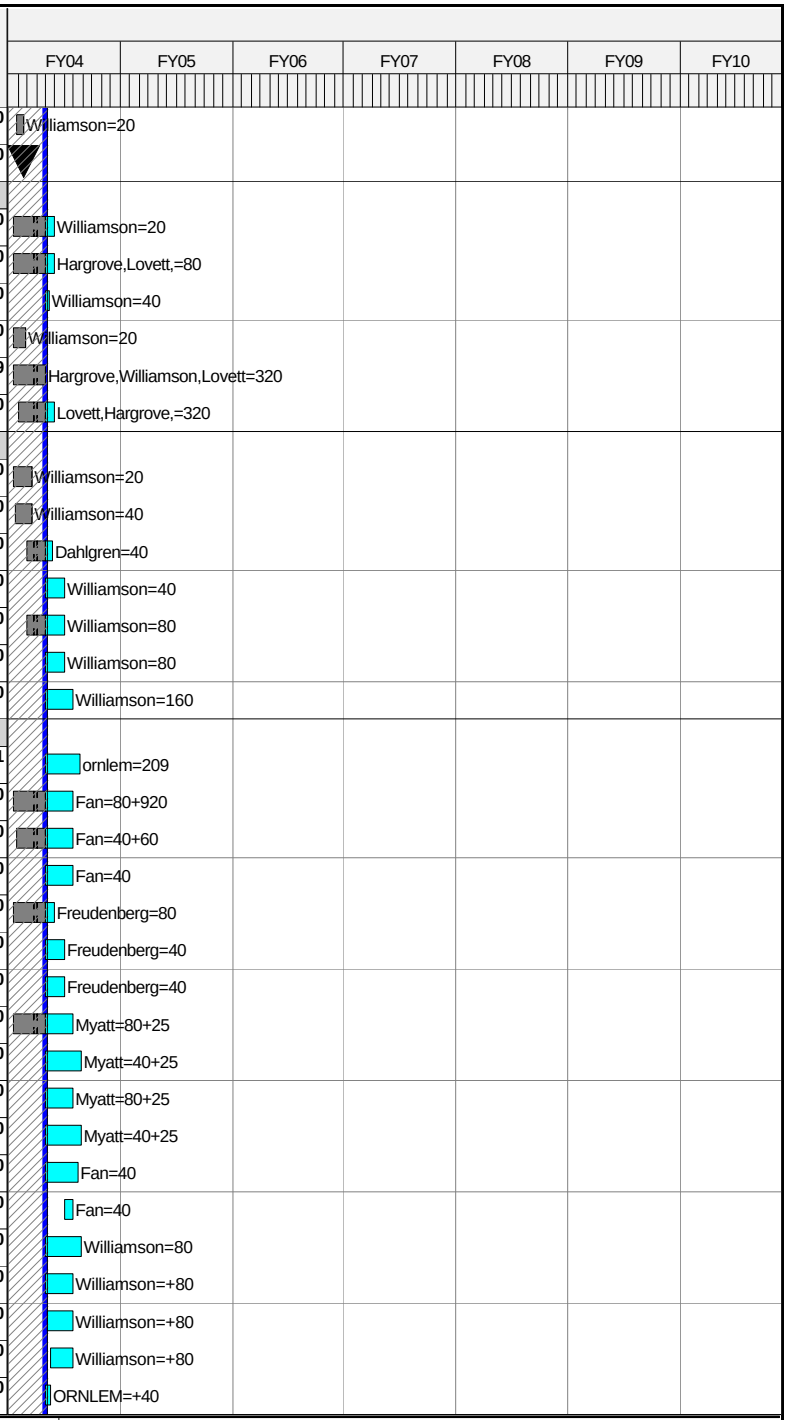
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 6 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
1403-07	Prepare PBR documentation	19*	31OCT03A	18NOV03A		100	2,573.80	**2,573.80**
1403-08	Performance Baseline Review	0		18NOV03A		100	0.00	**0.00**
Requirements/Config and Interfaces								
1403-10	Review, revise, and approve SRD	95*	15OCT03A	27FEB04	142	60	1,544.28	**2,573.80**
1403-11	Prepare assembly / interface drawings for ICDs	94*	15OCT03A	26FEB04	137	60	6,177.12	**10,295.20**
1403-12	Finalize and approve all ICDs	10*	02FEB04*	13FEB04	146	60	3,088.56	**5,147.60**
1403-13	Finalize winding pack ref xsec, conductor dims	45*	15OCT03A	26NOV03A		100	2,573.80	**2,573.80**
1403-14	Revise winding form and windings/asm models	75*	15OCT03A	30JAN04A		100	41,309.49	**41,309.49**
1403-15	Prepare winding form asm / detail drawings	82*	03NOV03A	27FEB04	1,434	70	28,826.56	**41,180.80**
Analysis - Thermal & Electrical								
1403-21	Document electrical, insulation parameters	56*	15OCT03A	19DEC03A		100	2,573.80	**2,573.80**
1403-22	Update thermal analysis to current WP design	51*	22OCT03A	19DEC03A		100	5,147.60	**5,147.60**
1403-23	Update thermo-hydraulic analysis of coils	58*	01DEC03A	23FEB04	155	10	642.80	**6,428.00**
1403-25	Check EM loads calculation for ref scenarios	43*	02FEB04*	31MAR04	128		0.00	**5,147.60**
1403-26	Perform scan of EM fault load conditions	85*	01DEC03A	31MAR04	128	30	3,088.56	**10,295.20**
1403-26.1	Check thermal & electrical calculations	43*	02FEB04*	31MAR04	128		0.00	**10,295.20**
1403-27	Prepare thermal, electrical analysis report	63	02FEB04*	28APR04	108		0.00	**20,590.40**
Analysis - Structural								
141TITLE2P	PDR #1,4,26 Access,Tolerance Budget,Bolting	78*	02FEB04*	19MAY04	1,352		0.00	**26,896.21**
1403-29	Complete ANSYS model of coil structure asm	140*	15OCT03A	30APR04	106	40	64,280.00	**160,700.00**
1403-30	Analyze global stress /deflect winding form asm	128*	31OCT03A	30APR04	106	40	6,428.00	**16,070.00**
1403-31	Analyze stress in bolted connections	65*	02FEB04*	30APR04	106	40	2,571.20	**6,428.00**
1403-32	Update MECHANICA model of 3 coil types	95*	15OCT03A	27FEB04	151	30	3,088.56	**10,295.20**
1403-33	Anlyz wind pack deflect/stress fo thrml, EM lds	43*	02FEB04*	31MAR04	128	30	1,544.28	**5,147.60**
1403-34	Analyze and optimize clamp locations	43*	02FEB04*	31MAR04	128	30	1,544.28	**5,147.60**
1403-35	Update ABAQUS model 3 coil types w/clamp geom	140*	15OCT03A	30APR04	106	20	3,374.70	**16,873.50**
1403-36	Analyze clamps&stress due to thrml, EM loading	83	02FEB04*	26MAY04	88		0.00	**10,445.50**
1403-37	Prepare ABAQUS model of coil elec leads region	65*	02FEB04*	30APR04	106		0.00	**16,873.50**
1403-38	Analyze stress/deflection in leads	83	02FEB04*	26MAY04	88		0.00	**10,445.50**
1403-39	Analyze gravity, equip, seismic loading	75	02FEB04*	14MAY04	96		0.00	**6,428.00**
1403-40	Analyze combined loads and fault conditions	23	31MAR04*	30APR04	106		0.00	**6,428.00**
1403-40.1	Check Structural Calculations	82	02FEB04*	25MAY04	89		0.00	**10,295.20**
1403-40.1A	Prepare plate element model of coil structure	65*	02FEB04*	30APR04	106		0.00	**10,295.20**
1403-40.1B	Confirm global deflection/stress, re-inf of shel	64*	03FEB04*	30APR04	106		0.00	**10,295.20**
1403-40.1C	Check all struct calculkations	54*	17FEB04*	30APR04	106		0.00	**10,295.20**
1403-40.2A	Develop multi-filament model of all coils	11*	02FEB04*	16FEB04	120		0.00	**5,147.60**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

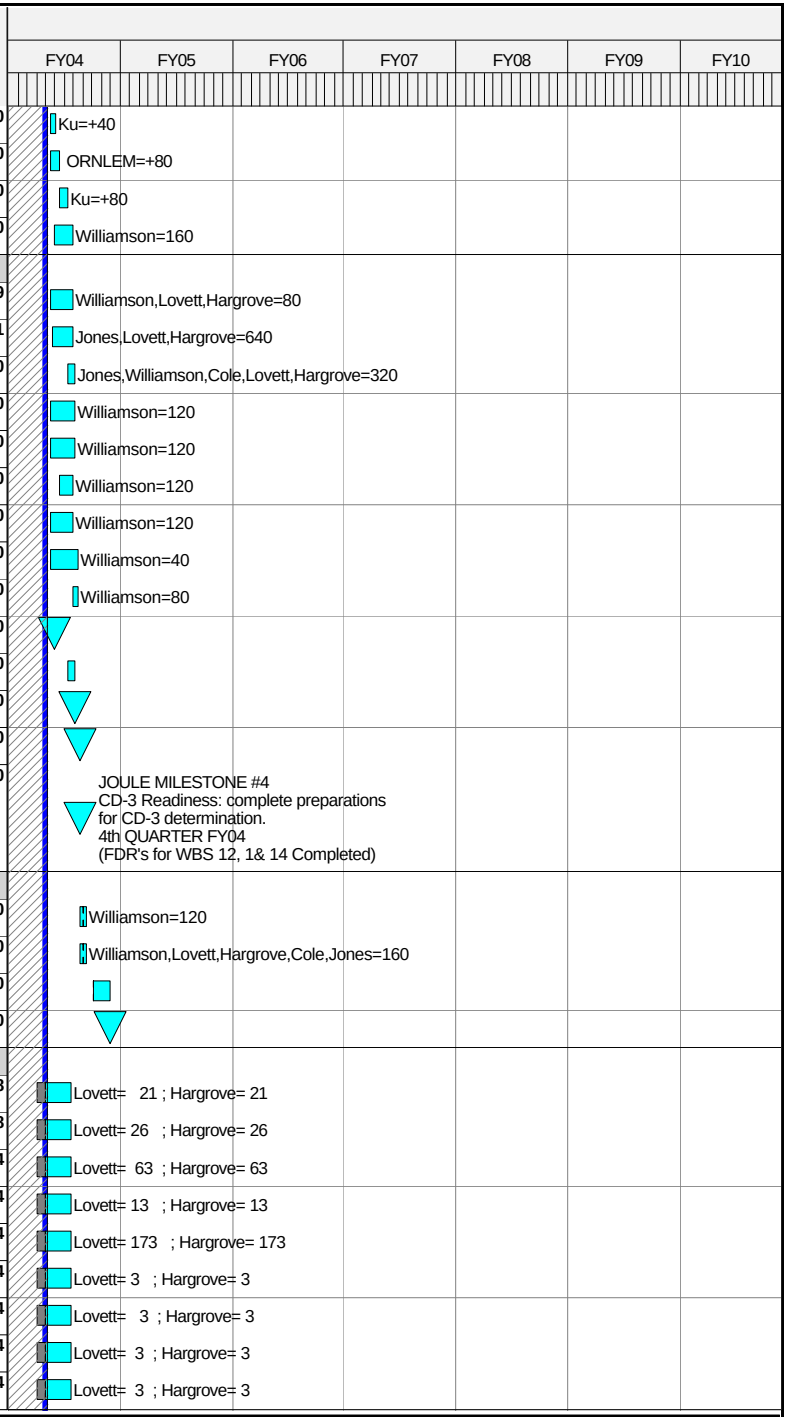
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 7 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
1403-40.2B	Confirm Plasma performance & surface quality	10	17FEB04	01MAR04	130		0.00	**6,428.00**
1403-40.2C	Model expected deflections under thermal/EM load	20	17FEB04	15MAR04	120		0.00	**10,295.20**
1403-40.2D	Confirm plasma performance & surface quality	20	16MAR04	12APR04	120		0.00	**12,856.00**
1403-41	Prepare structural analysis report	45*	01MAR04*	30APR04	106		0.00	**20,590.40**
Winding Form FDR Prep								
1403-43	Incorporate changes due to prototype fabr	55	16FEB04*	30APR04	106		0.00	**10,423.89**
1403-44	Prepare final drawings for winding forms, asm	51	20FEB04*	30APR04	106		0.00	**82,232.91**
1403-45	Check and promote models / drawings	15	15APR04*	05MAY04	103		0.00	**41,180.80**
1403-46	Update build-to specification / SOW	58	16FEB04*	05MAY04	103		0.00	**15,442.80**
1403-47	Prepare failure modes assessment (FMECA)	58	16FEB04*	05MAY04	103		0.00	**15,442.80**
1403-48	Update design basis document	33	17MAR04*	30APR04	106		0.00	**15,442.80**
1403-49	Update cost / schedule estimates	55	16FEB04*	30APR04	106		0.00	**15,442.80**
1403-49.1	Process ECP for all changes	63	16FEB04*	12MAY04	98		0.00	**5,147.60**
1403-50	Prepare FDR documentation / presentations	9	30APR04*	12MAY04	98		0.00	**10,295.20**
1403-50.1	Release EIO/JPP f/flow solidif & mach simulation	0	01MAR04*		171		0.00	**0.00**
1403-50.2	Prepare Prelim Bid Package	15	13APR04	03MAY04	129		0.00	**0.00**
1403-50.5	Prelim Bid Package Released	0		03MAY04*	129		0.00	**0.00**
1403-51	Final Design Review	0		19MAY04*	93		0.00	**0.00**
C-081.1	JOULE MILESTONE #4 - CD-3 Readiness	0		19MAY04	93		0.00	**0.00**
Post FDR Update & Planning								
1403-53	Resolve FDR comments and recommendations	15	20MAY04	10JUN04	117		0.00	**15,442.80**
1403-54	Final bid package(specs,models,dwgs)	13	24MAY04	10JUN04	117		0.00	**20,590.40**
C-071	Project eval cost proposals & select vendor	40	02JUL04	27AUG04	117		0.00	**0.00**
C-081	Castings-Award Mfg contract (phase funded)	0	30AUG04*		117		0.00	**0.00**
Winding and Assembly Design-Prototype (typeC)								
1403-100	Winding & Insulation Dwgs (8)-Prototype	60	02JAN04A	23APR04	144	24	1,297.20	**5,404.98**
1403-101	Leads & crossover Dwgs (10)-Prototype	60	02JAN04A	23APR04	144	24	1,606.06	**6,691.88**
1403-102	G-10 Filler Dwgs (24)-Prototype	60	02JAN04A	23APR04	144	24	3,891.58	**16,214.94**
1403-103	Clamp Dwgs (5)-Prototype	60	02JAN04A	23APR04	144	24	803.02	**3,345.94**
1403-104	Chill Plate Dwgs (66)-Prototype	60	02JAN04A	23APR04	144	24	10,686.42	**44,526.74**
1403-105	Installation Dwgs (1)-Prototype	60	02JAN04A	23APR04	144	24	185.32	**772.14**
1403-106	Cooling Schematic Dwgs (1)-Prototype	60	02JAN04A	23APR04	144	24	185.32	**772.14**
1403-107	Electrical Schematic Dwgs (1)-Prototype	60	02JAN04A	23APR04	144	24	185.32	**772.14**
1403-108	I&C Dwgs (1) -Prototype	60	02JAN04A	23APR04	144	24	185.32	**772.14**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

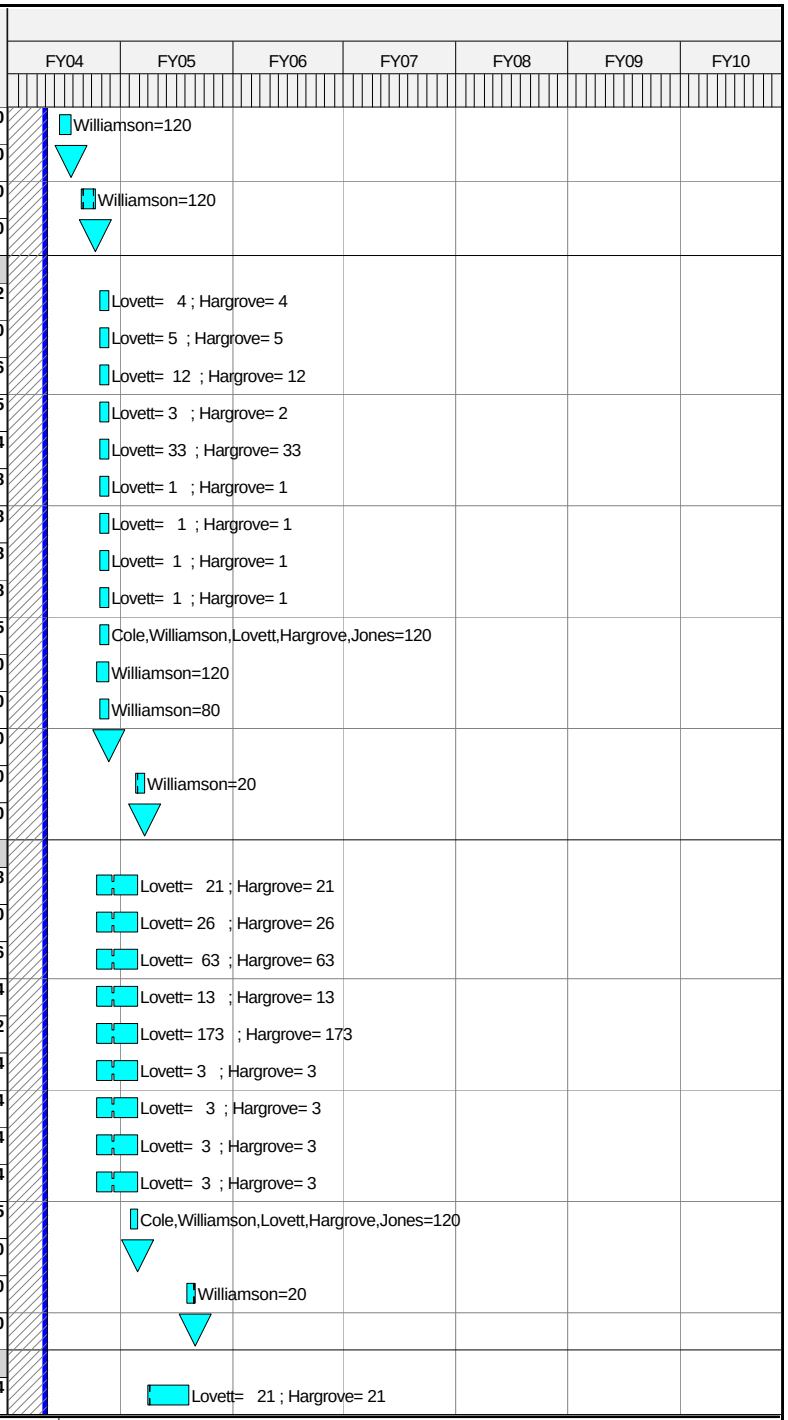
ECP5

NCSX Baseline
(ECP5)
First Plasma May 2008

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
1403-60	Update design basis document	30	15MAR04	23APR04	144		0.00	**15,442.80**
1403-20	Prototype FDR (Type C Drawings)	0		23APR04	144		0.00	**0.00**
1403-59	Update build-to specifications	30	26MAY04	08JUL04	142		0.00	**15,442.80**
1403-20.1	Prototype Fab Readiness Review	0		08JUL04	142		0.00	**0.00**
Winding and Assembly Design-Type C								
1403-200	Winding & Insulation Dwgs (8)-Type C Updates	20	29JUL04	25AUG04	122		0.00	**1,029.52**
1403-201	Leads & crossover Dwgs (10)-Type C Updates	20	29JUL04	25AUG04	122		0.00	**1,286.90**
1403-202	G-10 Filler Dwgs (24)-Type C Updates	20	29JUL04	25AUG04	122		0.00	**3,088.56**
1403-203	Clamp Dwgs (5)-Type C Updates	20	29JUL04	25AUG04	122		0.00	**643.45**
1403-204	Chill Plate Dwgs (66)-Type C Updates	20	29JUL04	25AUG04	122		0.00	**8,493.54**
1403-205	Installation Dwgs (1)-Type C Updates	20	29JUL04	25AUG04	122		0.00	**257.38**
1403-206	Cooling Schematic Dwgs (1)-Type C Updates	20	29JUL04	25AUG04	122		0.00	**257.38**
1403-207	Electrical Schematic Dwgs (1)-Type C Updates	20	29JUL04	25AUG04	122		0.00	**257.38**
1403-208	I&C Dwgs (1) -Type C Updates	20	29JUL04	25AUG04	122		0.00	**257.38**
1403-58C	Check and promote models / drawings -Type C	20	29JUL04	25AUG04	122		0.00	**17,373.15**
1403-61	Update cost / schedule estimates	30	15JUL04	25AUG04	122		0.00	**15,442.80**
1403-62	Prepare FDR documentation / presentations	20	29JUL04	25AUG04	122		0.00	**10,295.20**
1403-70	Final Design Review Production Type C	0		25AUG04	122		0.00	**0.00**
1403-70.05	Update MIT/QA Plans for Type C Winding Fab	20	19NOV04	20DEC04	122		0.00	**2,817.40**
1403-70.1	Fab Readiness Review - Production Type C	0		20DEC04	122		0.00	**0.00**
Winding and Assembly Design-Type A								
1403-300	Winding & Insulation Dwgs (8)-Type A	95	14JUL04	24NOV04	128		0.00	**5,614.98**
1403-301	Leads & crossover Dwgs (10)-Type A	95	14JUL04	24NOV04	128		0.00	**6,951.90**
1403-302	G-10 Filler Dwgs (24)-Type A	95	14JUL04	24NOV04	128		0.00	**16,844.96**
1403-303	Clamp Dwgs (5)-Type A	95	14JUL04	24NOV04	128		0.00	**3,475.94**
1403-304	Chill Plate Dwgs (66)-Type A	95	14JUL04	24NOV04	128		0.00	**46,256.82**
1403-305	Installation Dwgs (1)-Type A	95	14JUL04	24NOV04	128		0.00	**802.14**
1403-306	Cooling Schematic Dwgs (1)-Type A	95	14JUL04	24NOV04	128		0.00	**802.14**
1403-307	Electrical Schematic Dwgs (1)-Type A	95	14JUL04	24NOV04	128		0.00	**802.14**
1403-308	I&C Dwgs (1) -Type A	95	14JUL04	24NOV04	128		0.00	**802.14**
1403-58A	Check and promote models / drawings -Type A	15	04NOV04	24NOV04	128		0.00	**19,017.45**
1403-71	Final Design Review Production Type A	0		24NOV04	128		0.00	**0.00**
1403-71.05	Update MIT/QA Plans for Type C Winding Fab	20	04MAY05	01JUN05	128		0.00	**2,817.40**
1403-71.1	Fab Readiness Review - Production Type A	0		01JUN05	128		0.00	**0.00**
Winding and Assembly Design-Type B								
1403-400	Winding & Insulation Dwgs (8)-Type B	95	27DEC04	09MAY05	125		0.00	**5,916.54**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

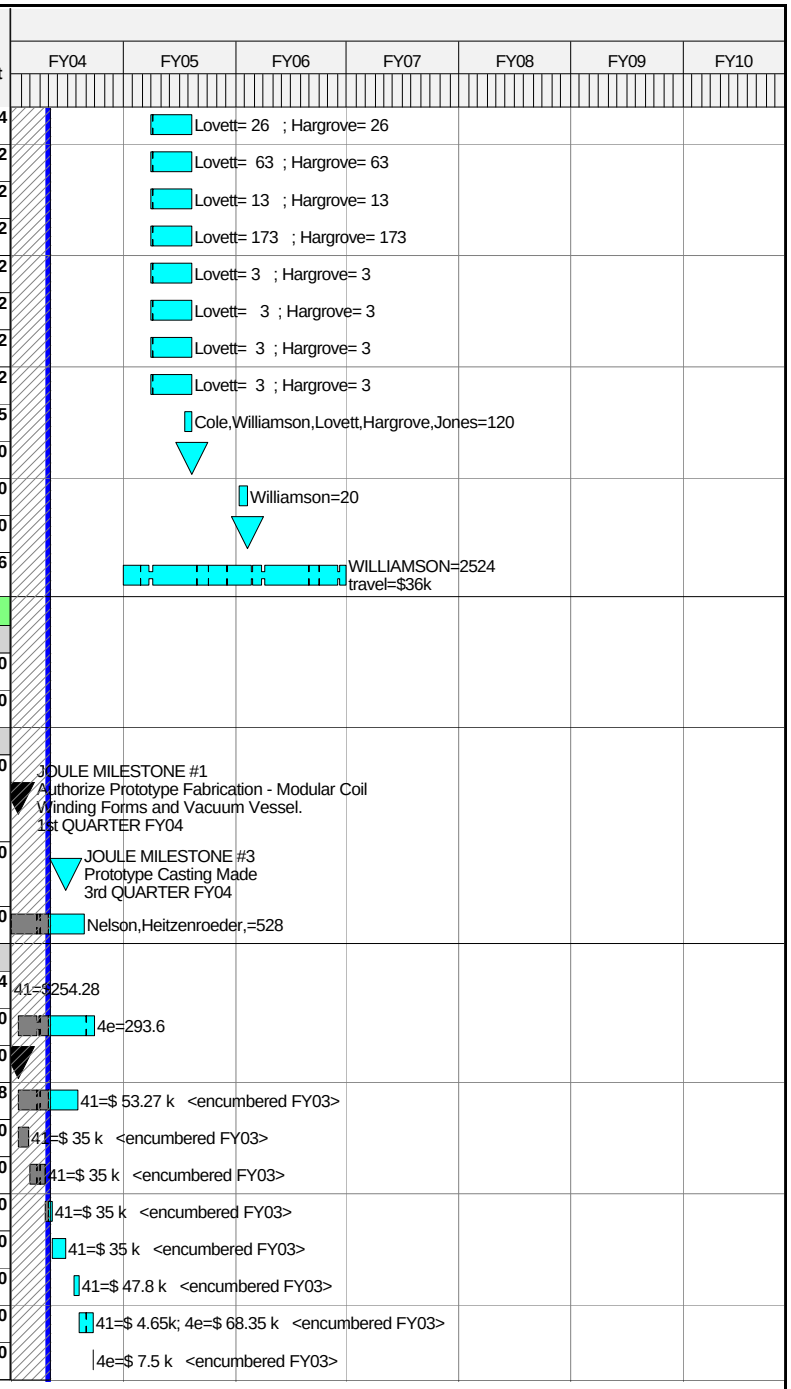
ECP5

NCSX Baseline (ECP5)
First Plasma May 2008

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
1403-401	Leads & crossover Dwgs (10)-Type B	95	27DEC04	09MAY05	125		0.00	**7,325.24**
1403-402	G-10 Filler Dwgs (24)-Type B	95	27DEC04	09MAY05	125		0.00	**17,749.62**
1403-403	Clamp Dwgs (5)-Type B	95	27DEC04	09MAY05	125		0.00	**3,662.62**
1403-404	Chill Plate Dwgs (66)-TypeB	95	27DEC04	09MAY05	125		0.00	**48,741.02**
1403-405	Installation Dwgs (1)-Type B	95	27DEC04	09MAY05	125		0.00	**845.22**
1403-406	Cooling Schematic Dwgs (1)-Type B	95	27DEC04	09MAY05	125		0.00	**845.22**
1403-407	Electrical Schematic Dwgs (1)-Type B	95	27DEC04	09MAY05	125		0.00	**845.22**
1403-408	I&C Dwgs (1) -Type B	95	27DEC04	09MAY05	125		0.00	**845.22**
1403-58B	Check and promote models / drawings -Type B	15	19APR05	09MAY05	125		0.00	**19,017.45**
1403-72	Final Design Review Production Type B	0		09MAY05	125		0.00	**0.00**
1403-72.05	Update MIT/QA Plans for Type C Winding Fab	20	13OCT05	09NOV05	125		0.00	**2,898.20**
1403-72.1	Fab Readiness Review - Production Type B	0		09NOV05	125		0.00	**0.00**
142TITLE3	Titel III Design-Coil Winding & Assembly	498*	01OCT04*	29SEP06	761		0.00	**423,168.36**
Job:1404-Mod Coil Winding Form R&D-HEITZENROEDER								
FY03 Actual Cost								
1404-002	Apr-Sept YTD MIE Cost ORNL	64*	01APR03A	30SEP03A		100	100,220.00	**100,220.00**
1404-003	Apr-Sept YTD MIE Cost PPPL	64*	01APR03A	30SEP03A		100	64,670.00	**64,670.00**
Prototype Design Issues								
1404-109.J	JOULE MILESTONE #1-Authorize Prototype Fab	0		20OCT03A			0.00	**0.00**
1404-110.J	JOULE MILESTONE #3-Prototype Casting Made	0		26MAR04	67		0.00	**0.00**
1404-65	Fabrication oversight by Project	168*	01OCT03A	26MAY04	1,371	LOE	38,074.78	**75,246.60**
EIO Subcontract (S04341F)								
1404-100	EIO-Cost FY03	10	01MAY03A	30SEP03A		100	307,170.24	**307,170.24**
1404-110X	EIO-forecast increase	176*	21OCT03A	28JUN04	1,344		132,120.00	**293,600.00**
1404-68	Authorization by PPPL	0		20OCT03A			0.00	**0.00**
1404-69	Oversight / reporting (4.1 & 4.2)	138*	21OCT03A	04MAY04	1,387		34,883.11	**67,865.98**
1404-70	Process model	27	21OCT03A	26NOV03A		100	44,590.00	**44,590.00**
1404-71	Build pattern	42*	01DEC03A	21JAN04A		100	44,590.00	**44,590.00**
1404-72	EIO Make casting	16*	22JAN04A	12FEB04	98		19,485.83	**44,590.00**
1404-73	Inspect, repair, heat treat	31*	13FEB04	26MAR04	140		0.00	**44,590.00**
1404-74	Ship, setup for machining	10	26APR04	07MAY04	120		0.00	**60,897.20**
1404-75	Perform machining	30*	10MAY04*	21JUN04	120		0.00	**74,274.10**
1404-76	Final inspection	2	22JUN04	23JUN04	120		0.00	**7,500.00**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

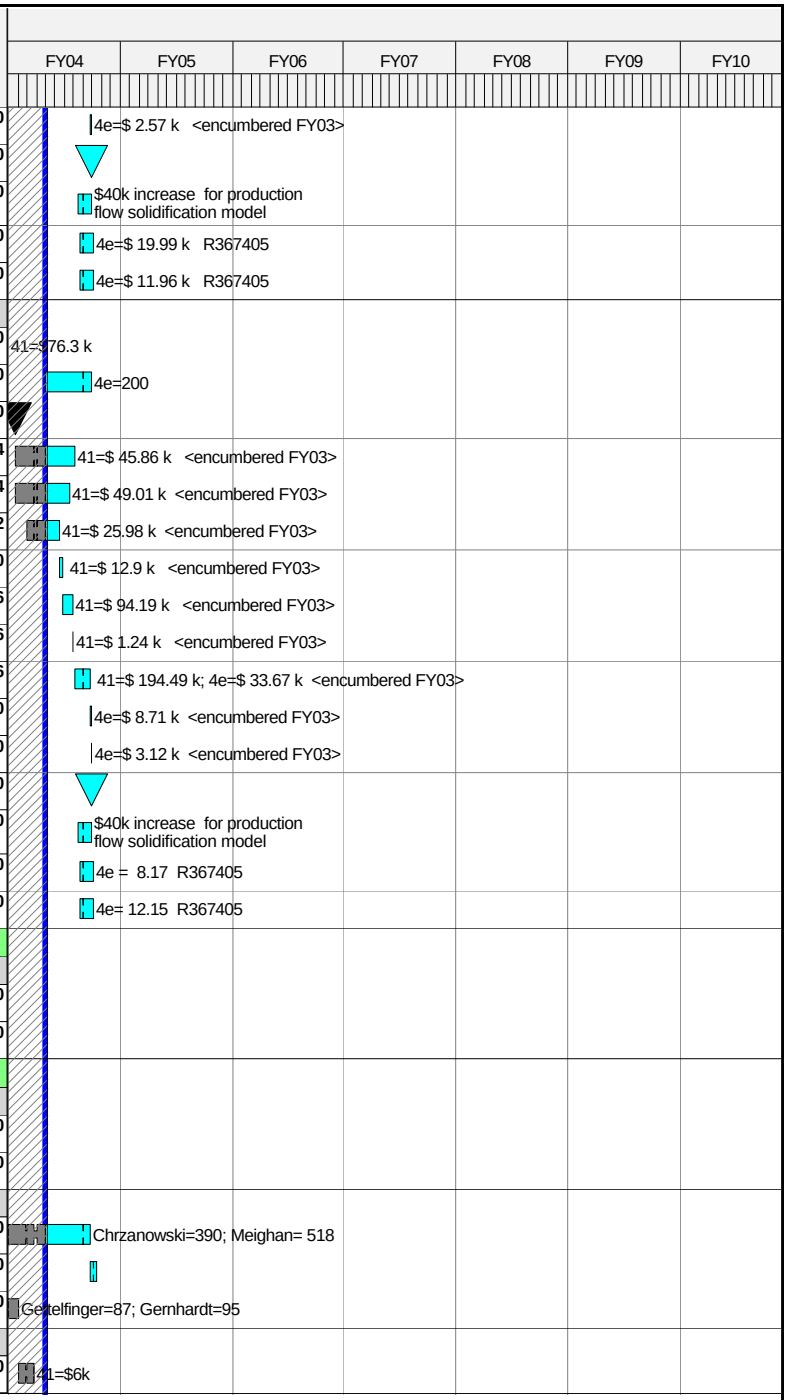
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 10 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
1404-77	Ship to PPPL	3	24JUN04	28JUN04	120		0.00	**2,570.00**
1404-77.1	EIO-Deliver Prototype	0		28JUN04	120		0.00	**0.00**
1404-78	Flow solid & machine simulation for Production	34*	13MAY04*	30JUN04	118		0.00	**40,000.00**
1404-79	Final MIT/QA plan	30	20MAY04	01JUL04	117		0.00	**19,990.00**
1404-80	Fixed price proposal	30	20MAY04	01JUL04	117		0.00	**11,960.00**
JP Pattern Subcontract (S04340F)								
1404-200	JPP- cost FY03	10	01MAY03A	30SEP03A		100	92,170.40	**92,170.40**
1404-210X	PPPL add'l-forecast increase	105*	02FEB04	28JUN04	1,344		0.00	**200,000.00**
1404-82	Authorization by PPPL to begin Fabrication	0		20OCT03A			0.00	**0.00**
1404-83	Oversight / reporting	138*	21OCT03A	04MAY04	1,387	LOE	30,030.78	**58,425.64**
1404-84	Process model	125*	21OCT03A	15APR04	1,400		35,465.20	**62,438.74**
1404-85	Build pattern	72*	01DEC03A	12MAR04	67		6,619.70	**33,098.52**
1404-86	JPP Make casting	10*	15MAR04	26MAR04	67		0.00	**16,434.60**
1404-87	Inspect, repair, heat treat	22*	29MAR04	27APR04	118		0.00	**119,998.06**
1404-88	Ship, setup for machining	3*	28APR04	30APR04	118		0.00	**1,579.76**
1404-89	Perform machining	37*	03MAY04	23JUN04	118		0.00	**281,450.26**
1404-90	Final inspection	3*	24JUN04	28JUN04	118		0.00	**8,710.00**
1404-91	Ship to PPPL	2	29JUN04	30JUN04	118		0.00	**3,120.00**
1404-91.1	JPP-Deliver Prototype	0		30JUN04	118		0.00	**0.00**
1404-92	Flow solid & machine simulation for Production	34*	13MAY04*	30JUN04	118		0.00	**40,000.00**
1404-93	Final MIT/QA plan	30	20MAY04	01JUL04	117		0.00	**8,170.00**
1404-94	Fixed price proposal	30	20MAY04	01JUL04	117		0.00	**12,150.00**
Job: 1405-Mod Coil Winding R&D Prep-CHRZANOWSKI								
FY03 Actual Cost								
1405-002	Apr-Sep YTD MIE Cost ORNL	64*	01APR03A	30MAY03A			0.00	**0.00**
1405-003	Apr-Sep YTD MIE Cost PPPL	64*	01APR03A	30MAY03A			168,070.00	**168,070.00**
Job: 1406 - Mod. Coil Winding R&D-CHRZANOWSKI								
FY03 Actual Cost								
1406-0002	Apr-Sep YTD MIE Cost ORNL	64*	01APR03A	30SEP03A		100	0.00	**0.00**
1406-0003	Apr-Sep YTD MIE Cost PPPL	64*	01APR03A	30SEP03A		100	831,120.00	**831,120.00**
Oversight & Supervision								
1406-000	Supervision & Oversight	180*	01OCT03A	22JUN04	1,312	LOE	51,458.88	**117,218.40**
1406-047	Prepare R&D report	17	23JUN04	16JUL04	1,312		0.00	**0.00**
1406-048	Testing & Strain Gauge Design	20	01OCT03A	31OCT03A		100	24,253.50	**24,253.50**
Keystone R&D								
1406-001	Purchase 10 spools conductor (twisted racetrack)	40*	03NOV03A	23DEC03A		100	7,644.00	**7,644.00**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

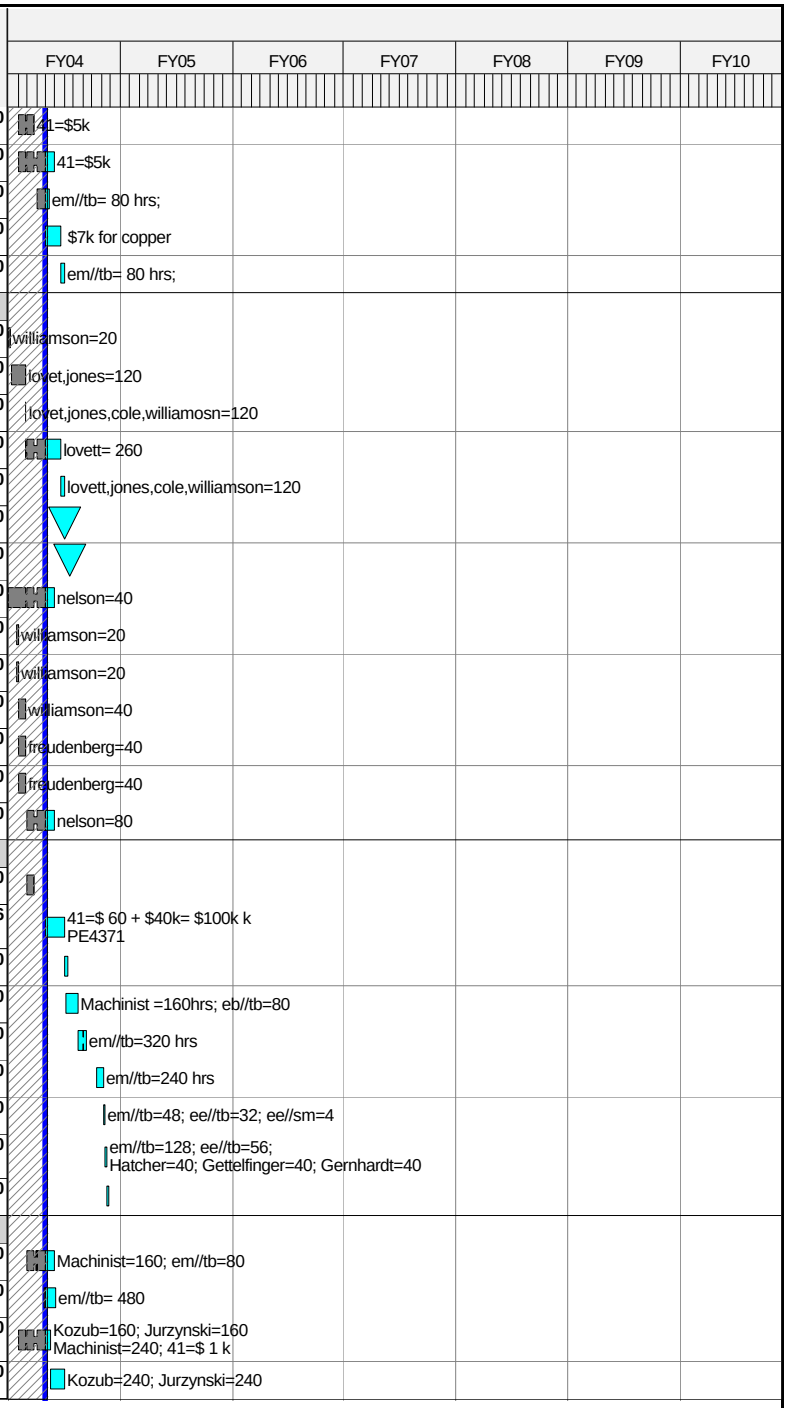
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 11 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
1406-003	Purchase 8 spools conductor (long twisted windin	40*	03NOV03A	23DEC03A		100	7,644.00	**7,644.00**
1406-005	Purchase epoxy & Insulation	76*	03NOV03A	27FEB04	213	50	4,693.68	**6,370.00**
1406-010	Keystone Test for New Conductor	31*	02JAN04A	13FEB04	194	80	4,915.20	**6,144.00**
1406-011	Purchase add'l copper Conductor	35	02FEB04	19MAR04	1,385		0.00	**8,918.00**
1406-012	Repeat Keystone Test for New Conductor	10	22MAR04	02APR04	1,385		0.00	**6,144.00**
Twisted Racetrack Design (Williamson)								
1406-097	Verify Conductor Dims	3	01OCT03A	03OCT03A		100	2,573.80	**2,573.80**
1406-098	Complete Drawings of Casting	21	13OCT03A	26NOV03A		100	15,442.80	**15,442.80**
1406-099	Review/Approve Casting Drawings	10	26NOV03A	26NOV03A		100	15,442.80	**15,442.80**
1406-101	Prepare Clamp & Chill Plate detail Drawings	80	24NOV03A	19MAR04	118	60	12,354.24	**20,590.40**
1406-102	Review/Approve Clamp& Chill Plate Dwgs	10	22MAR04	02APR04	118		0.00	**15,442.80**
1406-103	Twisted Racetrack FDR	0		02APR04	118		0.00	**0.00**
1406-103.1	Twisted Racetrack Fab Readiness Review	0		16APR04	118		0.00	**0.00**
1406-104	Prepare Draft of Coil Test Plan	99*	01OCT03A	27FEB04	1,410	30	1,544.28	**5,147.60**
1406-105	Prepare ANSYS thermal analysis model	3	31OCT03A	31OCT03A		100	2,573.80	**2,573.80**
1406-106	Analyze Thermal Behavior due to pulse	3	31OCT03A	31OCT03A		100	2,573.80	**2,573.80**
1406-107	Calculate EM Loads due to max current	3	03NOV03A	26NOV03A		100	5,147.60	**5,147.60**
1406-108	Prep MECHANICA Struct Analysis Model	3	03NOV03A	26NOV03A		100	5,147.60	**5,147.60**
1406-109	Analyze Stress/deflection due to cooldown,pulse	5	03NOV03A	26NOV03A		100	5,147.60	**5,147.60**
1406-110	Finalize, Approve coil test plan	58*	01DEC03A	27FEB04	231	30	3,088.56	**10,295.20**
Twisted Racetrack Fabrication & Winding (Chrzano								
1406-014	Bid, Evaluate and Award Casting to EIO or JPP	28	01DEC03A	23DEC03A		100	0.00	**0.00**
1406-016	Procure casting from EIO (new scope)	43*	02FEB04	31MAR04	140		0.00	**127,387.26**
1406-016.1	Inspect & Measure Casting	10	01APR04	14APR04	140		0.00	**0.00**
1406-016.5	PPPL Fabricate chill plates and clamps	30	05APR04	14MAY04	118		0.00	**22,992.00**
1406-017	Wind twisted racetrack	20	17MAY04	14JUN04	118		0.00	**24,576.00**
1406-018	Mold & VPI twisted racetrack	18	14JUL04	06AUG04	118		0.00	**18,432.00**
1406-019	Setup coil in test stand	2	09AUG04	10AUG04	118		0.00	**10,224.80**
1406-021	Perform tests	5	11AUG04	17AUG04	118		0.00	**30,853.60**
1406-023	Section and Evaluate coil turns	5	18AUG04	24AUG04	118		0.00	**0.00**
Conductor Property Testing								
1406-029	Fab New Specimen Molds	60*	01DEC03A	25FEB04	161	35	8,047.20	**22,992.00**
1406-030	Fab & Pot samples	30*	26JAN04A	05MAR04	154	15	5,529.60	**36,864.00**
1406-031	Prep fixtures and test equipt	67*	03NOV03A	16FEB04	147	50	34,617.00	**69,234.00**
1406-032	Test samples	31	17FEB04*	30MAR04	147		0.00	**64,032.00**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

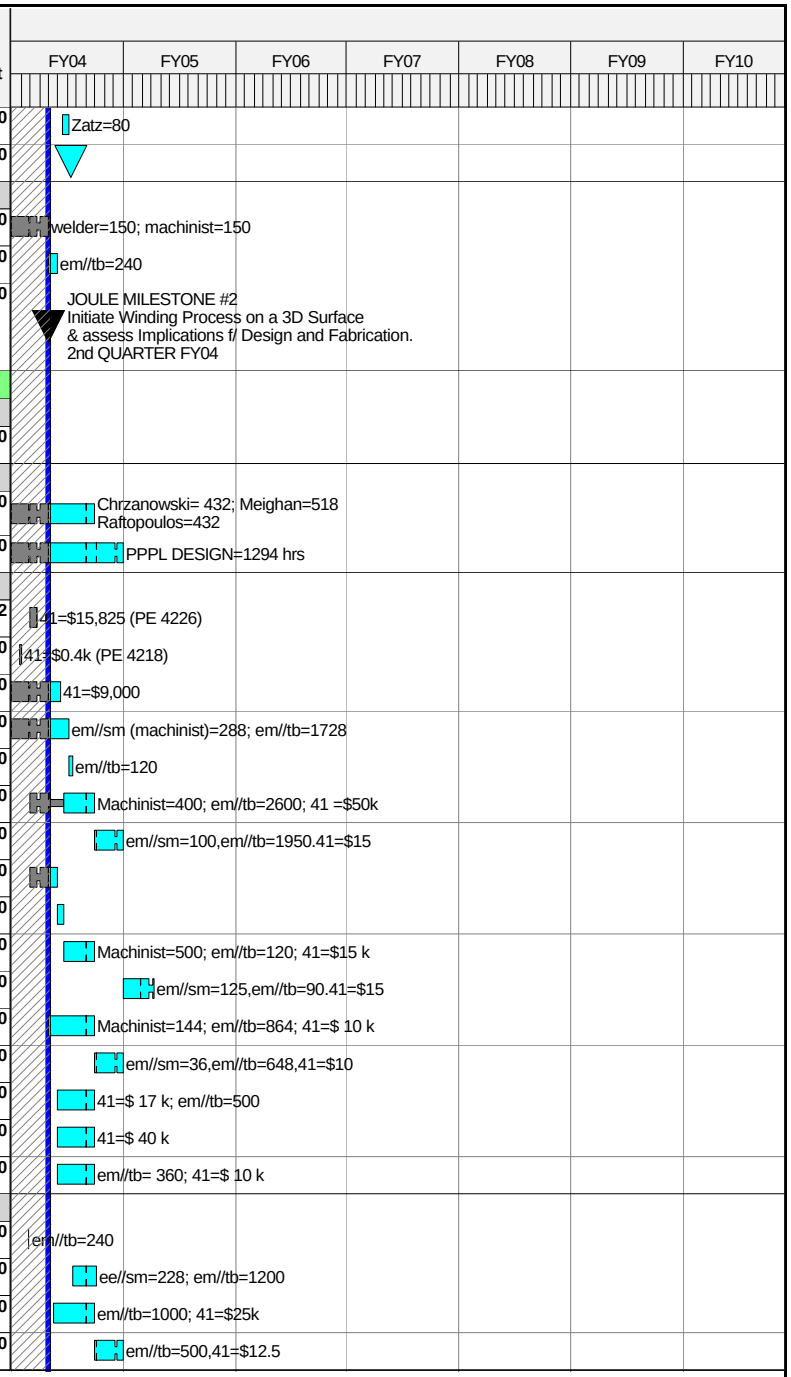
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 12 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
1406-033	Prepare Test report	15	17MAR04*	06APR04	147		0.00	**12,856.00**
1406-034	Conductor/Insulation FDR	0		13APR04*	142		0.00	**0.00**
"inchworm" Twisted Winding								
1406-119	Join straight sections w/2 end loops	79*	01OCT03A	30JAN04A		100	31,590.00	**31,590.00**
1406-120	Wind Conductor	19*	30JAN04A	25FEB04	1,412		976.90	**18,432.00**
1406-040	JOULE MILESTONE #2-Begin winding on 3D surface	0	30JAN04A				0.00	**0.00**
Job: 1407 -Mod Coil Winding Facility-CHRZANOWSKI								
FY03 Actual Cost								
1407-001	Apr-Sep YTD MIE Cost PPPL	64*	01APR03A	30SEP03A		100	267,550.00	**267,550.00**
Oversight and Supervision								
1407-002	Winding Facility, Tooling, Materials Oversight	186*	01OCT03A	30JUN04	1,323	LOE	82,190.84	**193,390.20**
1407-003	Winding Facility, Tooling, Design	250*	01OCT03A	30SEP04	1,259	LOE	43,016.70	**136,128.80**
Autoclave, Turning Fixture & other components								
1407-005	Domes & cylinder Fab & Deliver (PE4226)	18	01DEC03A	23DEC03A		100	20,167.42	**20,167.42**
1407-006.2	Blower/Elec HW- Fab & Deliver (PE 4218)	18	31OCT03A	31OCT03A		100	509.60	**509.60**
1407-008	Remaining Autoclave components-Deliver	49	01OCT03A	09MAR04	182	90	10,319.40	**11,466.00**
1407-011	Fabricate Autoclave	128*	01OCT03A	08APR04	160	60	97,822.08	**163,036.80**
1407-012	Autoclave PTP	5	09APR04	15APR04	160		0.00	**9,216.00**
1407-100	Fabricate turning fixtures and coil supports	145*	01DEC03A	30JUN04	162	30	91,650.00	**305,500.00**
1407-100.2	Fabr turning fixt&coil supports **2nd line**	64	01JUL04	30SEP04	211		0.00	**179,400.00**
1407-098	Final Dwgs for winding clamps	58*	01DEC03A	27FEB04	162	30	0.00	**0.00**
1407-099	Bid,Evaluate & Award Winding Clamps??????	16	01MAR04*	22MAR04	162		0.00	**0.00**
1407-110	Fabricate Winding clamp sets (100)	71*	23MAR04*	30JUN04	162		0.00	**80,976.00**
1407-110.2	Fabr Winding clamp sets (100)**2nd line**	64	01OCT04*	11JAN05	147		0.00	**40,027.50**
1407-115	Fabricate Conductor payout spool system	107*	02FEB04*	30JUN04	162		0.00	**94,258.40**
1407-115.2	Fabr Conduct payout spool syst ** 2nd line**	64	01JUL04*	30SEP04	211		0.00	**66,297.20**
1407-125	Fabricate VPI tanks & equipt/components	87*	01MAR04*	30JUN04	162		0.00	**63,898.00**
1407-130	Misc tools & equipt	87*	01MAR04*	30JUN04	162		0.00	**50,960.00**
1407-135	Fabricate Coil support structure (2)	87*	01MAR04*	30JUN04	162		0.00	**40,388.00**
Area Preparation								
1407-200	Decon TFTR test Cell Crane	20	26NOV03A	26NOV03A		N/R	18,432.00	**18,432.00**
1407-202	Setup facility stations	55*	16APR04*	02JUL04	160		0.00	**116,647.20**
1407-204	Build cleanrooms (2) locations	96	16FEB04*	29JUN04	211		0.00	**108,650.00**
1407-204.2	Build cleanroom (1 add'l) **2nd line**	65*	30JUN04	30SEP04	211		0.00	**54,325.00**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

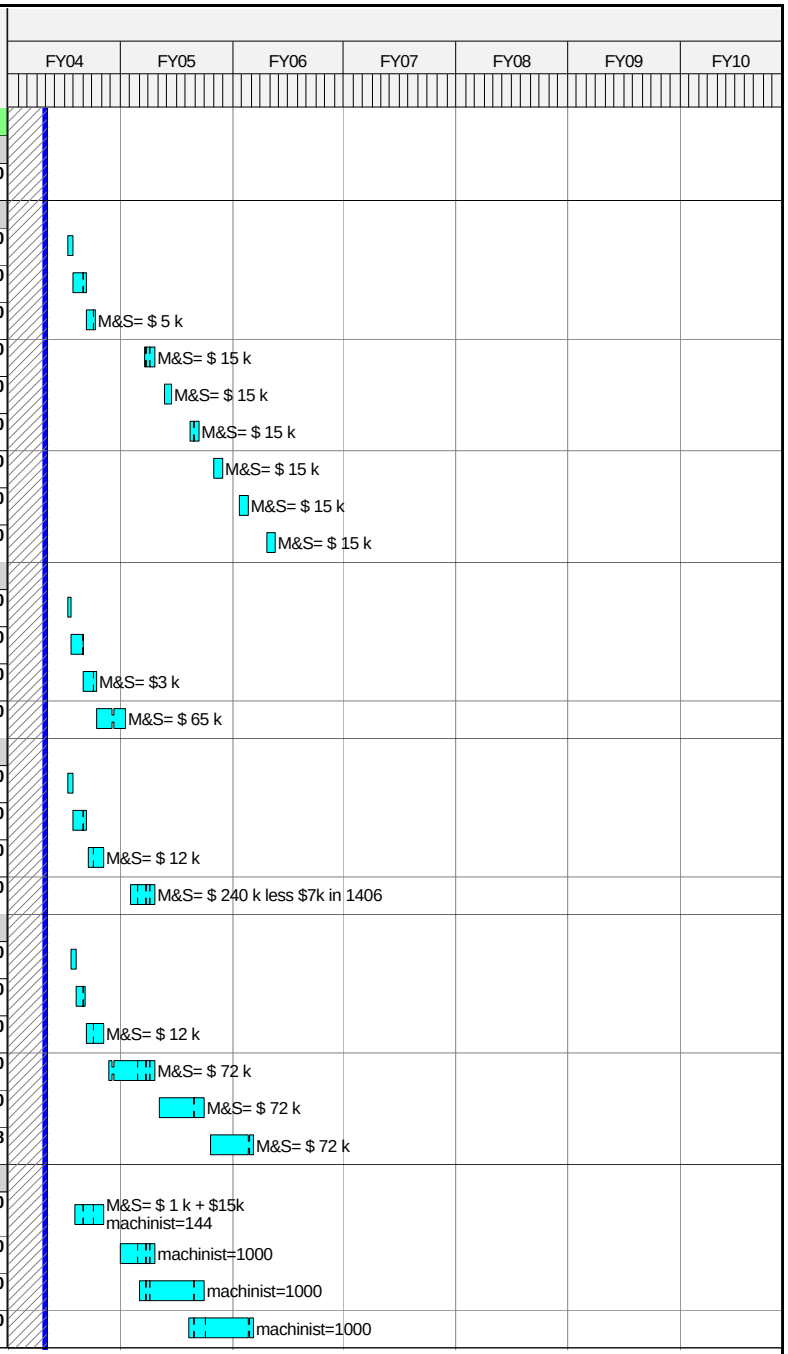
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 13 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

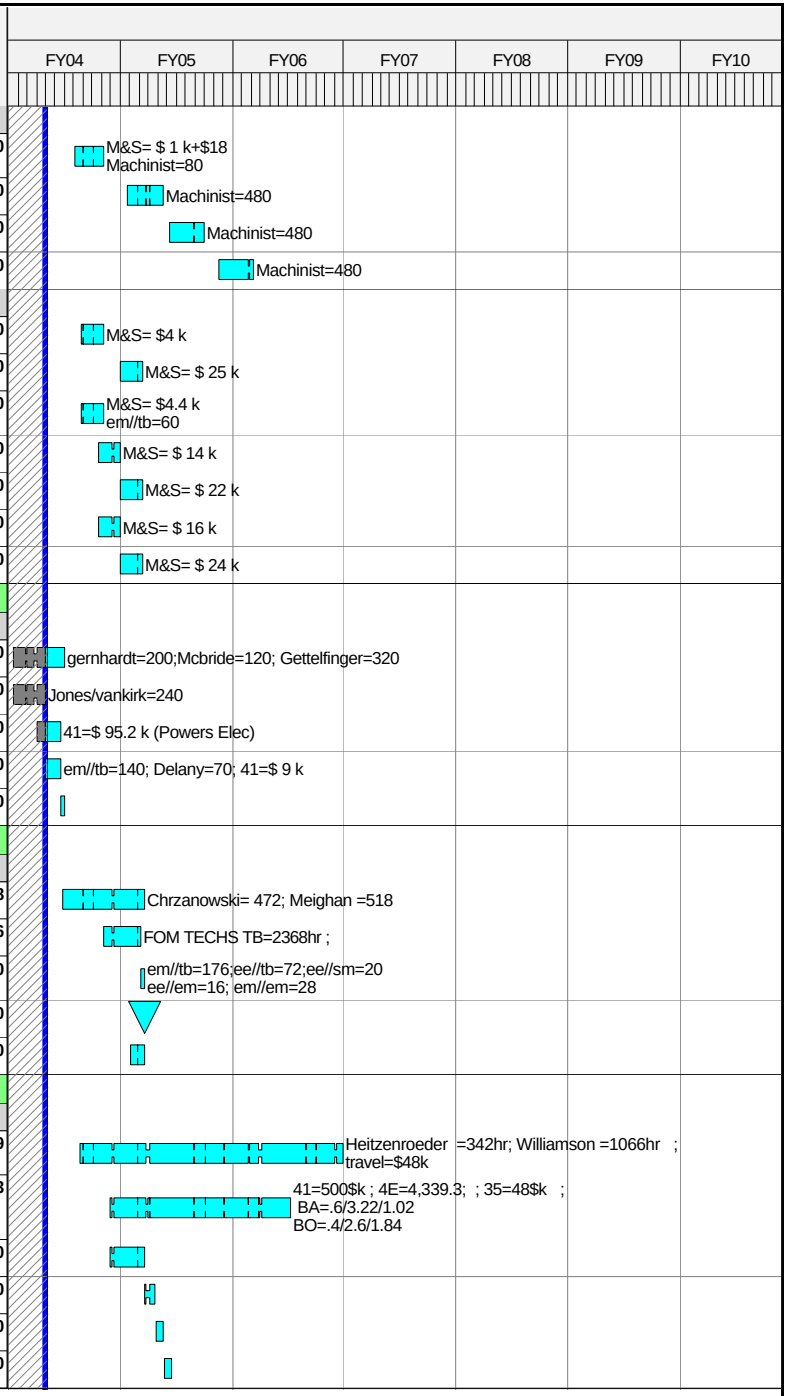
© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
Job:1408-Mod Coil Winding Supplies-CHRZANOWSKI								
FY03 Actual Cost								
1408-001	Apr-Sep YTD MIE Cost PPPL	64	01APR03A	30SEP03A		100	29,790.00	**29,790.00**
Epoxy								
1408-111	Epoxy -Spec & Requisition	10	14APR04	27APR04	162		0.00	**0.00**
1408-113	Epoxy -Bid & Award	30	28APR04	09JUN04	162		0.00	**0.00**
1408-115	Epoxy -Delivery for Prototype	20	10JUN04	08JUL04	162		0.00	**6,370.00**
1408-117	Epoxy -1st Delivery for Production	20	21DEC04	19JAN05	122		0.00	**19,380.00**
1408-119	Epoxy -2nd Delivery for Production	20	21FEB05	18MAR05	125		0.00	**19,380.00**
1408-121	Epoxy -3rd Delivery for Production	20	16MAY05	13JUN05	124		0.00	**19,380.00**
1408-123	Epoxy -4th Delivery for Production	20	04AUG05	31AUG05	124		0.00	**19,380.00**
1408-125	Epoxy -5th Delivery for Production	20	25OCT05	21NOV05	125		0.00	**19,575.00**
1408-127	Epoxy -6th Delivery for Production	20	20JAN06	16FEB06	118		0.00	**19,575.00**
Insulation for conductor								
1408-101	Insulation-Spec & Requisition	5	14APR04	20APR04	142		0.00	**0.00**
1408-103	Insulation-Bid & Award	30	21APR04	02JUN04	142		0.00	**0.00**
1408-105	Insulation-Delivery for Prototype	30	03JUN04	15JUL04	142		0.00	**3,822.00**
1408-107	Insulation-Delivery for Production	65	16JUL04	15OCT04	166		0.00	**83,980.00**
Copper Conductor								
1408-141	Copper Conductor -Spec & Requisition	10	14APR04	27APR04	147		0.00	**0.00**
1408-143	Copper Conductor -Bid & Award	30	28APR04	09JUN04	147		0.00	**0.00**
1408-145	Copper Conductor -Delivery for Prototype	35	17JUN04	05AUG04	142		0.00	**15,288.00**
1408-147	Copper Conductor -Delivery for Production	50	05NOV04	19JAN05	122		0.00	**301,036.00**
Chill Plates and Clamps								
1408-131	Chill plates & clamps -Spec & Requisition	10	26APR04	07MAY04	144		0.00	**0.00**
1408-133	Chill plates & clamps -Bid & Award	20	10MAY04	07JUN04	144		0.00	**0.00**
1408-135	Chill plates & clamps -Deliver Prototype (type C	40	10JUN04	05AUG04	142		0.00	**15,288.00**
1408-137	Chill plates & clamps Production Type C	100	26AUG04	19JAN05	122		0.00	**92,700.00**
1408-138	Chill plates & clamps Production Type A	100	09FEB05	29JUN05	128		0.00	**93,024.00**
1408-139	Chill plates & clamps Production Type B	100	21JUL05	09DEC05	125		0.00	**93,473.28**
G-11 Filler								
1408-151	G-11 Filler Fabrication - Prototype (type c)	65	05MAY04	05AUG04	142		0.00	**35,547.20**
1408-153	G-11 Filler Fabrication - Production Type C	75	01OCT04	19JAN05	122		0.00	**108,300.00**
1408-154	G-11 Filler Fabrication - Production Type A	150	29NOV04	29JUN05	128		0.00	**108,300.00**
1408-155	G-11 Filler Fabrication - Production Type B	150	10MAY05	09DEC05	125		0.00	**108,876.00**



© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
Lead hardware								
1408-161	Lead hardware Fabrication - Prototype (type c)	65	05MAY04	05AUG04	142		0.00	**32,630.00**
1408-163	Lead hardware Fabrication - Production Type C	80	22OCT04	16FEB05	122		0.00	**51,984.00**
1408-164	Lead hardware Fabrication - Production Type A	80	09MAR05	29JUN05	128		0.00	**51,984.00**
1408-165	Lead hardware Fabrication - Production Type B	80	18AUG05	09DEC05	125		0.00	**52,502.40**
Other								
1408-171	Misc supplies/matl's for Prototype	50	26MAY04	05AUG04	142		0.00	**5,096.00**
1408-173	Misc supplies/matl's for Production Windings	50	01OCT04*	13DEC04	147		0.00	**32,300.00**
1408-181	VPI Supplies for Prototype(mold epoxy,& hardware	50	26MAY04	05AUG04	142		0.00	**10,213.60**
1408-183	VPI Supplies -Epoxy & tape for Production 40%	50	20JUL04*	28SEP04	199		0.00	**17,836.00**
1408-184	VPI Supplies -Epoxy & tape for Production 60%	50	01OCT04*	13DEC04	1,233		0.00	**28,424.00**
1408-185	VPI Supplies -Valves & Tubing 40%	50	20JUL04*	28SEP04	199		0.00	**20,384.00**
1408-186	VPI Supplies -Valves & Tubing 60%	50	01OCT04*	13DEC04	1,233		0.00	**31,008.00**
Job: 1409 - Mod. Coil Test Stand-GETTELFINGER								
Test Stand								
1409-029	Oversight/Supervision	111*	20OCT03A	02APR04	206	LOE	51,198.56	**86,048.00**
1409-025	Design Test Stand	66*	20OCT03A	30JAN04A		100	25,248.00	**25,248.00**
1409-026	Install Electrical	56*	01JAN04A	19MAR04	206	42	50,939.62	**121,284.80**
1409-027	Cryo Line Installation	35	02FEB04*	19MAR04	206		0.00	**29,589.00**
1409-028	System Testing	10	22MAR04	02APR04	206		0.00	**0.00**
Job: 1410 Mod Coil Prototype Winding-CHRZANOWSKI								
Prototype Winding								
141-3-44	Oversight and materials/supplies	186	29MAR04	20DEC04	137		0.00	**131,483.38**
141-3-45	Wind & VPI prototype coil (stations 1 thru 5)	87	06AUG04*	09DEC04	137		0.00	**184,736.66**
141-3-46	Test prototype coil (station 6)	7	10DEC04	20DEC04	137		0.00	**28,850.00**
141-3-45.1	Complete Prototype Winding (SOW 4.9)	0		20DEC04*	137		0.00	**0.00**
141-3-45.2	Final Procedures & Process Plan (SOW 4.10)	30	05NOV04	20DEC04	137		0.00	**0.00**
Job: 1411 - Modular Coil Casting Fabrication								
Type 1 Castings								
172-031	Title III engr	589*	24MAY04*	29SEP06	761		0.00	**289,943.89**
172-037	MCWF FAB ba=.6/3.22/1.02 BO=.4/2.6/1.84	409*	30AUG04	11APR06	117		0.00	**5,274,392.53**
C-121	Castings-C-1-1 (1st MCC form delivered)	75	30AUG04	15DEC04	117		0.00	**0.00**
C-181	Castings-C-4-1	18	20DEC04	21JAN05	117		0.00	**0.00**
C-261	Castings-C-7-2	18	26JAN05	18FEB05	117		0.00	**0.00**
C-321	Castings-C-10-2	18	23FEB05	18MAR05	117		0.00	**0.00**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

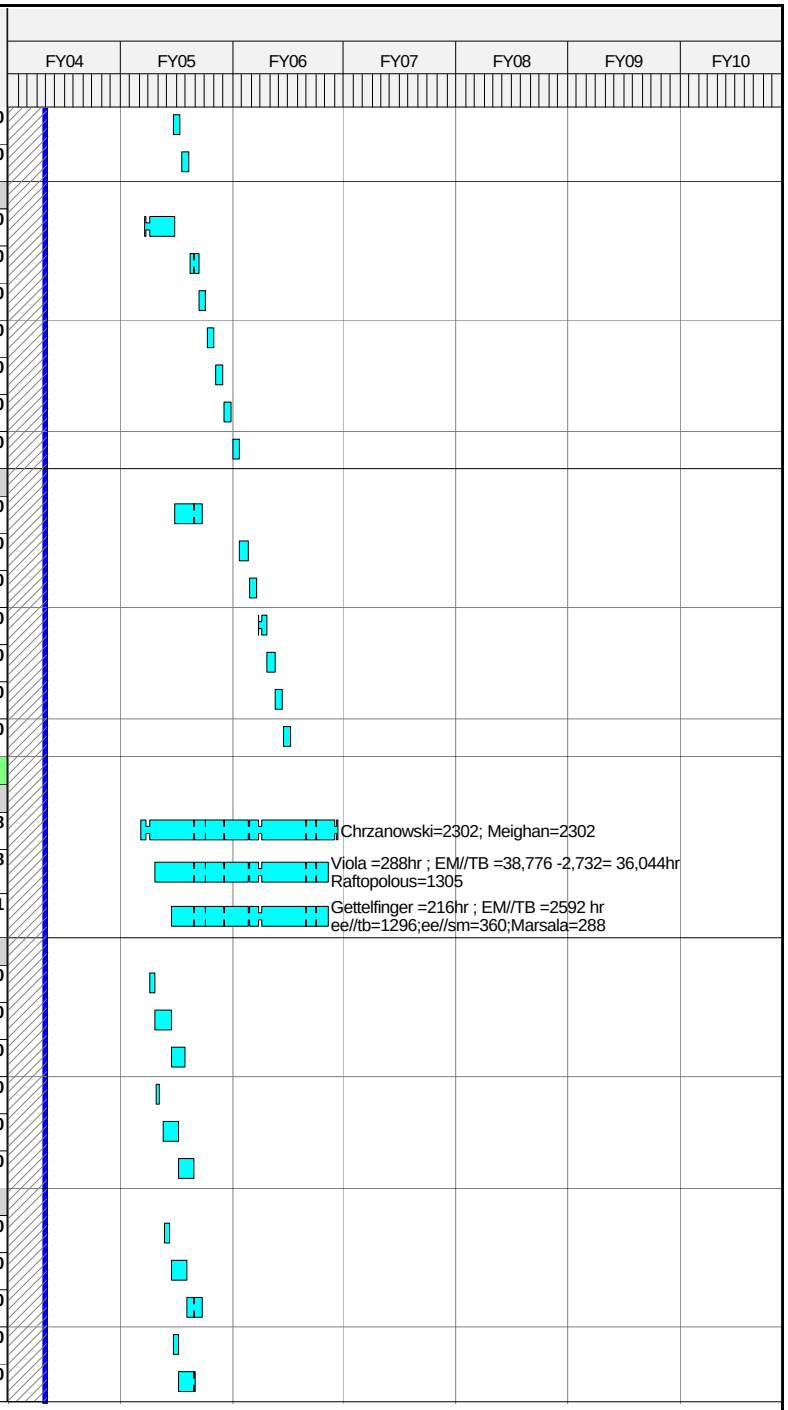
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 15 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
C-401	Castings-C-13-3	18	23MAR05	15APR05	117		0.00	**0.00**
C-461	Castings-C-16-3	18	20APR05	13MAY05	117		0.00	**0.00**
Type 2 Castings								
C-101	Castings-Production casting tooling prep type MI	65	16DEC04	25MAR05	154		0.00	**0.00**
C-141	Castings-A-2-1	18	18MAY05	13JUN05	117		0.00	**0.00**
C-201	Castings-A-5-1	18	14JUN05	08JUL05	117		0.00	**0.00**
C-281	Castings-A-8-2	17	13JUL05	04AUG05	117		0.00	**0.00**
C-341	Castings-A-11-2	17	09AUG05	31AUG05	117		0.00	**0.00**
C-421	Castings-A-14-3	17	06SEP05	28SEP05	117		0.00	**0.00**
C-481	Castings-A-17-3	17	03OCT05	25OCT05	117		0.00	**0.00**
Type 3 Castings								
C-102	Castings-Production casting tooling prep type BU	65	28MAR05	27JUN05	201		0.00	**0.00**
C-161B	Castings-B-3-1	17	28OCT05	21NOV05	117		0.00	**0.00**
C-221B	Castings-B-6-1	17	28NOV05	20DEC05	117		0.00	**0.00**
C-301B	Castings-B-9-2	17	23DEC05	24JAN06	117		0.00	**0.00**
C-361B	Castings-B-12-2	17	25JAN06	16FEB06	117		0.00	**0.00**
C-441B	Castings-B-15-3	17	21FEB06	15MAR06	117		0.00	**0.00**
C-501B	Castings-B-18-3 (last MCC form delivered)	17	20MAR06	11APR06	117		0.00	**0.00**
Job: 1421 - Type C Winding/VPI								
Labor								
171-040	Winding Oversight (LOE)	442	07DEC04*	14SEP06	772		0.00	**635,298.88**
171-041	Modular Coil Winding (18 coils) (see detail sch)	391*	20JAN05	08AUG06	117		0.00	**3,138,723.18**
171-041CT	PBR Increment for cold testing	353*	15MAR05	08AUG06	117		0.00	**430,218.41**
Period 1								
P1-001	Prep casting C-1-1 (station 1)	12	04JAN05	19JAN05	122		0.00	**0.00**
P1-011	Wind coil C-1-1 (station 2)	38	20JAN05*	14MAR05	122		0.00	**0.00**
P1-021	VPI,Test &Ship C-1-1 (1st MCC fabr) (sta 4/5/6)	34	15MAR05	29APR05	167		0.00	**0.00**
P1-091	Prep casting C-4-1 (station 1)	12	24JAN05	08FEB05	127		0.00	**0.00**
P1-101	Wind coil C-4-1 (station 3)	37	16FEB05*	07APR05	122		0.00	**0.00**
P1-111	VPI, Test & Ship C-4-1 (station 4/5/6)	34	08APR05	25MAY05	164		0.00	**0.00**
Period 2								
P2-001	Receive casting C7-2	12	21FEB05	08MAR05	129		0.00	**0.00**
P2-011	Wind coil BA-7-2 (station 2)	37	15MAR05	04MAY05	125		0.00	**0.00**
P2-021	VPI,Test & Ship C-7-2 (station 4/5/6)	34	05MAY05	22JUN05	160		0.00	**0.00**
P2-091	Receive casting C-10-2	12	21MAR05	05APR05	124		0.00	**0.00**
P2-101	Wind coil C-10-2 (station 3)	37	08APR05	31MAY05	122		0.00	**0.00**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

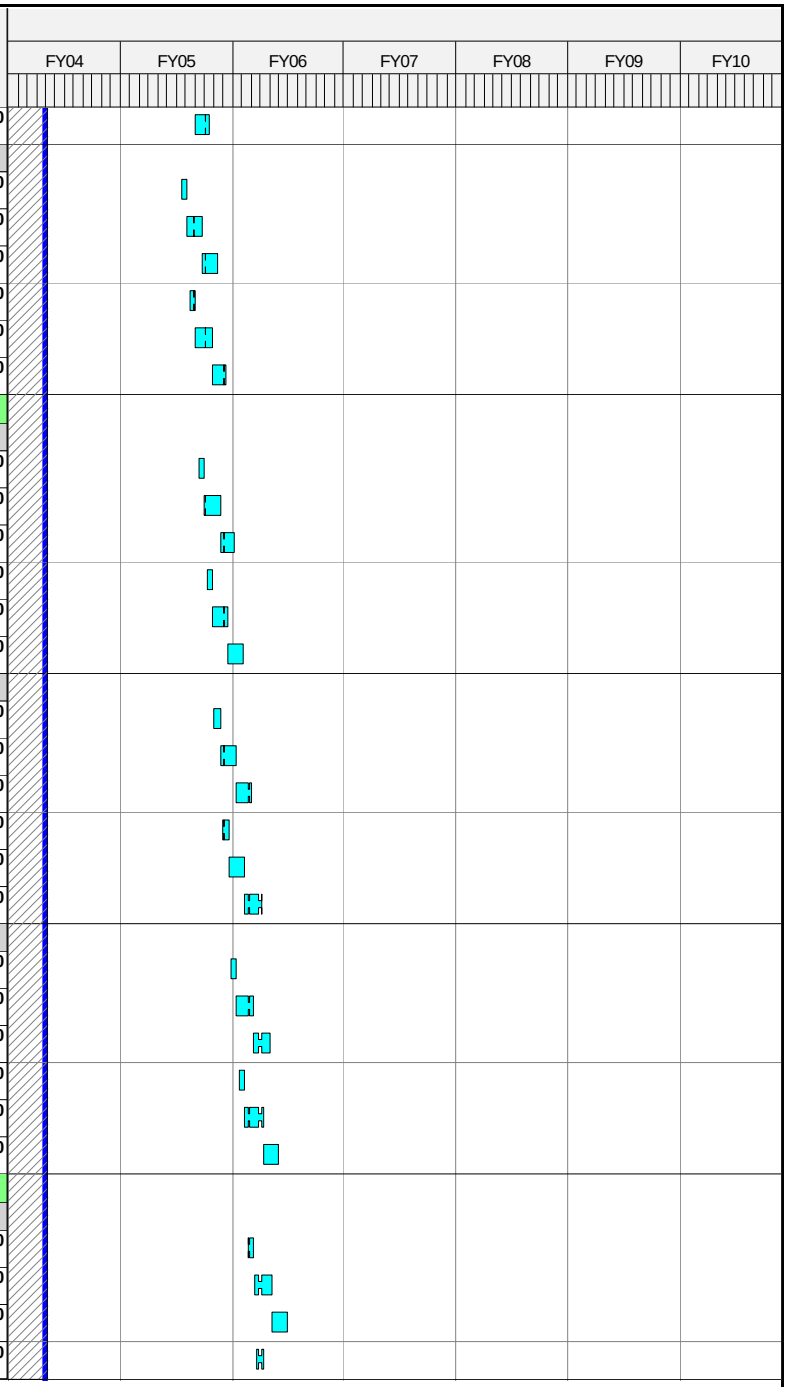
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 16 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

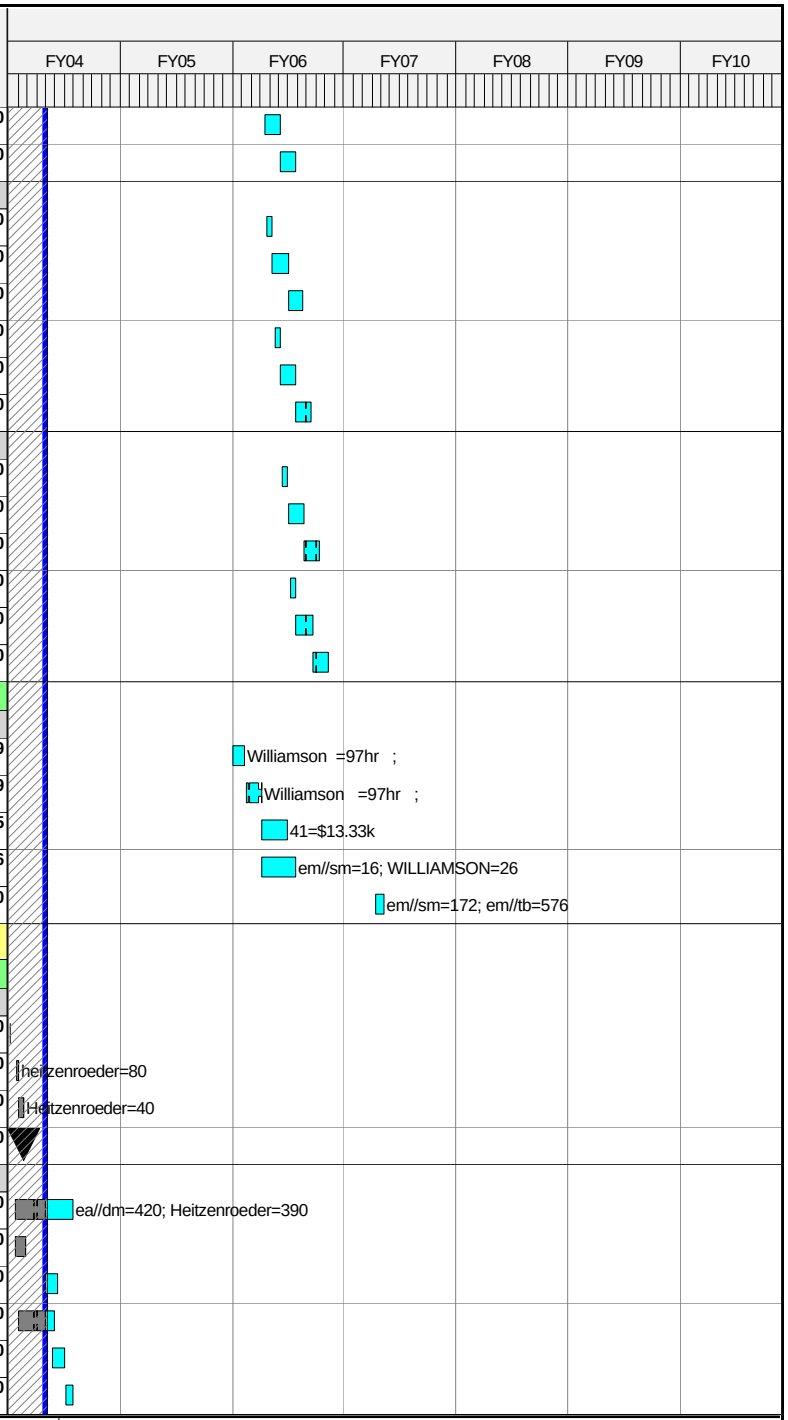
© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
P2-111	VPI,Test & Ship C-10-2 (station 4/5/6)	34	01JUN05	19JUL05	157		0.00	**0.00**
Period 3								
P3-001	Receive casting C-13-3	12	18APR05	03MAY05	126		0.00	**0.00**
P3-011	Wind coil C-13-3 (station 2)	37	05MAY05	27JUN05	125		0.00	**0.00**
P3-021	VPI,test & ship C-13-3 (station 4/5/6)	34	28JUN05	15AUG05	153		0.00	**0.00**
P3-091	Receive casting C-16-3	12	16MAY05	01JUN05	121		0.00	**0.00**
P3-101	Wind coil C-16-3 (station 3)	37	02JUN05	25JUL05	121		0.00	**0.00**
P3-111	VPI,test & ship C-16-3 (station 4/5/6)	34	26JUL05	12SEP05	149		0.00	**0.00**
Job: 1422 - Type A Winding/VPI								
Period 1								
P1-031	Receive casting A-2-1	12	14JUN05	29JUN05	123		0.00	**0.00**
P1-041	Wind coil A-2-1 (station 2)	37	30JUN05	22AUG05	123		0.00	**0.00**
P1-051	VPI, Test & Ship A-2-1 (station 4/5/6)	34	23AUG05	10OCT05	144		0.00	**0.00**
P1-121	Receive casting A-5-1	12	11JUL05	26JUL05	120		0.00	**0.00**
P1-131	Wind coil A-5-1 (station 3)	37	27JUL05	16SEP05	120		0.00	**0.00**
P1-141	VPI,Test & Ship A-5-1 (station 4/5/6)	34	19SEP05	03NOV05	141		0.00	**0.00**
Period 2								
P2-031	Receive casting A-8-2	12	05AUG05	22AUG05	123		0.00	**0.00**
P2-041	Wind coil A-8-2 (station 2)	37	23AUG05	13OCT05	123		0.00	**0.00**
P2-051	VPI,Test & Ship A-8-2 (station 4/5/6)	34	14OCT05	02DEC05	137		0.00	**0.00**
P2-121	Receive casting A-11-2	12	01SEP05	19SEP05	119		0.00	**0.00**
P2-131	Wind coil A-11-2 (station 3)	37	20SEP05	09NOV05	119		0.00	**0.00**
P2-141	VPI, test & Ship A-11-2 (station 4/5/6)	34	10NOV05	06JAN06	133		0.00	**0.00**
Period 3								
P3-031	Receive casting A-14-3	12	29SEP05	14OCT05	122		0.00	**0.00**
P3-041	Wind coil A-14-3 (station 2)	37	17OCT05	08DEC05	122		0.00	**0.00**
P3-051	VPI,Test & ship A-14-3 (station 4/5/6)	34	09DEC05	02FEB06	129		0.00	**0.00**
P3-121	Receive casting A-17-3	12	26OCT05	10NOV05	118		0.00	**0.00**
P3-131	Wind coil A-17-3 (station 3)	37	11NOV05	12JAN06	118		0.00	**0.00**
P3-141	VPI,Test & ship A-17-3 (station 4/5/6)	34	13JAN06	01MAR06	125		0.00	**0.00**
Job: 1423 - Type B Winding/VPI								
Period 1								
P1-061	Receive casting B-3-1	12	22NOV05	09DEC05	121		0.00	**0.00**
P1-071	Wind coil B-3-1 (station 2)	37	12DEC05	08FEB06	121		0.00	**0.00**
P1-081	VPI,Test & Ship B-3-1 (station 4/5/6)	34	09FEB06	28MAR06	121		0.00	**0.00**
P1-151	Receive casting B-6-1	12	21DEC05	13JAN06	117		0.00	**0.00**



© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
P1-161	Wind coil B-6-1 (station 3)	37	16JAN06	07MAR06	117		0.00	**0.00**
P1-171	VPI,Test & Ship B-6-1 (station 4/5/6)	34	08MAR06	24APR06	117		0.00	**0.00**
Period 2								
P2-061	Receive casting B-9-2	12	25JAN06	09FEB06	120		0.00	**0.00**
P2-071	Wind coil B-9-2 (station 2)	37	10FEB06	03APR06	120		0.00	**0.00**
P2-081	VPI,Test & Ship B-9-2 (station 4/5/6)	34	04APR06	19MAY06	120		0.00	**0.00**
P2-151	Receive casting B-12-2	12	17FEB06	06MAR06	118		0.00	**0.00**
P2-161	Wind coil B-12-2 (station 3)	37	08MAR06	27APR06	117		0.00	**0.00**
P2-171	VPI,Test & Ship B-12-2 (station 4/5/6)	34	28APR06	15JUN06	117		0.00	**0.00**
Period 3								
P3-061	Receive casting B-15-3	12	16MAR06	31MAR06	121		0.00	**0.00**
P3-071	Wind coil B-15-3 (station 2)	37	04APR06	24MAY06	120		0.00	**0.00**
P3-081	VPI,Test & ship B-15-3 (station 4/5/6)	34	25MAY06	13JUL06	120		0.00	**0.00**
P3-151	Receive casting B-18-3	12	12APR06	27APR06	117		0.00	**0.00**
P3-161	Wind coil B-18-3 (station 3)	37	28APR06	20JUN06	117		0.00	**0.00**
P3-171	Apply Mold, VPI ,Test & ship B-18-3 (last mcc)	34	21JUN06	08AUG06	117		0.00	**0.00**
Job: 1431 - Modular Coil Local I&C								
174-001	Title I design WBS 143 Mod coil local I&C	30	03OCT05*	11NOV05	316		0.00	**14,027.29**
174-011	Title II design WBS 143 Mod coil local I&C	30	14NOV05	04JAN06	316		0.00	**14,027.29**
174-035	Modular Coil local I&C -Procurement	60	05JAN06	29MAR06	321		0.00	**17,395.65**
174-036	Modular Coil local I&C -Title III	80	05JAN06	26APR06	884		0.00	**5,529.26**
174-037	Modular Coil local I&C -Install	20	15JAN07*	09FEB07	120		0.00	**70,223.20**
15 - Structures								
Job: 1501 - Structures Design- Heitzenroeder								
PDR/PBR Task List								
1501-105	Project PDR	1	07OCT03A	07OCT03A		100	0.00	**0.00**
1501-109	Prepare FY 04 WP/WAF	20	31OCT03A	31OCT03A		100	12,856.00	**12,856.00**
1501-113	Prepare PBR documentation	10	04NOV03A	18NOV03A		100	6,428.00	**6,428.00**
1501-117	Performance baseline review	0		18NOV03A		100	0.00	**0.00**
Reqmnts,Configuration, Interfaces and PDR								
1501-121	Rqmnts,Config,Interfaces, PDR (summary task)	136*	21OCT03A	30APR04	236	LOE	0.00	**0.00**
1501-125	Update drawings & models based on vendor recomm	30	21OCT03A	26NOV03A		100	28,765.30	**28,765.30**
1501-129	Develop a SRD design to spec	26*	02FEB04	08MAR04	265		0.00	**6,267.30**
1501-133	Prepare a "scope sheet" which defines all interf	82*	03NOV03A	27FEB04	281	90	5,640.57	**6,267.30**
1501-137	Prepare assembly & interface drawings for ICDs	30	23FEB04	02APR04	236		0.00	**28,765.30**
1501-141	Finalize and approve all ICDs	20	05APR04	30APR04	236		0.00	**6,267.30**



Run Date 24FEB04 10:53

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

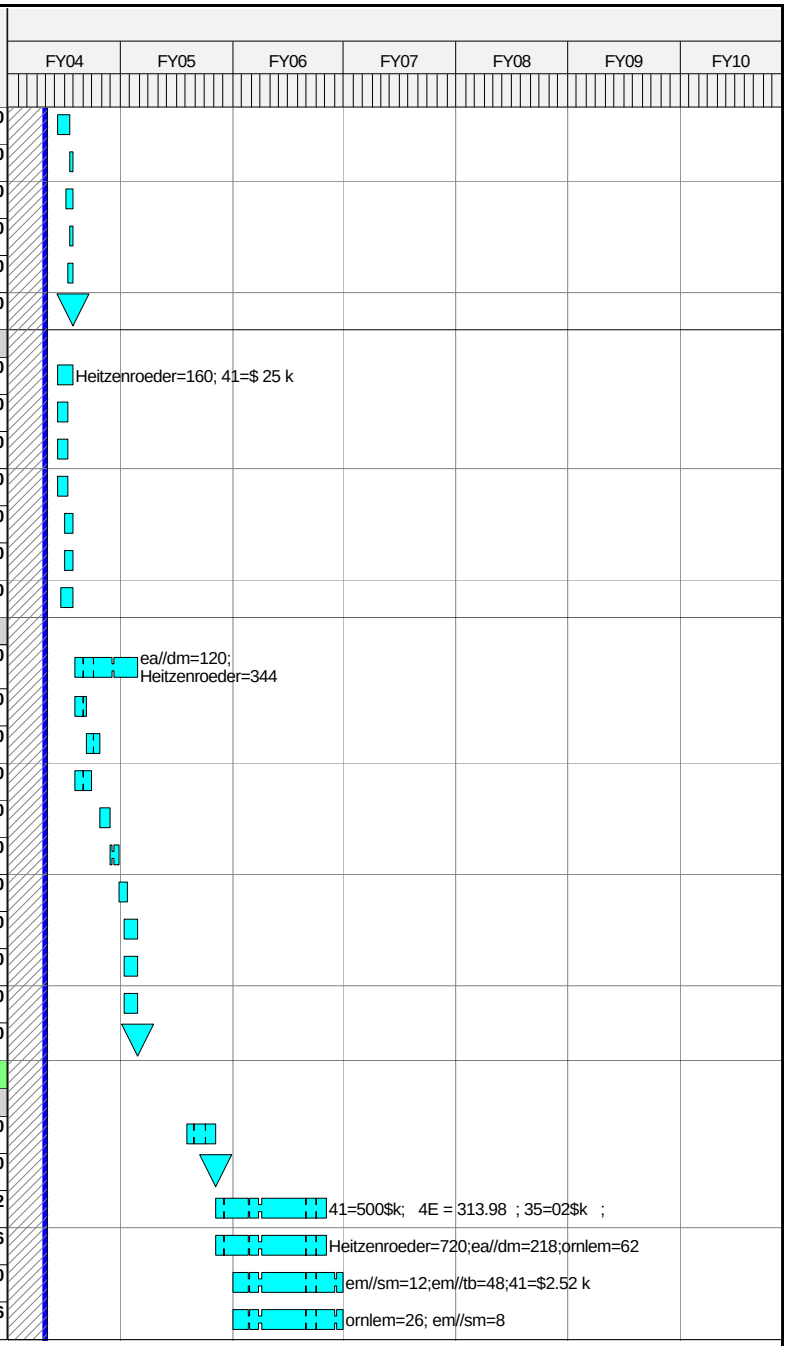
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 18 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
1501-145	Prepare assembly drawings for structure / coils	30	08MAR04	16APR04	236		0.00	**28,765.30**
1501-149	Update design basis document; address size and w	10	19APR04	30APR04	236		0.00	**6,267.30**
1501-157	Perform RAM & ES&H analyses document in design b	19	06APR04	30APR04	236		0.00	**6,267.30**
1501-161	Update cost and schedule	10	19APR04	30APR04	236		0.00	**6,267.30**
1501-162	PDR Preparation	15	12APR04	30APR04	236		0.00	**6,267.30**
1501-165	Perform PDR (jointly with conventional coils)	0		30APR04*	236		0.00	**0.00**
Preliminary Design Analyses								
1501-169	Design Analyses (summary task)	36*	12MAR04	30APR04	236		0.00	**0.00**
1501-173	Update ANSYS model of coils & structure	21	12MAR04	09APR04	236		0.00	**10,548.20**
1501-177	Perform structural stress analyses	21	12MAR04	09APR04	236		0.00	**10,548.20**
1501-181	Perform structural deflection analyses	21	12MAR04	09APR04	236		0.00	**10,548.20**
1501-185	Check EM loads for reference scenarios	21	02APR04	30APR04	236		0.00	**10,548.20**
1501-189	Perform EM combined loads & fault conditions	21	02APR04	30APR04	236		0.00	**10,869.60**
1501-221	Prepare Failure Modes Assessment (FMECA)	31	19MAR04	30APR04	236		0.00	**4,499.60**
Structures Final Design								
1501-205	Structures FDR (summary task)	144*	03MAY04	23NOV04	236		0.00	**0.00**
1501-197	Update analyses based on PDR recommendations	30	03MAY04	14JUN04	236		0.00	**6,106.60**
1501-201	Independent check of EM/ ANSYS analyses	30	15JUN04	27JUL04	236		0.00	**6,106.60**
1501-209	Prepare final drawings	42	03MAY04*	30JUN04	254		0.00	**18,962.60**
1501-213	Check & promote models / drawings	22	28JUL04	26AUG04	236		0.00	**12,534.60**
1501-217	Update build to spec / sow	20	27AUG04	24SEP04	236		0.00	**6,106.60**
1501-225	Update design basis document	20	27SEP04	22OCT04	236		0.00	**6,243.40**
1501-229	Update cost & schedule estimates	32	11OCT04	23NOV04	236		0.00	**6,277.60**
1501-233	Prepare FDR documentation / presentations	32	11OCT04	23NOV04	236		0.00	**6,442.80**
1501-237	Prepare ECP for FDR	32	11OCT04	23NOV04	236		0.00	**6,442.80**
1501-241	Hold FDR	0		23NOV04	236		0.00	**0.00**
Job: 1520-Structures Procure,Fab,Title III								
1501-245	Prep Spec,Solicit Bids, and Evaluate Bids	65	05MAY05	05AUG05	124		0.00	**0.00**
162-036.9	Award Coil Support Assy	0		05AUG05*	119		0.00	**0.00**
162-037	WBS 151Coil Support Assy Procurement [A/1]	249	08AUG05	04AUG06	119		0.00	**987,052.92**
162-031	Title III engr WBS 151	249	08AUG05	04AUG06	800		0.00	**153,504.56**
153.037	WBS 153 Support Structure I&C Procurement/Fab	249	03OCT05*	29SEP06	232		0.00	**8,464.20**
153.015	Title III design WBS 153 locall&C	249*	03OCT05*	29SEP06	761		0.00	**4,648.46**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

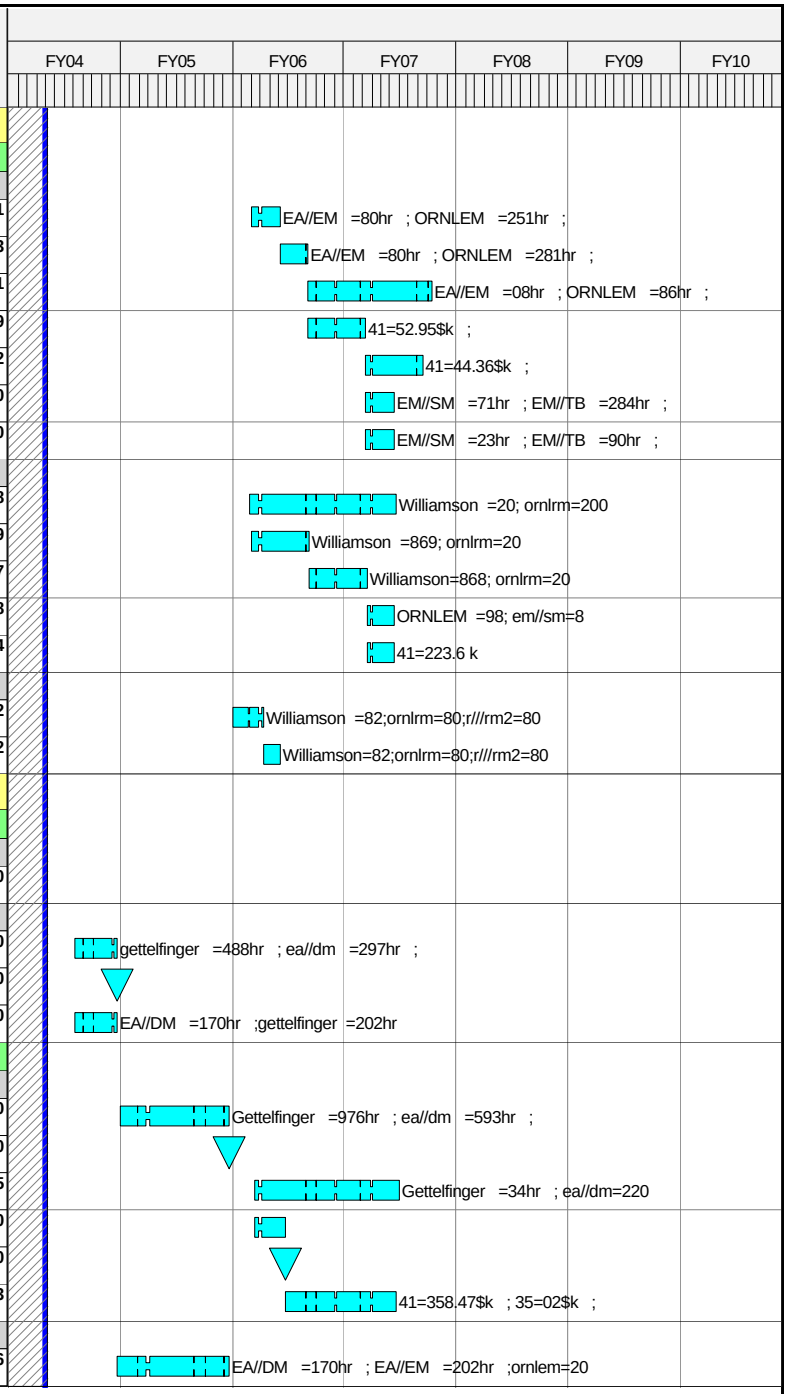
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 19 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
16 - Coil Services								
161 - LN2 Distribution								
191-001	Title I design WBS 161 LN2 manifolds&piping	65	01DEC05*	09MAR06	127		0.00	**49,812.41**
191-011	Title II design WBS 161 LN2 manifolds&piping	60	10MAR06	02JUN06	127		0.00	**99,769.73**
191-031	Title III engr WBS 161	280	05JUN06*	17JUL07	564		0.00	**14,468.81**
191-037	Procurement WBS 161	130	05JUN06*	07DEC06	127		0.00	**69,999.49**
191-038	PDR#17	130	08DEC06*	18JUN07	584		0.00	**59,974.72**
191-041	LN2 Manifolds & ppg Fab/assy WBS 161	65	08DEC06*	16MAR07	127		0.00	**32,986.60**
191-042	PDR #17,25,3	65	08DEC06*	16MAR07	649		0.00	**10,512.80**
162 - Electrical Leads								
132-000	PDR #17 & 25	325	30NOV05*	22MAR07	645		0.00	**40,162.88**
132-001	Title I design WBS 162 Coil leads	130	01DEC05*	09JUN06	127		0.00	**129,613.39**
132-011	Title II design WBS 162 Coil leads	130	12JUN06	14DEC06	127		0.00	**133,039.37**
132-015	Title III design WBS 162 Coil leads	60	15DEC06*	16MAR07	649		0.00	**16,105.48**
132-037	Coil Leads Procurement WBS 162	60	15DEC06*	16MAR07	127		0.00	**302,334.24**
163 - Coil Protection System								
163.001	Title I design WBS 163 Coil protection	65	03OCT05*	11JAN06	905		0.00	**39,029.02**
163.011	Title II design WBS 163 Coil protection	40	12JAN06	08MAR06	905		0.00	**39,029.02**
17 - Cryostat and Base Support Structure								
Job:1701-Cryost&Base Sprt Strct Dsn-GETTLEFINGER								
FY03 Actual Cost								
1701-001	Apr-Sept MIE Costs PPPL	54	01APR03A	30SEP03A		100	12,180.00	**12,180.00**
151-001	Title I design WBS 171 cryostat shell & struct	100	03MAY04*	22SEP04	171		0.00	**110,056.40**
151-002	Cryostat & Base Support Struct PDR	0		22SEP04	171		0.00	**0.00**
161-001	Title I design WBS 172 base support struct	100	03MAY04*	22SEP04	171		0.00	**50,507.00**
171 - Cryostat								
151-011	Title II design WBS 171 cryostat shell & struct	243*	01OCT04*	22SEP05	171		0.00	**226,216.90**
151-012	WBS 17 FDR	0		22SEP05	171		0.00	**0.00**
151-031	Title III engr	318	15DEC05	28MAR07	641		0.00	**30,815.05**
151-036.8	Prep Spec, Solicit bids, and Select Vendor	65	15DEC05*	23MAR06	124		0.00	**0.00**
151-036.9	Award Cryostat Procurement	0		23MAR06	124		0.00	**0.00**
151-037	Cryostat Procurement [A/1]	249	24MAR06	22MAR07	124		0.00	**479,215.43**
172 - Base Support Structure								
161-011	Title II design WBS 172 base support struct	249	23SEP04	22SEP05	171		0.00	**54,706.46**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

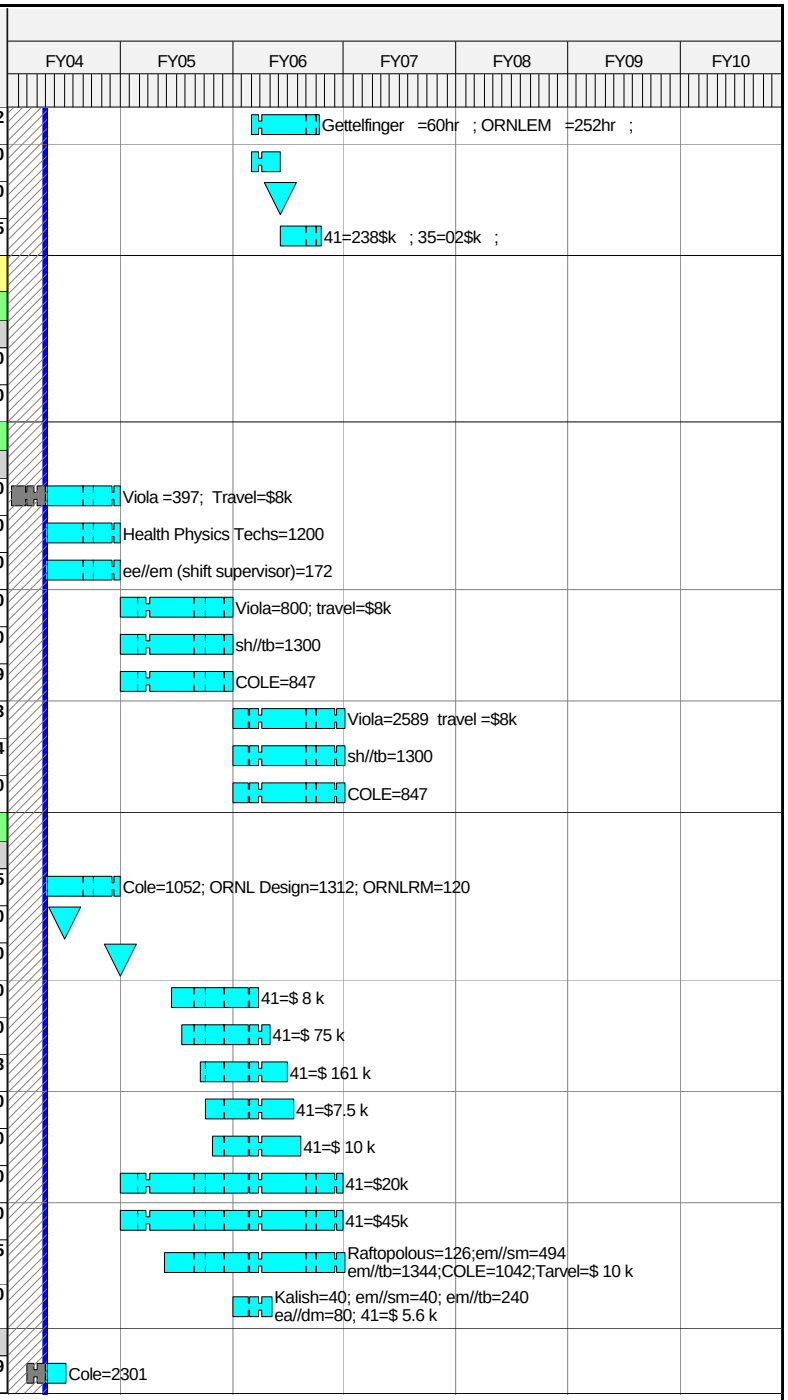
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 20 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
161-031	Title III engr WBS 172	150	01DEC05	10JUL06	819		0.00	**46,651.32**
161-036.8	Prep Spec, Solicit bids, and Select Vendor	65	01DEC05*	09MAR06	124		0.00	**0.00**
161-036.9	Award Machine Base&supports Procurement	0		09MAR06	124		0.00	**0.00**
161-037	Machine Base&supports Procurement [A/1]	90	10MAR06	17JUL06	124		0.00	**286,302.65**
18 - Field Period Assembly								
Job: 1801-Field Period Assly -CHRZANOWSKI (ORNL)								
FY03 Actual Cost								
1801-001	Apr-Sept MIE Costs PPPL	42	01APR03A	30SEP03A		100	7,750.00	**7,750.00**
1801-002	Apr-Sept MIE Costs ORNL	42	01APR03A	30SEP03A		100	53,050.00	**53,050.00**
Job: 1802 - FP Assy Oversight&Support-VIOLA								
Oversight and Supervision								
181.100	PPPL EM LOE FY04	242*	13OCT03A	30SEP04	1,259	LOE	22,838.62	**77,947.50**
181.200	HP Coverage in the TFTR TC LOE FY04	171*	02FEB04*	30SEP04	1,259		0.00	**115,320.00**
181.201	D-Site Shift Supervisor LOE FY04	171*	02FEB04*	30SEP04	1,259		0.00	**25,920.40**
181.110	PPPL EM LOE FY05	249*	01OCT04*	30SEP05	1,010		0.00	**146,784.00**
181.210	HP Coverage in the TFTR TC LOE FY05	249*	01OCT04*	30SEP05	1,010		0.00	**128,440.00**
181.310	ORNL EM LOE FY05	249*	01OCT04*	30SEP05	1,010		0.00	**119,316.89**
181.120	PPPL EM LOE FY06	250*	03OCT05*	02OCT06	760		0.00	**451,299.93**
181.220	HP Coverage in the TFTR TC LOE FY06	250*	03OCT05*	02OCT06	760		0.00	**130,690.04**
181.320	ORNL EM LOE FY06	250*	03OCT05*	02OCT06	760		0.00	**122,771.80**
Job: 1803- FP Assy Tooling/Constructability-COLE								
Tooling Design & Fabrication								
713A.010	Design Tooling	171*	02FEB04	30SEP04	268	LOE	0.00	**324,951.05**
713A.010A	Requirements & Constructability Peer Review	0		30MAR04*	1,388		0.00	**0.00**
713.010B	Tooling & Constructability FDR	0		30SEP04	268		0.00	**0.00**
713A.032	Fabricate-TF Coil sub-assy frame/manipulator	195	18MAR05*	22DEC05	210		0.00	**10,366.40**
713A.030	Fabricate-VV supporting fixture (3)	195	20APR05*	01FEB06	134		0.00	**97,300.00**
713A.031	Fabricate-Modular Coil sub-assy frame/manip/fixt	195	17JUN05*	30MAR06	121		0.00	**209,310.73**
713A.033	Fabricate-Full FP support fixture (3)	195	07JUL05*	18APR06	123		0.00	**9,757.00**
713A.034	Fabricate-VV port welding fixtures	195	29JUL05*	10MAY06	175		0.00	**13,020.00**
713A.040	General procurements	498*	01OCT04*	29SEP06	761		0.00	**25,970.00**
713A.050	Welding tools, materials & equipt	498*	01OCT04*	29SEP06	761		0.00	**58,432.50**
713A.020	Lab Fab/Assy/Installation	403*	25FEB05*	02OCT06	760		0.00	**349,167.95**
713A.060	Instl He gas piping from NSTX to D-site tc	85	03OCT05*	08FEB06	925		0.00	**46,540.00**
Tooling R&D								
713A.011	Tooling R&D-Design VV/MCWF Mockups inc pdr#20	84*	01DEC03A	05APR04	1,229	10	3,873.57	**38,735.69**



Run Date 24FEB04 10:53

ECP5 Schedule
Progress Bar
Critical Activity

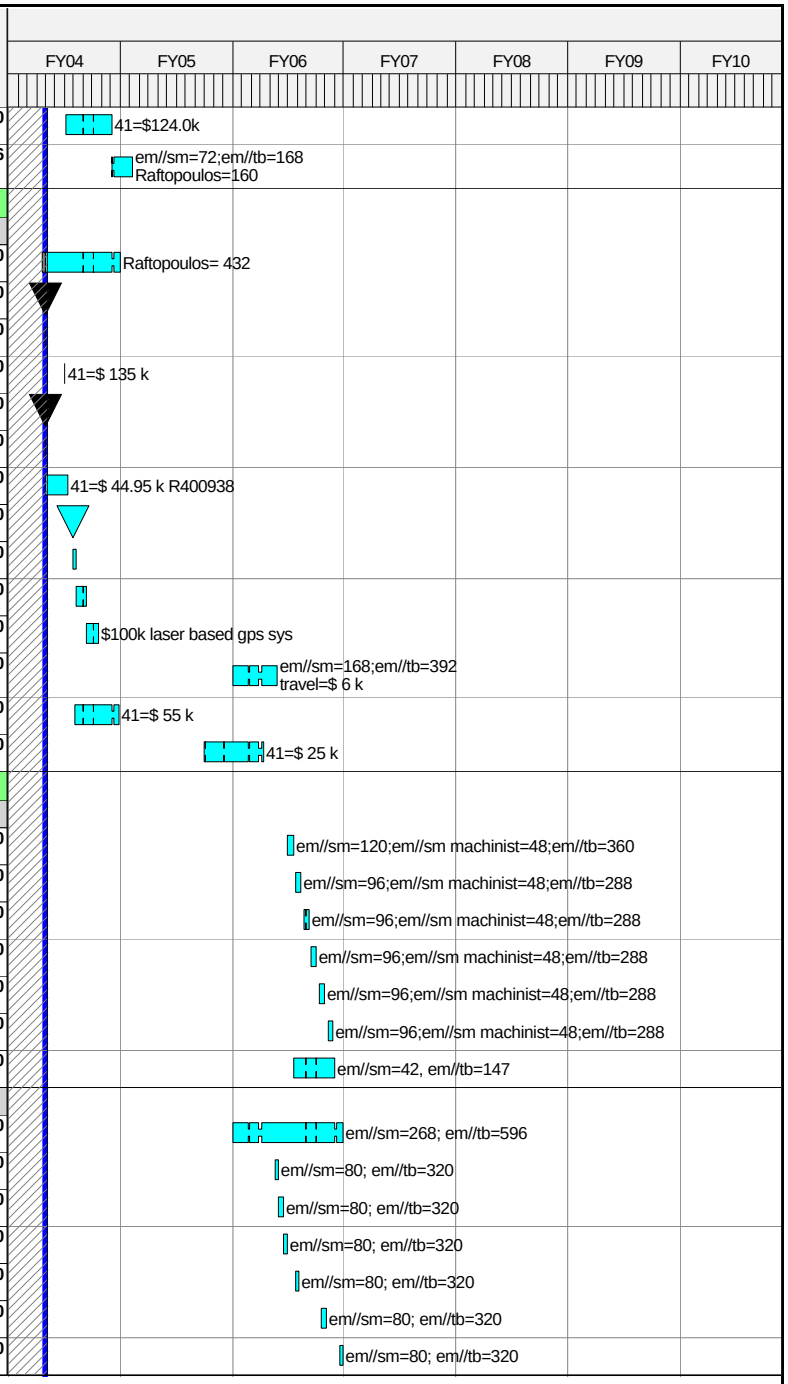
ECP5

NCSX Baseline (ECP5)
First Plasma May 2008

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
713A.012	Tooling R&D-Procure VV & MCWF Mockups [A/9]	105	06APR04	01SEP04	1,229		0.00	**157,976.00**
713A.013	Tooling R&D-Inspection & assy trails	50	02SEP04	11NOV04	1,229		0.00	**46,979.36**
Job: 1804-FP Assy Measurement Sys-RAFTOPOULOS								
Metrology								
740.010	Final Design Measurement systems	181*	19JAN04A	30SEP04	1,259		3,818.23	**69,422.40**
740.011	3-D Scanner/Faro Arm FDR	0		30JAN04A			0.00	**0.00**
740.015	Prepare Requisition 3-D scanner & Romer Arm	10	30JAN04A	30JAN04A			0.00	**0.00**
740.030	Deliver 3-D Scanner & Romer Arm	1	30MAR04*	30MAR04	227		0.00	**171,990.00**
740.031	Metrology Software Review	0		30JAN04A			0.00	**0.00**
740.032	Prepare Met Software Requisition	10	30JAN04A	30JAN04A			0.00	**0.00**
740.035	Deliver Metrology Software	53*	02FEB04	14APR04	1,377		0.00	**57,266.30**
740.041	Laser based GPS Sys Review	0		27APR04*	1,308		0.00	**0.00**
740.042	Prepare GPS Sys Requisition	10	28APR04	11MAY04	1,308		0.00	**0.00**
740.043	Bid,Evaluate & Award GPS sys	20	12MAY04	09JUN04	1,308		0.00	**0.00**
740.044	Deliver GPS sys	30	10JUN04	22JUL04	1,308		0.00	**127,400.00**
740.020	Faculity Prep	95	03OCT05*	22FEB06	162		0.00	**60,384.40**
740.045	Purchase- second Faro Arm (was under WBS 14)	102	03MAY04*	24SEP04	1,263		0.00	**70,070.00**
740.050	Purchase- targets [A/9]	130	01JUL05*	12JAN06	944		0.00	**32,300.00**
1808 - TF/Mod Coil Sub-Assembly								
Modular Coil Sub-assembly								
184-200	Mount/align right mod coil in fixture-Period #1	15	31MAR06	20APR06	121		0.00	**47,404.80**
184-205	Mount/align left mod coil in fixture-Period #1	12	25APR06	10MAY06	117		0.00	**38,980.80**
184-210	Mount/align right mod coil in fixture-Period #2	12	22MAY06	07JUN06	125		0.00	**38,980.80**
184-215	Mount/align left mod coil in fixture-Period #2	12	16JUN06	03JUL06	117		0.00	**38,980.80**
184-220	Mount/align right mod coil in fixture-Period #3	12	14JUL06	31JUL06	125		0.00	**38,980.80**
184-225	Mount/align left mod coil in fixture-Period #3	12	09AUG06	24AUG06	117		0.00	**38,980.80**
P1-000	PDR # 19 MCWF fitup	94	21APR06	01SEP06	780		0.00	**16,428.30**
TF Coil Sub-assembly								
722.010	Receive/Inspect TF & PF Coils	249*	03OCT05*	29SEP06	761		0.00	**77,365.60**
184-100	Assemble 3 TF coils&structure -Right -Period #1	10	17FEB06	02MAR06	176		0.00	**34,504.00**
184-105	Assemble 3 TF coils&structure -Left -Period #1	10	03MAR06	16MAR06	176		0.00	**34,504.00**
184-110	Assemble 3 TF coils&structure -Right -Period #2	10	17MAR06	30MAR06	193		0.00	**34,504.00**
184-115	Assemble 3 TF coils&structure -Left -Period #2	10	26APR06	09MAY06	175		0.00	**34,504.00**
184-120	Assemble 3 TF coils&structure -Right -Period #3	10	21JUL06	03AUG06	142		0.00	**34,504.00**
184-125	Assemble 3 TF coils&structure -Left -Period #3	10	18SEP06	29SEP06	112		0.00	**34,504.00**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

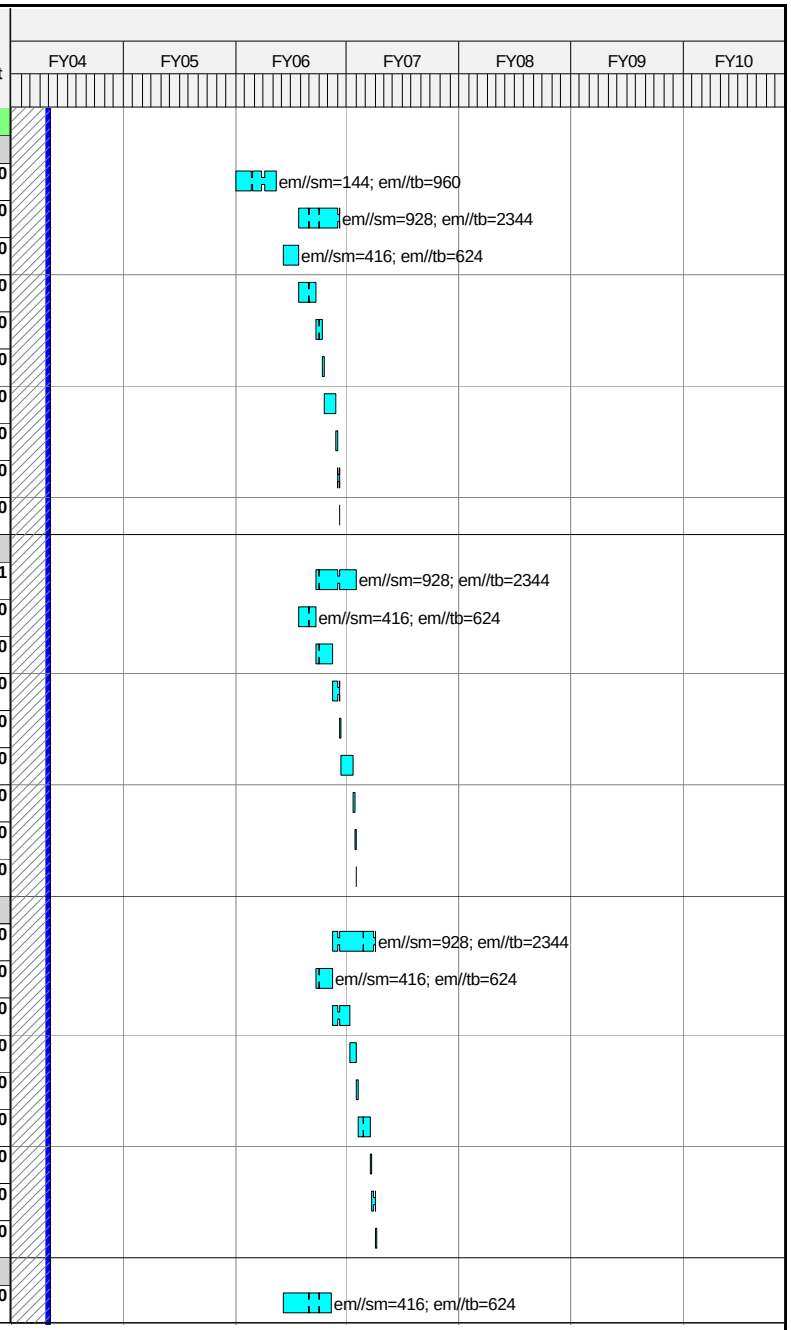
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 22 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

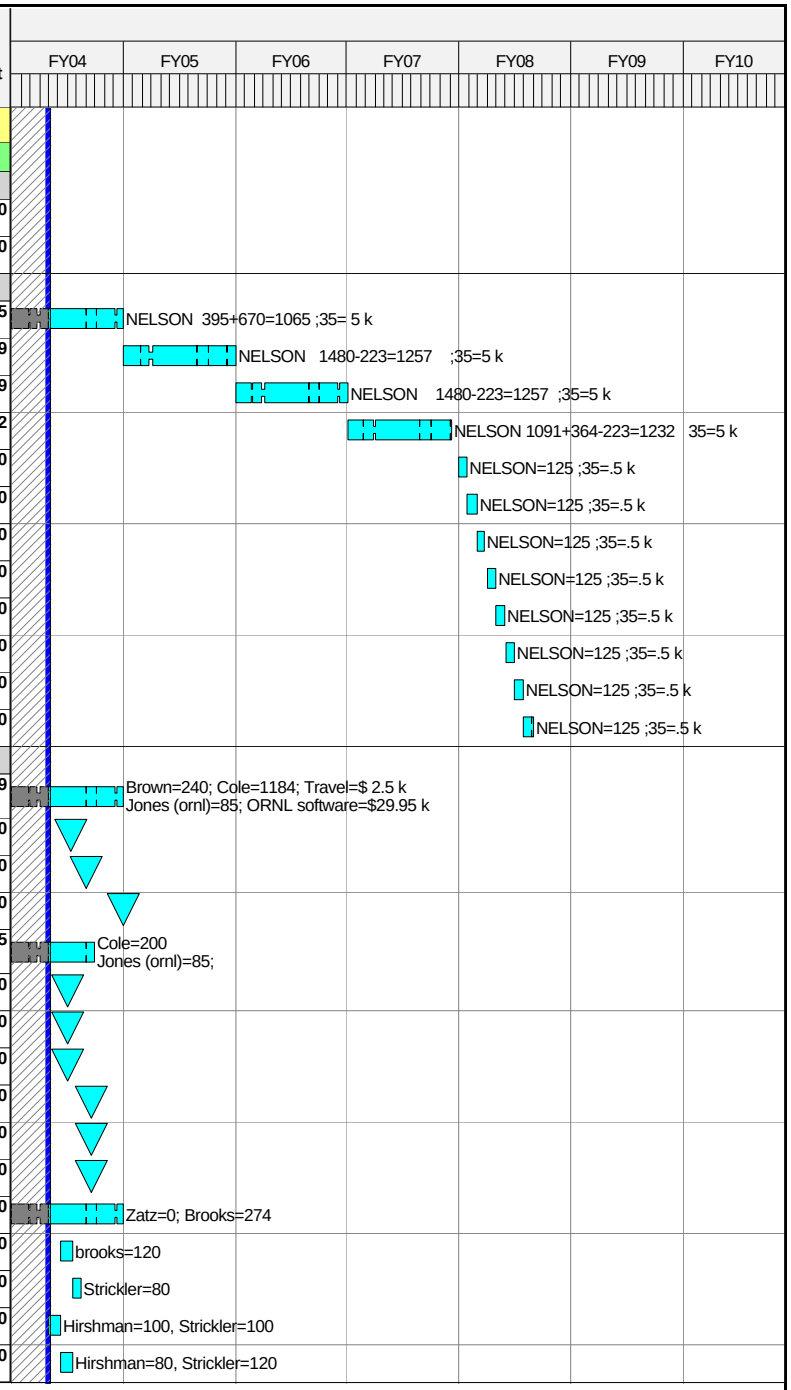
© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
Job:1810 - Field Period Assembly								
Period 1								
721.010	Area preparations	90	03OCT05*	15FEB06	124		0.00	**92,942.40**
725.001	Assemble Field Period #1 (summary task)	92*	28APR06	07SEP06	147		0.00	**290,396.00**
P1-180	Rec'v VV,Attach clng tubes &Insul to 1st Period	39	06MAR06	27APR06	112		0.00	**95,908.80**
P1-181	Assemble 1st. Field Period - coils/VV	37	28APR06	20JUN06	116		0.00	**0.00**
P1-191	Position and weld port assemblies	15	21JUN06	12JUL06	147		0.00	**0.00**
P1-201	Bakeout vessel segment to 150 degrees C	6	13JUL06	20JUL06	147		0.00	**0.00**
P1-211	vacuum leak check &Ext Trim coil instl	25	21JUL06	24AUG06	147		0.00	**0.00**
P1-221	Prepare field period for shipment	5	25AUG06	31AUG06	147		0.00	**0.00**
P1-231	Ship 1st. Field period	3	01SEP06	06SEP06	147		0.00	**0.00**
P1-241	Field period 1 ready for installation	1	07SEP06	07SEP06	147		0.00	**0.00**
Period 2								
725.101	Assemble Field Period #2 (summary task)	91*	23JUN06	31OCT06	129		0.00	**295,816.41**
P2-180	Rec'v VV,Attach clng tubes &Insul to 2nd Period	39	28APR06	22JUN06	112		0.00	**95,908.80**
P2-181	Assemble 2nd. Field Period- coils/ VV	37	23JUN06	15AUG06	114		0.00	**0.00**
P2-191	Position and weld port assemblies	15	16AUG06	06SEP06	129		0.00	**0.00**
P2-201	Bakeout vessel segment to 150 degrees C	6	07SEP06	14SEP06	129		0.00	**0.00**
P2-211	vacuum leak check &Ext Trim coil instl	25	15SEP06	19OCT06	129		0.00	**0.00**
P2-221	Prepare field period for shipment	5	20OCT06	26OCT06	129		0.00	**0.00**
P2-231	Ship 2nd. Field period	3	27OCT06	31OCT06	129		0.00	**0.00**
P2-241	Field Period 2 ready for installation	1	01NOV06	01NOV06	129		0.00	**0.00**
Period 3								
725.201	Assemble Field Period #3 (summary task)	90*	18AUG06	03JAN07	112		0.00	**305,343.20**
P3-180	Rec'v VV,Attach clng tubes &Insul to 3rd Period	39	23JUN06*	17AUG06	112		0.00	**95,908.80**
P3-181	Assemble 3rd. Field Period - coils/ VV	37	18AUG06	10OCT06	112		0.00	**0.00**
P3-191	Position and weld port assemblies	15	11OCT06	31OCT06	112		0.00	**0.00**
P3-201	Bakeout vessel segment to 150 degrees C	5	01NOV06	07NOV06	112		0.00	**0.00**
P3-211	vacuum leak check &Ext Trim coil instl	25	08NOV06	14DEC06	112		0.00	**0.00**
P3-221	Prepare field period for shipment	5	15DEC06	21DEC06	112		0.00	**0.00**
P3-231	Ship 3rd. Field Period	3	22DEC06	03JAN07	112		0.00	**0.00**
P3-241	3rd. Period ready for installation	1	04JAN07	04JAN07	112		0.00	**0.00**
P1-180A	cd-4 350c increment	109	06MAR06	07AUG06	799		0.00	**38,544.00**



© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
19 - Stellarator Core Management and Integration								
Job: 1901 - Stellarator Core Mngtt&Integr-NELSON								
FY03 Actual Cost								
1901-002	Apr-Sept MIE Costs ORNL	248	01APR03A	30SEP03A		100	187,090.00	**187,090.00**
1901-003	Apr-Sept MIE Costs PPPL	248	01APR03A	30SEP03A		100	67,070.00	**67,070.00**
191 - Stellarator Core Management & Oversight								
191-4	LOE-FY04 WBS 191-4 Management Activities	250*	01OCT03A	30SEP04	1,259	LOE	46,041.15	**145,699.85**
0191-5	LOE-FY05 WBS 191	249*	01OCT04*	30SEP05	1,010	LOE	0.00	**185,763.59**
0191-6	LOE-FY06 WBS 191	250*	03OCT05*	02OCT06	526	LOE	0.00	**190,877.89**
0191-6X	LOE-FY07 WBS 191	234	03OCT06*	10SEP07	526	LOE	0.00	**199,716.12**
0191-91	LOE-FY06 WBS 191 1 mo SO	22	01OCT07*	30OCT07	346	LOE	0.00	**20,250.00**
0191-92	LOE-FY06 WBS 191 1 mo SO	21	31OCT07*	28NOV07	346	LOE	0.00	**20,250.00**
0191-93	LOE-FY06 WBS 191 1 mo SO	15	03DEC07*	21DEC07	346	LOE	0.00	**20,250.00**
0191-94	LOE-FY06 WBS 191 1 mo SO	22	01JAN08*	30JAN08	346	LOE	0.00	**20,250.00**
0191-95	LOE-FY06 WBS 191 1 mo SO	22	31JAN08*	29FEB08	346	LOE	0.00	**20,250.00**
0191-96	LOE-FY06 WBS 191 1 mo SO	22	03MAR08*	01APR08	346	LOE	0.00	**20,250.00**
0191-97	LOE-FY06 WBS 191 1 mo SO	21	02APR08*	30APR08	346	LOE	0.00	**20,250.00**
0191-98	LOE-FY06 WBS 191 1 mo SO	21	01MAY08*	30MAY08	346	LOE	0.00	**20,250.00**
192 - Stellarator Core Integration & Analysis								
192-4	LOE-FY05 WBS 192-4 Design Integration Activities	250*	01OCT03A	30SEP04	1,259	LOE	75,005.15	**237,358.09**
192-4.1	Self consistent models/dwgs f/ Mod Coil & VV FDR	0		14APR04*	1,377		0.00	**0.00**
192-4.2	Self consistent models/dwgs Conv Coils&sprt strc	0		01JUN04*	1,344		0.00	**0.00**
192-4.4	Stellarator Core Assy dwgs & assy sequence	0		30SEP04*	1,259		0.00	**0.00**
192-5	LOE-FY05 WBS 192-5 VV & Coil Services Integr	186*	01OCT03A	30JUN04	1,323	LOE	15,587.58	**36,676.65**
192-5.1	\VV Helium Line Models	0		01APR04*	1,386		0.00	**0.00**
192-5.2	Mod Coil LN2 Lines Layouts	0		01APR04*	1,386		0.00	**0.00**
192-5.3	Mod Coil Leads Layouts	0		01APR04*	1,386		0.00	**0.00**
192-5.4	PF Coil Leads & Services Layouts	0		15JUN04*	1,334		0.00	**0.00**
192-5.5	TF Coil leads & Services Layouts	0		15JUN04*	1,334		0.00	**0.00**
192-5.6	External Trim Coil Leads /services Layouts	0		15JUN04*	1,334		0.00	**0.00**
192-6	LOE-FY05 WBS 192-6 Integrated Analysis	250*	01OCT03A	30SEP04	1,259	LOE	13,914.05	**44,031.80**
192-6.01	Document coil tolerance and trim coil requiremen	31	08MAR04*	19APR04	95		0.00	**19,284.00**
192-6.02	Check critical coil tolerance calculations.	20	20APR04	17MAY04	95		0.00	**10,295.20**
192-6.03	Invest FARO arm to deter mag field distrib from	26	02FEB04*	08MAR04	237		0.00	**25,738.00**
192-6.04	Calc impact omisalignments on mutual inductances	30	09MAR04	19APR04	1,277		0.00	**25,738.00**



Run Date 24FEB04 10:53

ECP5 Schedule
Progress Bar
Critical Activity

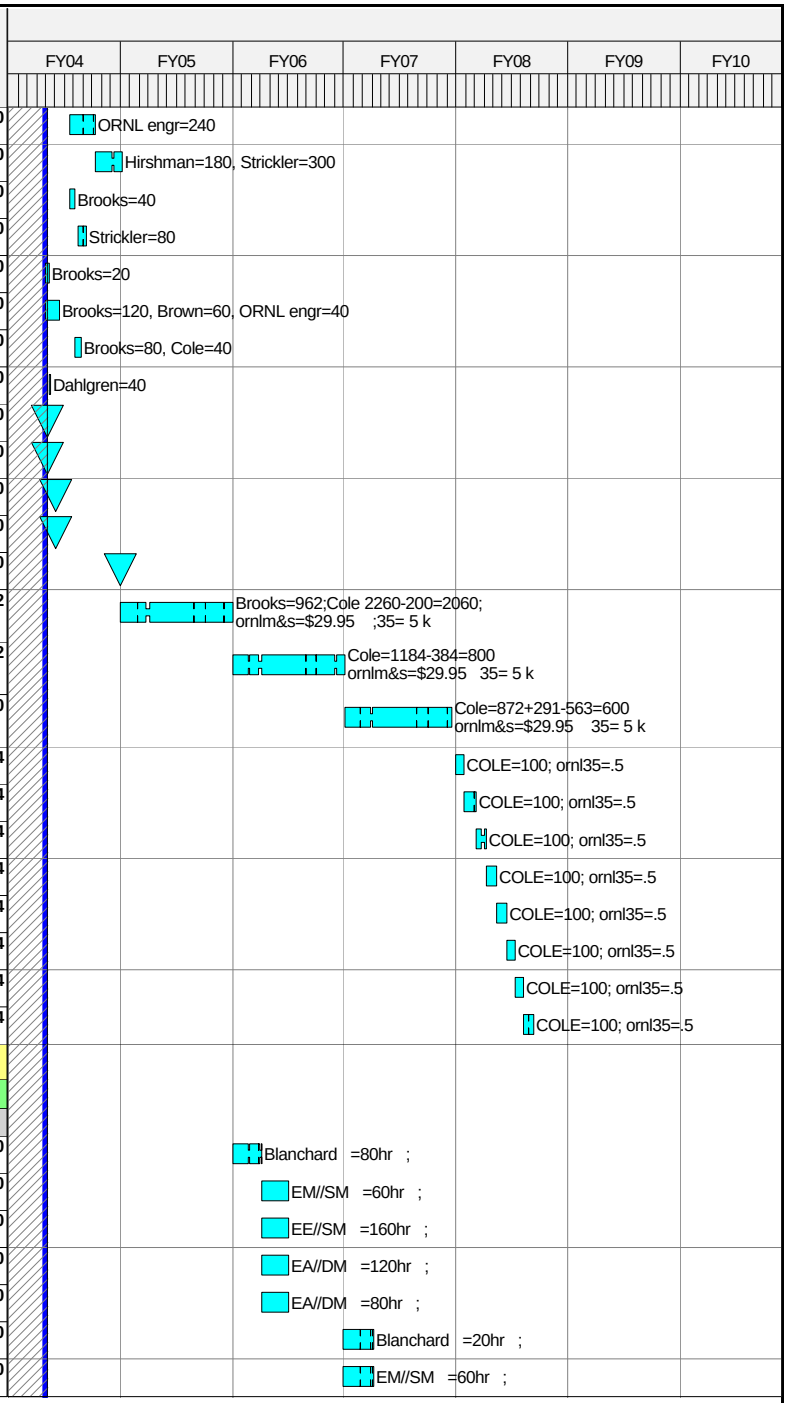
ECP5

NCSX Baseline (ECP5)
First Plasma May 2008

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
192-6.05	Determine reqd process for assly tolerances	58	20APR04	12JUL04	1,277		0.00	**30,885.60**
192-6.06	Coil positions to minimize islands.	63	13JUL04	08OCT04	1,277		0.00	**62,328.00**
192-6.07	Time constant calcs using SPARK	11	19APR04*	03MAY04	105		0.00	**6,428.00**
192-6.08	Indep check time constant calcs using EDDYCUFF	20	17MAY04*	14JUN04	1,359		0.00	**10,295.20**
192-6.09	Revised VV geometry	6	02FEB04*	09FEB04	1,448		0.00	**3,214.00**
192-6.10	MC interf during assly, geometry, assly trajecto	31	02FEB04*	15MAR04	1,423		0.00	**34,073.60**
192-6.11	Range of motion reqts for Assly MC fixture.	20	03MAY04*	28MAY04	1,369		0.00	**18,003.60**
192-6.12	Analysis plan seismic analysis of the stellr co	6	09FEB04*	16FEB04	1,443		0.00	**6,428.00**
192-6.1	Final Analysis coil geometry to field error	0		02FEB04*	1,429		0.00	**0.00**
192-6.5	Stellarator Core Assy Design criteria	0		02FEB04*	1,429		0.00	**0.00**
192-6.2	Final Mod Coil Trajectories	0		01MAR04*	1,409		0.00	**0.00**
192-6.6	Stellarator Core Materials Database	0		01MAR04*	1,409		0.00	**0.00**
192-6.3	Best fit for mod coil assy on winding measuremen	0		30SEP04*	1,259		0.00	**0.00**
0192-5	LOE-FY05 WBS 192	249*	01OCT04*	30SEP05	1,010	LOE	0.00	**485,136.72**
0192-6	LOE-FY06 WBS 192	250	03OCT05*	02OCT06	518	LOE	0.00	**152,610.82**
0192-6X	LOE-FY06 WBS 192	242	03OCT06*	20SEP07	518	LOE	0.00	**135,038.20**
0192-91	LOE-F1 mo SO	22	01OCT07*	30OCT07	338	LOE	0.00	**16,018.04**
0192-92	LOE-F1 mo SO	22	31OCT07*	03DEC07	338	LOE	0.00	**16,018.04**
0192-93	LOE-F1 mo SO	22	04DEC07*	10JAN08	338	LOE	0.00	**16,018.04**
0192-94	LOE-F1 mo SO	22	11JAN08*	11FEB08	338	LOE	0.00	**16,018.04**
0192-95	LOE-F1 mo SO	22	12FEB08*	12MAR08	338	LOE	0.00	**16,018.04**
0192-96	LOE-F1 mo SO	22	13MAR08*	11APR08	338	LOE	0.00	**16,018.04**
0192-97	LOE-F1 mo SO	21	14APR08*	12MAY08	338	LOE	0.00	**16,018.04**
0192-98	LOE-F1 mo SO	21	13MAY08*	11JUN08	338	LOE	0.00	**16,018.04**
21 - Fueling Systems								
21-10	Eng. Work Planning and Design	65	03OCT05*	05JAN06	238		0.00	**13,512.00**
21-15	Design Gas Handling Hardware	65	06JAN06	06APR06	238		0.00	**6,606.00**
21-20	Design PLC Controls	65	06JAN06*	06APR06	238		0.00	**17,968.00**
21-25	Electrical Drafting for pumping system	65	06JAN06*	06APR06	238		0.00	**13,200.00**
21-30	Drafting	65	06JAN06*	06APR06	238		0.00	**8,800.00**
21-35	Eng. Work Planning and Design during fab	65	02OCT06*	04JAN07	114		0.00	**3,638.00**
21-40	Fabrication/Install Hardware	65	02OCT06*	04JAN07	114		0.00	**7,116.00**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

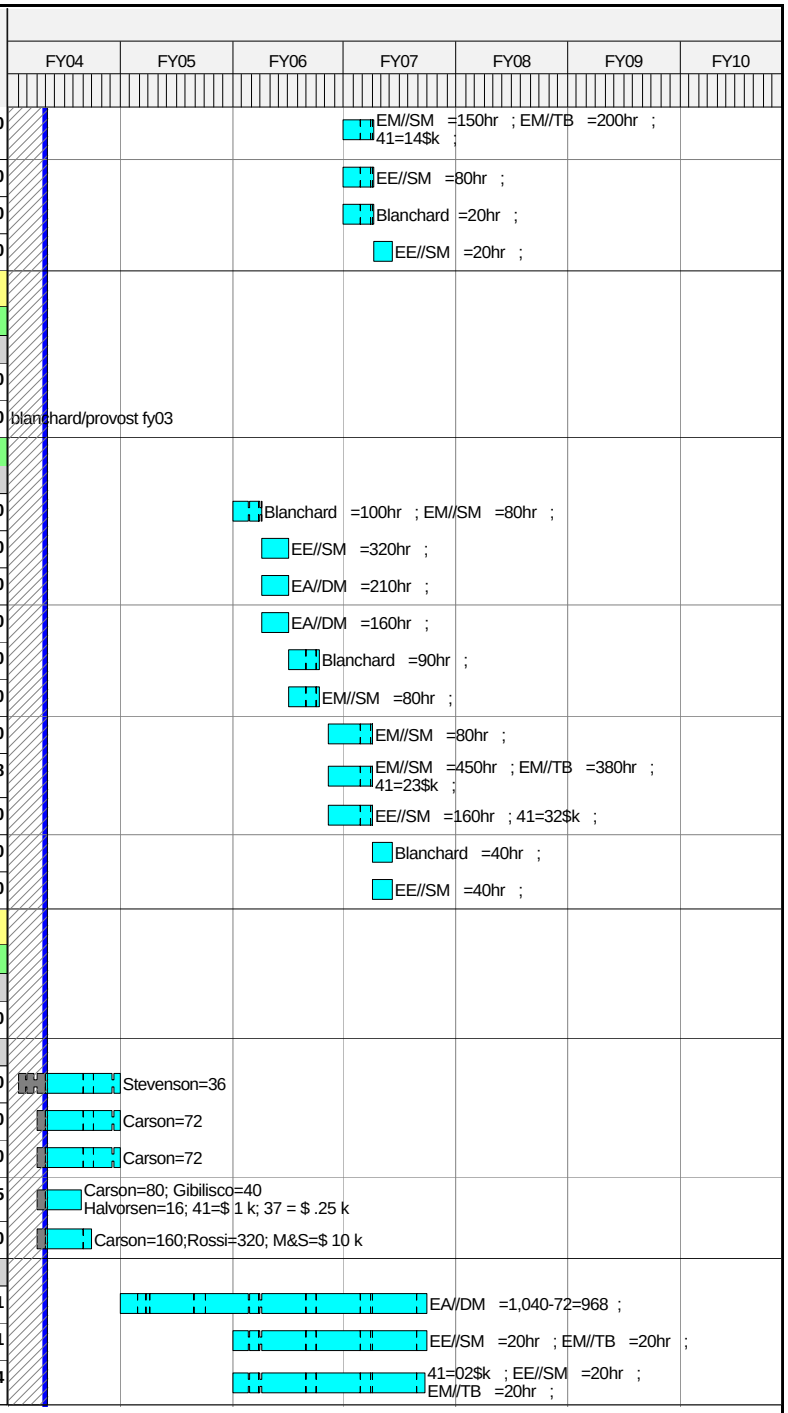
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 25 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
21-45	Fabrication/installation	65	02OCT06*	04JAN07	114		0.00	**53,477.20**
21-55	Install PLC Controls	65	02OCT06*	04JAN07	114		0.00	**9,672.00**
21-60	Integrated Systems Testing/Eng	65	02OCT06*	04JAN07	114		0.00	**3,638.00**
21-65	Integrated Systems Testing/Tech Support	45	05JAN07*	08MAR07	114		0.00	**2,418.00**
22 - Torus Vacuum Pumping Systems								
Job: 2001-VPS,Gas& Cond Sys Oversight-BLANCHARD								
FY03 Actual Cost								
2001-001	Apr-May MIE Cost	43*	01APR03A	30MAY03A		100	35,300.00	**35,300.00**
2001-100	PDR Support	164*	01JUN03A	30SEP03A		LOE	24,896.00	**24,896.00**
22-25	Eng. Work Planning and Design	65	03OCT05*	05JAN06	138		0.00	**25,698.00**
22-30	Design PLC based control system	65	06JAN06*	06APR06	203		0.00	**35,936.00**
22-35	Electrical Drafting for pumping system	65	06JAN06*	06APR06	203		0.00	**23,100.00**
22-40	Drafting	65	06JAN06*	06APR06	138		0.00	**17,600.00**
22-45	Eng. Work Planning and Design during fab	65	07APR06*	10JUL06	138		0.00	**15,201.00**
22-50	Perform maint. & repair of pmpg sys	65	07APR06*	10JUL06	138		0.00	**8,808.00**
22-55	Repair and Calibration of vac instrumentation	100	11AUG06*	03JAN07	115		0.00	**9,243.20**
22-60	Fabrication/installation	100	11AUG06*	03JAN07	115		0.00	**114,721.68**
22-65	Fab PLC conrols	100	11AUG06*	03JAN07	115		0.00	**61,571.20**
22-70	Integrated Systems Testing/Eng	45	04JAN07*	07MAR07	115		0.00	**7,276.00**
22-75	Integrated Systems Testing/Tech Support	45	04JAN07*	07MAR07	115		0.00	**4,836.00**
25 - Neutral Beam Injection System								
Job: 2501 - Neutral Beam Refurbishment-STEVENSON								
FY03 Actual Cost								
2501-001	Apr-Sept MIE Cost	43*	01APR03A	30SEP03A		100	146,310.00	**146,310.00**
FY04 Work Plan								
2501-015	Design & Work Planning	227*	03NOV03A	30SEP04	1,259	50	2,712.60	**5,425.20**
2501-020	Layout & Routing	192*	02JAN04A	30SEP04	1,259	30	2,319.84	**7,732.80**
2501-025	Systems Interfaces	192*	02JAN04A	30SEP04	1,259	10	773.28	**7,732.80**
2501-030	Power System Local testing	106*	01JAN04A	28MAY04	1,345	75	11,854.09	**15,805.45**
2501-035	Controls Development	128*	02JAN04A	30JUN04	1,323	20	12,858.40	**64,292.00**
Refurbishment								
25-100	6) Drafting Support	695*	01OCT04*	25JUN07	588		0.00	**108,007.21**
25-105	7) Refurbish sources	441	03OCT05*	26JUN07	587		0.00	**3,977.51**
25-110	8) Fabricate and install new filaments	438	03OCT05*	21JUN07	590		0.00	**6,625.84**



Run Date 24FEB04 10:53

ECP5 Schedule
Progress Bar
Critical Activity

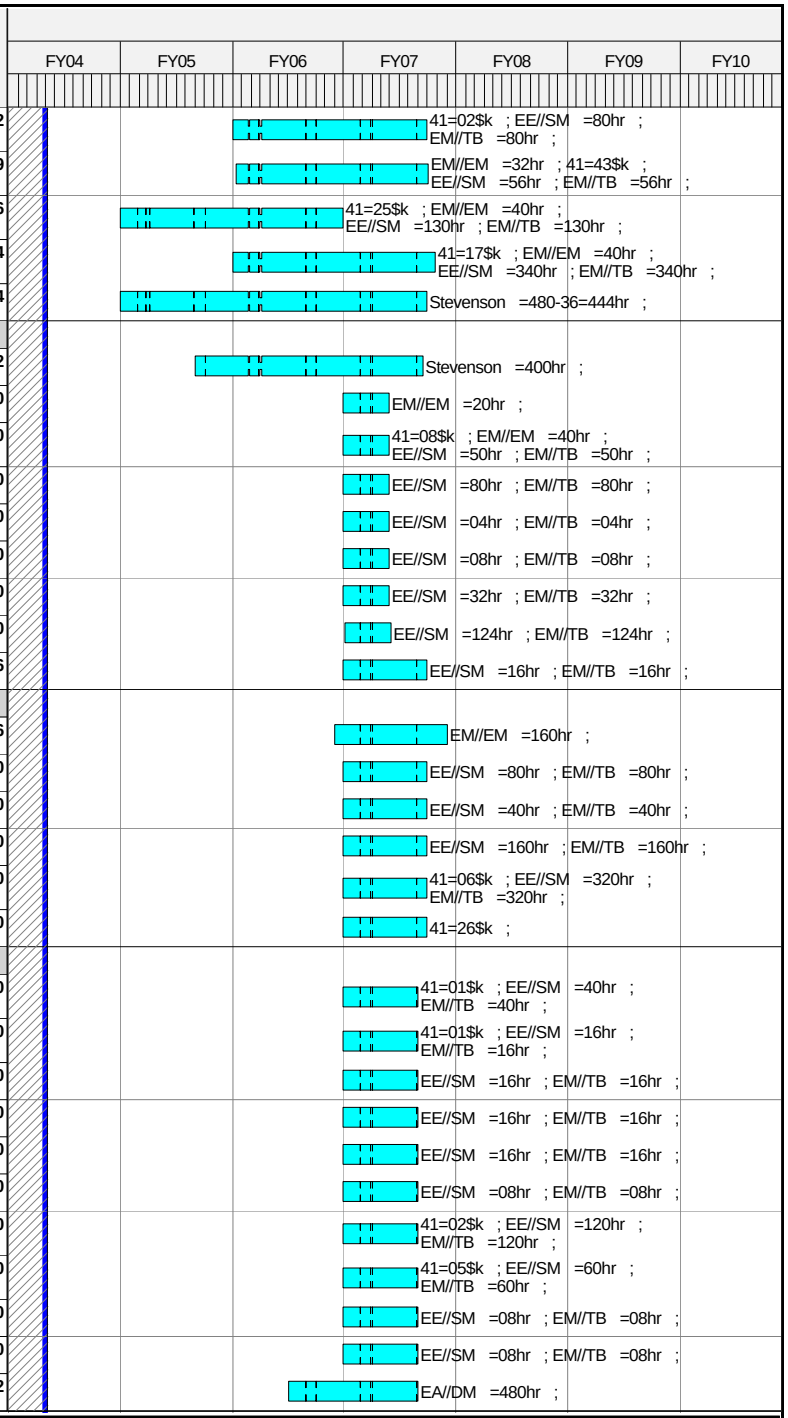
ECP5

NCSX Baseline (ECP5)
First Plasma May 2008

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
25-115	9) Refurbish calorimeters as needed	441	03OCT05*	26JUN07	587		0.00	**18,559.92**
25-130	12) Dsn,Fan,Instl NBI vacuum system	438	13OCT05*	03JUL07	582		0.00	**73,736.99**
25-145	15)Upgrade/Calibr of telemetry, ptical links etc	509*	01OCT04*	29SEP06	774		0.00	**63,991.66**
25-155	17) Fab/Instl Front Box Nitrogen Cryopanels.	460	03OCT05*	23JUL07	568		0.00	**97,269.14**
25-175	21) Sys Engr & Work Planning Procedures	699*	01OCT04*	29JUN07	584		0.00	**70,981.24**
Re-Install Beamline								
25-180	31)Work Planning Procedures	520	03JUN05*	18JUN07	593		0.00	**64,528.62**
25-185	32) EAD analysis of platform support capability	104	02OCT06*	28FEB07	670		0.00	**3,638.00**
25-190	33) Fabr BL alignment measur fixture,	104	02OCT06*	28FEB07	670		0.00	**28,462.00**
25-195	34) Fabr new bellows/electrical break	104	02OCT06*	28FEB07	670		0.00	**16,592.00**
25-200	35) Perform alignment measurements	104	02OCT06*	28FEB07	670		0.00	**829.60**
25-205	36) Prepare platform for base plate	104	02OCT06*	28FEB07	670		0.00	**1,659.20**
25-210	37) Relocate base plate to NCSX location	104	02OCT06*	28FEB07	670		0.00	**6,636.80**
25-215	38) Lift NB from Refurb location to NCSX locatio	104	04OCT06*	02MAR07	668		0.00	**25,717.60**
25-220	39) Enclose platform around base plate	190	29SEP06*	28JUN07	585		0.00	**3,317.16**
Re-Install Cables								
25-225	Cabling-Design & WP Procedures	255	04SEP06*	31AUG07	539		0.00	**28,940.86**
25-230	Cabling-Fabr and Install new Junction Box	190	02OCT06*	29JUN07	584		0.00	**16,592.00**
25-235	Cabling-Hi-potting cable run and fixing problems	190	02OCT06*	29JUN07	584		0.00	**8,296.00**
25-240	Cabling-Install Cable Trays	190	02OCT06*	29JUN07	584		0.00	**33,184.00**
25-245	Cabling-Pull cables Arc Room to PVC Junction Box	190	02OCT06*	29JUN07	584		0.00	**74,480.00**
25-250	Cabling- M&S f/ trays, fixtures, materials	190	02OCT06*	29JUN07	584		0.00	**35,152.00**
Beamline Connections								
25-255	Install weld cables Juncton Box to Ion Source.	170	02OCT06*	01JUN07	604		0.00	**9,107.20**
25-260	Connect bBL to foreline and exhaust manifold.	170	02OCT06*	01JUN07	604		0.00	**4,129.60**
25-265	New PLC. Test system after installation.	170	02OCT06*	01JUN07	604		0.00	**3,318.40**
25-270	Connect BL to new manifold & test	170	02OCT06*	01JUN07	604		0.00	**3,318.40**
25-275	Connect beamline to new manifold & test.	170	02OCT06*	01JUN07	604		0.00	**3,318.40**
25-280	Connect beamline to new manifold and test	170	02OCT06*	01JUN07	604		0.00	**1,659.20**
25-285	Install Water System	170	02OCT06*	01JUN07	604		0.00	**27,727.20**
25-290	Fab & Install Water Cooled Aperture	170	02OCT06*	01JUN07	604		0.00	**19,609.60**
25-295	New PLC for water sys & test	170	02OCT06*	01JUN07	604		0.00	**1,659.20**
25-300	Diag Sys-Fab/install new cables	170	02OCT06*	01JUN07	604		0.00	**1,659.20**
25-310	Drafting Labor Support	298	03APR06*	01JUN07	604		0.00	**55,127.52**



Run Date **24FEB04 10:53**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

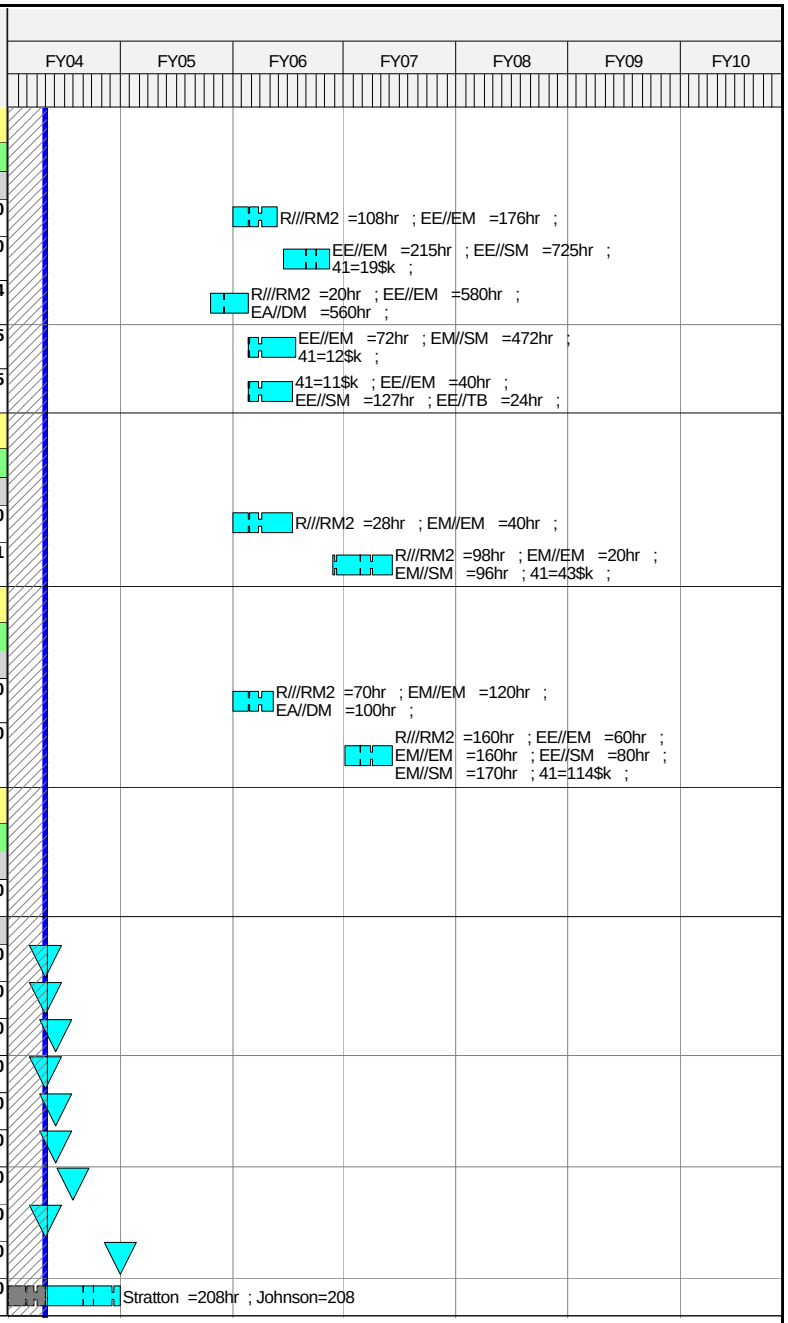
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 27 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
31 - Magnetic Diagnostics								
310-010	Design Mag Diagnostics	94	03OCT05*	21FEB06	129		0.00	**44,460.00**
310-015	Fabricate & Install Magnetics on Vessel	108	17MAR06	17AUG06	112		0.00	**140,205.50**
310-020	Design other ex-vessel sensors	85	25JUL05*	21NOV05	116		0.00	**154,537.34**
310-025	Fab & Install other ex-vessel sensors on coils	105	22NOV05	27APR06	116		0.00	**78,406.05**
310-030	Design & FabMagnetic integrators	94	22NOV05*	12APR06	127		0.00	**36,491.65**
36 - Edge and Divertor Diagnostics								
361-001	Design Visible Camera sys	130	03OCT05*	12APR06	208		0.00	**11,096.00**
361-015	Fab/Assy/Installation Visible Camera	130	28AUG06*	08MAR07	113		0.00	**88,191.41**
38 - Electron Beam (EB) Mapping								
380-010	Designe-Beam Probe,Fluor. Screen	88	03OCT05*	13FEB06	278		0.00	**42,118.00**
380-015	Fab & Install Beam probe	102	06OCT06	08MAR07	113		0.00	**249,952.00**
39 - Diagnostics Integration								
Job: 3901 - Diagnostics sys Integration-JOHNSON								
FY03 Actual Cost								
390-001	LOE Support FY03	151*	01APR03A	30SEP03A		100	155,450.00	**155,450.00**
390-100	Finalize VV ports (number,size,locations)	0		30JAN04*	1,430		0.00	**0.00**
390-110	Resolve port interferences.Final port config	0		30JAN04*	1,430		0.00	**0.00**
390-120	Update port map&revise diag port assignments	0		01MAR04*	1,409		0.00	**0.00**
390-130	Rvw status of existing ICD's w/VV & Mod Coils	0		30JAN04*	1,430		0.00	**0.00**
390-140	Write ICD's-Define external space for diagnostic	0		01MAR04*	1,409		0.00	**0.00**
390-150	Write ICD's-Define space f/racks in cntrl rm	0		01MAR04*	1,409		0.00	**0.00**
390-160	Start recruiting diag team at HTPD conference	0		30APR04*	1,365		0.00	**0.00**
390-170	Develop space envelopes for SXR	0		30JAN04*	1,430		0.00	**0.00**
390-180	Hold CDR's co-wound mag sensors&ext saddle loops	0		30SEP04*	1,259		0.00	**0.00**
390-010	LOE Support FY04	250*	01OCT03A	30SEP04	1,259	LOE	24,655.43	**78,023.50**



Run Date 24FEB04 10:53

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

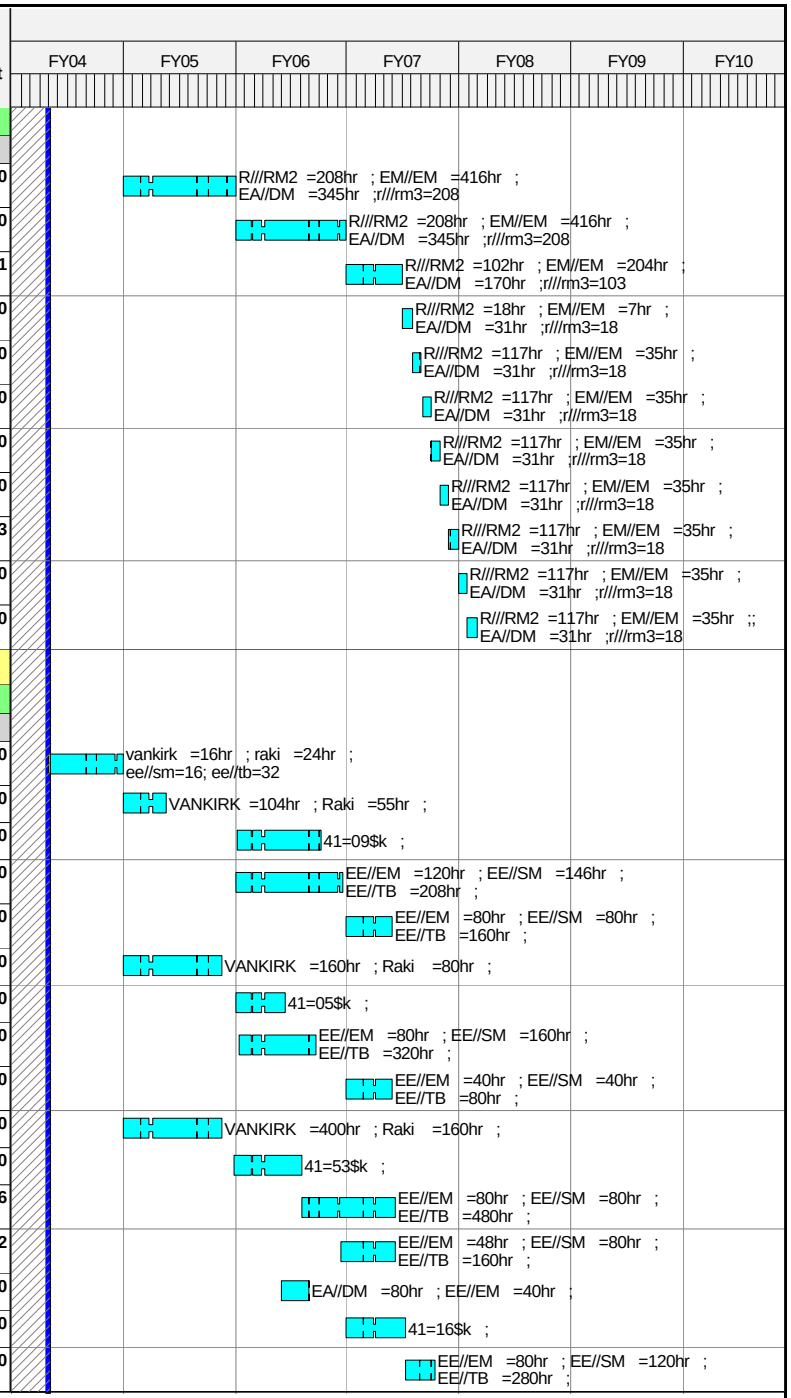
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 28 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

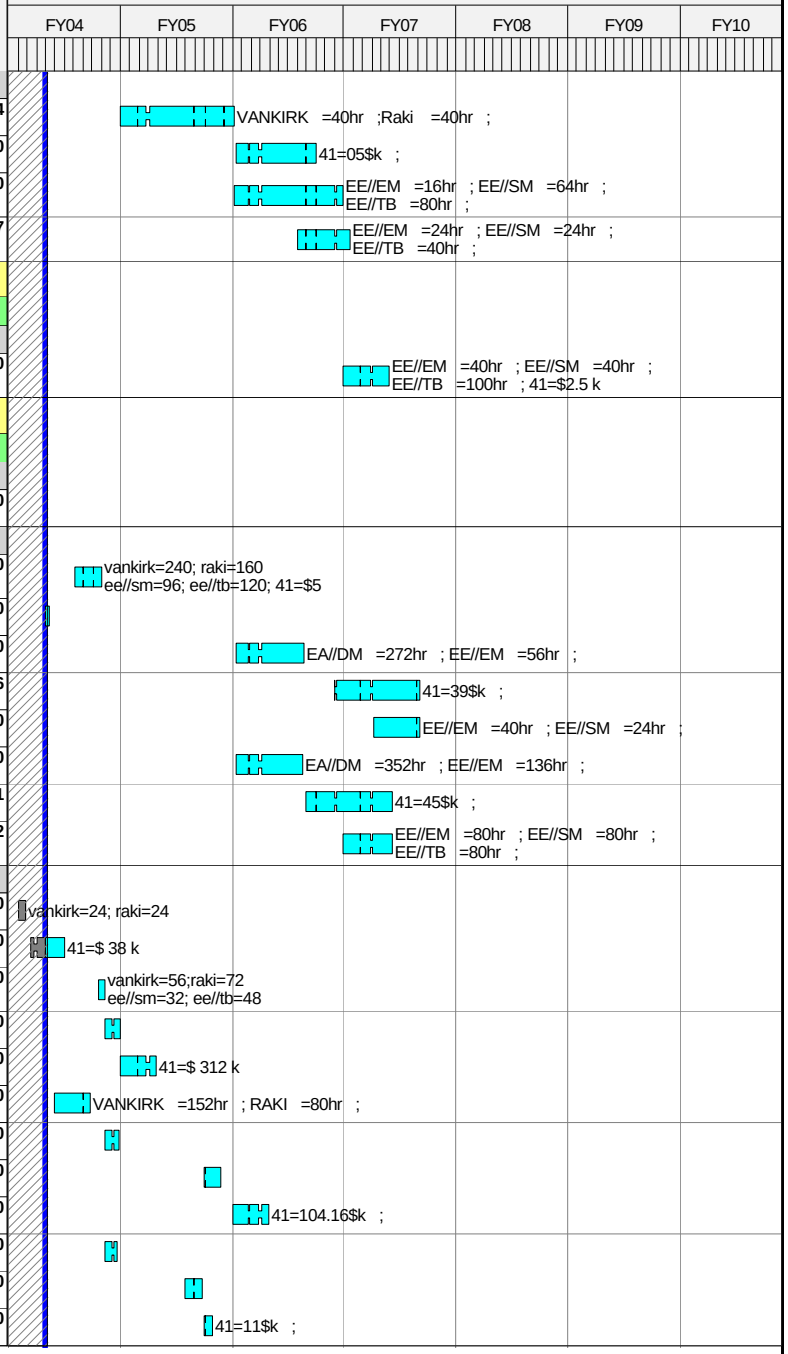
© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
390-015	LOE Support FY05	249*	01OCT04*	30SEP05	1,010		0.00	**183,996.90**
390-020	LOE Support FY06	249*	03OCT05*	29SEP06	761		0.00	**187,148.40**
390-025	LOE Support FY07	122*	02OCT06*	30MAR07	469		0.00	**99,039.11**
390-901	LOE Support FY07 1mo SO	22	02APR07	01MAY07	469		0.00	**17,760.40**
390-902	LOE Support FY07 1mo SO	22	02MAY07	01JUN07	469		0.00	**17,760.40**
390-903	LOE Support FY07 1mo SO	21	04JUN07	02JUL07	469		0.00	**17,760.40**
390-904	LOE Support FY07 1mo SO	21	03JUL07	01AUG07	469		0.00	**17,760.40**
390-905	LOE Support FY07 1mo SO	21	02AUG07	30AUG07	469		0.00	**17,760.40**
390-906	LOE Support FY07 1mo SO	21	31AUG07	01OCT07	469		0.00	**17,793.33**
390-907	LOE Support FY07 1mo SO	21	02OCT07	30OCT07	469		0.00	**18,451.90**
390-908	LOE Support FY07 1mo SO	21	31OCT07	28NOV07	469		0.00	**18,451.90**
41 - AC Power								
Job: 4101 - AC Power-RAMAKRISHNAN								
411 - Auxiliary AC Power Systems								
4101-100	Prepare Preliminary One line diagram	171*	02FEB04*	30SEP04	1,259		0.00	**9,440.80**
411-1-2	fEx-Test Cell AC Power Dist-Dsn	92*	01OCT04*	18FEB05	385		0.00	**19,761.90**
411-1-4	Ex-Test Cell AC Power Dist-Procure	185*	07OCT05*	06JUL06	279		0.00	**11,745.00**
411-1-6	Ex-Test Cell AC Power Dist-Install	240	03OCT05*	18SEP06	228		0.00	**51,769.40**
411-1-8	Ex-Test Cell AC Power Dist-Commission	100	02OCT06*	28FEB07	119		0.00	**46,568.00**
411-2-2	Grounding-Dsn	220*	01OCT04*	19AUG05	225		0.00	**29,688.00**
411-2-4	Grounding-Procure	107	03OCT05*	10MAR06	261		0.00	**6,525.00**
411-2-6	Grounding-Install	172	13OCT05*	22JUN06	188		0.00	**55,912.00**
411-2-8	Grounding-Commission	100	02OCT06*	28FEB07	119		0.00	**18,448.00**
411-3-2	Test Cell AC Power Distr-Dsn	220*	01OCT04*	19AUG05	140		0.00	**68,024.00**
411-3-4	Test Cell AC Power Distr-Procure	150	29SEP05*	08MAY06	113		0.00	**69,612.50**
411-3-6	Test Cell AC Power Distr-Install	207	09MAY06*	08MAR07	113		0.00	**61,951.46**
411-3-8	Test Cell AC Power Distr-Commission	121	11SEP06*	08MAR07	113		0.00	**31,186.72**
411-4-2	Standby Power for Cryo Sys -Dsn	65	01MAR06*	31MAY06	295		0.00	**15,100.00**
411-4-4	Standby Power for Cryo Sys -Procure	130	02OCT06*	11APR07	210		0.00	**21,632.00**
411-4-6	Standby Power for Cryo Sys -Install	65	12APR07	13JUL07	210		0.00	**51,968.00**



© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
412 - Experimental AC Power Systems								
412-1-2	D-site Pulsed AC Power Distr-Dsn	253	01OCT04*	06OCT05	189		0.00	**10,522.84**
412-1-4	D-site Pulsed AC Power Distr-Procure	179	13OCT05*	03JUL06	251		0.00	**6,525.00**
412-1-6	D-site Pulsed AC Power Distr-Install	245	07OCT05	29SEP06	189		0.00	**16,043.20**
412-1-8	D-site Pulsed AC Power Distr-Commission	121	03MAY06*	23OCT06	173		0.00	**9,741.47**
42 - AC/DC Converters								
422 - D-Site AC/DC Converters								
422-1-8	Transrex power supplies Reactivation	100	02OCT06*	28FEB07	119		0.00	**23,534.00**
43 - DC Systems								
Job: 4301 - DC Systems-RAMAKRISHNAN								
FY03 Actual Cost								
4301-001	Apr-Sept MIE Cost	43*	01APR03A	30SEP03A		100	2,390.00	**2,390.00**
431 - C-Site DC Systems								
4301-100	Prel Design link box & physical details,location	63	03MAY04*	30JUL04	1,302		0.00	**75,124.40**
4301-104	clear EF/OH bldg of stored hardware	10	02FEB04	13FEB04	1,420		0.00	**0.00**
431-1-2	Coil DC Cabling to link box (PCTB)-Dsn	153	13OCT05*	25MAY06	659		0.00	**38,740.00**
431-1-4	Coil DC Cabling to link box(PCTB)-Procure	190	01SEP06*	07JUN07	591		0.00	**52,804.46**
431-1-6	Coil DC Cabling to (PCTB)-Install	108	08JAN07*	07JUN07	591		0.00	**9,689.60**
431-2-2	DC Cabling to Coils in TC-Dsn	149	13OCT05*	19MAY06	181		0.00	**60,140.00**
431-2-4	DC Cabling to Coils in TC-Procure	190	01JUN06*	07MAR07	174		0.00	**60,160.01**
431-2-6	DC Cabling to Coils in TC-Install	108	27SEP06	07MAR07	174		0.00	**30,012.22**
432 - D to C-Site DC Systems								
432-100	Prepare Tower SOW and IP for BOA design	10*	03NOV03A	26NOV03A		100	6,141.60	**6,141.60**
432-105	BOA design tower supports	71*	12DEC03A	30MAR04	1,202	10	15,975.96	**48,412.00**
432-110	Prep SOW and Requisition for tower installation	16	21JUL04	11AUG04	1,124		0.00	**23,812.00**
432-115	Bid & Award	35	12AUG04	30SEP04	1,124		0.00	**0.00**
432-120	Install Tower Supports	74	01OCT04*	25JAN05	1,124		0.00	**403,104.00**
432-1-2	DC Cabling-Dsn	80	01MAR04*	21JUN04	1,124		0.00	**28,046.40**
432-1-4.0	Prepare SOW & Requisition for 1000MCM 5kv Cable	30	13AUG04*	24SEP04	1,087		0.00	**0.00**
432-1-4.1	Bid & Award - Cable	40	01JUL05*	26AUG05	898		0.00	**0.00**
432-1-4.2	Cable Delivery [A/1]	75	03OCT05*	25JAN06	874		0.00	**135,928.80**
432-1-4.4	Prepare SOW & Requisition for Cable Installation	30	10AUG04*	21SEP04	1,104		0.00	**0.00**
432-1-4.5	Bid & Award Cable Installation	40	02MAY05*	27JUN05	955		0.00	**0.00**
432-1-4.7	Procure trays	20	01JUL05*	29JUL05	952		0.00	**14,212.00**



Run Date 24FEB04 10:53

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

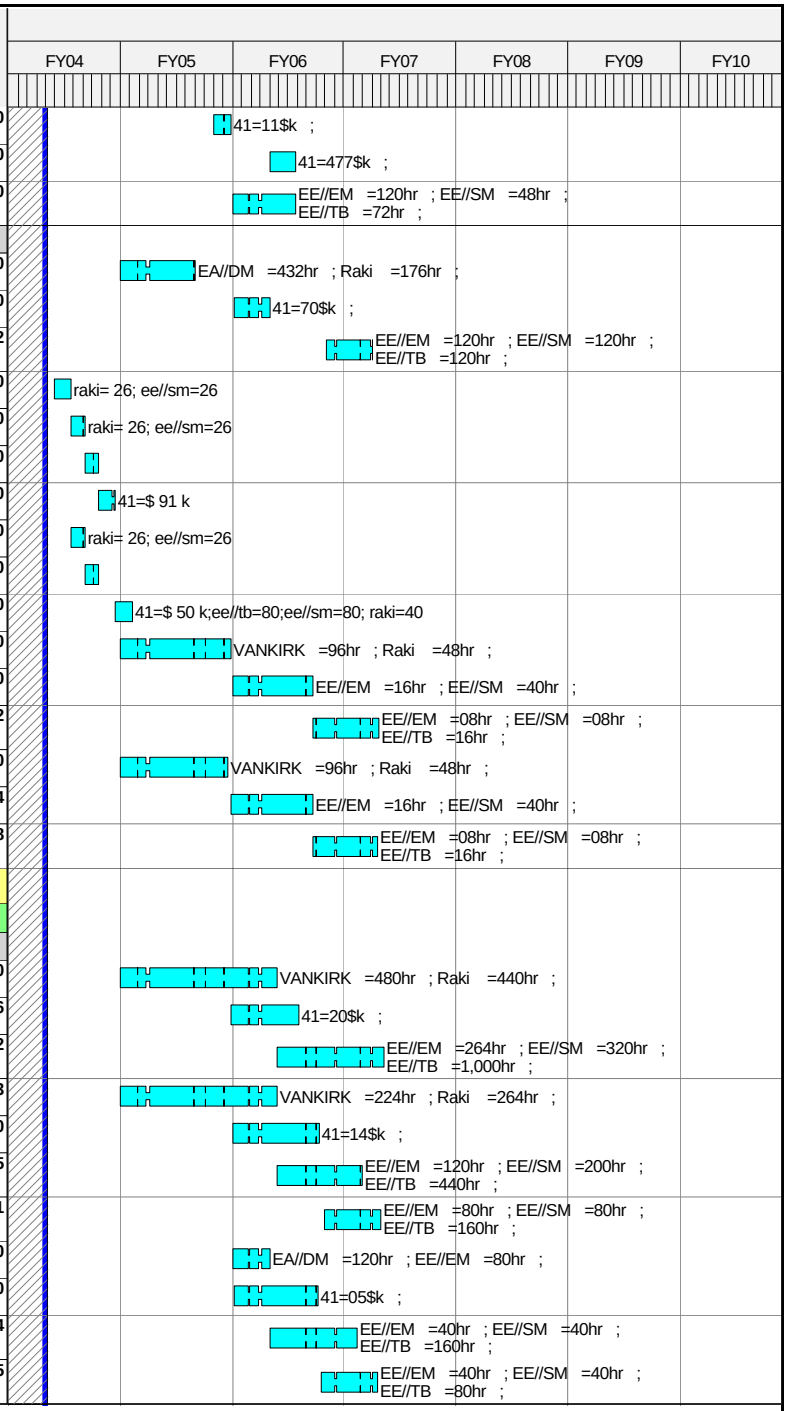
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 30 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

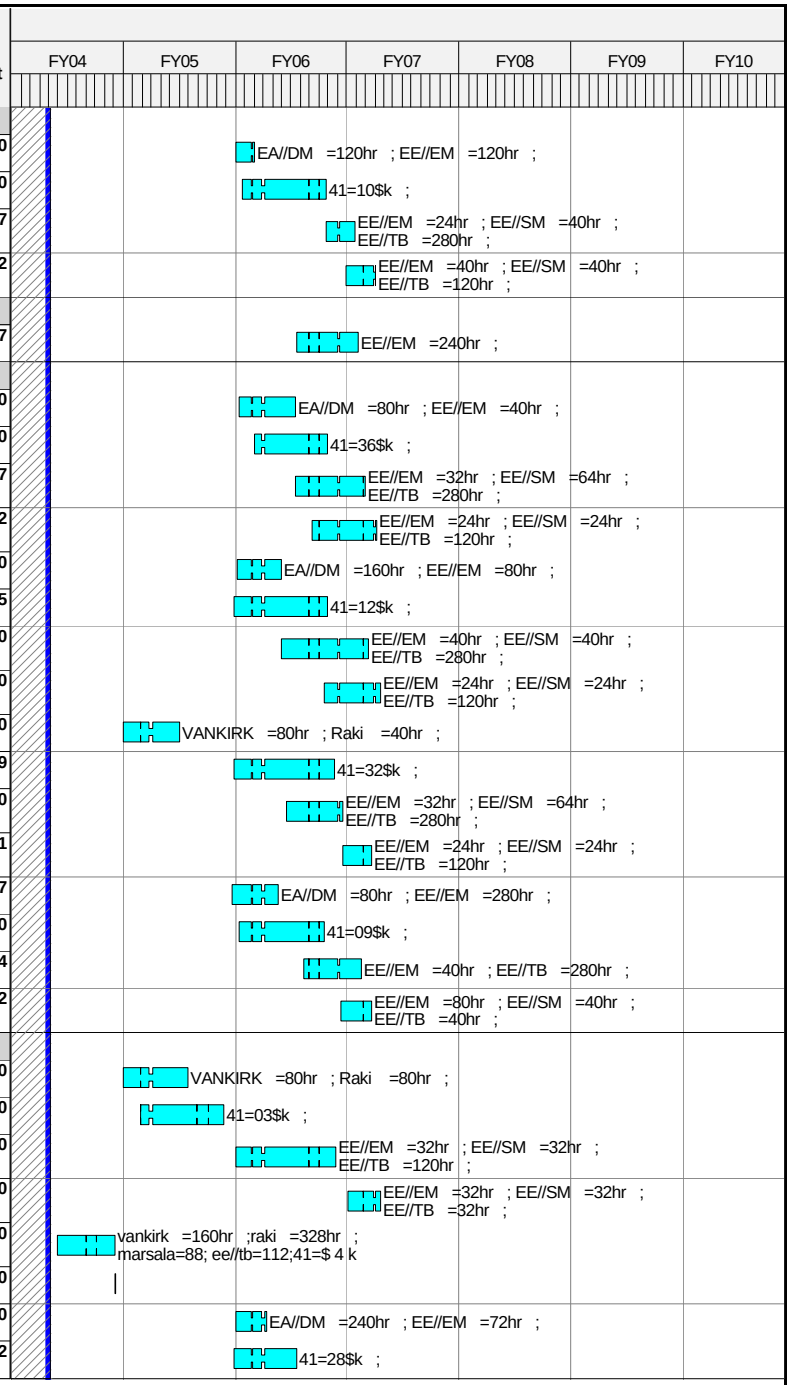
© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
432-1-4.8	Install Trays	41	01AUG05	27SEP05	952		0.00	**14,212.00**
432-1-4.6	S/C Install Cable [A/1]	61	01FEB06	26APR06	870		0.00	**622,485.00**
432-1-6	DC Cabling-Installation Support	140	03OCT05*	26APR06	870		0.00	**29,992.80**
433 - D-Site DC Systems								
433-1-2	DC Cabling-Dsn	166	01OCT04*	03JUN05	421		0.00	**73,961.60**
433-1-4	DC Cabling-Procure	75	07OCT05*	31JAN06	259		0.00	**91,819.80**
433-1-6	DC Cabling-Install	100	03AUG06*	02JAN07	130		0.00	**43,784.52**
433-2-4.0	Design Isolation switch	40	01MAR04*	23APR04	1,230		0.00	**6,710.60**
433-2-4.1	Prep Spec and Requisition for Isolation Switch	30	26APR04	07JUN04	1,230		0.00	**6,710.60**
433-2-4.2	Bid & Award Isolation Switch	30	08JUN04	20JUL04	1,230		0.00	**0.00**
433-2-4.3	Deliver Isolation Switch	40	21JUL04	15SEP04	1,230		0.00	**115,934.00**
433-2-4.4	Prep SOW and Requisition for IS installation	30	26APR04	07JUN04	1,270		0.00	**6,710.60**
433-2-4.5	Bid & Award IS Installation	30	08JUN04	20JUL04	1,270		0.00	**0.00**
433-2-4.6	Install Isolation Switch	40	16SEP04	10NOV04	1,230		0.00	**85,451.90**
433-3-2	NSTX OH PS changes-Dsn	245*	01OCT04*	26SEP05	119		0.00	**17,812.80**
433-3-6	NSTX OH PS changes-Install	180	03OCT05*	22JUN06	115		0.00	**7,012.00**
433-3-8	NSTX OH PS changes-Commission	143	23JUN06	23JAN07	115		0.00	**3,562.22**
433-4-2	NSTX TF Power Supply changes-Dsn	238*	01OCT04*	15SEP05	126		0.00	**17,812.80**
433-4-6	NSTX TF Power Supply changes-Install	180	28SEP05*	19JUN06	118		0.00	**7,010.04**
433-4-8	NSTX TF Power Supply changes-Commission	143	20JUN06	18JAN07	118		0.00	**3,556.68**
44 - Control and protection Systems								
Job: 4401 - Control & Protection-RAMAKRISHNAN								
441 - Electrical Interlocks								
441-1-2	C-site-Dsn	345*	01OCT04*	23FEB06	114		0.00	**120,616.10**
441-1-4	C-site-Procure	149	30SEP05*	08MAY06	300		0.00	**26,046.06**
441-1-6	C-site-Install	238	24FEB06*	07FEB07	114		0.00	**161,027.72**
441-2-2	D-site-Dsn	345*	01OCT04*	23FEB06	120		0.00	**65,417.43**
441-2-4	D-site-Procure	192	03OCT05*	11JUL06	176		0.00	**18,217.80**
441-2-6	D-site-Install	192	24FEB06*	27NOV06	120		0.00	**77,399.95**
441-2-8	D-site-Commission	123	31JUL06*	30JAN07	120		0.00	**35,951.61**
441-3-2	D-to-C-site-Dsn	80	03OCT05*	01FEB06	128		0.00	**25,800.00**
441-3-4	D-to-C-site-Procure	186*	07OCT05*	07JUL06	178		0.00	**6,525.00**
441-3-6	D-to-C-site-Install	200	02FEB06*	13NOV06	128		0.00	**23,744.24**
441-3-8	D-to-C-site-Commission	123	19JUL06*	18JAN07	128		0.00	**17,889.95**



© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
442 - Kirk Key Interlocks								
442-1-2	Kirk Keys-Dsn	41	03OCT05*	30NOV05	289		0.00	**32,100.00**
442-1-4	Kirk Keys-Procure	185	24OCT05*	21JUL06	130		0.00	**13,050.00**
442-1-6	Kirk Keys-Install	68	24JUL06*	26OCT06	130		0.00	**31,103.17**
442-1-8	Kirk Keys-Commission	62	27SEP06*	02JAN07	130		0.00	**21,784.32**
443 - Real Time Control Systems								
443-1-2	Develop Control Algorithms-Dsn	142	21APR06*	09NOV06	130		0.00	**38,397.97**
444 - Instrument Systems								
444-1-2	DC Current Transducers (DCCTs)-Dsn	124	13OCT05*	14APR06	126		0.00	**15,100.00**
444-1-4	DC Current Transducers (DCCTs)-Procure	164	05DEC05*	01AUG06	191		0.00	**46,980.00**
444-1-6	DC Current Transducers (DCCTs)-Install	160	17APR06*	01DEC06	126		0.00	**35,115.07**
444-1-8	DC Current Transducers (DCCTs)-Commission	143	08JUN06*	08JAN07	126		0.00	**16,521.62**
444-2-2	DC Potential Transducers (DCPTs)-Dsn	95	07OCT05*	28FEB06	119		0.00	**30,200.00**
444-2-4	DC Potential Transducers (DCPTs)-Procure	207	30SEP05*	31JUL06	192		0.00	**15,659.25**
444-2-6	DC Potential Transducers (DCPTs)-Install	200	01MAR06*	12DEC06	119		0.00	**33,603.00**
444-2-8	DC Potential Transducers (DCPTs)-Commission	120	21JUL06*	17JAN07	119		0.00	**16,697.40**
444-3-2	DC Shunts-Dsn	122*	01OCT04*	01APR05	415		0.00	**14,844.00**
444-3-4	DC Shunts-Procure	224	29SEP05*	22AUG06	176		0.00	**41,756.29**
444-3-6	DC Shunts-Install	130	20MAR06*	20SEP06	176		0.00	**34,403.20**
444-3-8	DC Shunts-Commission	65	21SEP06*	22DEC06	131		0.00	**17,077.81**
444-4-2	Signal Conditioning & Cabling-Dsn	99	23SEP05*	20FEB06	195		0.00	**52,846.67**
444-4-4	Signal Conditioning & Cabling-Procure	188	13OCT05*	17JUL06	135		0.00	**11,745.00**
444-4-6	Signal Conditioning & Cabling-Install	130	16MAY06*	16NOV06	135		0.00	**29,050.34**
444-4-8	Signal Conditioning & Cabling-Commission	65	15SEP06*	18DEC06	135		0.00	**21,559.32**
445 - Coil Protection Systems								
445-1-2	Ground Fault Protection-Dsn	142	01OCT04*	29APR05	282		0.00	**21,040.00**
445-1-4	Ground Fault Protection-Procure	187	24NOV04*	26AUG05	199		0.00	**3,876.00**
445-1-6	Ground Fault Protection-Install	223	05OCT05*	25AUG06	173		0.00	**18,137.60**
445-1-8	Ground Fault Protection-Commission	65	05OCT06*	15JAN07	121		0.00	**12,028.80**
445-2-0	Overload Protection & Cabling-Prelim Dsn	131*	01MAR04*	01SEP04	1,279		0.00	**89,287.20**
445-2-1	Overload Protection & Cabling-Peer Review	0	02SEP04	01SEP04	1,279		0.00	**0.00**
445-2-2	Overload Protection & Cabling-FinalDsn	65	05OCT05*	13JAN06	120		0.00	**37,740.00**
445-2-4	Overload Protection & Cabling-Procure	136	30SEP05*	19APR06	173		0.00	**36,537.32**



Run Date **24FEB04 10:54**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

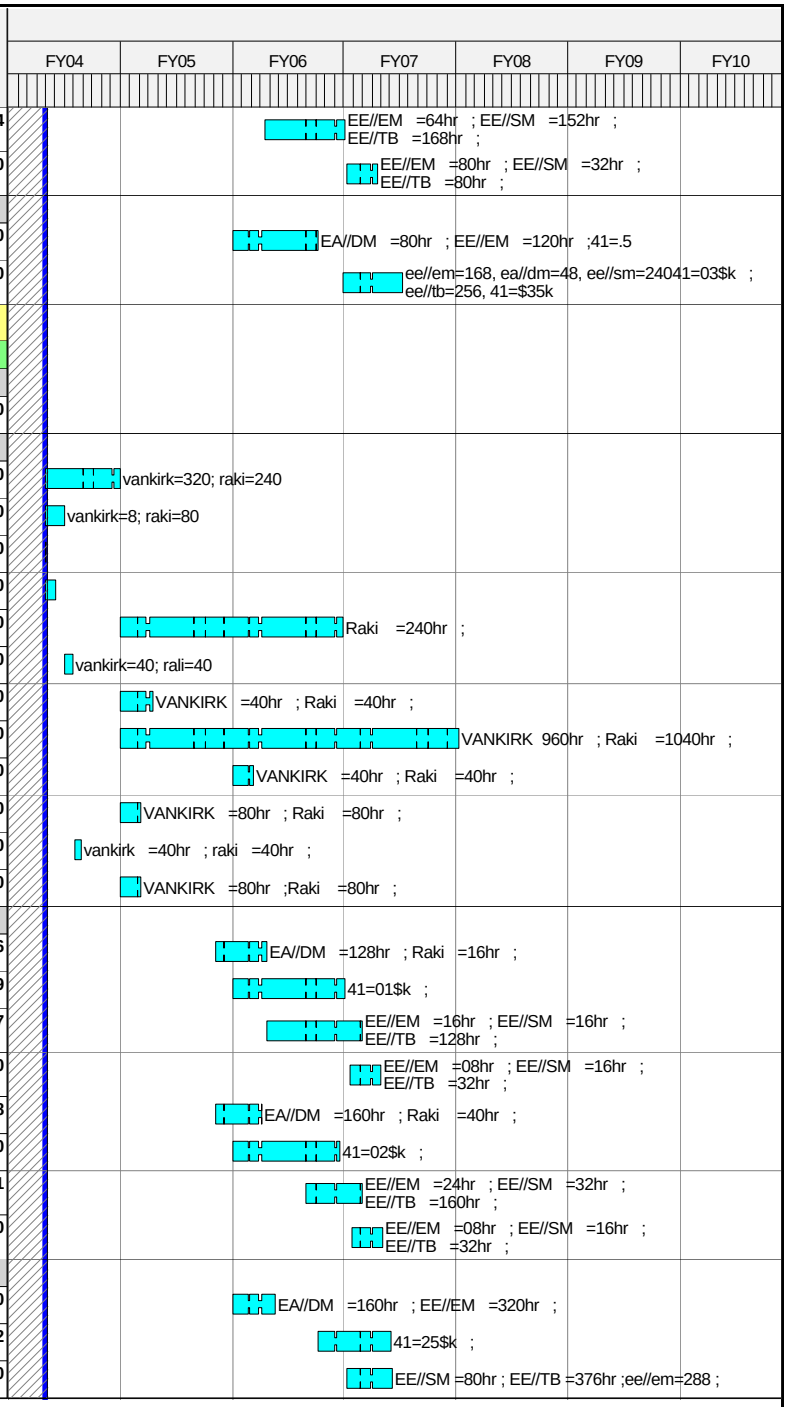
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 32 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

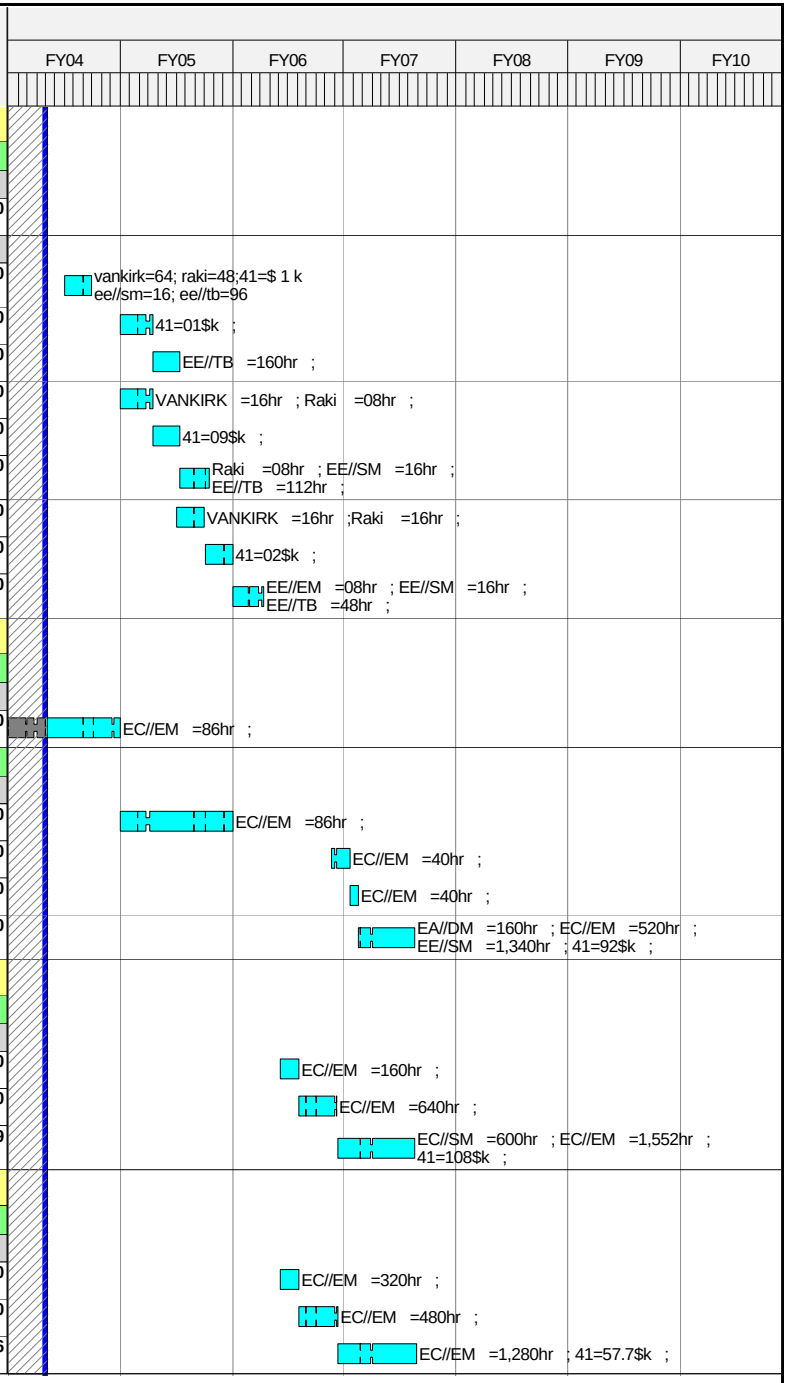
© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
445-2-6	Overload Protection & Cabling-Install	186	16JAN06*	05OCT06	120		0.00	**40,522.14**
445-2-8	Overload Protection & Cabling-Commission	65	09OCT06	17JAN07	119		0.00	**24,268.80**
446 - Ground Fault Monitoing System								
446-1-2	GFMS-Dsn	190	03OCT05*	07JUL06	208		0.00	**34,652.50**
446-1-4	GFMS-Procure/Fab/Install	130	02OCT06*	11APR07	149		0.00	**132,370.40**
45 - Power System Design and Integration								
Job: 4501 - Power Sys Dsn & Integr-RAMAKRISHNAN								
FY03 Actual Cost								
4501-001	Apr-Sept MIE Cost	43*	01APR03A	30SEP03A		100	112,340.00	**112,340.00**
451 - System Design & Interfaces								
4501-100	Design Drawings	171*	02FEB04*	30SEP04	1,259		0.00	**69,832.00**
4501-110	Calculations-Dsn	43*	02FEB04*	31MAR04	1,387		0.00	**12,897.60**
451-0-1	C-Site Decision	0	02FEB04	30JAN04*	1,430		0.00	**0.00**
451-0-2	Develop SRD	21*	02FEB04*	01MAR04	1,409		0.00	**0.00**
451-1-2	Calculations-Dsn	498*	01OCT04*	29SEP06	761		0.00	**37,488.00**
451-2-2	PDR Power system -Dsn	22*	01APR04*	30APR04	1,365		0.00	**10,236.00**
451-2-2.1	FDR Power system -Dsn	65	01OCT04*	12JAN05	1,194		0.00	**10,520.00**
451-3-2	Drawings,changes,asbuilts -Elect Dsn Integration	756*	01OCT04*	11OCT07	503		0.00	**275,076.00**
451-4-2	FDR AC auxiliaries & grounding-Dsn	45	03OCT05*	06DEC05	965		0.00	**10,700.00**
451-6-2	FDR C-Site -Dsn	45	01OCT04*	06DEC04	1,214		0.00	**21,040.00**
451-7-2	FDR DC transmission-Dsn	20*	03MAY04*	28MAY04	1,345		0.00	**10,236.00**
451-8-2	FDR D-Site -Dsn	45	01OCT04*	06DEC04	1,214		0.00	**21,040.00**
452 - Electrical Systems Support								
452-1-2	Diagnostics AC Power Distr-Dsn	108*	11AUG05*	20JAN06	139		0.00	**16,505.06**
452-1-4	Diagnostics AC Power Distr-Procure	248	05OCT05*	02OCT06	178		0.00	**1,305.19**
452-1-6	Diagnostics AC Power Distr-Install	217	23JAN06	28NOV06	139		0.00	**14,659.67**
452-1-8	Diagnostics AC Power Distr-Commission	65	23OCT06*	31JAN07	139		0.00	**6,021.60**
452-2-2	Diagnostics sensor cabling-Dsn	97*	11AUG05*	05JAN06	237		0.00	**23,748.58**
452-2-4	Diagnostics sensor cabling-Procure	240	05OCT05*	20SEP06	186		0.00	**2,610.00**
452-2-6	Diagnostics sensor cabling-Install	130	30MAY06*	01DEC06	136		0.00	**20,556.31**
452-2-8	Diagnostics sensor cabling-Commission	65	26OCT06*	05FEB07	136		0.00	**6,021.60**
453 - System Testing (PTP's)								
453-1-2	New Procedures	90	06OCT05*	20FEB06	215		0.00	**68,000.00**
453-1-4	Preop Testing-Procure test equipt	160	10JUL06*	01MAR07	118		0.00	**33,366.72**
453-1-8	Testing PTPs, ISTPs	100	09OCT06*	07MAR07	114		0.00	**90,618.40**



© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
46 - FCPC Building Modifications								
Job: 4601 - FCPC Bldg Mods-RAMAKRISHNAN								
FY03 Actual Cost								
4601-001	Apr-Sept MIE Cost	43*	01APR03A	30SEP03A		100	1,300.00	**1,300.00**
4601-100	Clear area in West wing SPS to HVAC equipt	64*	01APR04*	30JUN04	1,323		0.00	**24,226.00**
460-2-4	Clear the small Vacuum prep lab -Procure	65	01OCT04*	12JAN05	1,129		0.00	**646.00**
460-2-6	Clear the small Vacuum prep lab -Install	65	13JAN05	13APR05	1,129		0.00	**12,464.00**
460-3-2	Floor & Wall Penetrations-Dsn	65	01OCT04*	12JAN05	392		0.00	**2,968.80**
460-3-4	Floor & Wall Penetrations-Procure	65	13JAN05	13APR05	392		0.00	**11,628.00**
460-3-6	Floor & Wall Penetrations-Install	65	14APR05	15JUL05	392		0.00	**11,730.40**
460-4-2	Mechanical Modifications-Dsn	65	01APR05*	01JUL05	271		0.00	**4,208.00**
460-4-4	Mechanical Modifications-Procure	65	05JUL05	04OCT05	271		0.00	**2,584.80**
460-4-6	Mechanical Modifications-Install	65	05OCT05	13JAN06	271		0.00	**6,858.40**
51 - TCP/IP Infrastructure Systems								
Job: 5801 -Central I&C Integr & Oversight-OLIARO								
51-01	FY04 LOE support	250*	01OCT03A	30SEP04	1,259	LOE	3,951.39	**12,504.40**
51-02	FY05 LOE support	249*	01OCT04*	30SEP05	1,010		0.00	**12,848.40**
51-10	Preliminary Design (Title I)	45	21AUG06*	23OCT06	123		0.00	**6,246.40**
51-20	Final Network Design (Title II)	20	24OCT06	20NOV06	123		0.00	**6,548.00**
51-30	Installation, Testing, Documentation (Title III)	120	21NOV06*	17MAY07	123		0.00	**390,879.60**
52 - Central Instrumentation & Control								
52-10	Preliminary Design (Title I)	45	06MAR06*	05MAY06	121		0.00	**24,320.00**
52-20	Final Design (Title II)	87	08MAY06	08SEP06	121		0.00	**97,280.00**
52-30	Installation, Testing, Documentation (Title III)	173	11SEP06*	21MAY07	121		0.00	**456,439.69**
53 - Data Acquisition & Facility Computing								
53-10	Preliminary Design (Title I)	45	08MAR06*	09MAY06	119		0.00	**48,640.00**
53-20	Final Design (Title II)	87	10MAY06	12SEP06	119		0.00	**72,960.00**
53-30	Coding, Configuration, Testing (Title III)	173	13SEP06*	23MAY07	119		0.00	**286,217.26**



Run Date 24FEB04 10:54

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

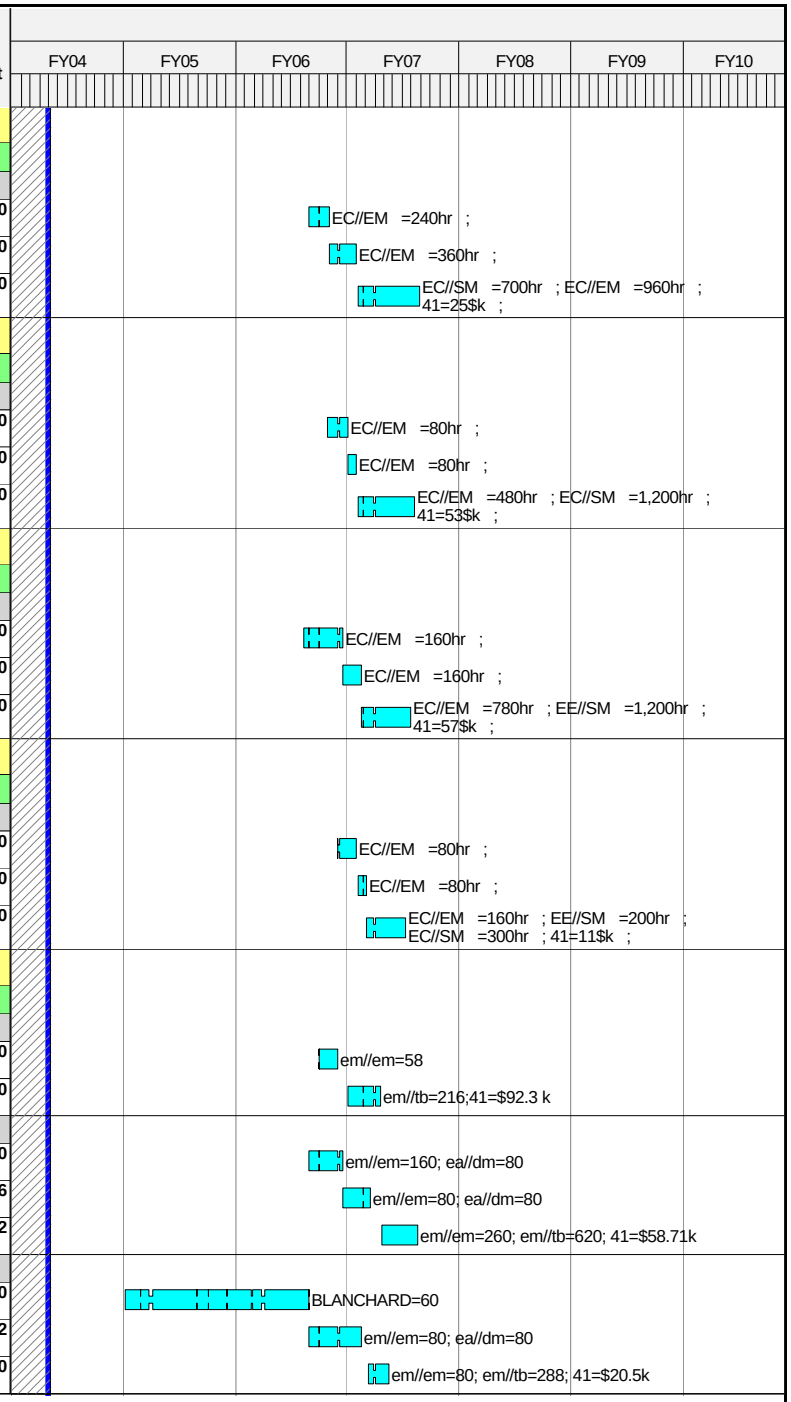
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 34 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
54 - Facility Timing & Synchronization								
54-10	Preliminary Design (Title I)	45	01JUN06*	03AUG06	119		0.00	**36,480.00**
54-20	Final Design (Title II)	65	04AUG06	03NOV06	119		0.00	**56,340.00**
54-30	Installation, Testing, Documentation (Title III)	135	06NOV06	23MAY07	119		0.00	**259,211.60**
55 - Real Time Plasma & Power Supply Control Sys								
55-10	Preliminary Design (Title I)	45	01AUG06*	03OCT06	137		0.00	**12,201.60**
55-20	Final Design (Title II)	20	04OCT06	31OCT06	137		0.00	**13,096.00**
55-30	Installation, Testing, Documentation (Title III)	120	10NOV06	08MAY07	130		0.00	**267,982.40**
56 - Central Safety Interlock Systems								
56-10	Preliminary Design (Title I)	87	15MAY06*	15SEP06	136		0.00	**24,320.00**
56-20	Final Design (Title II)	45	18SEP06	17NOV06	136		0.00	**25,776.00**
56-30	Installation, Testing, Documentation (Title III)	108	20NOV06	30APR07	136		0.00	**349,830.00**
57 - Control Room Facility								
57-10	Preliminary Design (Title I)	45	01SEP06*	03NOV06	147		0.00	**12,680.00**
57-20	Final Design (Title II)	20	06NOV06	05DEC06	147		0.00	**13,096.00**
57-30	Installation, Testing, Documentation (Title III)	87	06DEC06	13APR07	147		0.00	**93,938.00**
61 - Water Systems								
611 - C-Site Cooling System								
615.011	Engr recommissioning of C-Site Water systems	44	03JUL06*	01SEP06	160		0.00	**9,796.20**
615.021	Replace valves, resins, filters	65	06OCT06*	16JAN07	137		0.00	**143,473.60**
612 - NB Water Cooling Systems								
622.001	WBS 612 Preliminary design	79	30MAY06*	19SEP06	147		0.00	**35,824.00**
622.011	WBS 612 Final Design	60	20SEP06	14DEC06	147		0.00	**23,802.66**
622.021	WBS 612 Assembly/Fabrication/Installation	80	26JAN07*	17MAY07	123		0.00	**180,299.92**
613 - Vacuum Pumping System								
623.010	LOE WBS 612	410*	06OCT04*	31MAY06	846		0.00	**10,033.20**
623.011	Design WBS 612	118	01JUN06*	15NOV06	133		0.00	**22,793.02**
632.021	WBS 612 Assembly/Fabrication/Installation	40	13DEC06*	14FEB07	116		0.00	**67,180.00**



Run Date 24FEB04 10:54

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

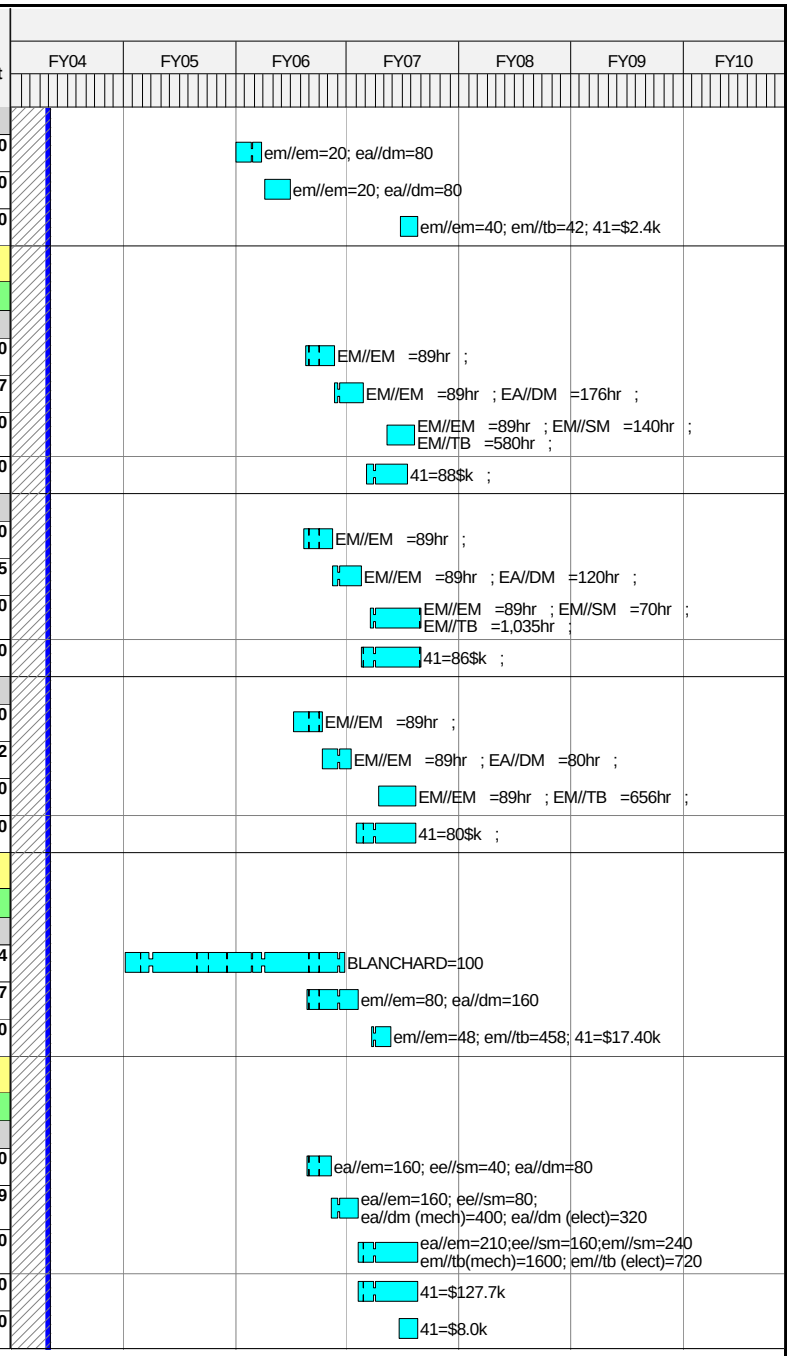
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 35 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
614 - Bakeout Water System								
625.001	WBS 614 Preliminary design	58	03OCT05*	23DEC05	368		0.00	**12,178.00**
625.011	WBS 614 Final Design	62	03JAN06	29MAR06	368		0.00	**12,178.00**
625.021	WBS 614 Assembly/Fabrication	40	26MAR07	18MAY07	122		0.00	**14,153.80**
62 - Cryogenic Systems								
621 - LN2-LHe Supply System								
631-001	Preliminary Design	65	19MAY06*	21AUG06	137		0.00	**15,032.10**
631-010	Final Design	65	22AUG06	21NOV06	137		0.00	**35,902.27**
631-015	Fab/Assy/Installation	65	08FEB07*	09MAY07	129		0.00	**82,963.10**
631-020	Procurement	88	06DEC06*	16APR07	129		0.00	**118,976.00**
622 - LN2 Coil Cooling Supply								
632-001	Preliminary Design	65	15MAY06*	15AUG06	116		0.00	**15,032.10**
632-010	Final Design	65	16AUG06	15NOV06	116		0.00	**29,337.35**
632-015	Fab/Assy/Installation	110	18DEC06*	29MAY07	116		0.00	**114,018.60**
632-020	Procurement	130	16NOV06*	29MAY07	116		0.00	**116,001.60**
623 - GN2 Cryostat Cooling System								
633-001	Preliminary Design	65	12APR06*	13JUL06	139		0.00	**15,032.10**
633-010	Final Design	65	14JUL06	13OCT06	139		0.00	**24,114.72**
633-015	Fab/Assy/Installation	88	11JAN07*	14MAY07	126		0.00	**72,933.10**
633-020	Procurement	130	02NOV06*	14MAY07	126		0.00	**108,092.40**
63 - Utility Systems								
640.010	FY04/05 LOE support	489*	06OCT04*	21SEP06	767		0.00	**16,749.14**
640.011	Design GN2, Air & Vent Systems	117	26MAY06*	09NOV06	150		0.00	**31,706.87**
640.021	Assembly/Fabrication	40	19DEC06*	20FEB07	125		0.00	**72,413.80**
64 - PFC/VV Heating & Cooling								
650.001	Preliminary Design	50	26MAY06*	07AUG06	122		0.00	**40,172.00**
650.005	Final Design	65	08AUG06	07NOV06	122		0.00	**118,749.29**
650.010	Lab Fab/Assy/Installation	130	08NOV06*	18MAY07	122		0.00	**286,477.00**
650.012	Procured Hardware/Material	130	08NOV06*	18MAY07	122		0.00	**172,650.40**
650.015	Procured Installation/Assy	43	21MAR07*	18MAY07	122		0.00	**10,816.00**



Run Date **24FEB04 10:54**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

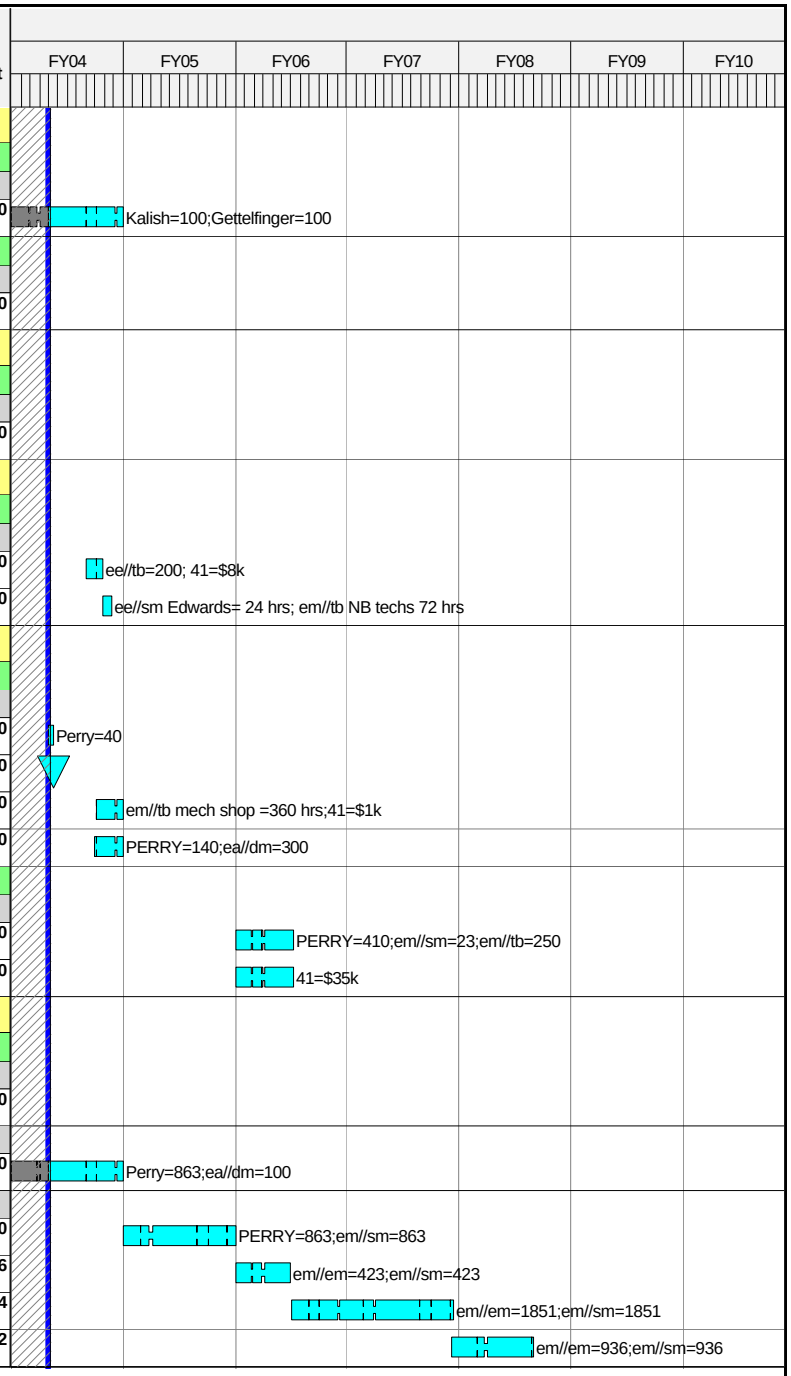
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 36 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
65 - Facility Systems Integration								
Job: 6163 - Facility Systems Support FY04								
65-03	LOE WBS 6	250*	01OCT03A	30SEP04	1,259	LOE	10,181.52	**32,220.00**
Job: 6501 - Facility Systems Integration-DUDEK								
FY03 Actual Cost								
6501-001	Apr-Sept MIE Cost PPPL	0	01APR03A	30SEP03A		100	9,380.00	**9,380.00**
71 - Shield Wall Seismic Modifications								
Job: 7101 - Shield Wall Modif Design-PERRY								
FY03 Actual Cost								
7101-000	Apr-Sept MIE Cost PPPL	66	01APR03A	30SEP03A		100	32,150.00	**32,150.00**
72 - Control Room Refurbishment								
Job: 7201 - Control Room Walls&Floors-PERRY								
710.001	Block Wall east side control room	41	01JUN04*	28JUL04	1,284		0.00	**39,512.00**
711B.050	Complete Control Room Flooring	20	29JUL04	25AUG04	1,284	85	0.00	**8,107.20**
73 - Platform Design & Fabrication								
Job: 7301 - Platform Design & Fab-PERRY								
712.008	Update Platform Specification	12*	02FEB04*	17FEB04	1,354		0.00	**6,460.00**
712.009	Platform PDR	0		17FEB04*	1,354		0.00	**0.00**
711A.040	Platform nut plates	63*	02JUL04*	30SEP04	1,259	75	0.00	**28,922.00**
712.010	Final Design	64*	01JUL04*	30SEP04	1,283		0.00	**54,170.00**
Job: 7401 - TC Prep & Mach Assy Planning-PERRY								
712.020	Fab & Assemble Platform	132	03OCT05*	10APR06	212		0.00	**24,296.30**
712.030	Miscs Hardware/Material	132	03OCT05*	10APR06	896		0.00	**45,675.00**
74 - Machine Assembly Planning and Oversight								
Job: 7401 - TC Prep & Mach Assy Planning-PERRY								
FY03 Actual Cost								
7401-001	Apr-Sept MIE Cost PPPL	66	01APR03A	30SEP03A		100	131,680.00	**131,680.00**
Oversight and Supervision								
711A.020	LOE FY04	256*	01OCT03A	30SEP04	1,283	LOE	49,764.97	**149,894.50**
Project Scope								
714.010	LOE FY05	249	01OCT04*	30SEP05	522		0.00	**236,807.20**
714.020	LOE FY06 prior to assy starting	122	03OCT05	31MAR06	522		0.00	**118,111.86**
714.030	LOE FY07 thru first plasma	366	03APR06	14SEP07	522		0.00	**542,474.94**
714.031	WBS 7 mgt stretch out cost	180*	11SEP07*	30MAY08	346		0.00	**287,396.72**



Run Date 24FEB04 10:54

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

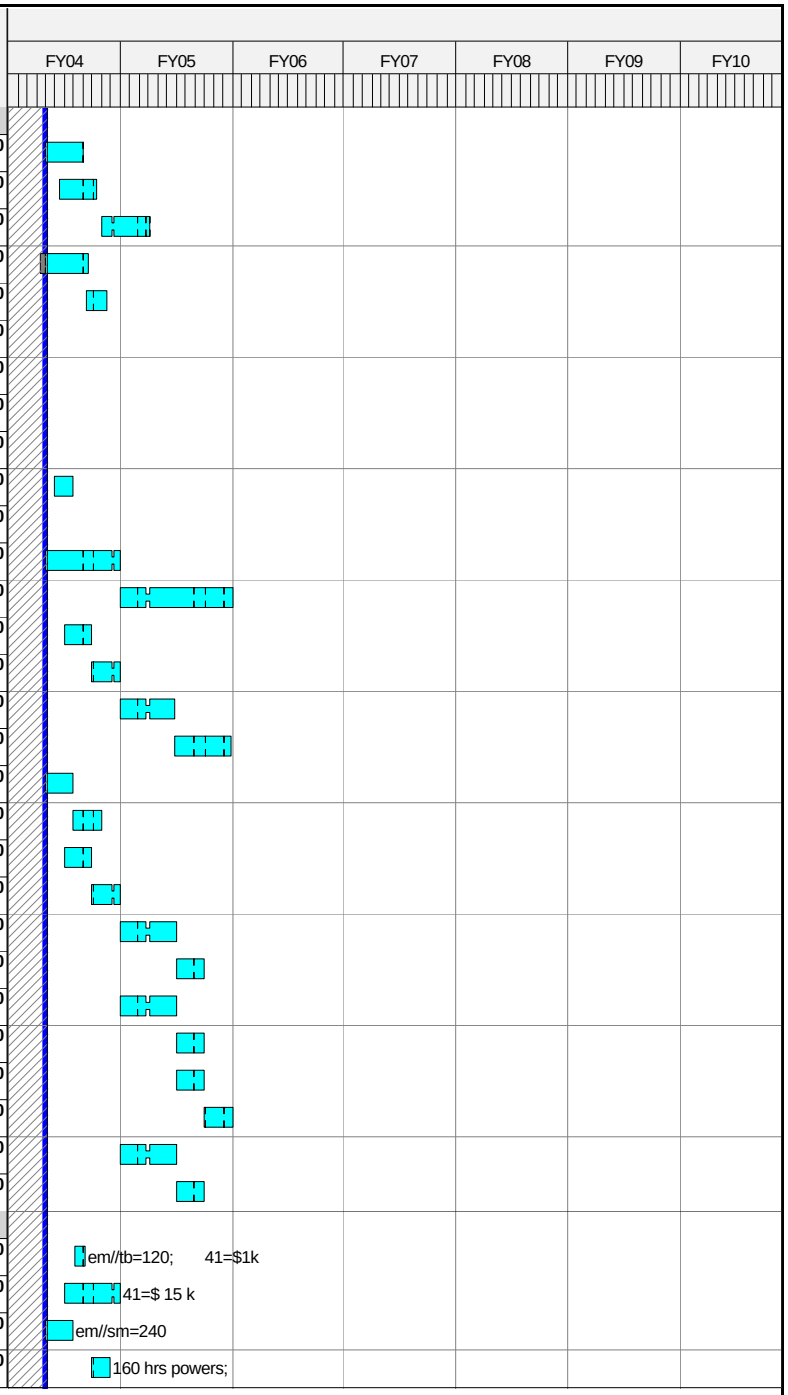
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 37 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
FED/Infrastructure Support (non Project cost)								
613.010	Remove Shield Walls ** GPP **	86*	02FEB04*	01JUN04	1,368		0.00	**0.00**
613.015	Fabricate New Bottom Course of Blocks **GPP**	87*	15MAR04*	15JUL04	1,337		0.00	**0.00**
613.017	Install New Bottom Course **GPP**	107*	02AUG04*	04JAN05	1,219		0.00	**0.00**
613.020	Remove south PLT shielding (cc 7230)	111*	12JAN04A	15JUN04	1,358		0.00	**0.00**
613.025	Dispose of old south PLT shielding **GPP**	44*	15JUN04*	16AUG04	1,315		0.00	**0.00**
EXFAC003	Clear PBX control room & Safe PBX (cc7230)	110*	27JAN03A	30JUN03A		100	0.00	**0.00**
EXFAC004	Remove Fire protection PLT wall (cc7230)	21	01MAY03A	09MAY03A		100	0.00	**0.00**
EXFAC005	Remove Fire Protection under platform (cc7230)	21	01APR03A	30APR03A		100	0.00	**0.00**
EXFAC006	Remove Fire Protection Control rm walls(cc7230)	21	01MAY03A	09MAY03A		100	0.00	**0.00**
EXFAC007	Remove PBX Base Plates cc7230)	45*	01MAR04*	30APR04	1,174	100	0.00	**0.00**
GPP001	GPP-Upgarde C-Site central chilled wtr plant*TBD	1	01OCT02A	01OCT02A			0.00	**0.00**
GPP004	GPP-Roofing Design	171*	02FEB04*	30SEP04	1,010		0.00	**0.00**
GPP004.1	GPP-Roofing Install	249*	01OCT04*	30SEP05	1,010		0.00	**0.00**
GPP005	GPP-Test Cell lighting Design	64*	01APR04*	30JUN04	1,259		0.00	**0.00**
GPP005.1	GPP-Test Cell lighting Install	64	01JUL04	30SEP04	1,259		0.00	**0.00**
GPP006	GPP-Test Cell HVAC/dew point control Design	120	01OCT04*	30MAR05	1,011		0.00	**0.00**
GPP006.1	GPP-Test Cell HVAC/dew point control Install	128	31MAR05	29SEP05	1,011		0.00	**0.00**
GPP007	GPP-C-Site elevators Design	64	02FEB04*	29APR04	1,302		0.00	**0.00**
GPP007.1	GPP-C-Site elevators Install	64	30APR04	30JUL04	1,302		0.00	**0.00**
GPP008	GPP-Fire suppression high bay design	64	01APR04*	30JUN04	1,259		0.00	**0.00**
GPP008.1	GPP-Fire suppression high bay install	64	01JUL04	30SEP04	1,259		0.00	**0.00**
GPP009	Control Room Lights & Outlets design	121*	01OCT04*	31MAR05	1,010		0.00	**0.00**
GPP009.1	Control Room Lights & Outlets install	64	01APR05	30JUN05	1,010		0.00	**0.00**
GPP010	Control Room HVAC Design	121*	01OCT04*	31MAR05	1,010		0.00	**0.00**
GPP010.1	Control Room HVAC Install	64	01APR05	30JUN05	1,010		0.00	**0.00**
GPP011	Control Room Ceiling Design	64	01APR05*	30JUN05	1,010		0.00	**0.00**
GPP011.1	Control Room Ceiling Install	64	01JUL05	30SEP05	1,010		0.00	**0.00**
GPP012	Control Rm Fire Detection & Suppression Design	121*	01OCT04*	31MAR05	1,010		0.00	**0.00**
GPP012.1	Control RmFire Detection & Suppression Install	64	01APR05	30JUN05	1,010		0.00	**0.00**
Test Cell Modifications & Upgrades								
613.030	Test Cell copper ground plane cuts	25	03MAY04*	07JUN04	1,198		0.00	**10,490.00**
713.010	General procurements	128*	01APR04*	30SEP04	1,283		0.00	**19,110.00**
7502-000	Outlet Design	65*	02FEB04*	30APR04	1,199		0.00	**25,272.00**
7502-001	Test Cell 110v outlets	40	01JUL04*	26AUG04	1,283		0.00	**14,268.80**



Run Date **24FEB04 10:54**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

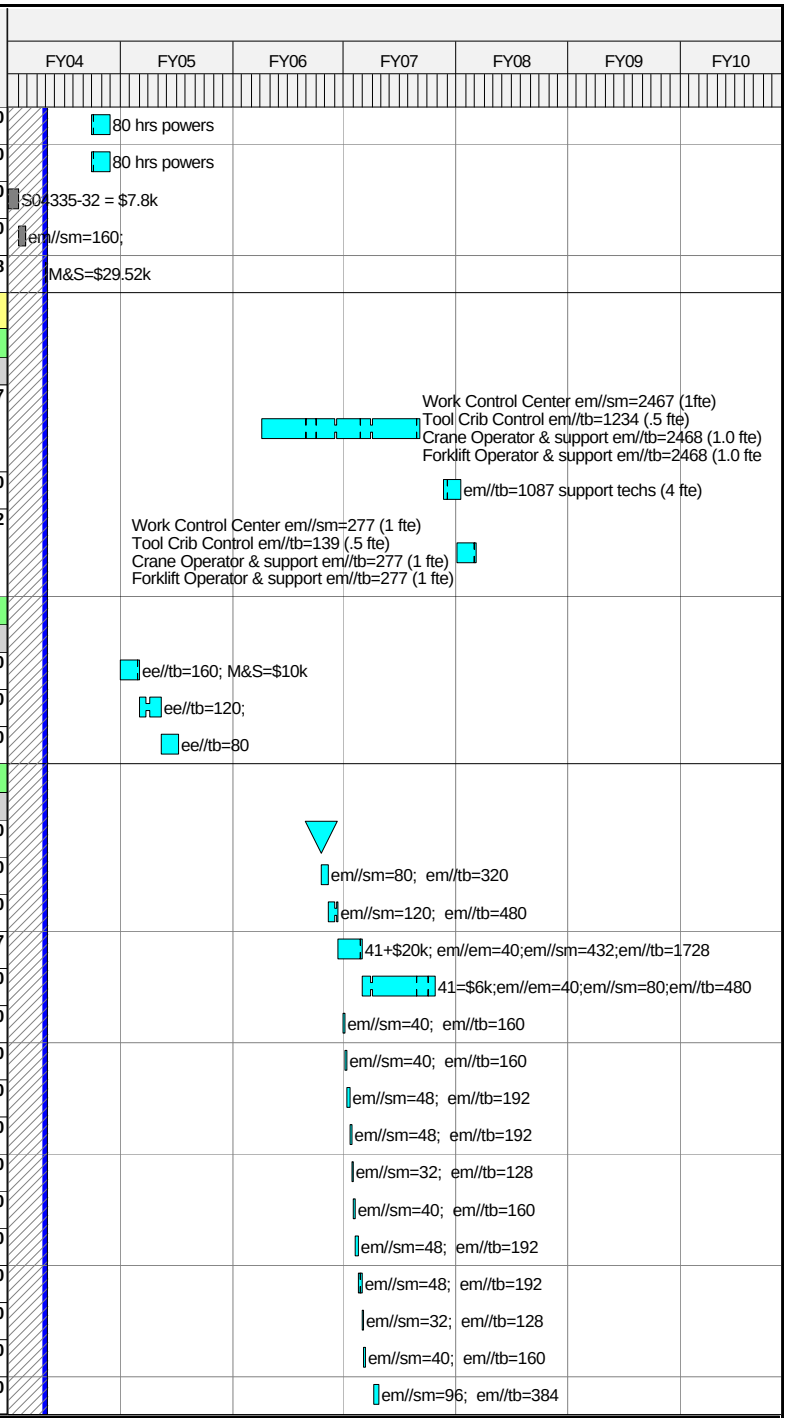
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 38 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

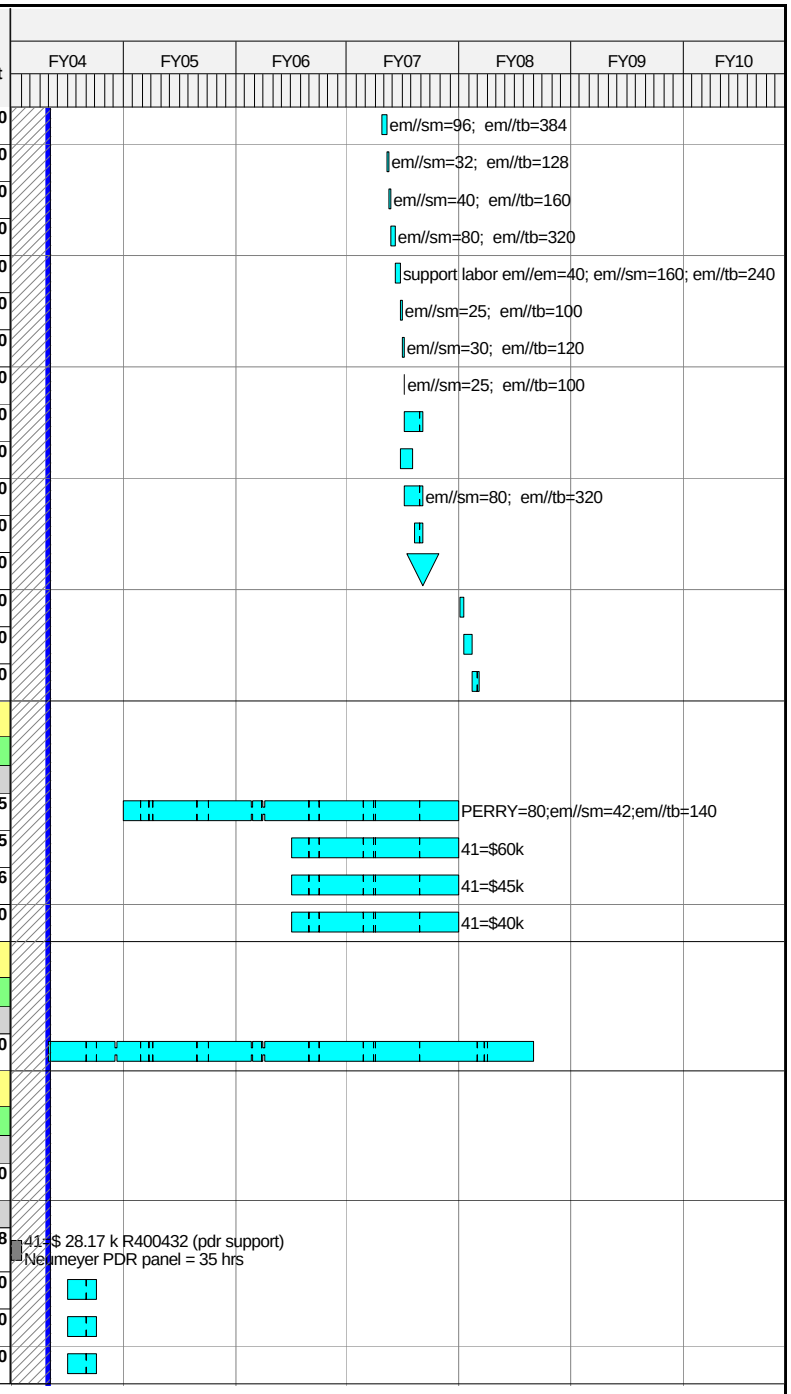
© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
7502-002	Test Cell 208v outlets	40	01JUL04*	26AUG04	1,283		0.00	**7,134.40**
7502-010	Ready Rooms (under control room) 110v outlets	40	01JUL04*	26AUG04	1,157		0.00	**7,134.40**
7502-011	Cable Removal in test cell (S04335-32)	0*	01OCT03A	31OCT03A		100	9,937.20	**9,937.20**
7502-025	TC Floor penetration covers	42	03NOV03A	26NOV03A		100	16,848.00	**16,848.00**
EXFAC001.:	Complete Crane Modifications (S04354)	0*	02FEB04A	30JAN04A		100	37,608.48	**37,608.48**
75 - Test Cell and Basement Assembly Operations								
7501 - Construction Support Crew								
7501-05	Construction Support Crew during machine assy	356	05JAN06	04JUN07	112		0.00	**794,815.37**
7501-06	Construction Support Crew during e-beam mapping	41	22AUG07	18OCT07	498		0.00	**94,025.50**
7501-07	Construction Support Crew during cryostat instl	40	05OCT07	03DEC07	468		0.00	**92,837.72**
7502 - Test Cell Facility Preparations								
7502-020	Resurface TC floor	42	04OCT04*	02DEC04	1,132		0.00	**30,248.00**
7502-030	TC Floor firesealing	42	03DEC04*	09FEB05	1,132		0.00	**12,996.00**
7502-035	Control room firesealing	42	10FEB05*	08APR05	1,132		0.00	**8,664.00**
7503 - Machine Assembly								
730.1000	Begin Assembly Activities	0	18JUL06*		124		0.00	**0.00**
730.1020	Install & Level Support Base Plates	15	18JUL06	07AUG06	124		0.00	**34,504.00**
730.1030	Install/Level Machine Support Columns	25	08AUG06	12SEP06	124		0.00	**51,756.00**
730.1040	Install Platform	55	13SEP06	30NOV06	124		0.00	**231,277.87**
730.1050	Install Lighting,Fire Det/Supprs under platform	160	01DEC06	24JUL07	559		0.00	**70,761.60**
730.1060	Install Lower Cryostat Floor	5	27SEP06	03OCT06	124		0.00	**17,784.80**
730.1070	Install Lower PF 3,4,5&6 into prelim position	5	04OCT06	10OCT06	124		0.00	**18,584.00**
730.1081	1st Field Period Assembly-Position	6	11OCT06	18OCT06	124		0.00	**22,300.80**
730.1081X	*******PBR add1st Field Period Assembly-Position	6	19OCT06	26OCT06	124		0.00	**22,300.80**
730.1082	1st Field Period Assembly-Weld	4	27OCT06	01NOV06	124		0.00	**14,867.20**
730.1083	1st Field Period Assembly-Leak Check	5	02NOV06	08NOV06	124		0.00	**18,584.00**
730.1091	2nd Field Period Assembly-Position	6	09NOV06	16NOV06	124		0.00	**22,300.80**
730.1091X	*****PBR add2nd Field Period Assembly-Position	6	17NOV06	28NOV06	124		0.00	**22,300.80**
730.1092	2nd Field Period Assembly-Weld	4	29NOV06	04DEC06	124		0.00	**14,867.20**
730.1093	2nd Field Period Assembly-Leak Check	5	05DEC06	11DEC06	124		0.00	**18,584.00**
730.1101	3rd Field Period Assembly-Position	12	05JAN07	22JAN07	112		0.00	**44,601.60**



© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
730.1101X	*******pbr adrd Field Period Assembly-Position	12	23JAN07	07FEB07	112		0.00	**44,601.60**
730.1102	3rd Field Period Assembly-Weld	4	08FEB07	13FEB07	112		0.00	**14,867.20**
730.1103	3rd Field Period Assembly-Leak Check	5	14FEB07	20FEB07	112		0.00	**18,584.00**
730.1130	Make Final Vacuum Pump Connections to VV	13	21FEB07	09MAR07	112		0.00	**37,168.00**
730.1140	PTP Pumpdown & leak check VV (WBS 220-025)	10	12MAR07	23MAR07	112		0.00	**47,012.00**
730.1150	Raise lower PF-3,4,5&6 coils into final position	3	26MAR07	28MAR07	112		0.00	**11,615.00**
730.1170	Install PF Solenoid into position (U/L 1&2 PF)	4	29MAR07	03APR07	112		0.00	**13,938.00**
730.1175	Install Upper PF-3,4,5 & 6 coils	3	04APR07	06APR07	112		0.00	**11,615.00**
730.1180	Install Bus connections to coil sys (WBS 431-131	40	09APR07	04JUN07	112		0.00	**0.00**
730.1210	Connect Cooling System (WBS 61)	30	26MAR07	04MAY07	132		0.00	**0.00**
730.1230	Complete Bus connections (WBS 4)	40	09APR07	04JUN07	112		0.00	**37,168.00**
730.1249	Operational Readiness Assessment	20	07MAY07	04JUN07	112		0.00	**0.00**
730.1250	Operational Readiness	0		04JUN07	112		0.00	**0.00**
730.8075	Prep Cryostat for installation	10	05OCT07	18OCT07	112		0.00	**66,128.00**
730.8100	Cryo stat installation & Test & Cooldown	20	19OCT07	15NOV07	112		0.00	**132,256.00**
730.8200	Cold Power Test PTP	10	16NOV07	03DEC07	112		0.00	**66,128.00**
76 - Tooling Design & Fabrication								
713.020	Lab Fab/Assy/Installation	764*	01OCT04*	28SEP07	519		0.00	**29,973.45**
713.030	Tooling,assy fixtures,misc equipt	383*	03APR06*	28SEP07	519		0.00	**80,177.55**
713.040	General procurements	383*	03APR06*	28SEP07	519		0.00	**60,133.16**
713.050	Welding tools, materials & equipt	383*	03APR06*	28SEP07	519		0.00	**53,451.70**
77 - Measurement Systems								
780.000	No additional tools/devices needed.	1,106*	02FEB04	30MAY08	348		0.00	**0.00**
81 - Project Management and Control								
Job: 8101 - Project Management & Control-NEILSON								
FY03 Actual Cost								
810.001	Apr-Sept MIE Cost PPPL	128*	01APR03A	30SEP03A		100	387,340.00	**387,340.00**
810.009	PDR Support	3*	01OCT03A	31OCT03A		100	41,163.08	**41,163.08**
810.010	CD-3 Readiness - Update Assy & Installation plan	65	01APR04*	01JUL04	1,346		0.00	**0.00**
810.015	CD-3 Readiness - Update resource loaded schedule	65	01APR04*	01JUL04	1,346		0.00	**0.00**
810.020	CD-3 Readiness - Update risk management plan	65	01APR04*	01JUL04	1,346		0.00	**0.00**



Run Date 24FEB04 10:54

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

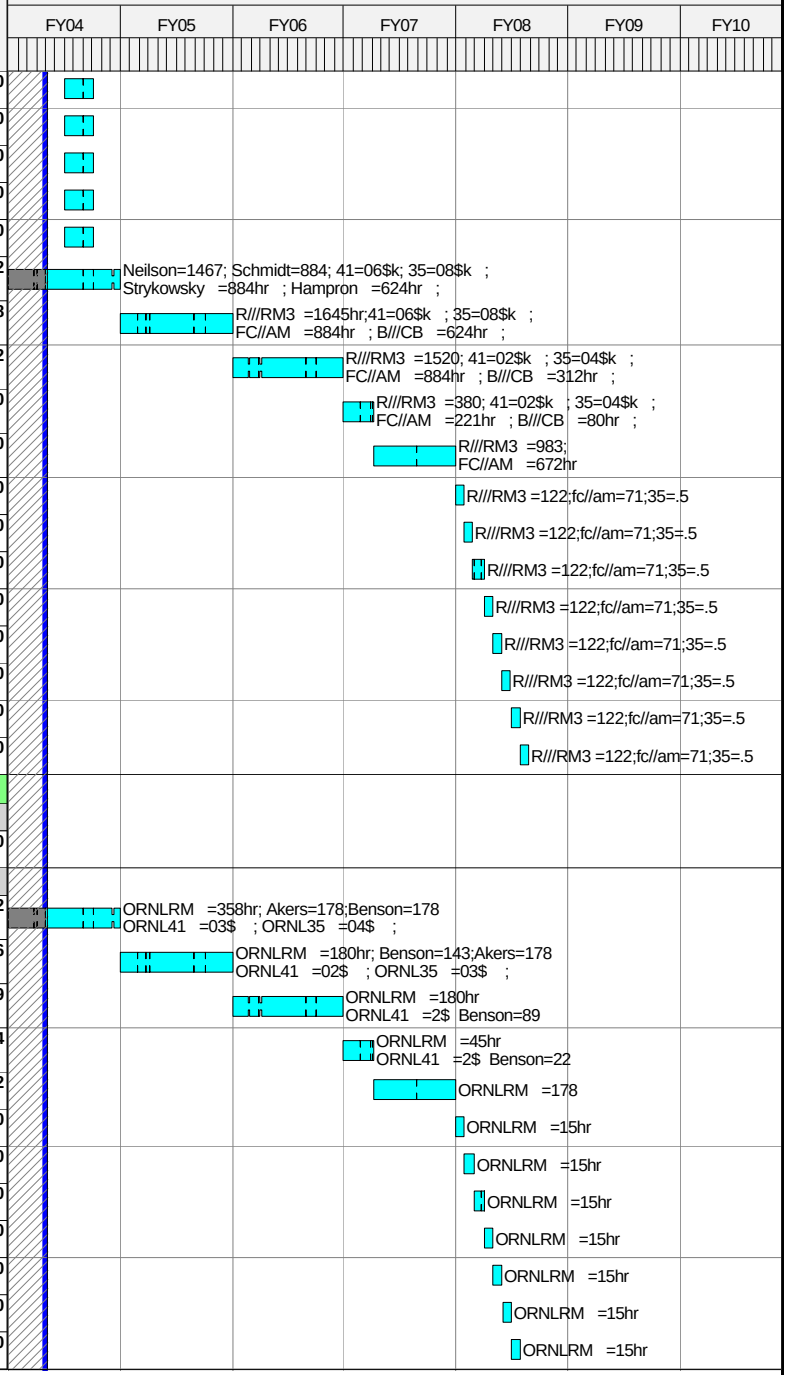
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 40 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
810.025	CD-3 Readiness - Update Value mgt/engr doc.	65	01APR04*	01JUL04	1,346		0.00	**0.00**
810.028	CD-3 Readiness - Update Project Controls doc.	65	01APR04*	01JUL04	1,346		0.00	**0.00**
810.030	CD-3 Readiness - Update Acquisition Strategy	65	01APR04*	01JUL04	1,346		0.00	**0.00**
810.035	CD-3 Readiness - Update Proj Exec Plan (PEP)	65	01APR04*	01JUL04	1,346		0.00	**0.00**
810.040	CD-3 Readiness - Assess/Update Integr Proj Team	65	01APR04*	01JUL04	1,346		0.00	**0.00**
810.002	Project Management Office PPPL FY04	256*	01OCT03A	30SEP04	1,283	LOE	228,799.40	**689,154.82**
810.003	Project Management Office PPPL FY05	255*	01OCT04*	30SEP05	1,028		0.00	**538,759.58**
810.004	Project Management Office PPPL FY06	254*	03OCT05*	29SEP06	519		0.00	**492,727.12**
810.004X	Project Management Office PPPL FY07	65	02OCT06	04JAN07	519		0.00	**140,228.10**
810.005	Project Management OfficePPPL FY07	190*	05JAN07	28SEP07	519		0.00	**341,782.20**
810.900	Project Management Office PPPL 1 mo SO	21	01OCT07*	29OCT07	351		0.00	**42,310.60**
810.990	Project Management Office PPPL 1 mo SO	21	30OCT07*	27NOV07	351		0.00	**42,310.60**
810.991	Project Management Office PPPL 1 mo SO	21	28NOV07*	31DEC07	351		0.00	**42,310.60**
810.992	Project Management Office PPPL 1 mo SO	21	02JAN08*	30JAN08	351		0.00	**42,310.60**
810.993	Project Management Office PPPL 1 mo SO	21	31JAN08*	28FEB08	351		0.00	**42,310.60**
810.994	Project Management Office PPPL 1 mo SO	21	29FEB08*	28MAR08	351		0.00	**42,310.60**
810.995	Project Management Office PPPL 1 mo SO	21	31MAR08*	28APR08	351		0.00	**42,310.60**
810.996	Project Management Office PPPL 1 mo SO	21	29APR08*	27MAY08	351		0.00	**42,310.60**
Job: 8102 - NCSX MIE Management ORNL-LYON								
FY03 Actual Cost								
810.101	Apr-Sept MIE Cost ORNL	129*	01APR03A	30SEP03A		100	58,600.00	**58,600.00**
810.102	Project Management Office ORNL FY04	256*	01OCT03A	30SEP04	1,283	LOE	39,915.77	**120,228.22**
810.103	Project Management Office ORNL FY05	255*	01OCT04*	30SEP05	1,028		0.00	**85,894.36**
810.104	Project Management Office ORNL FY06	254*	03OCT05*	29SEP06	519		0.00	**49,323.49**
810.104X	Project Management Office ORNL FY06	65	02OCT06	04JAN07	519		0.00	**14,321.54**
810.105	Project Management Office ORNL FY07	190*	05JAN07	28SEP07	519		0.00	**33,631.32**
810.901	Project Management Office ORNL 1 mo SO	21	02OCT07*	30OCT07	350		0.00	**2,834.10**
810.980	Project Management Office ORNL 1 mo SO	21	31OCT07*	28NOV07	350		0.00	**2,834.10**
810.981	Project Management Office ORNL 1 mo SO	21	03DEC07*	02JAN08	350		0.00	**2,834.10**
810.982	Project Management Office ORNL 1 mo SO	21	03JAN08*	31JAN08	350		0.00	**2,834.10**
810.983	Project Management Office ORNL 1 mo SO	21	01FEB08*	29FEB08	350		0.00	**2,834.10**
810.984	Project Management Office ORNL 1 mo SO	21	03MAR08*	31MAR08	350		0.00	**2,834.10**
810.985	Project Management Office ORNL 1 mo SO	21	01APR08*	29APR08	350		0.00	**2,834.10**



Run Date **24FEB04 10:54**

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

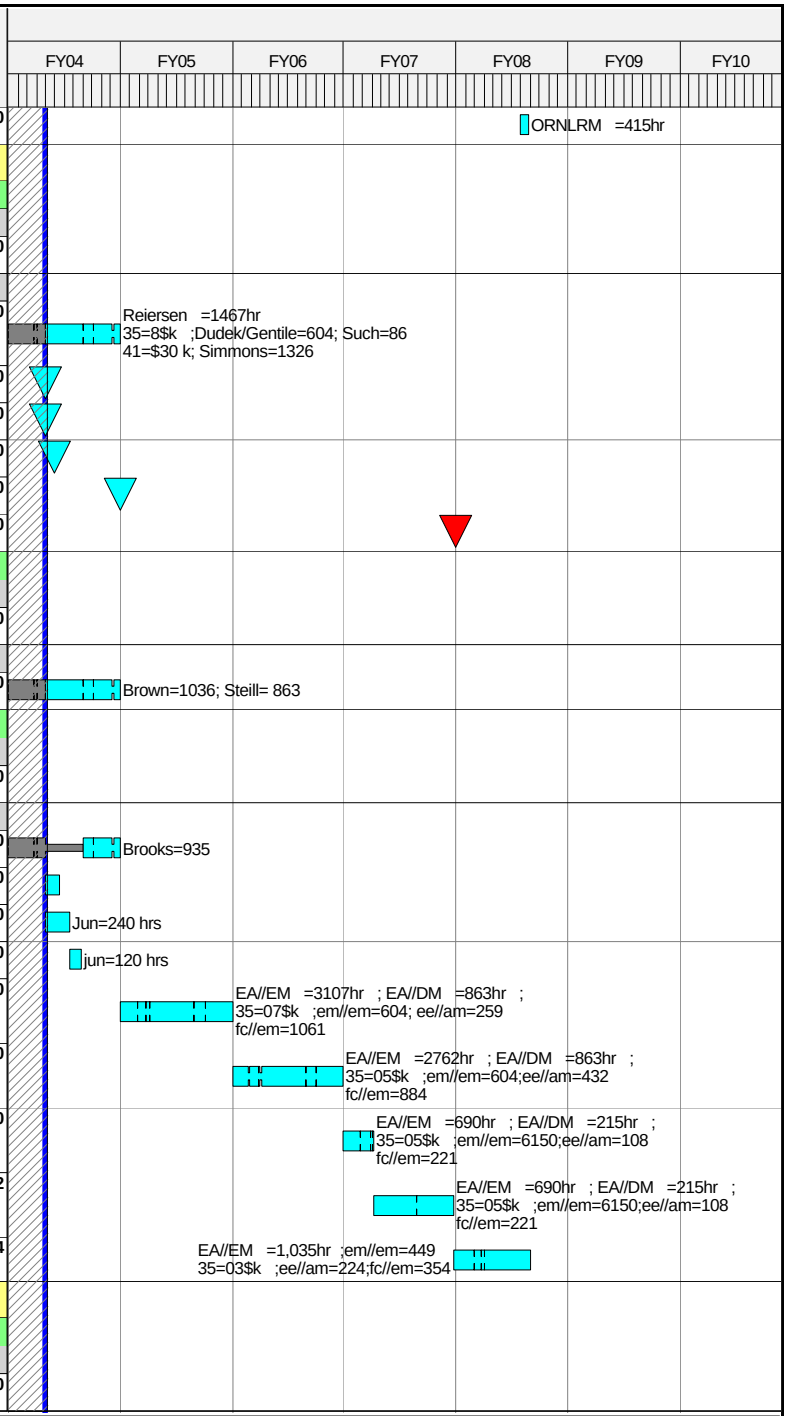
NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 41 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
810.986	Project Management Office ORNL 1 mo SO	21	30APR08*	28MAY08	350		0.00	**2,834.10**
82 - Project Engineering								
Job: 8202 - Engr Mgmt & Sys Eng Support-REIERSEN								
FY03 Actual Cost								
820.110	Apr-Sept MIE Cost PPPL	128*	01APR03A	30SEP03A		100	295,530.00	**295,530.00**
820.002	LOE FY04	256*	01OCT03A	30SEP04	1,283	LOE	208,081.42	**626,751.30**
L4-200	PDR	0		30JAN04*	1,410		0.00	**0.00**
L4-217	EIR	0		30JAN04*	1,410		0.00	**0.00**
M-0100	CD-2 CD-3A	0		27FEB04*	1,410		0.00	**0.00**
M-0115	CD-3	0		30SEP04*	1,259		0.00	**0.00**
M-0120	CD-4	0		28SEP07*	0		0.00	**0.00**
Job: 8203 - Design Integration-REIERSEN								
FY03 Actual Cost								
820.150	Apr-Sept MIE Cost PPPL	128*	01APR03A	30SEP03A		100	178,750.00	**178,750.00**
820.200	LOE FY04	256*	01OCT03A	30SEP04	1,283	LOE	85,414.57	**257,272.80**
Job: 8204 - Systems Analysis-REIERSEN								
FY03 Actual Cost								
820.173	Apr-Sept MIE Cost PPPL	128*	01APR03A	30SEP03A		100	44,620.00	**44,620.00**
820.174	LOE FY04	172*	01OCT03A	30SEP04	1,283	LOE	74,687.91	**150,254.50**
1501-193	Perform seismic analyses	30	02FEB04	12MAR04	1,424		0.00	**0.00**
8204.01	Assess magnetic material in test cell	56*	02FEB04*	19APR04	125		0.00	**38,568.00**
8204.02	Model effects local high MU regions on MCWF	29	20APR04	28MAY04	125		0.00	**19,284.00**
820.003	Proj engr,Sys Integr.,Designers, Deputy PM FY05	255*	01OCT04*	30SEP05	1,028		0.00	**933,340.30**
820.004	Proj engr,Sys Integr.,Designers, Deputy PM FY06	254*	03OCT05*	29SEP06	348		0.00	**870,153.80**
820.004X	Proj engr,Sys Integr.,Designers, Deputy PM FY07	65	02OCT06	04JAN07	348		0.00	**240,404.50**
820.004Z	Proj engr,Sys Integr.,Designers, Deputy 8mo s.o.	187	05JAN07	25SEP07	348		0.00	**692,941.22**
820.005	Proj engr,Sys Integr.,Designers, Deputy PM FY07	174*	26SEP07*	30MAY08	348		0.00	**375,239.54**
84 - Project Physics								
Job: 8401 - Project Physcis-ZARNSTORFF								
FY03 Actual Cost								
840.201	Apr-Sept MIE Cost PPPL	128*	01APR03A	30SEP03A		100	210,270.00	**210,270.00**



Run Date 24FEB04 10:54

ECP5 Schedule
Progress Bar
Critical Activity

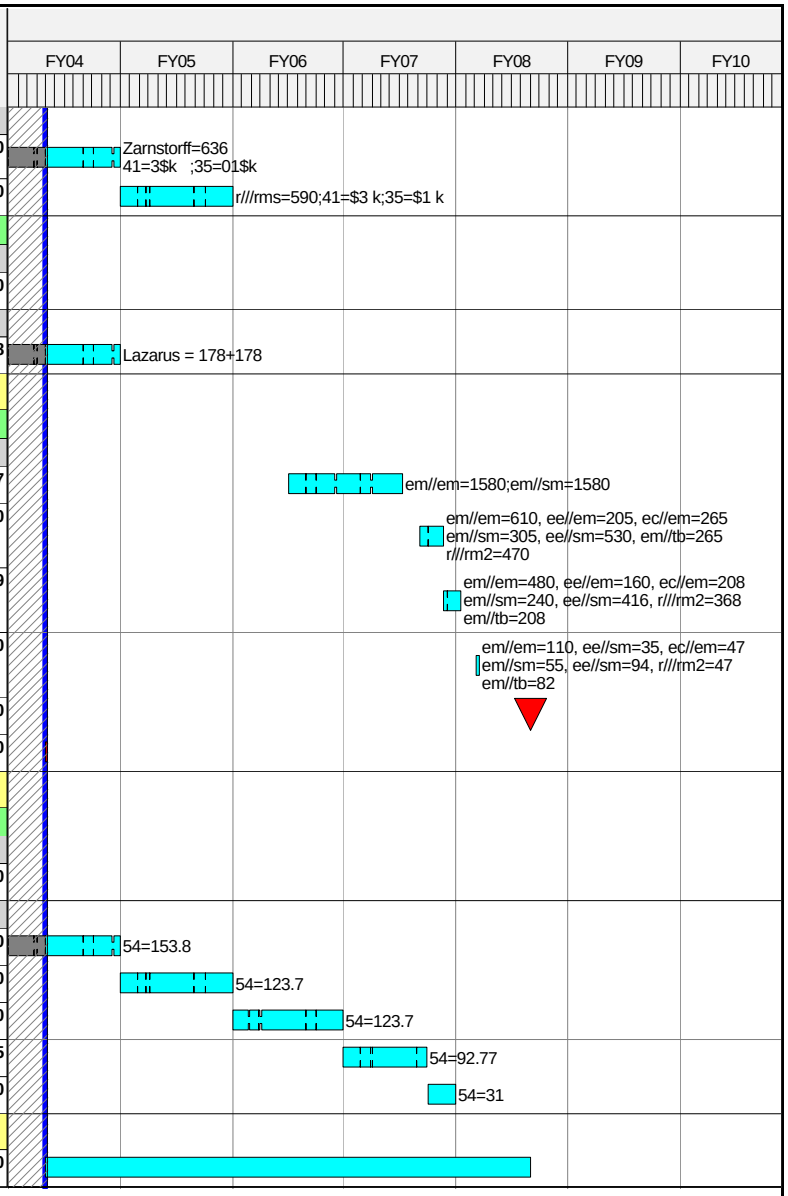
ECP5

NCSX Baseline (ECP5)
First Plasma May 2008

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Total Float	PCTC	Earned value cost (BCWP)	Budgeted Cost (loaded without Conting)
840.202	Project Physics/Engr Analysis FY04	256*	01OCT03A	30SEP04	1,283	LOE	33,135.66	**99,806.20**
840.203	Project Physics/Engr Analysis FY05	255*	01OCT04*	30SEP05	1,028		0.00	**95,530.00**
Job: 8402 - Project Physics MIE ORNL-LYON								
FY03 Actual Cost								
840.301	Apr-Sept MIE Cost ORNL	152*	01APR03A	30SEP03A		100	40,980.00	**40,980.00**
840.302	Project Physics/Engr Analysis FY04	256*	01OCT03A	30SEP04	1,283	LOE	10,144.42	**30,555.48**
85 - Integrated Systems Testing								
920.001	Procedure and Document Preparation	257	03APR06*	11APR07	129		0.00	**458,003.27**
920.005	Start-up Testing	55	05JUN07	21AUG07	112		0.00	**390,743.50**
920.010	Power Testing and E-Beam Mapping	41	22AUG07	18OCT07	112		0.00	**308,663.69**
920.020	Final ISTP	10	04DEC07	17DEC07	112		0.00	**67,553.80**
730.9000	First Plasma	0		30MAY08*	0		0.00	**0.00**
920.030		1	02FEB04	02FEB04	0		0.00	**0.00**
PPPL Allocations								
Job: 8998 - Allocations								
FY03 Actual Cost								
99.03	Apr-Sept MIE Cost PPPL	128*	01APR03A	30SEP03A		100	60,670.00	**60,670.00**
99.04	PPPL Allocations FY04	256*	01OCT03A	30SEP04	1,283	LOE	88,285.51	**265,920.20**
99.05	PPPL Allocations FY05	255*	01OCT04*	30SEP05	1,028		0.00	**214,990.60**
99.06	PPPL Allocations FY06	254*	03OCT05*	29SEP06	774		0.00	**214,619.50**
99.07	PPPL Allocations FY07	190*	02OCT06*	29JUN07	519		0.00	**170,232.95**
99.07X	PPPL Allocations FY07	65*	02JUL07*	28SEP07	519		0.00	**56,885.00**
+ Contingency								
		1,106	02FEB04	30MAY08	348		0.00	**15,381,700.00**



Run Date 24FEB04 10:54

ECP5 Schedule
Progress Bar
Critical Activity

ECP5

NCSX Baseline (ECP5)
First Plasma May 2008

Sheet 43 of 43

Rev B
WBS 12-2/18; WBS 13- 2/19
WBS14- 2/20; WBS 7 -2/20

© Primavera Systems, Inc.