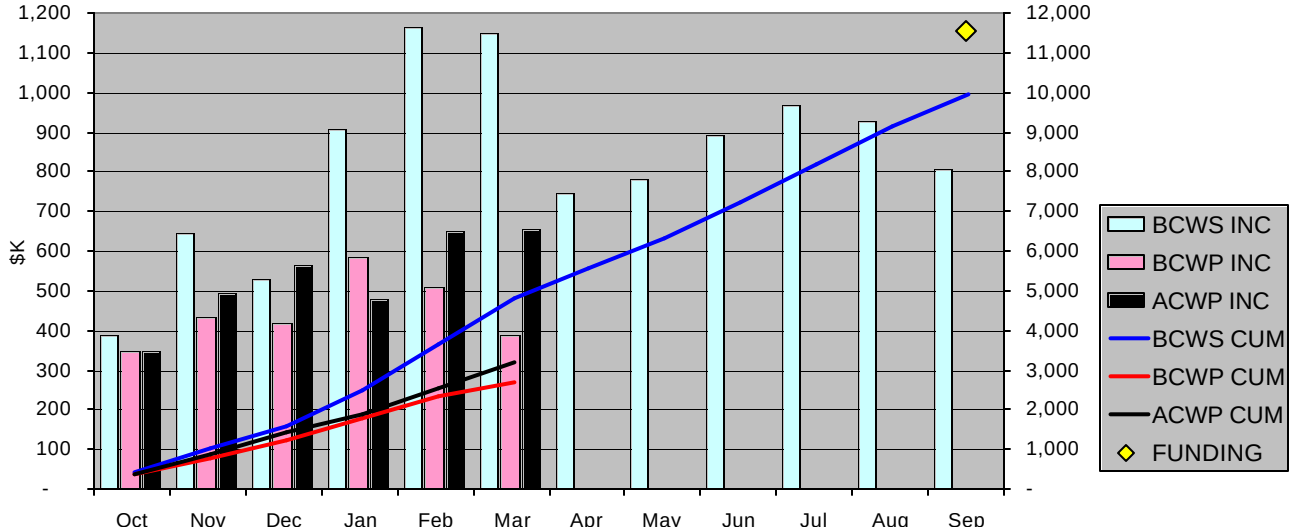
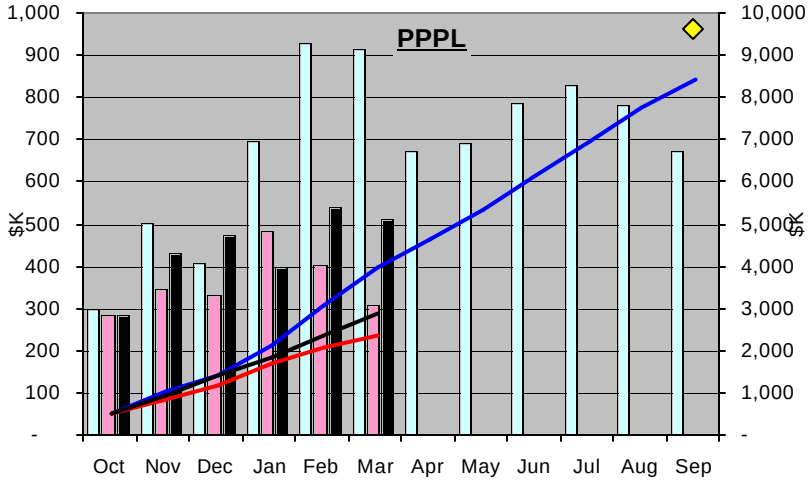
NCSX PCS Reports

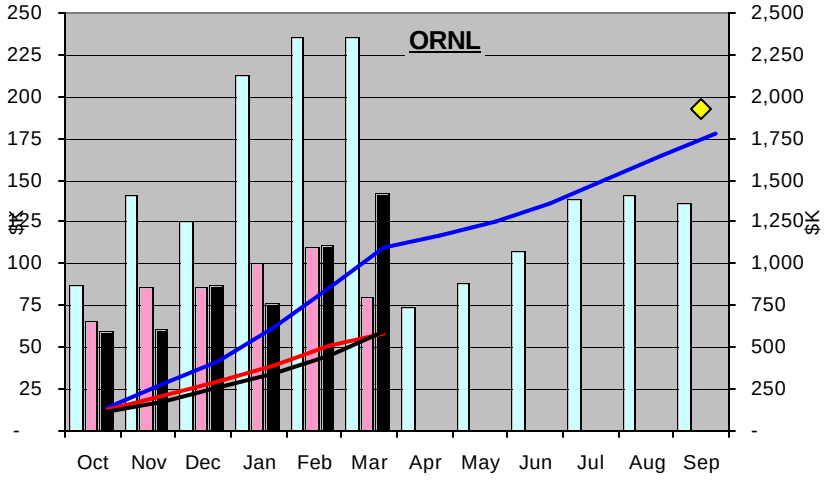
Performance Through

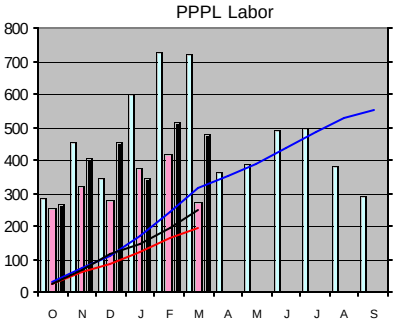
April 1, 2003

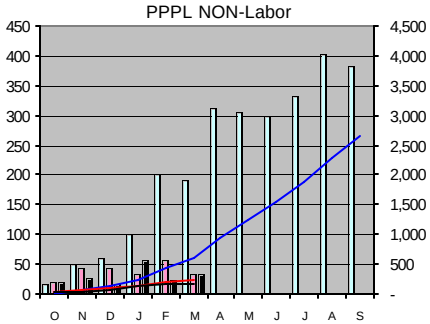
NCSX PPPL/ORNL MIE
FY 2003 Cost Performance

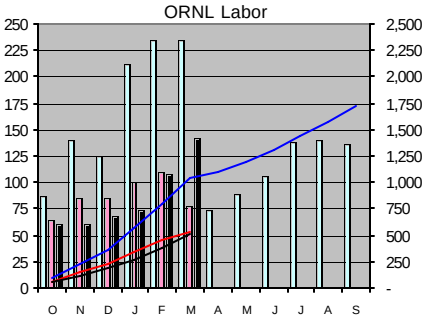


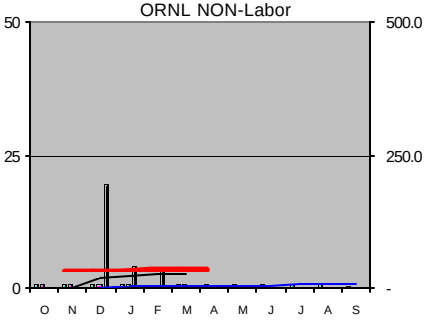












PrincetonUniversity Plasma Physics Laboratory

PPPL COST PERFORMANCE REPORT WORKBREAKDOWN STRUCTURE

NCSX

******* Fiscal Year 03 only *******

MARCH FY03

	CURRENT PERIOD			CUMULATIVE TO DATE							FY03		
	Budgeted Cost			Budgeted Cost			VARIANCES				Budget		
	BCWS	BCWP	ACWP	BCWS	BCWP	ACWP	Sch Var	SPI	Cst Var	CPI	Baseline	Forecast	Vari
PPPL and ORNL		$K			$K						$K	$K	
Advanced Conceptual Design													
1 - Stellarator Core Systems	874	193	376	3,291	1,609	1,874	-1,682	.49	-266	.86	7,061	7,462	-401
11 In-Vessel Components	7	0		15	1		-14	.05	1		18	22	-4
1101 - Limiter Advanced Concep Design	7	0		15	1		-14	.05	1		18	22	-4
1102 - Limiter Prelim & Final Design													
12 Vacuum Vessel Systems	154	5	70	554	134	218	-420	.24	-84	.62	1,106	1,714	-608
1201 - Vacuum Vessel Dsn	82	3	46	366	88	161	-278	.24	-73	.55	378	269	109
1202 - Vacuum Vessel R&D	72	2	24	188	46	57	-142	.25	-11	.80	625	1,324	-699
1203 - Vacuum Vessel Final Dsn											102	121	-19
13 Conventional Coils	35	10	17	103	17	34	-86	.17	-17	.50	432	419	13
1301 - Convential Coils Design	35	10	17	103	17	34	-86	.17	-17	.50	432	419	13
14 Modular Coils	499	151	255	2,082	1,287	1,398	-795	.62	-111	.92	4,353	4,058	295
1401 - Mod. Coil Design (casting&winding)	93	29	49	342	147	169	-195	.43	-23	.87	364	326	38
1402 - Mod.Coil Analyses	50	5	25	201	108	164	-93	.54	-56	.66	201	264	-63
1403 - Mod. Coil Final Design											358	300	58
1404 - Mod. Coil Winding Form R&D	64	30	10	191	75	114	-117	.39	-40	.65	1,751	1,643	108
1405 - Mod. Coil Winding R&D Prep	82	63	73	504	493	476	-11	.98	18	1.04	530	585	-55
1406 - Mod. Coil Winding R&D	113	23	52	486	258	269	-229	.53	-11	.96	618	720	-102
1407 - Mod. Coil Winding Facility	97	0	46	358	207	206	-151	.58	1	1.00	531	220	311
1408 -Mod. Coil Prototype Coil Winding												0	0
15 1501 - Structures Design	53	0		94	13	18	-81	.14	-5	.74	283	283	0
16 1601 - Coil Services Design	24			46			-46				89	89	0
17 1701 - Cryostat & Base Support Struct Dsn	36	0	1	85	0	3	-85	.00	-2	.14	141	141	0
18 1801 - Field Period Assembly Design	14			30		4	-30		-4		93	103	-10
19 1901 - Stellarator Core Management&Integr	52	26	33	280	156	199	-125	.55	-43	.78	547	633	-86
2 - Plasma Heating, Fueling & Vac Systems	33	9	55	144	36	120	-108	.25	-84	.30	288	288	0
2001 - VPS,Gas & Cond sys Design/Oversigh	11	2	10	22	10	12	-12	.47	-1	.90	22	22	0
2501 - Neutral Beam Refurbishment	22	7	45	121	25	108	-96	.21	-82	.24	266	266	0
3 - Diagnostics	25	18	25	158	67	124	-91	.42	-57	.54	225	227	-2
39 3901 - Diagnostics systems Integration	25	18	25	158	67	124	-91	.42	-57	.54	225	227	-2
4 - Electrical Power Systems	53	-1	1	148	6	9	-142	.04	-3	.67	257	256	1
43 4301 - Electrical Dsn DC SystemsWBS 432&4	19	-3		71	3	5	-68	.04	-2	.57	125	125	0
44 4401 - Electrical Dsn Control & Protection	4			7			-7				23	23	0
45 4501 - Electr System Design & Integration	8	2	1	32	3	4	-30	.09	-1	.80	66	66	0
46 4601 - FCPC Bldg Modifications	22			37			-37				42	42	0
5 - Central I&C Systems	2			10			-10				24	24	0
58 5801 - Central I&C Integration & Oversight	2			10			-10				24	24	0
6 - Facility Systems	5	5	6	36	24	17	-11	.68	7	1.43	66	66	0
65 6501 - Facility Systems Integration	5	5	6	36	24	17	-11	.68	7	1.43	66	66	0
7 - Test Cell Preparation and Machine Assy	5	6		25	26	12	1	1.03	14	2.16	109	80	29
71 7101 - Shield Wall Modifications Design		1			1		1		1		51	51	0
74 7401 - TC Prep & Mach Assy Plan&Oversight	5	5		25	25	12	0	1.00	13	2.10	58	29	29
8 - Project Oversight and Support	154	167	190	975	925	1,031	-51	.95	-107	.90	1,882	2,054	-172
81 Project Management and Control	67	67	82	389	389	407	0	1.00	-18	.96	800	763	37
8101 - Project Management and Control	49	49	60	280	280	287	0	1.00	-6	.98	579	556	23
8102 - NCSX MIE Management ORNL	9	9	11	55	54	66	0	1.00	-12	.82	109	104	5
8998 - Allocations	9	9	11	54	54	54	0	1.00	0	1.00	111	103	8
82 Project Engineering	57	69	65	412	361	405	-51	.88	-43	.89	732	816	-84
8202 - Engineering Mgmt & Sys Engr Support	31	50	38	254	238	279	-16	.94	-41	.85	445	579	-134
8203 - Design Integration	14	14	26	82	82	103	0	1.00	-21	.79	168	185	-17
8204 - Systems Analysis	11	5	1	76	42	23	-35	.55	19	1.84	119	52	67
84 Project Physics	30	30	42	174	174	220	0	1.00	-45	.79	350	475	-125
8401 - Project Physcis	21	21	36	122	122	192	0	1.00	-71	.63	251	376	-125
8402 - Project Physics MIE ORNL	9	9	7	53	53	27	0	1.00	26	1.94	99	99	0
Subtotal	1,152	396	654	4,786	2,692	3,187	-2,095	.56	-495	.84	9,912	10,457	-545
Contingency													
Management Reserve											1,635	1,090	545
TOTAL PPPL/ORNL											**11,547**	**11,547**	
Funding													
Financial Plan BA											10,828	10,828	
FY02 Carryover											445	445	
Rate Adjustment setaside											274	274	
ERWM Allocation Increment]													
TOTAL PPPL/ORNL FUNDING											**11,547**	**11,547**	

PrincetonUniversity Plasma Physics Laboratory

PPPL COST PERFORMANCE REPORT WORKBREAKDOWN STRUCTURE

NCSX

******* Fiscal Year 03 only *******

MARCH FY03

	CURRENT PERIOD			CUMULATIVE TO DATE							FY03		
	Budgeted Cost			Budgeted Cost			VARIANCES				Budget		
	BCWS	BCWP	ACWP	BCWS	BCWP	ACWP	Sch Var	SPI	Cst Var	CPI	Baseline	Forecast	Vari
PPPL													
Advanced Conceptual Design													
1 - Stellarator Core Systems	656	131	251	2,361	1,187	1,428	-1,174	.50	-241	.83	5,545	6,163	-618
11 In-Vessel Components													
1101 - Limiter Advanced Concep Design													
1102 - Limiter Prelim & Final Design													
12 Vacuum Vessel Systems	84	2	25	199	16	90	-183	.08	-74	.18	635	1,407	-772
1201 - Vacuum Vessel Dsn	15	1	1	55	5	33	-50	.09	-28	.15	55	58	-3
1202 - Vacuum Vessel R&D	69	1	24	144	11	57	-133	.08	-46	.19	565	1,324	-759
1203 - Vacuum Vessel Final Dsn											15	25	-10
13 Conventional Coils	35	10	17	103	17	34	-86	.17	-17	.50	419	419	0
1301 - Convential Coils Design	35	10	17	103	17	34	-86	.17	-17	.50	419	419	0
14 Modular Coils	397	117	206	1,695	1,116	1,211	-579	.66	-95	.92	3,664	3,492	172
1401 - Mod. Coil Design (casting&winding)				7		11	-7		-11		7	11	-4
1402 - Mod.Coil Analyses	43	5	25	175	107	164	-68	.61	-57	.65	175	264	-89
1403 - Mod. Coil Final Design											110	92	18
1404 - Mod. Coil Winding Form R&D	62	26	10	165	51	85	-115	.31	-35	.59	1,694	1,600	94
1405 - Mod. Coil Winding R&D Prep	82	63	73	504	493	476	-11	.98	18	1.04	530	585	-55
1406 - Mod. Coil Winding R&D	113	23	52	486	258	269	-229	.53	-11	.96	618	720	-102
1407 - Mod. Coil Winding Facility	97	0	46	358	207	206	-151	.58	1	1.00	531	220	311
1408 -Mod. Coil Prototype Coil Winding												0	0
15 1501 - Structures Design	53	0		94	13	18	-81	.14	-5	.74	270	270	0
16 1601 - Coil Services Design	24			46			-46				89	89	0
17 1701 - Cryostat & Base Support Struct Dsn	36	0	1	85	0	3	-85	.00	-2	.14	141	141	0
18 1801 - Field Period Assembly Design	14			30		4	-30		-4		93	103	-10
19 1901 - Stellarator Core Management&Integr	12		1	108	24	67	-84	.23	-43	.36	235	242	-7
2 - Plasma Heating, Fueling & Vac Systems	33	9	55	144	36	120	-108	.25	-84	.30	288	288	0
2001 - VPS,Gas & Cond sys Design/Oversigh	11	2	10	22	10	12	-12	.47	-1	.90	22	22	0
2501 - Neutral Beam Refurbishment	22	7	45	121	25	108	-96	.21	-82	.24	266	266	0
3 - Diagnostics	25	18	25	158	67	124	-91	.42	-57	.54	225	227	-2
39 3901 - Diagnostics systems Integration	25	18	25	158	67	124	-91	.42	-57	.54	225	227	-2
4 - Electrical Power Systems	53	-1	1	148	6	9	-142	.04	-3	.67	257	256	1
43 4301 - Electrical Dsn DC SystemsWBS 432&4	19	-3		71	3	5	-68	.04	-2	.57	125	125	0
44 4401 - Electrical Dsn Control & Protection	4			7			-7				23	23	0
45 4501 - Electr System Design & Integration	8	2	1	32	3	4	-30	.09	-1	.80	66	66	0
46 4601 - FCPC Bldg Modifications	22			37			-37				42	42	0
5 - Central I&C Systems	2			10			-10				24	24	0
58 5801 - Central I&C Integration & Oversight	2			10			-10				24	24	0
6 - Facility Systems	5	5	6	36	24	17	-11	.68	7	1.43	66	66	0
65 6501 - Facility Systems Integration	5	5	6	36	24	17	-11	.68	7	1.43	66	66	0
7 - Test Cell Preparation and Machine Assy	5	6		25	26	12	1	1.03	14	2.16	109	80	29
71 7101 - Shield Wall Modifications Design		1			1		1		1		51	51	0
74 7401 - TC Prep & Mach Assy Plan&Oversight	5	5		25	25	12	0	1.00	13	2.10	58	29	29
8 - Project Oversight and Support	136	149	172	868	817	938	-50	.94	-121	.87	1,674	1,851	-177
81 Project Management and Control	58	59	71	334	334	341	0	1.00	-6	.98	691	659	32
8101 - Project Management and Control	49	49	60	280	280	287	0	1.00	-6	.98	579	556	23
8102 - NCSX MIE Management ORNL													
8998 - Allocations	9	9	11	54	54	54	0	1.00	0	1.00	111	103	8
82 Project Engineering	57	69	65	412	361	405	-51	.88	-43	.89	732	816	-84
8202 - Engineering Mgmt & Sys Engr Support	31	50	38	254	238	279	-16	.94	-41	.85	445	579	-134
8203 - Design Integration	14	14	26	82	82	103	0	1.00	-21	.79	168	185	-17
8204 - Systems Analysis	11	5	1	76	42	23	-35	.55	19	1.84	119	52	67
84 Project Physics	21	21	36	122	122	192	0	1.00	-71	.63	251	376	-125
8401 - Project Physcis	21	21	36	122	122	192	0	1.00	-71	.63	251	376	-125
8402 - Project Physics MIE ORNL													
Subtotal	916	316	511	3,749	2,163	2,647	-1,586	.58	-484	.82	8,187	8,955	-768
Management Reserve											1,439	671	768
TOTAL PPPL											9,626	9,626	
Funding													
Financial Plan BA											8,907	8,907	
FY02 Carryover											+ 445	+ 445	
Rate Adjustment setaside											+ 274	+ 274	
TOTAL PPPL FUNDING											9,626	9,626	

(1) includes $150k mr for the VV r&d contract. Includes $140k for the MCC r&d contract

PrincetonUniversity Plasma Physics Laboratory

PPPL COST PERFORMANCE REPORT WORKBREAKDOWN STRUCTURE

NCSX

******* Fiscal Year 03 only *******

MARCH FY03

	CURRENT PERIOD			CUMULATIVE TO DATE							FY03		
	Budgeted Cost			Budgeted Cost			VARIANCES				Budget		
	BCWS	BCWP	ACWP	BCWS	BCWP	ACWP	Sch Var	SPI	Cst Var	CPI	Baseline	Forecast	Vari
ORNL													
Advanced Conceptual Design													
1 - Stellarator Core Systems	**219**	**63**	**125**	**930**	**422**	**447**	**-508**	**.45**	**-25**	**.94**	**1,516**	**1,299**	**217**
11 In-Vessel Components	**7**	**0**		**15**	**1**		**-14**	**.05**	**1**		**18**	**22**	**-4**
1101 - Limiter Advanced Concep Design	7	0		15	1		-14	.05	1		18	22	-4
1102 - Limiter Prelim & Final Design													
12 Vacuum Vessel Systems	**70**	**3**	**44**	**355**	**118**	**128**	**-237**	**.33**	**-10**	**.93**	**471**	**307**	**164**
1201 - Vacuum Vessel Dsn	67	1	44	311	83	128	-228	.27	-45	.65	323	211	112
1202 - Vacuum Vessel R&D	3	2		44	35		-9	.79	35		61	0	61
1203 - Vacuum Vessel Final Dsn											87	96	-9
13 Conventional Coils											**13**		**13**
1301 - Convential Coils Design											13		13
14 Modular Coils	**102**	**33**	**49**	**387**	**171**	**188**	**-216**	**.44**	**-16**	**.91**	**689**	**566**	**123**
1401 - Mod. Coil Design (casting&winding)	93	**29**	**49**	**335**	**147**	**158**	-189	.44	-12	.92	**357**	**315**	42
1402 - Mod.Coil Analyses	7	**1**		**26**	**1**		-25	.03	1		**26**	**0**	26
1403 - Mod. Coil Final Design											**248**	**208**	40
1404 - Mod. Coil Winding Form R&D	2	**4**		**26**	**24**	**29**	-2	.93	-5	.82	**58**	**43**	15
1405 - Mod. Coil Winding R&D Prep												**0**	0
1406 - Mod. Coil Winding R&D												**0**	0
1407 - Mod. Coil Winding Facility												**0**	0
1408 -Mod. Coil Prototype Coil Winding												**0**	0
15 1501 - Structures Design											**13**	**13**	**0**
16 1601 - Coil Services Design												**0**	**0**
17 1701 - Cryostat & Base Support Struct Dsn												**0**	**0**
18 1801 - Field Period Assembly Design												**0**	**0**
19 1901 - Stellarator Core Management&Integr	**40**	**26**	**32**	**172**	**131**	**132**	**-41**	**.76**	**0**	**1.00**	**312**	**391**	**-79**
2 - Plasma Heating, Fueling & Vac Systems													
2001 - VPS,Gas & Cond sys Design/Oversigh													
2501 - Neutral Beam Refurbishment													
3 - Diagnostics													
39 3901 - Diagnostics systems Integration													
4 - Electrical Power Systems													
43 4301 - Electrical Dsn DC SystemsWBS 432&4													
44 4401 - Electrical Dsn Control & Protection													
45 4501 - Electr System Design & Integration													
46 4601 - FCPC Bldg Modifications													
5 - Central I&C Systems													
58 5801 - Central I&C Integration & Oversight													
6 - Facility Systems													
65 6501 - Facility Systems Integration													
7 - Test Cell Preparation and Machine Assy													
71 7101 - Shield Wall Modifications Design													
74 7401 - TC Prep & Mach Assy Plan&Oversight													
8 - Project Oversight and Support	**17**	**17**	**18**	**107**	**107**	**93**	**0**	**1.00**	**14**	**1.15**	**208**	**203**	**5**
81 Project Management and Control	**9**	**9**	**11**	**55**	**54**	**66**	**0**	**1.00**	**-12**	**.82**	**109**	**104**	**5**
8101 - Project Management and Control													
8102 - NCSX MIE Management ORNL	9	9	11	55	54	66	0	1.00	-12	.82	109	**104**	5
82 Project Engineering													
8202 - Engineering Mgmt & Sys Engr Support													
8203 - Design Integration													
8204 - Systems Analysis													
84 Project Physics	**9**	**9**	**7**	**53**	**53**	**27**	**0**	**1.00**	**26**	**1.94**	**99**	**99**	**0**
8401 - Project Physcis													
8402 - Project Physics MIE ORNL	9	9	7	53	53	27	0	1.00	26	1.94	99	99	0
Subtotal	**236**	**80**	**143**	**1,037**	**529**	**540**	**-509**	**.51**	**-11**	**.98**	**1,724**	**1,502**	**222**
Contingency													
Management Reserve											**197**	**419**	**-222**
TOTAL ORNL											**1,921**	**1,921**	
Funding													
Financial Plan BA											1,921	1,921	
TOTAL ORNL FUNDING											**1,921**	**1,921**	

PrincetonUniversity Plasma Physics Laboratory

PPPL COST PERFORMANCE REPORT WORKBREAKDOWN STRUCTURE

NCSX

******* Fiscal Year 03 only *******

MARCH FY03

Research Preparations

PPPL and ORNL

	CURRENT PERIOD			CUMULATIVE TO DATE							FY03		
	Budgeted Cost			Budgeted Cost			VARIANCES				Budget		
	BCWS	BCWP	ACWP	BCWS	BCWP	ACWP	Sch Var	SPI	Cst Var	CPI	Baseline	Forecast	Vari
Research Preparations													
8 - Project Oversight and Support													
81 Project Management and Control	**35**	**35**	**41**	**203**	**203**	**150**	**1.00**	**52**	**1.35**		**419**	**284**	**135**
8181 - Research Prep PPPL	14	14	20	79	79	81	1.00	-2	.97		162	146	16
8182 - Research Prep ORNL	22	22	21	124	124	69	1.00	54	1.78		256	138	118
8183 - Research Prep Support LLNL													
84 Project Physics													
8481 - Research Prep Physics	**33**	**33**	**27**	**191**	**191**	**127**	**1.00**	64	**1.50**		**395**	**267**	**128**
Subtotal	**69**	**69**	**68**	**394**	**394**	**277**	**1.00**	116	**1.42**		**813**	**551**	**262**
Management Reserve											**4**	**235**	**-231**
TOTAL PPPL/ORNL											**817**	**786**	**31**
Funding													
Financial Plan BA											806	806	
Rate Adjustment setaside											-20	-20	
ERWM Allocation Increment]													
TOTAL PPPL/ORNL FUNDING											**786**	**786**	

PPPL

Research Preparations												
8 - Project Oversight and Support												
81 Project Management and Control	**14**	**14**	**20**	**79**	**79**	**81**	**1.00**	**-2**	**.97**	**162**	**146**	**16**
8181 - Research Prep PPPL	14	14	20	79	79	81	1.00	-2	.97	162	146	16
8182 - Research Prep ORNL												
8183 - Research Prep Support LLNL												
84 Project Physics												
8481 - Research Prep Physics	**33**	**33**	**27**	**191**	**191**	**127**	**1.00**	64	**1.50**	**395**	**267**	**128**
Subtotal	**47**	**47**	**47**	**270**	**270**	**208**	**1.00**	62	**1.30**	**557**	**413**	**144**
Management Reserve											**113**	**-113**
TOTAL PPPL										**557**	**526**	**31**
Funding												
Financial Plan BA										546	546	
FY02 Carryover												
Rate Adjustment setaside										-20	-20	
TOTAL PPPL FUNDING										**526**	**526**	

ORNL

Research Preparations												
8 - Project Oversight and Support												
81 Project Management and Control	**22**	**22**	**21**	**124**	**124**	**69**	**1.00**	**54**	**1.78**	**256**	**138**	**118**
8181 - Research Prep PPPL												
8182 - Research Prep ORNL	22	22	21	124	124	69	1.00	54	1.78	256	138	118
8183 - Research Prep Support LLNL												
84 Project Physics												
8481 - Research Prep Physics												
Subtotal	**22**	**22**	**21**	**124**	**124**	**69**	**1.00**	54	**1.78**	**256**	**138**	**118**
Management Reserve										**4**	**122**	**-118**
TOTAL ORNL										**260**	**260**	
Funding												
Financial Plan BA										260	260	
TOTAL ORNL FUNDING										**260**	**260**	

NCSX FY03 Discretionary Status

			TARGET DISCRETIONARY BUDGET	YTD Costs: Subcontract Labor	YTD Costs: Overtime	YTD Costs: Cost (m&s, travel other)	Encum	Req's/Forecast	Free Balance
Research Prep			15,000			15,615			
	S04054	Allan Boozer TO BE CANCEL					3,123	(3,123)	
	S03936	Berkeley Lab Software TO BE CANCEL					2,837	(2,837)	
QPS			22,000			1,535	-	-	
MIE/R&D									
VV Prototypes (1202)						122			
	Vendor mt		400,000						
		Phase I						18,423	
		Phase II (delivery Dec 2003)						402,452	
		subtotal						420,875	
		Phase III ($7,401 FY04)						-	
	Vendor r		400,000						
		Phase I						75,529	
		Phase II (delivery Dec 2003)						238,502	
		subtotal						314,031	
		Phase III ($36,876 FY04)						-	
MCC Prototypes (1404)				5,300					
	S04341 EIO		475,000						
		Phase I					187,855		
		Phase II (delivery Dec 2003)					370,487		
		subtotal					558,342		
		Phase III ($41,952 FY04)					-		
	S04340 JP Pattern		534,000						
		Phase I					67,381		
		Phase II (delivery Dec 2003)					473,780		
		subtotal					541,161		
		Phase III ($22,681 FY04)					-		
MCC Dsn (1401)						8,143			
	George Steill S/C CADD Designer 4/1/03 - 6/30/03							29,000	
MCC Winding R&D(1405-7)			123,000		17,393	58,394			
	R400076	NB duct mods in TFTR TC						3,500	
	S/C req	Cadd Designer						28,800	
	PE4069	J.P.Pattern					8,680		
	R359248	Mech/Thermal Testing (REDUCED DOWN FROM $70K)						20,000	
	credit encumbr estimated						4,275		
NB Refurb///VPS (2501)			5,600	-	113	1,096			
	S04299	Insp,test, amint NB ac pwr equipt					14,400		
Diag (3901)			-	-	-	2,291			
Facility (6501)			500	-	-	3,210			
Proj Mgt (8101)			40,500		203	4,319			
Proj Engr (8202/4)					-	8,343			
Proj Physics (8401)						5,023			
	S04337	Georgiyevskiy				1,800	4,300		
Sub-Total			**2,015,600**	**5,300**	**17,709**	**109,891**	**1,137,118**	**810,246**	***-65,000***
ContingencyManagement Reserve									
VV Prototypes			150,000						*116,000*
MCC Prototypes			140,000						*109,000*
Sub-Total			**290,000**						***225,000***
TOTAL			**2,305,600**	**5,300**	**17,709**	**109,891**	**1,137,118**	**810,246**	***225,000***
Proposed:									
MCC Turning Fixture materials								$30,000	

BUDGET STATUS

	Funding BA	Budget (incl carryover & rate adj)	Cost Thru MARCH	ETC (Aril 1st - Sept 30)	EAC
PPPL					
MIE	6,537	5,412	0	6,309	6,309
MIE Management Reserve	-	1,439			
ACD	2,370	2,775	2,646	0	2,646
Res Prep	546	526	209	203	412
QPS	260	304	46	50	97
Total	9,713	**10,456**	2,901	6,562	**9,464**
ORNL					
MIE	1,171	974	-	962	962
MIE Management Reserve	-	197	-	-	
ACD	750	750	540	-	540
Res Prep	260	260	70	70	139
Total	2,181	**2,181**	609	1,032	**1,641**

NCSX April 1st Cost Performance Analysis

Vacuum Vessel Design and vendor R&D program

Job 1201 and 1202	BCWS	BCWP	ACWP	Sched Vari.	SPI	Cost Vari.	CPI	
Paul Goranson	554	134	218	-420	0.24	-84	0.61	TASKS

All design, analysis scope sheets behind. See detailed critical path sheet. CRITICAL PATHS NEED RESOLUTION BY REIERSEN AND NELSON. — L4-041& L4-042, L4-069, L4-064, L4-054 thru 62, L4-043

VV prototype award now forecast for 4/16/03 (approx 2 1/2months late) Receipt of MIT, cost and schedule plans forecast 5/23. — 121-5-16 thru 5-25

Cost Variance driven by PPPL EA engineering.

Conventional Coils Design

Job 1301	BCWS	BCWP	ACWP	Sched Vari.	SPI	Cost Vari.	CPI
Mike Kalish	103	17	34	-86	0.17	-17	0.50

SRD,SDD, General arrngts, and ICD's late. — 130-1-01 & 1-2

Modular Coil Design, analyses and vendor R&D program

Jobs 1401, 1402 and 1404	BCWS	BCWP	ACWP	Sched Vari.	SPI	Cost Vari.	CPI
Dave Williamson	734	330	447	-404	0.45	-117	0.74

All design/analysis task approx 2 mos late. Current forecasts; Pro/E models 4/9, ICD's 4/23, Prelim dsn dwgs 5/9, STL models 5/15, build to specs 5/16, analyses late May. — 140-5-4 , 140-5-12, L4-105 thru 140-2-3, 140-4-1 thru 140-4-3

MCC R&D Vendor awards 3/14/03 and 3/17 (2 months late). With 10 week lead time vendor delivery of cost/schedule mit plans by 5/27/03. — 142-1-2A & B

Cost variance driven by PPPL labor in support of MCC procurement efforts and PPPL support of analyses.

Modular coil in-house winding R&D activities

1406, and 1407	BCWS	BCWP	ACWP	Sched Vari.	SPI	Cost Vari.	CPI
Jim Chrzanowski	844	465	475	-379	0.55	-10	0.98

Determination of materials properties and allowables only 10% complete. — 141-2-1.01, 141-2-3

Selection of epoxy resin system forecast 6/9 (3 mo. late) and completion of keystoning test forecast for 5/1 (1 mo. Late). — 141-2-1.1

Winding facility design 1 1/2 mos. Late forecast completion 5/15/03.

FDR for autoclave forecast 4/30 (3 mo. Late). Autoclave fabrication deferred to FY04. No impact to project schedule. — 141-3, 141-3-3 thru 141-3-31

Stellarator Core Structure, Coil Services,Cryostat,and Field Period Assy Design

Jobs 1501,1601,1701, and 1801	BCWS	BCWP	ACWP	Sched Vari.	SPI	Cost Vari.	CPI
Feder, Williamson, Gettlefinger, Chrzanowski	255	13	25	-242	0.05	-12	0.52

Design tasks started late. — various

Stellarator Core Management & Integration

Job 1901	BCWS	BCWP	ACWP	Sched Vari.	SPI	Cost Vari.	CPI
Brad Nelson	280	156	199	-124	0.56	-43	0.78

Stellarator core assy dsn criteria 2 mos. behind (waiting on CTD data). Time constant/rqmnts,loop voltage, transient field error analysis, tolerance studies, vv disruption loads 4 mos behind (Art Brooks temp assigned to NSTX tasks) — 121-1-01, 193-1-1 thru 193-1-5, 192-2-4

Cost Variance driven by PPPL EA engr labor

Neutral Beam Refurbishment

Job 2501	BCWS	BCWP	ACWP	Sched Vari.	SPI	Cost Vari.	CPI
Tim Stevenson	121	25	108	-96	0.21	-83	0.23

Leak detector procurement on hold (-33k) no impact; inhouse leak detector has been refurbished. — 250-0025.5

Approx 3 mos behind on power supply evaluations and 1 month behind on beamline evaluations. — various

Diagnostics

Job 3901	BCWS	BCWP	ACWP	Sched Vari.	SPI	Cost Vari.	CPI
Dave Johnson	158	67	124	-91	0.42	-57	0.54

Magnetics integration 2-3 mos. behind, SXR Tomography3 mos. behind, and Port Orientation/allocation 2 months behind plan.

PPPL researcher charges greater that estimated for work performed.

Electrical systems design and integration

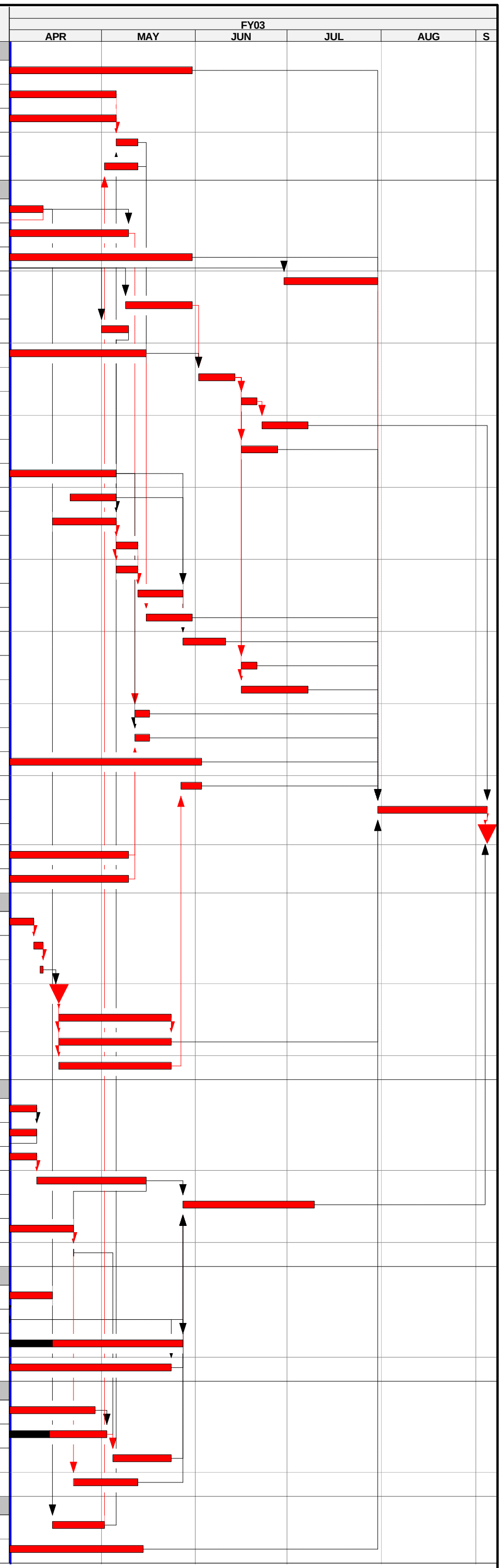
Jobs 4301, 4401,4501,4601	BCWS	BCWP	ACWP	Sched Vari.	SPI	Cost Vari.	CPI
Raki Ramakrishnan	148	6	9	-142	0.04	-3	0.67

Work initiated to clearout the FCPC area. DC cabling design behind schedule;PDR is now forecast 9/29/03, a 4 1/2 mo. Slip. The coil protection design has not started and is now forecast to begin in FY04.

Project Engineering	BCWS	BCWP	ACWP	Sched Vari.	SPI	Cost Vari.	CPI
Jobs 8202, 8203, and 8204	412	361	405	-51	0.88	-44	0.89
Wayne Reiersen							

Plans and procedures as well as development of technical data behind by 2 months.Forecast completion 4/25/03

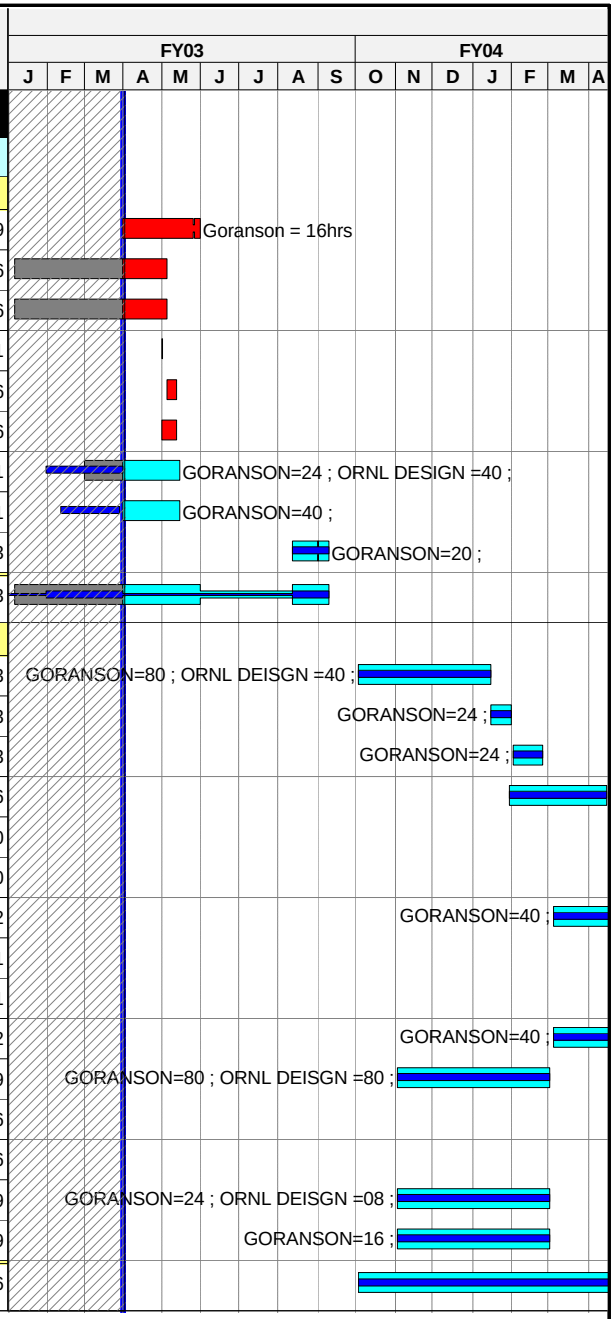
Activity ID	Baseline Start	Baseline Finish	Total Float	Activity Description
Job: 1101 - Limiter Adv Concep Design-GORANSON				
111-2-01	01APR03*	30MAY03	-9	Update Concep Dsn for limiter
L4-035	06JAN03A	05MAY03	-6	Incorporate radiation shields in FW panels (if r
L4-036	06JAN03A	05MAY03	-6	Calculate bakeout heat loads on VV and in-vessel
L4-038	06MAY03*	12MAY03	-6	Perform design studies for CFC liner with divert
L4-039	02MAY03*	12MAY03	-6	Perform design studies for flowing Li divertor,
Job: 1201 - Vacuum Vessel Dsn-GORANSON				
L4-003	16DEC02A	11APR03	-10	Define VV shell and FW geometry
L4-042	16DEC02A	09MAY03	0	Establish final port geometry
L4-043	03FEB03A	30MAY03	-9	Develop design of bolted angled joint
L4-044	30JUN03*	30JUL03	-51	Build geometric mock-up to demo feasibility
L4-045	09MAY03*	30MAY03	-34	Establish feasibility of swiping vac seals
L4-046	01MAY03*	09MAY03	-20	Resolve interference with VV supports
L4-047	17FEB03A	15MAY03	-24	Establish envelopes & locations in vsl cmpnts
L4-048	02JUN03*	13JUN03	-34	Establish port allocations
L4-049	16JUN03*	20JUN03	-9	Perform FMECA
L4-052	23JUN03*	07JUL03	-9	Evaluate design versus performance reqmnts
L4-053	16JUN03*	27JUN03	-29	Review and promote models/drawings
L4-071	22JAN03A	05MAY03	-1	Calculate Heat leakage to cold mass
L4-064	21APR03*	05MAY03	-1	Perform EM & Stress Analysis of VV
L4-065	15APR03*	05MAY03	-16	Develop FEA model incl supports
L4-066	06MAY03*	12MAY03	-16	Calc. buckling FOS &stresses under atmosp
L4-067	06MAY03*	12MAY03	-16	Calculate disruption loads
L4-068	13MAY03*	27MAY03	-16	Calculate stresses under combined loads
L4-055	16MAY03*	30MAY03	-9	Prepare Scope sheet items PFC's (WBS 12/11)
L4-056	28MAY03*	10JUN03	-16	Prepare Scope sheet items (WBS 12/14)
L4-057	16JUN03*	20JUN03	-24	Prepare Scope sheet items 12/21-23
L4-060	16JUN03*	07JUL03	-34	Prepare Scope sheet items diag (WBS 12/3)
L4-061	12MAY03*	16MAY03	0	Prepare Scope sheet item grounding (WBS 12/4)
L4-063	12MAY03*	16MAY03	0	Prepare Scope sheet VV Htg/Clng (WBS 12/6)
125-1-1	01APR03*	02JUN03	-10	Sensor specification,locations,interface w/vv
L4-079	27MAY03*	02JUN03	-10	Finalize budgetary cost and schedule (WBS 12
121-4-15	31JUL03	04SEP03	-51	PDR Preparation
125-1-PDR		04SEP03*	-51	Vacuum Vessel/Modular Coil Prel Dsn Review *PDR*
123-1-1	19DEC02A	09MAY03	0	Schematics and CAD assembly drawing of piping
123-1-2	19DEC02A	09MAY03	0	Flow analysis
Job: 1202 - Vacuum Vessel R&D-GORANSON				
121-5-16	03FEB03A	08APR03	-7	Evaluate Proposals
121-5-18	09APR03	11APR03	-7	Finalize Contract
121-5-19	11APR03*	11APR03	-7	DOE Approval
121-5-25		16APR03*	-10	Award 2 VV R&D ContractS
L4-076	17APR03*	23MAY03	-5	Report on mfg methods sow 3.1.1
L4-077	17APR03	23MAY03	-5	Preliminary MIT and QA Plans for VVSA sow 3.1.3
L4-077.1	17APR03	23MAY03	-10	Budgetary and cost estimates sow 3.1.4
Job: 1401 - Mod Coil Dsn -WILLIAMSON				
140-5-12	22JAN03A	09APR03	-3	Develop detailed ProE models winding packs&leads
L4-097	24FEB03A	09APR03	-8	Develop detailed ProE models clamps&cooling sys
140-1-02	16DEC02A	09APR03	-19	Revise ProE conceptual-level models
140-5-4	10APR03*	15MAY03	-19	Procure STL models for asm verification
140-5-3	28MAY03*	09JUL03	-11	Prepare MCC Design Review Documentation
L4-014	22JAN03A	21APR03	-1	Define geometry of SLA model
L4-015	22APR03*	21APR03	-1	Order/fabricate model
Job:1404-Mod Coil Winding Form R&D-HEITZENROEDER				
142-1-10	01APR03	14APR03	-11	Proj UpdateTech Pkg (remove cladding)
142-10.1	01APR03*	31MAR03	-1	Proj UpdateTech Pkg (M50 coils,cooling,VPI)
142-1-2A	15MAR03A	27MAY03	-11	Phase I -MIT Plan/cost for produc articles EIO
142-1-2B	14MAR03A	23MAY03	-10	Phase I -MIT Plan/cost prod articles JP Pattern
Job: 1801 - Field Period Assly Dsn-CHRZANOWSKI				
185-1-1	01APR03	28APR03	-6	Revised conceptual plan for field period assembl
L4-016	31MAR03A	02MAY03	-10	Develop concept of tooling and assembly features
L4-017	05MAY03*	23MAY03	-10	Document procedure for FP assembly, conduct revi
L4-019	22APR03*	12MAY03	-1	Document procedure for final assembly, conduct r
Job: 1901 - Stellarator Core Mngtt&Integr-NELSON				
L4-025	15APR03*	01MAY03	-6	Perform initial divertor (edge modeling) studies
L4-054	02JAN03A	14MAY03	2	Develop Interfaces



© Primavera Systems, Inc.

NCSX April 1, 2003 Status Critical Paths

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
1 - Stellarator Core Systems								
11 - In-Vessel Components								
Job: 1101 - Limiter Adv Concep Design-GORANSON								
111-2-01	Update Concep Dsn for limiter	01APR03*	30MAY03	-108	20	432.00	2,160.00	-9
L4-035	Incorporate radiation shields in FW panels (if r	06JAN03A	05MAY03	0	33	0.00	0.00	-6
L4-036	Calculate bakeout heat loads on VV and in-vessel	06JAN03A	05MAY03	0	75	0.00	0.00	-6
L4-037	Update design of initial limiter configuration	02MAY03*	01MAY03	0		0.00	0.00	1
L4-038	Perform design studies for CFC liner with divert	06MAY03*	12MAY03	0		0.00	0.00	-6
L4-039	Perform design studies for flowing Li divertor,	02MAY03*	12MAY03	0		0.00	0.00	-6
111-2-1	Interface control documents for invessel compnts	01MAR03A	15MAY03	-33	5	382.00	7,640.00	1
111-3-1	Update cost estimate for Limiter	01APR03*	15MAY03	-34		0.00	5,400.00	1
111-3-2	Update planning for FY-04	12AUG03*	09SEP03	0		0.00	2,700.00	2,363
Subtotal		06JAN03A	09SEP03	0		814.00	17,900.00	2,363
Job: 1102 - Limiter Prelim&Final Design-GORANSON								
111-1-1	CAD models and drawings of limiter dsn	03OCT03*	15JAN04	0		0.00	15,200.00	2,243
111-1-2	Thermal analysis of limiters	16JAN04	30JAN04	0		0.00	3,240.00	2,243
111-1-3	Stress analysis of limiters	02FEB04	24FEB04	0		0.00	3,240.00	2,243
111-1-4	Assembly plan for limiters	30JAN04*	15APR04	0		0.00	3,240.00	2,206
111-2-2	Interface control document for diagnostics	31MAY04*	27AUG04	0		0.00	3,240.00	2,110
111-2-3	Interface control document for Utilities	31MAY04*	27AUG04	0		0.00	8,040.00	2,110
111-4-1	Design-to specification	05MAR04*	21APR04	0		0.00	5,400.00	2,202
111-4-2	Draft Build-to (manufacturing) specification for	12AUG04*	09SEP04	0		0.00	2,700.00	2,101
111-4-3	Final Build-to (manufacturing) specification for	12AUG04*	09SEP04	0		0.00	2,700.00	2,101
111-5-1	Demonstrate installation feasibility	05MAR04*	19MAY04	0		0.00	5,400.00	2,182
111-6-1	CAD models and drawings of limiter final design,	03NOV03*	01MAR04	0		0.00	19,600.00	2,239
111-6-2	Final thermal analysis of limiters	01JUN04*	30SEP04	0		0.00	5,400.00	2,086
111-6-3	Final stress analysis of vessel lmiters	01JUN04*	30SEP04	0		0.00	9,210.00	2,086
114-1-1	Sensor specification and schematics of sensor pl	03NOV03*	01MAR04	0		0.00	4,120.00	2,239
114-1-2	Interface and cost data input for tasks 111-2, 1	03NOV03*	01MAR04	0		0.00	2,160.00	2,239
Subtotal		03OCT03	30SEP04	0		0.00	92,890.00	2,086



Run Date **11APR03 15:07**

© Primavera Systems, Inc.

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

NCSX

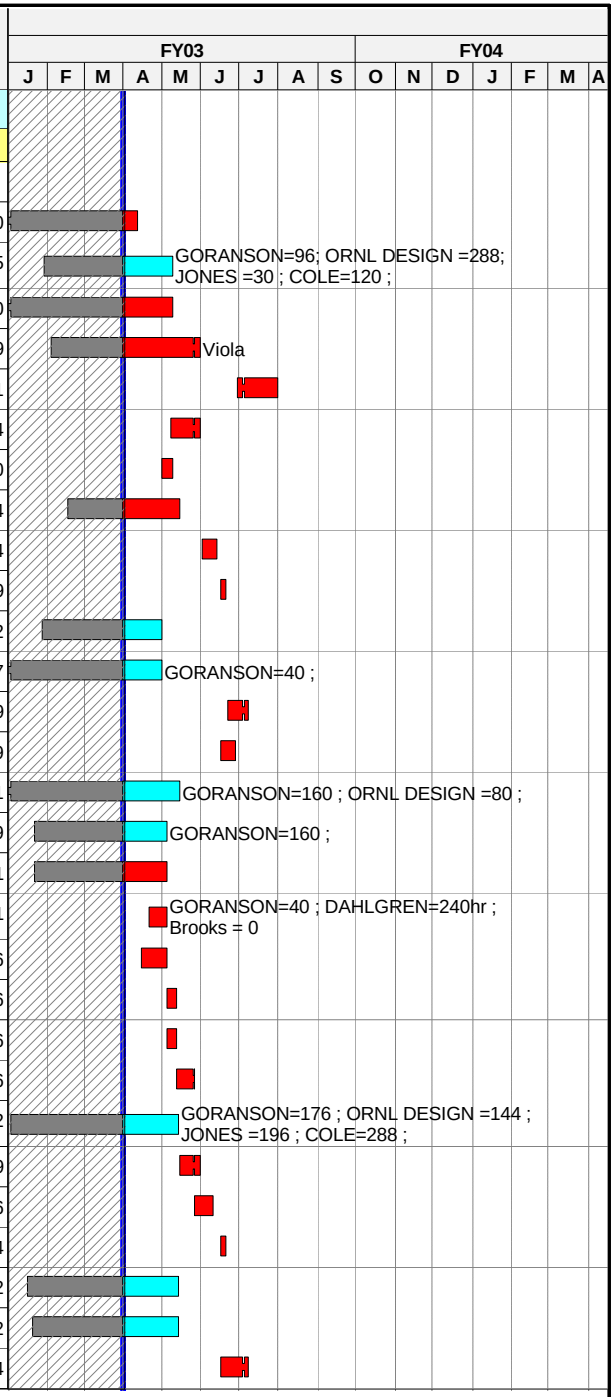
FY03 Work Authorization Plan

STATUS THROUGH 3/31/03

12 - Vacuum Vessel Systems

Job: 1201 - Vacuum Vessel Dsn-GORANSON

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
L4-001	Reconstruct conceptual design of stellarator cor	01NOV02A	18DEC02A	0	100	29,760.00	29,760.00	
L4-003	Define VV shell and FW geometry	16DEC02A	11APR03	0	40	0.00	0.00	-10
L4-041	Design of VV	28JAN03A	09MAY03	0	25	16,117.50	64,470.00	5
L4-042	Establish final port geometry	16DEC02A	09MAY03	0	30	0.00	0.00	0
L4-043	Develop design of bolted angled joint	03FEB03A	30MAY03	0	35	0.00	0.00	-9
L4-044	Build geometric mock-up to demo feasibility	30JUN03*	30JUL03	0	-	0.00	0.00	-51
L4-045	Establish feasibility of swiping vac seals	09MAY03*	30MAY03	0	-	0.00	0.00	-34
L4-046	Resolve interference with VV supports	01MAY03*	09MAY03	0	-	0.00	0.00	-20
L4-047	Establish envelopes & locations in vsl cmpnts	17FEB03A	15MAY03	0	10	0.00	0.00	-24
L4-048	Establish port allocations	02JUN03*	13JUN03	0	-	0.00	0.00	-34
L4-049	Perform FMECA	16JUN03*	20JUN03	0	-	0.00	0.00	-9
L4-050	Establish instrumentation requirements	27JAN03A	01MAY03	0	20	0.00	0.00	2
L4-053.5	Prepare performance (design-to) specification fo	09DEC02A	30APR03	0	20	1,080.00	5,400.00	27
L4-052	Evaluate design versus performance reqmnts	23JUN03*	07JUL03	0		0.00	0.00	-9
L4-053	Review and promote models/drawings	16JUN03*	27JUN03	0	-	0.00	0.00	-29
L4-071.5	Develop design for VV insulation & attachments	19DEC02A	15MAY03	0	10	3,040.00	30,400.00	1
L4-069	Perform thermal analysis of VV	22JAN03A	05MAY03	0	20	4,320.00	21,600.00	9
L4-071	Calculate Heat leakage to cold mass	22JAN03A	05MAY03	0	30	0.00	0.00	-1
L4-064	Perform EM & Stress Analysis of VV	21APR03*	05MAY03	0	0	0.00	42,014.40	-1
L4-065	Develop FEA model incl supports	15APR03*	05MAY03	0	-	0.00	0.00	-16
L4-066	Calc. buckling FOS &stresses under atmosp	06MAY03*	12MAY03	0	-	0.00	0.00	-16
L4-067	Calculate disruption loads	06MAY03*	12MAY03	0	-	0.00	0.00	-16
L4-068	Calculate stresses under combined loads	13MAY03*	27MAY03	0	-	0.00	0.00	-16
L4-054	Develop Interfaces	02JAN03A	14MAY03	0	18	17,622.36	97,902.00	2
L4-055	Prepare Scope sheet items PFC's (WBS 12/11)	16MAY03*	30MAY03	0	-	0.00	0.00	-9
L4-056	Prepare Scope sheet items (WBS 12/14)	28MAY03*	10JUN03	0	-	0.00	0.00	-16
L4-057	Prepare Scope sheet items 12/21-23	16JUN03*	20JUN03	0	-	0.00	0.00	-24
L4-058	Prepare Scope sheet items ICH (WBS12/24)	16JAN03A	14MAY03	0	10	0.00	0.00	2
L4-059	Prepare Scope sheet items NB (WBS 12/25)	20JAN03A	14MAY03	0	20	0.00	0.00	2
L4-060	Prepare Scope sheet items diag (WBS 12/3)	16JUN03*	07JUL03	0	-	0.00	0.00	-34



Run Date 11APR03 15:07

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

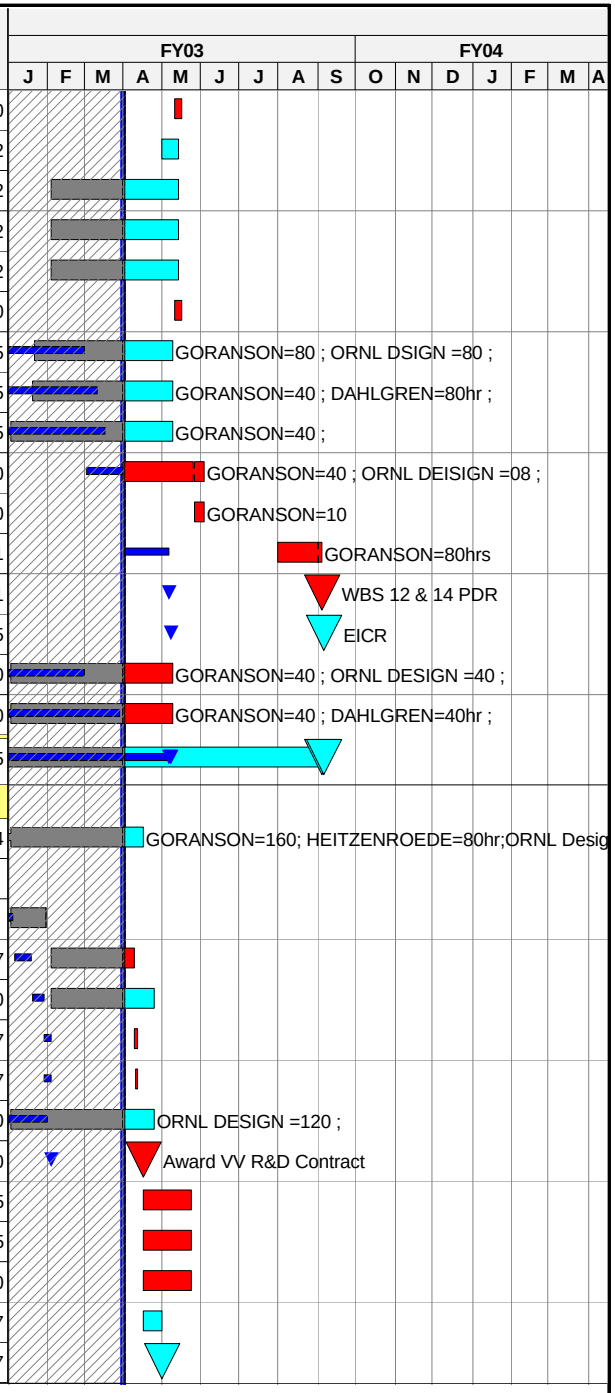
NCSX
FY03 Work Authorization Plan

Sheet 2 of 20

STATUS THROUGH 3/31/03

© Primavera Systems, Inc.

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
L4-061	Prepare Scope sheet item grounding (WBS 12/4)	12MAY03*	16MAY03	0	-	0.00	0.00	0
L4-062	Prepare Scope sheet items I&C (WBS 12/5)	02MAY03*	14MAY03	0	2	0.00	0.00	2
L4-062.2	Prepare Scope sheet items (WBS 12/13)	03FEB03A	14MAY03	0	2	0.00	0.00	2
L4-062.4	Prepare Scope sheet items (WBS 12/17)	03FEB03A	14MAY03	0	2	0.00	0.00	2
L4-062.6	Prepare Scope sheet items (WBS 12/18)	03FEB03A	14MAY03	0	2	0.00	0.00	2
L4-063	Prepare Scope sheet VV Htg/Clng (WBS 12/6)	12MAY03*	16MAY03	0	-	0.00	0.00	0
124-1-1	Support Syst-CAD models,assly dwgs, Interfaces	22JAN03A	09MAY03	-50	20	3,920.00	19,600.00	5
124-1-2	Support Syst-Stress analysis	20JAN03A	09MAY03	-44	5	880.24	17,604.80	5
124-1-3	Support Syst-Thermal analysis	16DEC02A	09MAY03	-39	25	1,350.00	5,400.00	5
125-1-1	Sensor specification,locations,interface w/vv	01APR03*	02JUN03	-44	0	0.00	6,280.00	-10
L4-079	Finalize budgetary cost and schedule (WBS 12	27MAY03*	02JUN03	0	0	0.00	1,350.00	-10
121-4-15	PDR Preparation	31JUL03	04SEP03	-84	0	0.00	10,800.00	-51
125-1-PDR	Vacuum Vessel/Modular Coil Prel Dsn Review *PDR*		04SEP03*	-84	-	0.00	0.00	-51
125-1-ICR	NCSX External Independent Cost Review		05SEP03*	-84	-	0.00	0.00	2,365
123-1-1	Schematics and CAD assembly drawing of piping	19DEC02A	09MAY03	-50	15	1,470.00	9,800.00	0
123-1-2	Flow analysis	19DEC02A	09MAY03	-30	75	8,626.80	11,502.40	0
Subtotal		01NOV02A	05SEP03	-84		88,186.90	373,883.60	2,365
Job: 1202 - Vacuum Vessel R&D-GORANSON								
121-5-1	Procurement Oversight and Support	24OCT02A	16APR03	-99	LOE	34,231.50	38,204.80	2,464
121-5-12	Develop and Issue RFP	18NOV02A	18NOV02A	-1	100	0.00	0.00	
121-5-14	Proposal Prep by subcontractors	19NOV02A	29JAN03A	-18	100	0.00	0.00	
121-5-16	Evaluate Proposals	03FEB03A	08APR03	-57	90	0.00	0.00	-7
121-5-17	Update Documentation (SOW,spec,dwgs)	03FEB03A	25APR03	-64	-	0.00	0.00	70
121-5-18	Finalize Contract	09APR03	11APR03	-49	-	0.00	0.00	-7
121-5-19	DOE Approval	11APR03*	11APR03	-49	-	0.00	0.00	-7
121-5-2	Update CAD models, drawings and specifications	15NOV02A	25APR03	-61	90	11,880.00	13,200.00	70
121-5-25	Award 2 VV R&D ContractS		16APR03*	-52	-	0.00	0.00	-10
L4-076	Report on mfg methods sow 3.1.1	17APR03*	23MAY03	0	-	0.00	0.00	-5
L4-077	Preliminary MIT and QA Plans for VVSA sow 3.1.3	17APR03	23MAY03	0	-	0.00	0.00	-5
L4-077.1	Budgetary and cost estimates sow 3.1.4	17APR03	23MAY03	0	-	0.00	0.00	-10
L4-077.2	MIT and QA plan for PVVS sow 3.2.1	17APR03	30APR03	0	-	0.00	0.00	67
L4-077.3	Relaese for Prototype Fabrication		30APR03	0	-	0.00	0.00	67



Run Date 11APR03 15:07

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

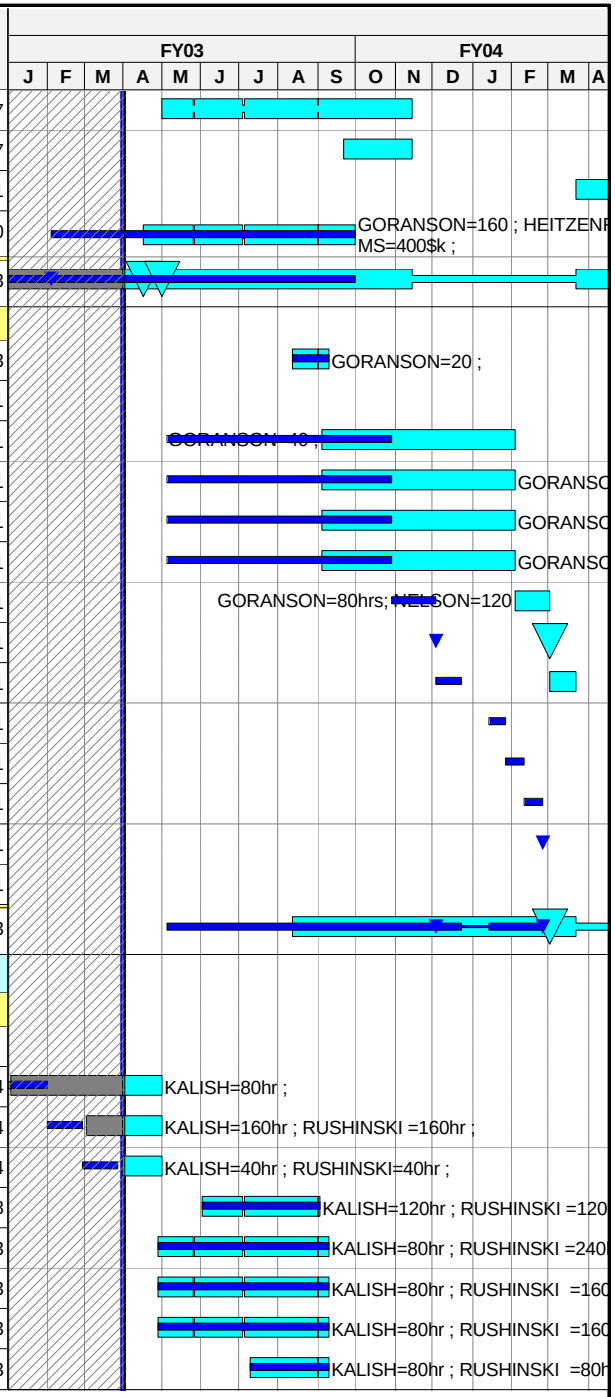
NCSX
FY03 Work Authorization Plan

Sheet 3 of 20

STATUS THROUGH 3/31/03

© Primavera Systems, Inc.

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
L4-78	Vendor design/Fab prototype sow 3.2.2	01MAY03	14NOV03	0	-	0.00	0.00	67
L4-79	Report on add'l manufacturing activities	22SEP03	14NOV03	0	-	0.00	0.00	67
L4-80	Vendors Final plans&firm fixed price 3.3.1 &.2	23MAR04	20APR04	0	-	0.00	0.00	31
121-5-3	VV R&D and oversight	17APR03	30SEP03	0	LOE	0.00	574,009.60	120
Subtotal		24OCT02A	20APR04	-145		46,111.50	625,414.40	2,203
Job: 1203 - Vacuum Vessel Final Dsn-GORANSON								
121-3-2	Update planning for FY-04	12AUG03*	09SEP03	0		0.00	2,700.00	2,363
121-36-9.2	Release for Fabrication		14DEC04	0		0.00	0.00	31
121-4-3	Build-to (manufacturing) specification for	05SEP03*	02FEB04	-68		0.00	5,400.00	31
121-6-1	CAD models and drawings of vessel final design,	05SEP03*	02FEB04	-68		0.00	85,200.00	31
121-6-2	Final thermal analysis of vessel assembly	05SEP03*	02FEB04	-68		0.00	11,841.43	31
121-6-3	Final stress analysis of vessel assembly	05SEP03*	02FEB04	-68		0.00	18,282.86	31
121-6-4	FDR Prep	03FEB04*	01MAR04	-64		0.00	30,480.00	31
121-6-5	FDR		01MAR04	-64		0.00	0.00	31
121-6-6	Finalize tech Doc package & Resolve chits	02MAR04	22MAR04	-64		0.00	0.00	31
121-6-8	Evaluate and Select VV Production Vendor	21APR04	04MAY04	-70		0.00	0.00	31
121-6-83	Negotiate with vendor	05MAY04	18MAY04	-70		0.00	0.00	31
121-6-85	DOE Approve VV Selection & contract	19MAY04	01JUN04	-70		0.00	0.00	31
121-6-9	Award VV Production Vendor (Phase funded)		01JUN04	-70		0.00	0.00	31
121-6-9.1	Release for Engr/design/tooling/fixtures		01JUN04	0		0.00	0.00	31
Subtotal		12AUG03	14DEC04	-210		0.00	153,904.29	2,033
13 - Conventional Coils								
Job: 1301 - Convential Coils Design-KALISH								
130-1-01	Update Conceptual design	01OCT02A	20DEC02A	-2	100	6,102.40	6,102.40	
130-1-1	Draft of 1) SRD, and 2) SDD Section III - Requir	02DEC02A	30APR03	-64	10	1,220.48	12,204.80	2,454
130-1-2	General arrangement models and drawings	03MAR03A	30APR03	-44	20	9,763.84	48,819.20	2,454
130-1-3	Interface control document input for modular coi	01APR03*	30APR03	-24		0.00	12,204.80	2,454
130-1-4	Interface control document for Conventional Coil	02JUN03*	02SEP03	0		0.00	36,614.40	2,368
130-2-1	PF Coil drawings, models, SDD Sect IV text	28APR03*	09SEP03	0		0.00	48,819.20	2,363
130-2-2	TF Coil drawings, models, SDD Sect IV text	28APR03*	09SEP03	0		0.00	36,614.40	2,363
130-2-3	External Trim Coil drawings, models, SDD Sect IV	28APR03*	09SEP03	0		0.00	36,614.40	2,363
130-2-4	Coils I&C	10JUL03*	09SEP03	0		0.00	24,409.60	2,363



Run Date 11APR03 15:07

© Primavera Systems, Inc.

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

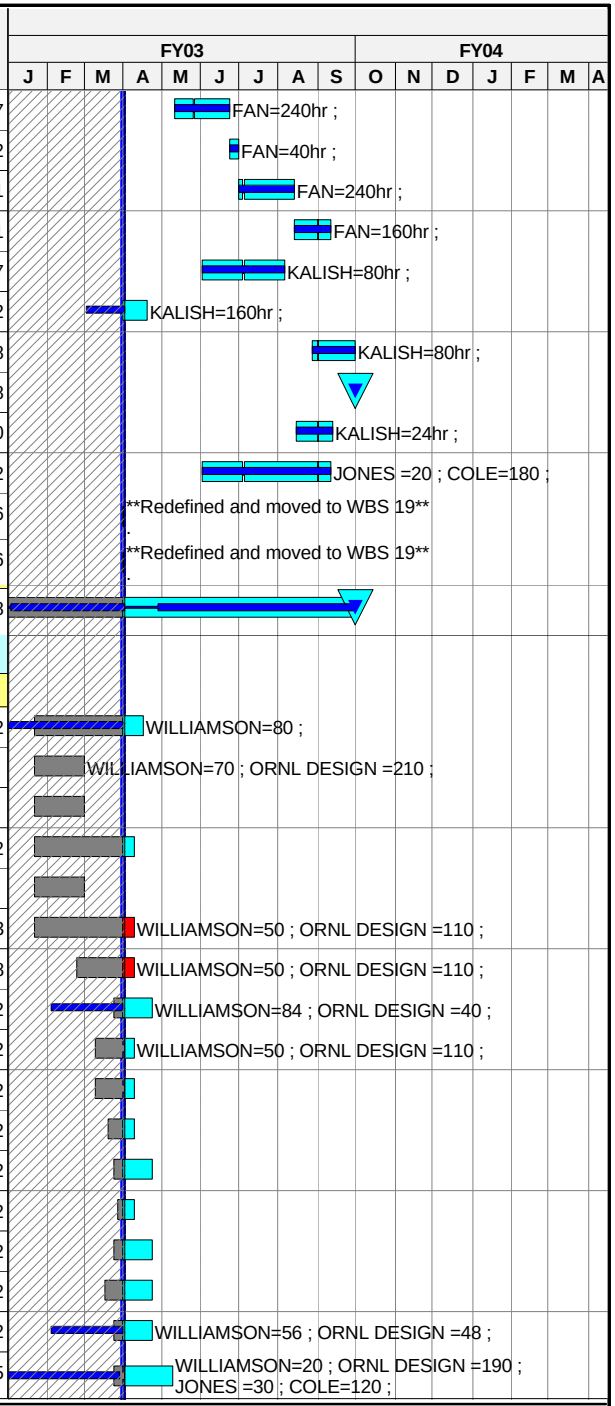
NCSX

FY03 Work Authorization Plan

Sheet 4 of 20

STATUS THROUGH 3/31/03

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float	
130-3-1	Develop thermal/structural FEA models of cols, i	12MAY03*	23JUN03	0		0.00	36,614.40	2,417	FAN=240hr ;
130-3-2	Incorporate EM loads and load cases from global	24JUN03*	30JUN03	0		0.00	6,102.40	2,412	FAN=40hr ;
130-3-3	Evaluate stress/deflection due to EM / gravity /	01JUL03*	13AUG03	0		0.00	36,614.40	2,381	FAN=240hr ;
130-3-4	Prepare analysis reports, SDD analysis summary,	14AUG03*	11SEP03	0		0.00	24,409.60	2,361	FAN=160hr ;
130-4-1	Document fabrication and assembly options for co	02JUN03*	05AUG03	0		0.00	12,204.80	2,387	KALISH=80hr ;
130-4-2	Prepare cost and schedule estimates WBS 13	01APR03	18APR03	-13		0.00	24,409.60	2,462	KALISH=160hr ;
130-4-3	Prepare PDR documentation WBS 13	28AUG03*	30SEP03	0		0.00	12,204.80	2,348	KALISH=80hr ;
130-4-3.1	Conventional Coils and Structure PDR (WBS 13&15)		30SEP03	0		0.00	0.00	2,348	
130-4-4	Prepare FY04 workplans	15AUG03*	12SEP03	0		0.00	3,661.44	2,360	KALISH=24hr ;
192-1-2-13	Self consistent models/dwgs Conv coil/strct PDR	02JUN03*	10SEP03	0		0.00	13,220.00	2,362	JONES =20 ; COLE=180 ;
192-2-1-13	Coil geometry tolerance guidance (wbs 13)	01APR03*	31MAR03	-119		0.00	0.00	2,476	**Redefined and moved to WBS 19**
192-2-3-13	Eddy current analysis&struct time constant wbs13	01APR03*	31MAR03	-119		0.00	0.00	2,476	**Redefined and moved to WBS 19**
Subtotal		01OCT02A	30SEP03	0		17,086.72	431,844.64	2,348	
14 - Modular Coils									
Job: 1401 - Mod Coil Dsn -WILLIAMSON									
140-1-1	Design-to specification (SRD)	22JAN03A	16APR03	-12	75	8,640.00	11,520.00	12	WILLIAMSON=80 ;
140-5-11	Develop detailed ProE models of winding forms	22JAN03A	28FEB03A	0	100	33,180.00	33,180.00		WILLIAMSON=70 ; ORNL DESIGN =210 ;
L4-093	Incorporate features to resolve issue of multipl	22JAN03A	28FEB03A	0	100	0.00	0.00		
L4-094	Incorporate final port geometry into shell cutou	22JAN03A	09APR03	0	70	0.00	0.00	2	
L4-098	Develop design of wings, including structural at	22JAN03A	28FEB03A	0	100	0.00	0.00		
140-5-12	Develop detailed ProE models winding packs&leads	22JAN03A	09APR03	0	70	9,650.00	19,300.00	-3	WILLIAMSON=50 ; ORNL DESIGN =110 ;
L4-097	Develop detailed ProE models clamps&cooling sys	24FEB03A	09APR03	0	70	9,650.00	19,300.00	-8	WILLIAMSON=50 ; ORNL DESIGN =110 ;
140-2-1	Develop ICD for conv coils.vessel,structure	24MAR03A	23APR03	-17	20	3,299.20	16,496.00	12	WILLIAMSON=84 ; ORNL DESIGN =40 ;
L4-091.1	Develop assy models,incl bolts,insul,	10MAR03A	09APR03	0	70	13,510.00	19,300.00	2	WILLIAMSON=50 ; ORNL DESIGN =110 ;
L4-092	Develop design of insulating, bolted joints at f	10MAR03A	09APR03	0	70	0.00	0.00	2	
L4-095	Incorporate feature to support the VV	20MAR03A	09APR03	0	70	0.00	0.00	2	
L4-105	Develop ICD with conventional coils (WBS 12)	24MAR03A	23APR03	0	20	0.00	0.00	12	
L4-096	Incorporate features required for FP and final a	27MAR03A	09APR03	0	20	0.00	0.00	22	
L4-106	Develop ICD with coil structures (WBS 13)	24MAR03A	23APR03	0	20	0.00	0.00	12	
L4-107	Develop ICD with diagnostics (WBS 15)	17MAR03A	23APR03	0	20	0.00	0.00	12	
140-2-3	Develop ICD with cryo,power, I&C	24MAR03A	23APR03	-17	20	2,668.80	13,344.00	12	WILLIAMSON=56 ; ORNL DESIGN =48 ;
140-5-2	Prepare Preliminary Design Drawings	24MAR03A	09MAY03	-30	20	8,722.00	43,610.00	5	WILLIAMSON=20 ; ORNL DESIGN =190 ; JONES =30 ; COLE=120 ;



Run Date 11APR03 15:07

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

© Primavera Systems, Inc.

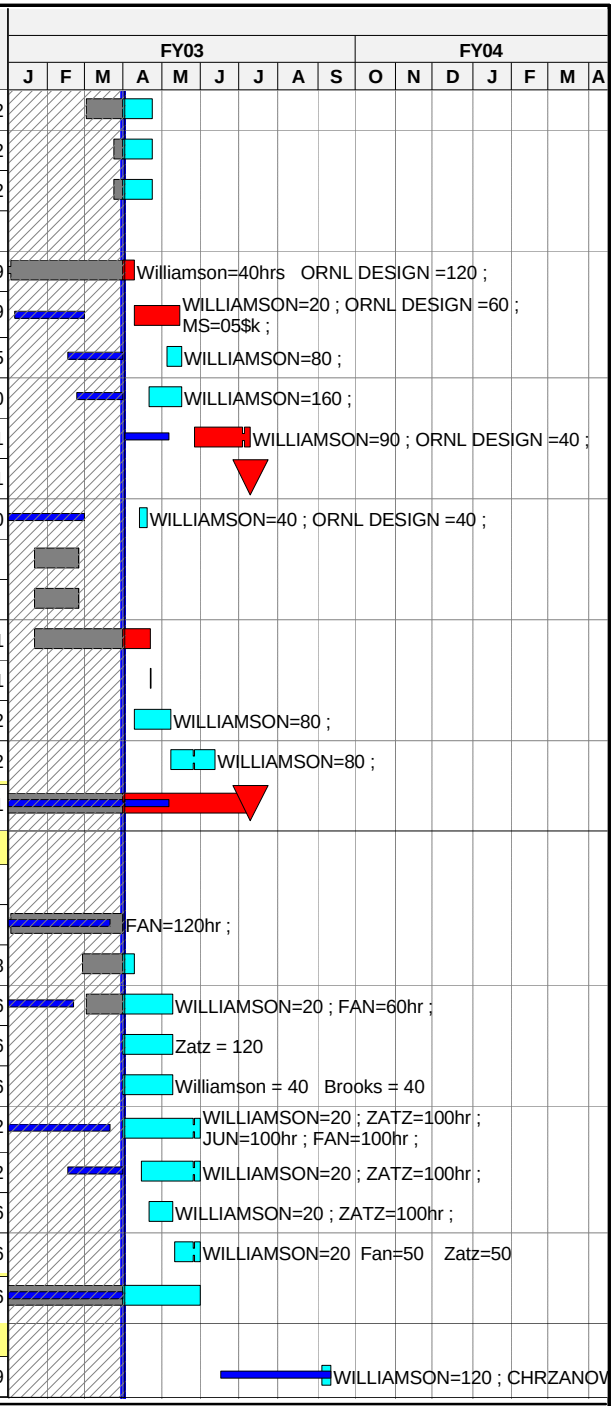
0303

NCSX

FY03 Work Authorization Plan

STATUS THROUGH 3/31/03

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
L4-108	Develop ICD with WBS 4, including grounding and	03MAR03A	23APR03	0	20	0.00	0.00	12
L4-109	Develop ICD with I&C (WBS 5)	24MAR03A	23APR03	0	20	0.00	0.00	12
L4-110	Develop ICD with cryogenic systems (WBS 62)	24MAR03A	23APR03	0	20	0.00	0.00	12
140-1-01	Update CDR models and drawings	21OCT02A	20DEC02A	-1	100	43,200.00	43,200.00	
140-1-02	Revise ProE conceptual-level models	16DEC02A	09APR03	0	90	14,042.16	15,602.40	-19
140-5-4	Procure STL models for asm verification	10APR03*	15MAY03	-54		0.00	16,080.00	-19
140-1-2	Develop build-to specifications	05MAY03*	16MAY03	-34		0.00	11,520.00	25
140-3-1	Develop cost and schedule estimates	21APR03*	16MAY03	-34		0.00	23,040.00	20
140-5-3	Prepare MCC Design Review Documentation	28MAY03*	09JUL03	-44		0.00	17,360.00	-11
140-PDR	WBS 14 & 12 pdr		09JUL03*	0		0.00	0.00	-11
143-1-1	Develop Instrumentation Drawings	14APR03*	18APR03	-35		0.00	10,160.00	20
L4-004	Define geometry of modular coil winding forms	22JAN03A	24FEB03A	0	100	0.00	0.00	
L4-012	Resolve issue of final fit-up of multiple mating	22JAN03A	24FEB03A	0	100	0.00	0.00	
L4-014	Define geometry of SLA model	22JAN03A	21APR03	0	50	0.00	0.00	-1
L4-015	Order/fabricate model	22APR03*	21APR03	0		0.00	0.00	-1
L4-100	Prepare FMEA	10APR03*	07MAY03	0		0.00	11,520.00	2
L4-102	Evaluate design versus performance requirements	08MAY03*	12JUN03	0		0.00	11,520.00	2
Subtotal		21OCT02A	09JUL03	-44		146,562.16	336,052.40	-11
Job: 1402 - Mod.Coil Analyses-WILLIAMSON								
140-4-01	Update conceptual design analysis	01OCT02A	13DEC02A	-10	100	85,891.28	85,891.28	
140-4-2	Update 2D/3D thermal analysis incl insulation	16DEC02A	31MAR03A	-6	100	18,307.20	18,307.20	
L4-160	Perform cooldown analysis following a pulse	28FEB03A	09APR03	0	90	0.00	0.00	38
140-4-1	Develop FE models and perform EM &struc analysis	03MAR03A	09MAY03	-56	30	3,610.08	12,033.60	16
L4-155	Calculate EM loads, identify critical load cases	01APR03*	09MAY03	0		0.00	18,307.20	16
L4-156	Update material properties based on R&D results	01APR03*	09MAY03	0		0.00	11,862.40	16
140-4-3	Perform stress analysis for critical cases	01APR03*	30MAY03	-50		0.00	48,648.00	2
140-4-4	Prepare local models& stress analysis	15APR03*	30MAY03	-43		0.00	18,136.00	2
L4-159	Model cooldown from ambient	21APR03*	09MAY03	0		0.00	18,136.00	16
L4-159.1	Prepare Design Review Documentation f/analyses	12MAY03*	30MAY03	0		0.00	18,136.00	16
Subtotal		01OCT02A	30MAY03	-43		107,808.56	249,457.68	16
Job: 1403 - Mod. Coil Final Design-WILLIAMSON								
140-1-3	Final Build-to (manufacturing) specification for	05SEP03*	10SEP03	0		0.00	29,484.80	89



Run Date 11APR03 15:07

© Primavera Systems, Inc.

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

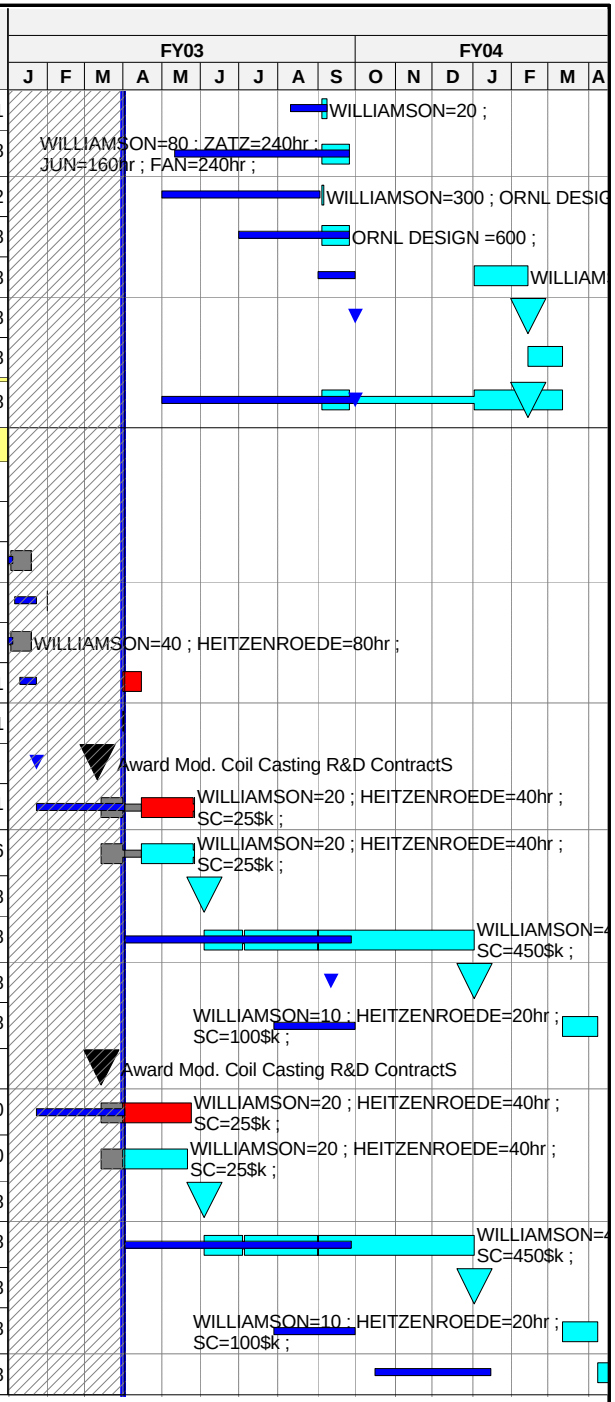
NCSX

FY03 Work Authorization Plan

Sheet 6 of 20

STATUS THROUGH 3/31/03

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
140-3-5	Update planning for FY-04	05SEP03*	08SEP03	0		0.00	2,880.00	91
140-4-5	Re-assess all analysis for final design and upda	05SEP03*	25SEP03	0		0.00	109,158.40	78
140-6-1	CAD models of modular coil assembly final design	05SEP03*	05SEP03	-3		0.00	109,200.00	92
140-6-2	CAD drawings of all parts, subassemblies, interf	05SEP03*	25SEP03	0		0.00	66,000.00	78
140-6-3	Final design review documentation prep	02JAN04	12FEB04	-98		0.00	41,360.00	8
140-6-3.1	FDR Modular Coils		12FEB04	-98		0.00	0.00	8
140-6-4	Disposition FDR Chits and finalize procurmnt pkg	13FEB04	11MAR04	0		0.00	0.00	8
Subtotal		05SEP03	11MAR04	-118		0.00	358,083.20	8
Job:1404-Mod Coil Winding Form R&D-HEITZENROEDER								
142-1-05	Pre Documentation and Issue RFP	01OCT02A	18OCT02A	0	100	26,299.68	26,299.68	
142-1-06	Vendors Prep Proposals	21OCT02A	16DEC02A	-1	-	0.00	0.00	
142-1-07	Evaluate & Negotiate Proposals w/vendors	17DEC02A	17JAN03A	-10	-	0.00	0.00	
142-1-08	DOE Review & Approve	31JAN03A	31JAN03A	-7	-	0.00	0.00	
142-1-1	Answer bidder questions, eval bids,select vendrs	17DEC02A	17JAN03A	-10	LOE	17,964.80	17,964.80	
142-1-10	Proj UpdateTech Pkg (remove cladding)	01APR03	14APR03	-58	-	0.00	0.00	-11
142-10.1	Proj UpdateTech Pkg (M50 coils,cooling,VPI)	01APR03*	31MAR03	0	-	0.00	0.00	-1
142-1-15	Award MCC R&D Contract to EIO		11MAR03A	-34	-	0.00	0.00	
142-1-2A	Phase I -MIT Plan/cost for produc articles EIO	15MAR03A	27MAY03	-39	0	12,610.75	41,982.40	-11
142-1-2AP	Phase I -MIT plan for prototype EIO	15MAR03A	27MAY03	0	0	12,610.75	41,982.40	2,436
142-1-30	RELEASE EIO FOR PROTOTYPE FABRICATION		02JUN03*	0	0	0.00	0.00	8
142-1-3A	Phase II - Fabricate Prototype- [EIO]	03JUN03*	01JAN04	-69	0	0.00	617,151.35	8
C-061	Castings-R&D Casting Reports EIO		01JAN04	-81		0.00	0.00	8
142-1-4A	Phase III - Final MIT plans, detailed est EIO	12MAR04*	08APR04	-137	0	0.00	108,735.00	8
142-1-16	Award MCC R&D Contract to JP Pattern		14MAR03A	0	-	0.00	0.00	
142-1-2B	Phase I -MIT Plan/cost prod articles JP Pattern	14MAR03A	23MAY03	-38		2,440.86	41,982.40	-10
142-1-2BP	Phase I -MIT plan for prototype JP PAttern	14MAR03A	20MAY03	0		2,575.60	41,982.40	2,440
142-1-31	RELEASE JP Pattern FOR PROTOTYPE FABRICATION		02JUN03*	0	0	0.00	0.00	8
142-1-3B	Phase II - Fabricate Prototype- JP Pattern	03JUN03	01JAN04	-69	0	0.00	617,151.35	8
C-062	Castings-R&D Casting Reports JP Pattern		01JAN04	0		0.00	0.00	8
142-1-4B	Phase III-Final MIT plans,detail est JP Pattern	12MAR04*	08APR04	-137	0	0.00	108,735.00	8
C-071	Project eval R&D cost proposals & select vendor	09APR04	06MAY04	-80		0.00	0.00	8



Run Date 11APR03 15:07

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

NCSX

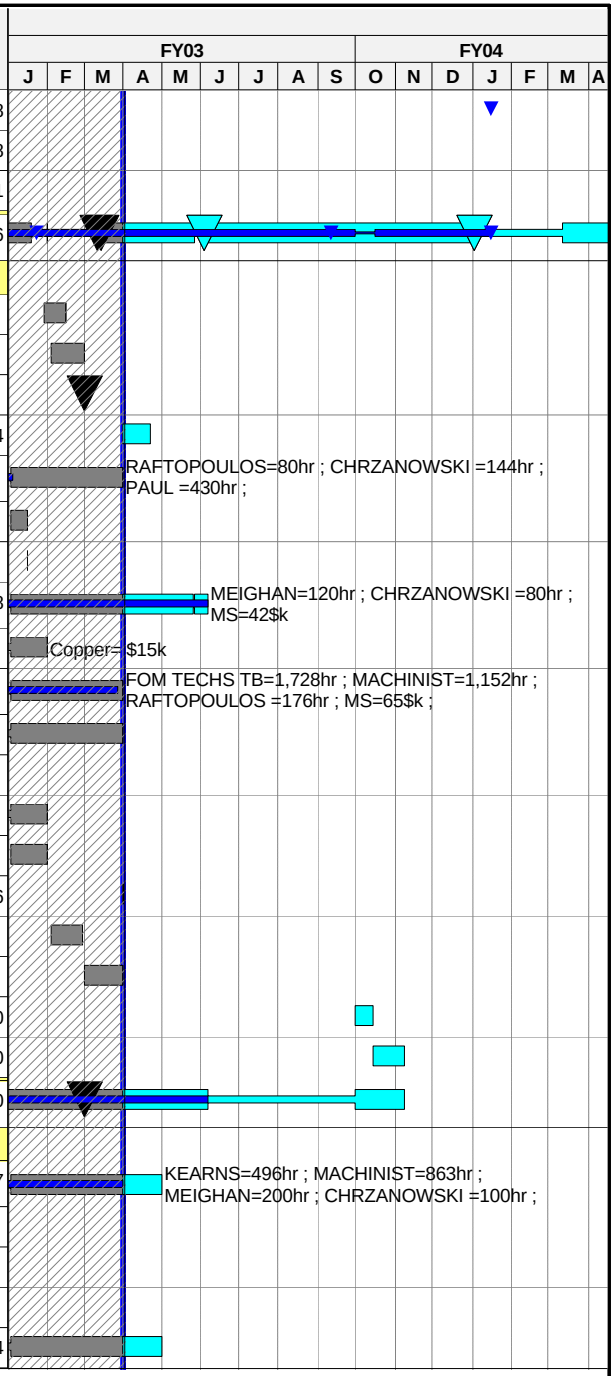
FY03 Work Authorization Plan

Sheet 7 of 20

STATUS THROUGH 3/31/03

© Primavera Systems, Inc.

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
C-081	Castings-Award Mfg contract (phase funded)	07MAY04		-80		0.00	0.00	8
C-082	Castings-Release f/ engr/tooling&1st 9 castings	07MAY04		0		0.00	0.00	8
C-083	Castings-Release for last 9 castings	01OCT04*		0		0.00	0.00	221
Subtotal		01OCT02A	30SEP04	-185		74,502.44	1,663,966.78	2,086
Job: 1405-Mod Coil Winding R&D Prep-CHRZANOWSKI								
142-9-0	Dev SOW for cladding R&D	29JAN03A	14FEB03A	0	N/A	0.00	0.00	
142-9-1	Internal R&D for cladding	03FEB03A	28FEB03A	0	100	0.00	0.00	
142-9-2	Choose cladding method		28FEB03A	0	100	0.00	0.00	
142-9-3	Update performance spec/dwgs for cladding f/PDR	01APR03	21APR03	0		0.00	0.00	14
141-1-1	Design Prototypes for R&D Activities	01OCT02A	31MAR03A	-61	100	77,121.84	77,121.84	
L4-141	Develop process design	02JAN03A	15JAN03A	0	100	0.00	0.00	
L4-142	Peer review process design	15JAN03A	15JAN03A	0	100	0.00	0.00	
141-1-2	Procure supplies/equip. for R&D Trials	28OCT02A	06JUN03	0	75	59,732.70	79,643.60	2,428
141-1-2.1	Procure copper	02DEC02A	31JAN03A	-22	100	19,800.00	19,800.00	
141-1-3	Fabricate winding forms/molds for trials	28OCT02A	31MAR03A	-2	100	336,736.64	353,896.64	
L4-139	Fabricate 1st (straight) winding form at PPPL	18NOV02A	31MAR03A	0	100	0.00	0.00	
L4-140	Place contract for 2nd and 3rd winding forms	18NOV02A	17DEC02A	0	100	0.00	0.00	
L4-146	Fab and Deliver 2nd winding form	18DEC02A	31JAN03A	0	100	0.00	0.00	
L4-149.1	Fab & Deliver 3rd winding form	03JAN03A	31JAN03A	0	100	0.00	0.00	
L4-152	Fab and deliver 4th winding form (oval)*DELETED*	01APR03	31MAR03	0		0.00	0.00	2,476
L4-300	Place contract for Oval Tee Mold (5th)	03FEB03A	27FEB03A	0	100	0.00	0.00	
L4-302	Fab & Deliver Oval Tee Mold (5th)	01MAR03A	31MAR03A	0	100	0.00	0.00	
L4-304	Place Contract for Tee Return Molds (6th)	01OCT03*	14OCT03	0		0.00	0.00	2,320
L4-306	Fab & Deliver Return Molds (6th)	15OCT03	07NOV03	0		0.00	0.00	2,320
Subtotal		01OCT02A	07NOV03	-108		493,391.18	530,462.08	2,320
Job: 1406 - Mod. Coil Winding R&D-CHRZANOWSKI								
141-2-1	Develop VPI mold & impregnation techniques	01OCT02A	30APR03	-22	80	126,182.86	157,728.57	167
L4-129	Prepare TFTR basement for winding R&D, set up eq	04NOV02A	27NOV02A	0		0.00	0.00	
L4-130	Select epoxy resin	02DEC02A	20DEC02A	0		0.00	0.00	
L4-131	Prepare NEPA and WP to cover winding development	02DEC02A	20DEC02A	0		0.00	0.00	
L4-132	Develop VPI procedure for impregnating molded co	19NOV02A	30APR03	0	90	0.00	0.00	124



Run Date 11APR03 15:07

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

NCSX

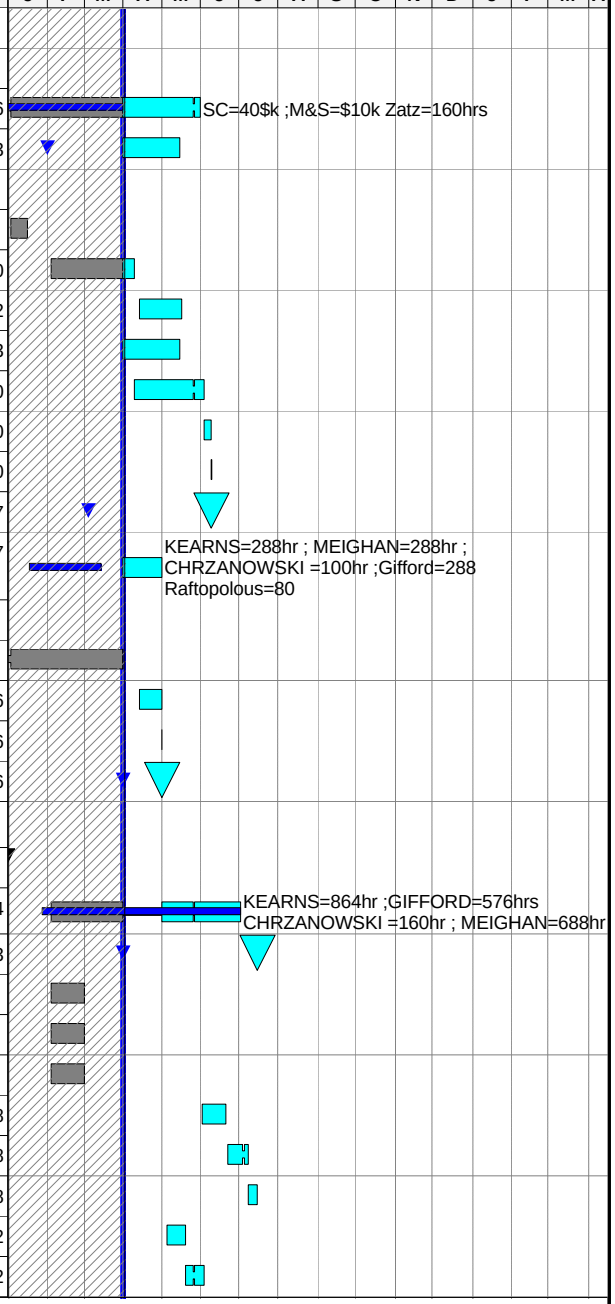
FY03 Work Authorization Plan

Sheet 8 of 20

STATUS THROUGH 3/31/03

© Primavera Systems, Inc.

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
L4-133	Prep single conductor molds and test samples	02DEC02A	17DEC02A	0		0.00	0.00	
L4-134	VPI single conductor test samples	18DEC02A	20DEC02A	0		0.00	0.00	
141-2-1.01	Determine material properties and allowables	02DEC02A	30MAY03	-43	10	3,760.96	90,409.60	146
141-1-3.1	Fabricate Tensile Test Specimens-In House	01APR03*	15MAY03	-75		0.00	0.00	2,443
L4-119	Establish test rqmts	16DEC02A	20DEC02A	0		0.00	0.00	
L4-121	Peer review test plans and specimens	02JAN03A	15JAN03A	0	100	0.00	0.00	
L4-124	Place contracts for outside testing	03FEB03A	08APR03	0	99	0.00	0.00	140
L4-122	Fabricate molds for test speciments	14APR03*	16MAY03	0		0.00	0.00	2,442
L4-123	Fabricate test specimens	01APR03*	15MAY03	0		0.00	0.00	2,443
L4-125	Perform tests on test specimens,estab properties	09APR03*	02JUN03	0		0.00	0.00	140
L4-126	Review results of test program	03JUN03*	09JUN03	0		0.00	0.00	140
L4-127	Update design criteria	10JUN03*	09JUN03	0		0.00	0.00	140
141-2-1.1	Select Epoxy Resin System		09JUN03*	-69		0.00	0.00	2,387
141-2-3	Perform conductor Keystone tests	01APR03*	30APR03	-33	10	3,321.44	98,277.12	167
L4-113	Design winding form	02DEC02A	16DEC02A	0	100	0.00	0.00	
L4-114	Peer review plans for keystoning	17DEC02A	31MAR03A	0	100	0.00	0.00	
L4-116	Tape and wind conductor on winding form, measure	14APR03*	30APR03	0		0.00	0.00	166
L4-117	Review results of keystoning test	01MAY03	01MAY03	0		0.00	0.00	166
141-2-3.1	Keystone tests complete		01MAY03	-23		0.00	0.00	166
141-2-2	Receive, inspect and VPI test coil wound at UT	28OCT02A	20DEC02A	-9	100	33,875.80	33,875.80	
141-2-2.1	VPI of test Coil from UT		20DEC02A	-9		0.00	0.00	
141-2-4	Perform VPI and winding testing	03FEB03A	01JUL03	0	40	79,300.29	198,250.72	124
141-2-4.1	Prelim VPI Process for Mod Coils		14JUL03	-73		0.00	0.00	2,403
L4-143	Wind conductor on 1st winding form	03FEB03A	28FEB03A	0	100	0.00	0.00	
L4-144	Apply mold and VPI 1st winding	03FEB03A	28FEB03A	0	100	0.00	0.00	
L4-145	Inspect and test 1st windings	03FEB03A	28FEB03A	0	100	0.00	0.00	
L4-146.1	Prep & Wind conductor 2nd (twisted) winding form	02JUN03*	20JUN03	0		0.00	0.00	2,378
L4-147	Apply mold and VPI 2nd winding	23JUN03	07JUL03	0		0.00	0.00	2,378
L4-148	Inspect and test 2nd winding	08JUL03	14JUL03	0		0.00	0.00	2,378
L4-149.2	Prep & Wind Demo Coil	05MAY03*	19MAY03	0		0.00	0.00	2,422
L4-150	Apply mold and VPI Demo Coil	20MAY03	02JUN03	0		0.00	0.00	2,422



Run Date 11APR03 15:07

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

NCSX

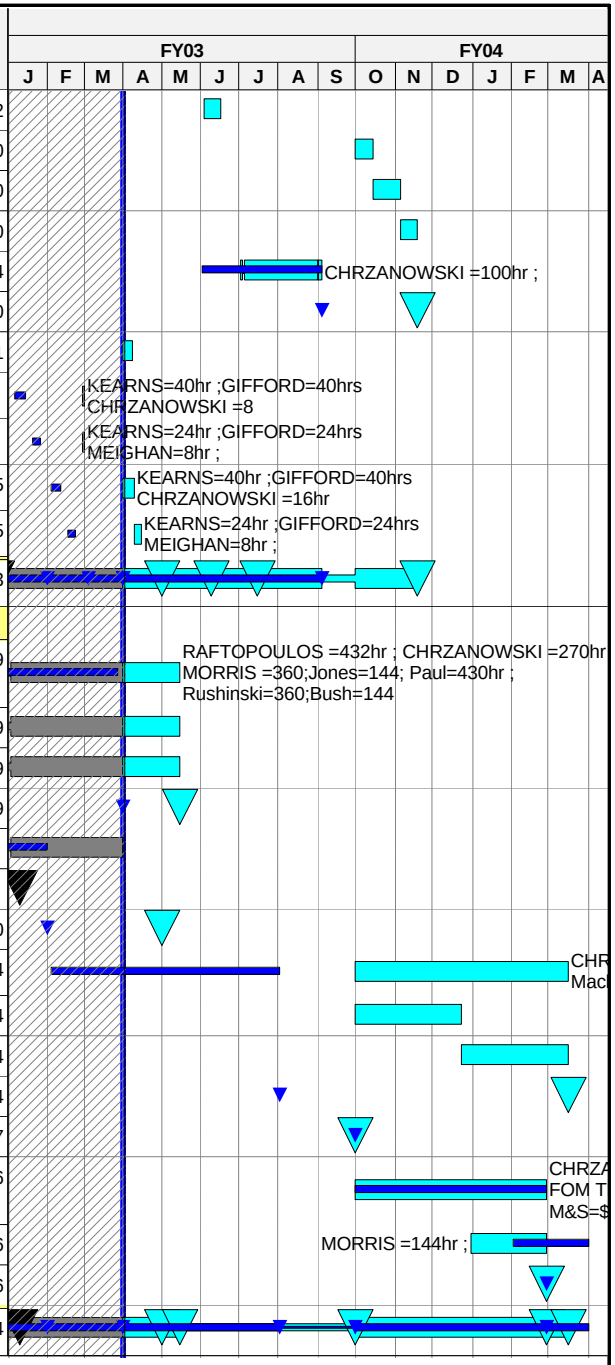
FY03 Work Authorization Plan

Sheet 9 of 20

STATUS THROUGH 3/31/03

© Primavera Systems, Inc.

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
L4-151	Inspect and test Demo Coil	03JUN03	16JUN03	0		0.00	0.00	2,422
L4-177	Prep &Wind conductor 4th (vertical) winding form	01OCT03*	14OCT03	0		0.00	0.00	70
L4-178	Apply mold and VPI 4th winding	15OCT03*	04NOV03	0		0.00	0.00	70
L4-179	Inspect and test 4th winding	05NOV03	18NOV03	0		0.00	0.00	70
141-2-5	Develop winding and VPI procedures for prototype	02JUL03*	03SEP03	0		0.00	15,256.00	124
141-2-5.1	Final VPI Process for Mod Coils		18NOV03*	-54		0.00	0.00	70
L4-115	Fab winding form (outside vendor)	01APR03*	07APR03	0		0.00	0.00	2,471
141-QPS-1	Wind 2nd Test Coil @ PPPL *deleted*	28FEB03A	28FEB03A	-34	DEL	7,056.48	7,056.48	
141-QPS-2	VPI 2nd Test Coil *deleted*	28FEB03A	28FEB03A	-25	DEL	4,301.52	4,301.52	
141-QPS-3	Wind (4) conductor Coil *deleted*	01APR03*	08APR03	-41	DEL	0.00	8,276.96	2,465
141-QPS-4	VPI (4) Conductor Coil *deleted*	09APR03*	15APR03	-37	DEL	0.00	4,301.52	2,465
Subtotal		01OCT02A	18NOV03	-54		257,799.35	617,734.29	2,313
Job: 1407 -Mod Coil Winding Facility-CHRZANOWSKI								
141-3-1	Design Tooling and Winding Facility	01NOV02A	15MAY03	-35	75	206,931.54	275,908.72	259
L4-170	Develop facility requirements and design	09DEC02A	15MAY03	0	50	0.00	0.00	259
L4-171	Complete product specification and fab drawings	09DEC02A	15MAY03	0	50	0.00	0.00	259
141-3-1.4	Complete Design of Tooling and autoclav(SOW 4.8)		15MAY03	-33		0.00	0.00	259
141-3-1.1	Design Autoclave	02NOV02A	31MAR03A	-41	100	0.00	0.00	
141-3-1.2	PDR Autoclave		08JAN03A	-7	100	0.00	0.00	
141-3-1.3	FINAL design Autoclave		30APR03*	-63		0.00	0.00	150
141-3-3	Fabricate Autoclave	01OCT03*	16MAR04	-161		0.00	261,874.54	44
L4-173	Procure components for autoclave	01OCT03	23DEC03	0		0.00	0.00	44
L4-174	Fabricate and install autoclave	24DEC03	16MAR04	0		0.00	0.00	44
141-3-3.1	Fabricate Autoclave		16MAR04	-161		0.00	0.00	44
141-3-35.1	FDR Winding Facility and Tooling		29SEP03*	0		0.00	0.00	57
141-3-35	Fabricate remainder of winding facility	01OCT03*	27FEB04	0		0.00	632,927.58	56
141-3-2	Upgrade tooling drawings as required	31DEC03	27FEB04	23		0.00	15,347.52	56
141-3-35.2	Fabricate Remainder of winding facility complete		27FEB04*	0		0.00	0.00	56
Subtotal		01NOV02A	16MAR04	11		206,931.54	1,186,058.36	44



Run Date 11APR03 15:07

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

NCSX

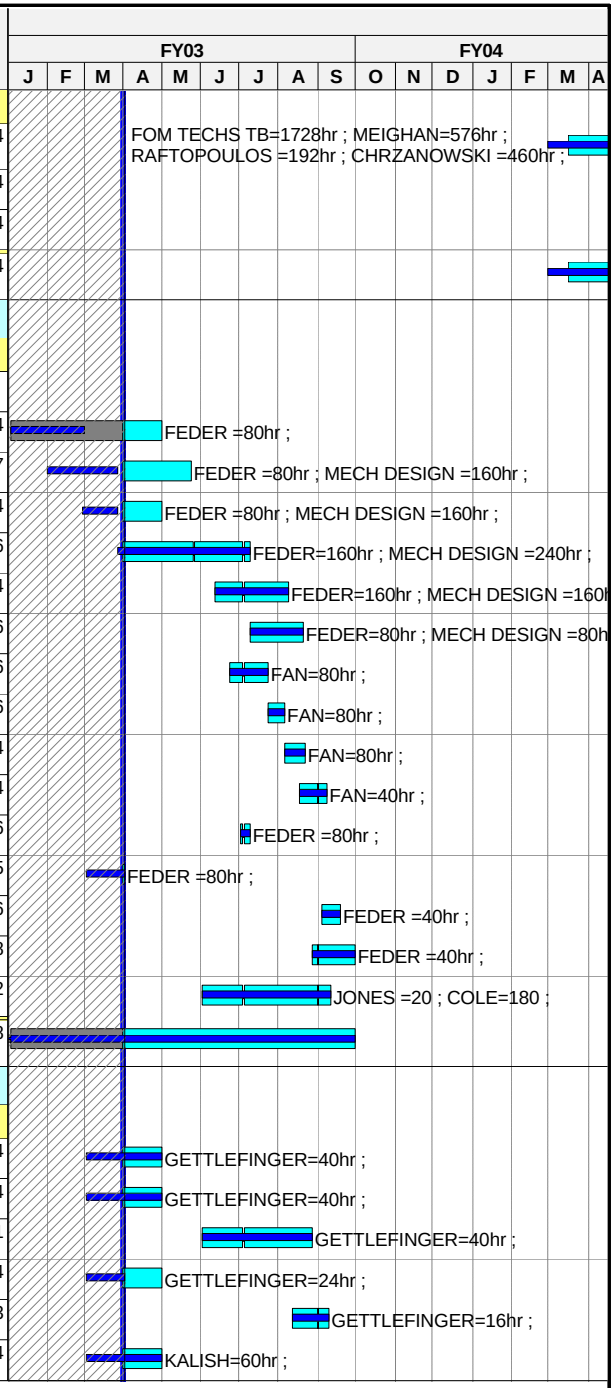
FY03 Work Authorization Plan

Sheet 10 of 20

STATUS THROUGH 3/31/03

© Primavera Systems, Inc.

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
Job:1408-Mod Coil Proto Coil Winding-CHRZANOWSKI								
141-3-45	Wind, VPI & test prototype coil	17MAR04*	16JUN04	-12		0.00	306,342.12	44
141-3-45.1	Complete Prototype Winding (SOW 4.9)		16JUN04*	-12		0.00	0.00	44
141-3-45.2	Final Procedures & Process Plan (SOW 4.10)		16JUN04	32		0.00	0.00	44
Subtotal		17MAR04	16JUN04	32		0.00	306,342.12	44
15 - Structures								
Job: 1501 - Structures Design-FEDER								
150-1-0	Update Conceptual Design	14OCT02A	20DEC02A	-2	100	12,268.80	12,268.80	
150-1-1	Draft of 1) SRD, and 2) SDD Section III - Requir	02JAN03A	30APR03	-43	10	1,226.88	12,268.80	2,454
150-1-2	General arrangement models and drawings	01APR03*	23MAY03	-41		0.00	28,249.60	2,437
150-1-3	Interface drawings	01APR03*	30APR03	-24		0.00	28,249.60	2,454
150-2-1	Drawings, models, SDD Sect IV text for TF and ou	01APR03*	09JUL03	0		0.00	48,508.80	2,406
150-2-2	Same data for central solenoid supports and TF b	12JUN03*	08AUG03	0		0.00	40,518.40	2,384
150-2-3	Support structure I&C	10JUL03*	20AUG03	0		0.00	20,259.20	2,376
150-3-1	Develop thermal/structural FEA models of cols, i	24JUN03*	23JUL03	0		0.00	12,204.80	2,396
150-3-2	Incorporate EM loads and load cases from global	24JUL03*	06AUG03	0		0.00	12,204.80	2,386
150-3-3	Evaluate stress/deflection due to EM / gravity /	07AUG03*	22AUG03	0		0.00	12,204.80	2,374
150-3-4	Prepare analysis reports, SDD analysis summary,	18AUG03*	08SEP03	0		0.00	6,102.40	2,364
150-4-1	Document fabrication and assembly options for co	02JUL03*	09JUL03	0		0.00	12,268.80	2,406
150-4-2	Update cost and schedule estimates WBS 15	01APR03*	01APR03	0		0.00	12,268.80	2,475
150-4-3	Prepare plans for FY-04	05SEP03*	18SEP03	0		0.00	6,134.40	2,356
150-4-4	Prepare PDR documentation for WBS 15	28AUG03*	30SEP03	0		0.00	6,134.40	2,348
192-1-2-15	Self consistent models/dwgs Conv coil/strct PDR	02JUN03*	10SEP03	0		0.00	13,220.00	2,362
Subtotal		14OCT02A	30SEP03	0		13,495.68	283,066.40	2,348
16 - Coil Services								
Job: 1601 - Coil Services Design-WILLIAMSON								
161-1-1	Draft "design-to" spec.	01APR03	30APR03	0		0.00	6,134.40	2,454
161-1-2	Interface control documents for modular coils	01APR03	30APR03	0		0.00	6,134.40	2,454
161-1-3	Interface control document for conventional coil	02JUN03*	27AUG03	0		0.00	6,134.40	2,371
161-2-1	Update cost estimate for LN2 distribution system	01APR03	30APR03	-21		0.00	3,680.64	2,454
161-2-2	Update planning for FY-04	12AUG03*	09SEP03	0		0.00	2,453.76	2,363
162-1-1	Interface control documents for modular coils	01APR03	30APR03	0		0.00	9,153.60	2,454



Run Date 11APR03 15:07

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

NCSX

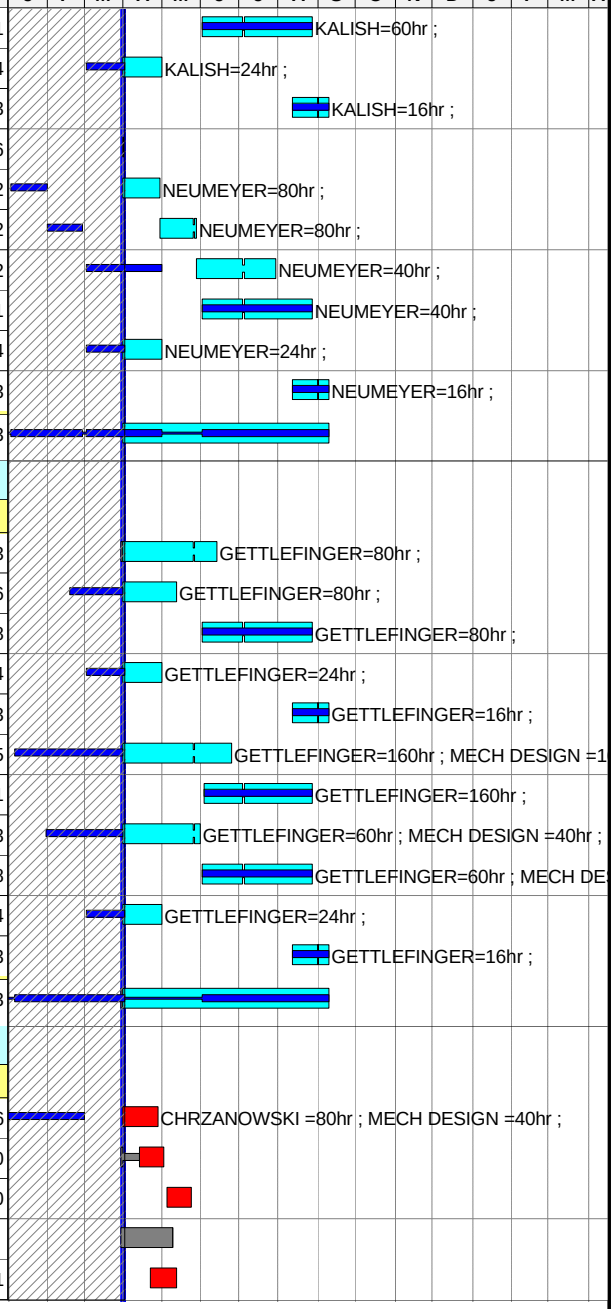
FY03 Work Authorization Plan

Sheet 11 of 20

STATUS THROUGH 3/31/03

© Primavera Systems, Inc.

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
162-1-2	Interface control document for conventional coil	02JUN03*	27AUG03	0		0.00	9,153.60	2,371
162-2-1	Update cost estimate coil electrical leadsWBS162	01APR03	30APR03	-21		0.00	3,661.44	2,454
162-2-2	Update planning for FY-04	12AUG03*	09SEP03	0		0.00	2,440.96	2,363
163-1-1	Design-to specification **N/R**	01APR03	31MAR03	-120		0.00	0.00	2,476
163-1-2	Coil protection system architecture and sys resp	01APR03	29APR03	-63		0.00	11,445.60	2,392
163-1-3	Define Interfaces	30APR03	28MAY03	-63		0.00	11,445.60	2,392
163-2-1	Interface control documents for modular coils	29MAY03	29JUL03	-62		0.00	5,722.80	2,392
163-2-2	Interface control document for conventional coil	02JUN03*	27AUG03	0		0.00	5,722.80	2,371
163-3-1	Update cost estimate coil protection systWBS 163	01APR03	30APR03	-21		0.00	3,433.68	2,454
163-3-2	Update planning for FY-04	12AUG03*	09SEP03	0		0.00	2,289.12	2,363
Subtotal		01APR03	09SEP03	0		0.00	89,006.80	2,363
17 - Cryostat and Base Support Structure								
Job:1701-Cryost&Base Sprt Strct Dsn-GETTLEFINGER								
171-1-0	Update Conceptual design	31MAR03A	13JUN03	-118	3	368.06	12,268.80	2,423
171-1-1	Cryostat interface with VV and Mod coils	01APR03*	12MAY03	-30		0.00	12,268.80	2,446
171-1-2	Cryostat interface with conv coils & structure	02JUN03*	27AUG03	0		0.00	12,268.80	2,348
171-2-1	Cryostst-update cost estimat	01APR03	30APR03	-21		0.00	3,680.64	2,454
171-2-2	Cryostat-update planning for FY-04	12AUG03*	09SEP03	0		0.00	2,453.76	2,363
172-1-1	Base structure Design CAD models/dwgs	01APR03*	25JUN03	-61		0.00	40,518.40	2,415
172-1-2	Base Struct Design analysis reports	03JUN03*	27AUG03	0		0.00	24,537.60	2,371
172-2-1	Base Struct interface with VV and Mod coils	01APR03*	30MAY03	-43		0.00	13,196.80	2,433
172-2-2	Base Struct interface with conv coils and struc	02JUN03*	27AUG03	0		0.00	13,196.80	2,348
172-3-1	Base Struct- update cost estimate	01APR03*	30APR03	-21		0.00	3,680.64	2,454
172-3-2	Base Struct-Update planning for FY-04	12AUG03*	09SEP03	0		0.00	2,453.76	2,363
Subtotal		31MAR03A	09SEP03	0		368.06	140,524.80	2,363
18 - Field Period Assembly								
Job: 1801 - Field Period Assly Dsn-CHRZANOWSKI								
185-1-1	Revised conceptual plan for field period assembl	01APR03	28APR03	-41		0.00	16,200.00	-6
L4-016	Develop concept of tooling and assembly features	31MAR03A	02MAY03	0	10	0.00	0.00	-10
L4-017	Document procedure for FP assembly, conduct revi	05MAY03*	23MAY03	0		0.00	0.00	-10
L4-018	Develop concept of tooling and assembly features	31MAR03A		0	10	0.00	0.00	
L4-019	Document procedure for final assembly, conduct r	22APR03*	12MAY03	0		0.00	0.00	-1



Run Date 11APR03 15:07

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

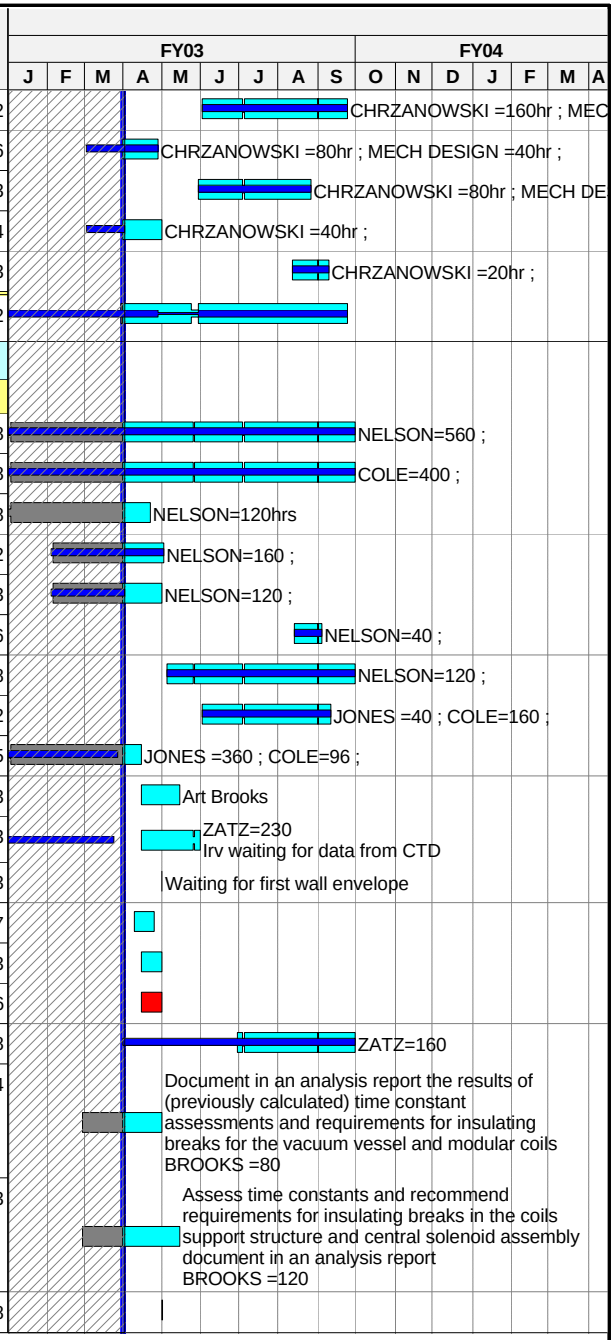
NCSX
FY03 Work Authorization Plan

Sheet 12 of 20

STATUS THROUGH 3/31/03

© Primavera Systems, Inc.

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
185-1-2	Layouts and preliminary tooling models and draw	02JUN03*	24SEP03	0		0.00	34,897.00	2,352
185-2-1	Interface control documents for vacuum vessel an	01APR03*	28APR03	0		0.00	16,200.00	2,456
185-2-2	Interface control document for conventional coil	30MAY03*	25AUG03	0		0.00	16,200.00	2,373
185-3-1	Update cost estimate field period assmbly WBS 18	01APR03*	30APR03	-21		0.00	6,102.40	2,454
185-3-2	Update planning for FY-04	12AUG03*	09SEP03	0		0.00	3,051.20	2,363
Subtotal		31MAR03A	24SEP03	0		0.00	92,650.60	2,352
19 - Stellarator Core Management and Integration								
Job: 1901 - Stellarator Core Mngtt&Integr-NELSON								
0191-1-5	LOE-Day to day telecons, meetings,Design and R&D	01OCT02A	30SEP03	0	LOE	44,450.56	91,840.00	2,348
0192-1-3	LOE-Day to day coordin of Pro-E & Pro-Intrali	01OCT02A	30SEP03	0	LOE	27,878.40	57,600.00	2,348
121-1-01	Update Conceptual Design of Stellarator Core	01OCT02A	21APR03	-79	95	18,696.00	19,680.00	2,448
191-1-1	Modular Coil / VV dsn review and documentation	05FEB03A	02MAY03	0	10	2,624.00	26,240.00	2,452
191-1-2	CD 2 cost and schedule update for WBS 1	05FEB03A	01MAY03	-22	10	1,968.00	19,680.00	2,453
191-1-3	FY04 work plans	14AUG03*	04SEP03	0		0.00	6,560.00	2,366
191-1-4	Conventional Coils / support structure dsn rvw	05MAY03*	30SEP03	0		0.00	19,680.00	2,348
192-1-2	Self consistent models/dwgs Conv coil/strct PDR	02JUN03*	10SEP03	0		0.00	26,440.00	2,362
192-1-4	Prepare Stellarator Core Assembly dwgs &assy seq	01NOV02A	15APR03	-13	80	35,539.20	44,424.00	2,465
192-2-2	Material permeability limits vs location	15APR03*	15MAY03	-152		0.00	0.00	2,443
192-2-4	Prepare stellarator core assembly dsn criteria	15APR03*	30MAY03	-48		0.00	35,088.80	2,433
L4-022	Define preliminary S1, S2, and S3 states	01MAY03*	01MAY03	0		0.00	0.00	2,453
L4-023	Confirm final S1, S2, and S3 states	10APR03*	25APR03	0		0.00	0.00	2,457
L4-024	Perform flexibility studies	15APR03*	01MAY03	0		0.00	0.00	2,453
L4-025	Perform initial divertor (edge modeling) studies	15APR03*	01MAY03	0		0.00	0.00	-6
192-2-5A	continuing analysis/final rprts f/mod coil FY 03	30JUN03*	30SEP03	0		0.00	19,527.68	2,348
193-1-1	Doc time cnstnt/rqmnts f/ insul breaks vv/mc	28FEB03A	30APR03	-100	50	6,102.40	12,204.80	2,454
193-1-2	Doc time cnstnt/rqmnts insul breaks struct/solen	28FEB03A	15MAY03	-96	50	9,153.60	18,307.20	2,443
L4-029	Assess time constants and derived rqmts in struc	02MAY03*	01MAY03	0		0.00	0.00	2,388



Run Date 11APR03 15:07

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

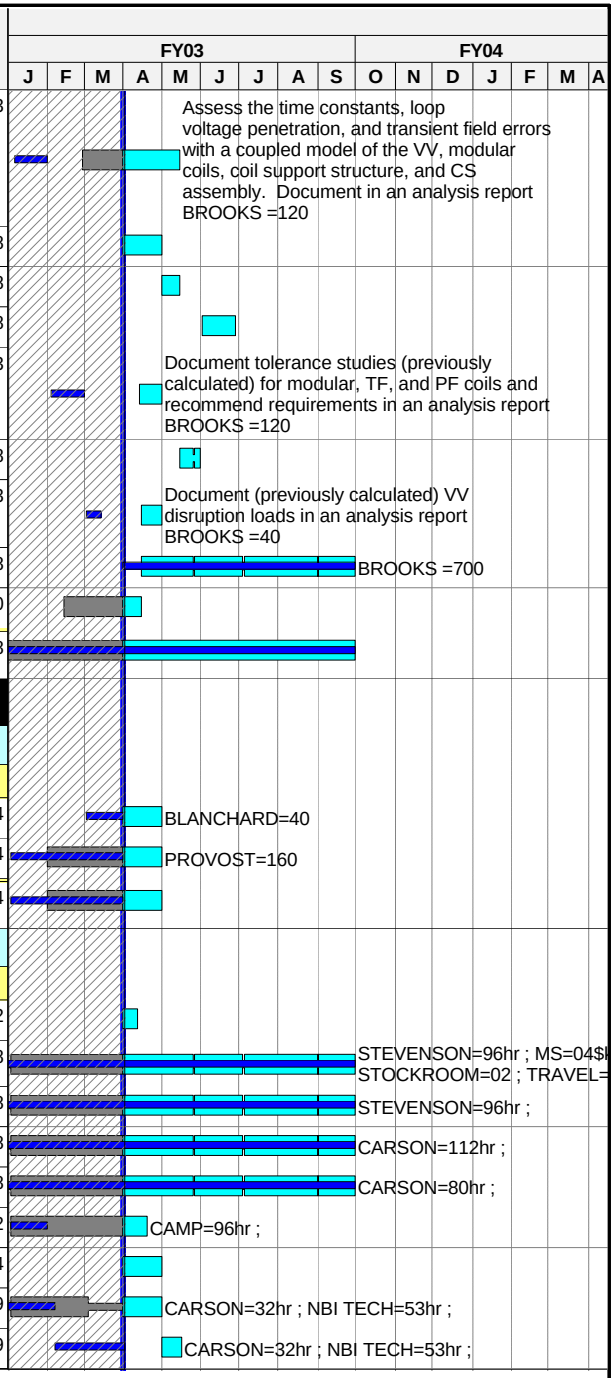
NCSX
FY03 Work Authorization Plan

Sheet 13 of 20

STATUS THROUGH 3/31/03

© Primavera Systems, Inc.

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
193-1-3	Time cnstnt,loop voltage, transient filed errors	28FEB03A	15MAY03	-74	50	9,153.60	18,307.20	2,443
L4-028	Document time constants and derived rqmts for MC	01APR03*	01MAY03	0		0.00	0.00	2,388
L4-030	Assess time constants and field errors in couple	02MAY03*	15MAY03	0		0.00	0.00	2,388
L4-032	Assess potential sources of field errors in TC	02JUN03*	27JUN03	0		0.00	0.00	2,388
193-1-4	Doc. tolerance studies for mod,TF,&PF coils	14APR03*	01MAY03	-44		0.00	18,307.20	2,453
L4-031	Document tolerance studies and derived rqmts	16MAY03*	30MAY03	0		0.00	0.00	2,388
193-1-5	Doc. VV disruption loads	15APR03*	01MAY03	-34		0.00	6,102.40	2,453
193-1-6	EM analysis in final design	15APR03*	30SEP03	0		0.00	106,792.00	2,348
L4-182	Update the ICH (WBS 24) conceptual design for an	14FEB03A	15APR03	0	2	0.00	0.00	2,440
Subtotal		01OCT02A	30SEP03	0		155,565.76	546,781.28	2,348
2 - Plasma Heating, Fueling & Vac Systems								
21 - Fueling Systems								
Job: 2001-VPS,Gas& Cond Sys Oversight-BLANCHARD								
211-0001	CDR Chits and C&S updates	01APR03*	30APR03	-22		0.00	6,134.40	2,454
211-0002	Equipment checkout	31JAN03A	30APR03	-22	LOE	10,494.95	15,998.40	2,454
Subtotal		31JAN03A	30APR03	-22		10,494.95	22,132.80	2,454
25 - Neutral Beam Injection System								
Job: 2501 - Neutral Beam Refurbishment-STEVENSON								
L4-188	Update cost and schedule estimates	01APR03*	11APR03	0		0.00	0.00	2,442
250-0001	Design & work planning	02DEC02A	30SEP03	0	10	2,185.67	21,856.72	2,348
250-0003	Systems Engineering & Interfaces	02DEC02A	30SEP03	0	10	1,373.47	13,734.72	2,348
250-0005	Design Layout and Routing	02DEC02A	30SEP03	0	10	1,142.06	11,420.64	2,348
250-0006	Procedures	28OCT02A	30SEP03	0	15	1,223.64	8,157.60	2,348
250-0007	Power Supply Eval-Pole Xfmr AC Power Test	02JAN03A	18APR03	-55	25	3,433.68	13,734.72	2,462
250-0007.1	AC power equipt Insp, test,maint R367433	01APR03*	30APR03	0	90	0.00	0.00	2,454
250-0009	Power Supply Eval-Clean Accel Rectifier	02DEC02A	30APR03	-60	10	707.37	7,073.74	2,419
250-0011	Power Supply Eval-Hipot Accel Rectifier	01MAY03	16MAY03	-32		0.00	7,073.74	2,419



Run Date 11APR03 15:07

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

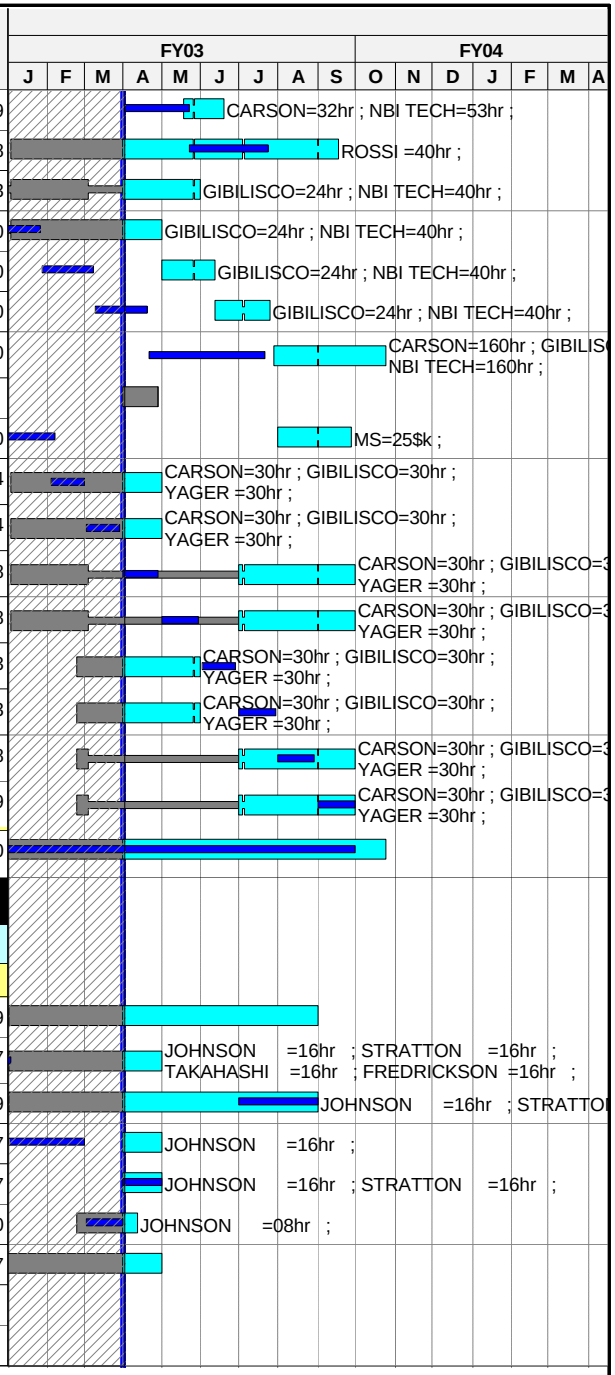
NCSX
FY03 Work Authorization Plan

Sheet 14 of 20

STATUS THROUGH 3/31/03

© Primavera Systems, Inc.

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
250-0013	Power Supply Eval-Local Test Accel Rectifier	19MAY03	19JUN03	-19		0.00	7,073.74	2,419
250-0015	Power Supply Eval-Evaluate Phase Controller	02JAN03A	16SEP03	-37	10	407.88	4,078.80	2,358
250-0017	Power Supply Eval-Modulator Restoration	21OCT02A	30MAY03	-119	50	2,661.64	5,323.28	2,433
250-0019	Power Supply Eval-Fault Detector Evaluation	02DEC02A	30APR03	-68	50	2,661.64	5,323.28	2,330
250-0021	Power Supply Eval-Crowbar Test	01MAY03	12JUN03	-68		0.00	5,323.28	2,330
250-0023	Power Supply Eval-Relocate DL to Mod Area	13JUN03	25JUL03	-68		0.00	5,323.28	2,330
250-0025	Power Supply Eval-Accel System Test	28JUL03	24OCT03	-68		0.00	45,281.00	2,330
250-0025.5	Repair existing leak detector	01APR03A	28APR03A	0		0.00	0.00	
250-0026	Purchase Leak Detector **on hold pending CR**	01AUG03*	26SEP03	-164		0.00	33,000.00	2,350
250-0027	Beamline #1 Evaluations-Vacuum Test	02JAN03A	30APR03	-43	50	4,558.95	9,117.90	2,454
250-0029	Beamline #2 Evaluations-Vacuum Test	02JAN03A	30APR03	-23	30	2,735.37	9,117.90	2,454
250-0031	Beamline #3 Evaluations-Vacuum Test	02JAN03A	30SEP03	-108	5	455.91	9,117.90	2,348
250-0033	Beamline #4 Evaluations-Vacuum Test	02JAN03A	30SEP03	-86	5	455.91	9,117.90	2,348
250-0035	Beamline #1 Evaluations-Cryo Pump Test	24FEB03A	30MAY03	20	10	911.79	9,117.90	2,433
250-0037	Beamline #2 Evaluations-Cryo Pump Test	24FEB03A	30MAY03	41	2	182.35	9,117.90	2,433
250-0039	Beamline #3 Evaluations-Cryo Pump Test	24FEB03A	30SEP03	-22	2	182.35	9,117.90	2,348
250-0041	Beamline #4 Evaluations-Cryo Pump Test	24FEB03A	29SEP03	0	2	182.35	9,117.90	2,349
Subtotal		21OCT02A	24OCT03	-18		25,462.03	266,721.74	2,330
3 - Diagnostics								
39 - Diagnostics Integration								
Job: 3901 - Diagnostics sys Integration-JOHNSON								
390-1	DIAGNOSTIC INTEGRATION	01JAN03A	01SEP03	-239		0.00	0.00	2,369
390-101	refine measurement requirements	01JAN03A	30APR03	-84	40	4,005.96	10,014.88	2,457
390-102	refine diagnostics/research plan	01JAN03A	01SEP03	0	30	1,653.56	5,511.84	2,369
390-103	prepare physics meetings presentations	01APR03*	30APR03	-43		0.00	3,260.32	2,457
390-104	prepare VV PDR material	01APR03*	30APR03	0		0.00	5,511.84	2,457
390-105	review and modify WBS3 cost estimates	24FEB03A	11APR03	-9	10	163.02	1,630.16	2,470
390-2	PORT ORIENTATION/ALLOCATION ISSUES	01OCT02A	30APR03	-151		0.00	0.00	2,457
390-201	prioritize diagnostics for access	01OCT02A	31OCT02A	-1	100	2,755.92	2,755.92	
390-202	prep drawings package for specialist meetings	01OCT02A	31OCT02A	-1	100	4,083.92	4,083.92	



Run Date 11APR03 15:07

© Primavera Systems, Inc.

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

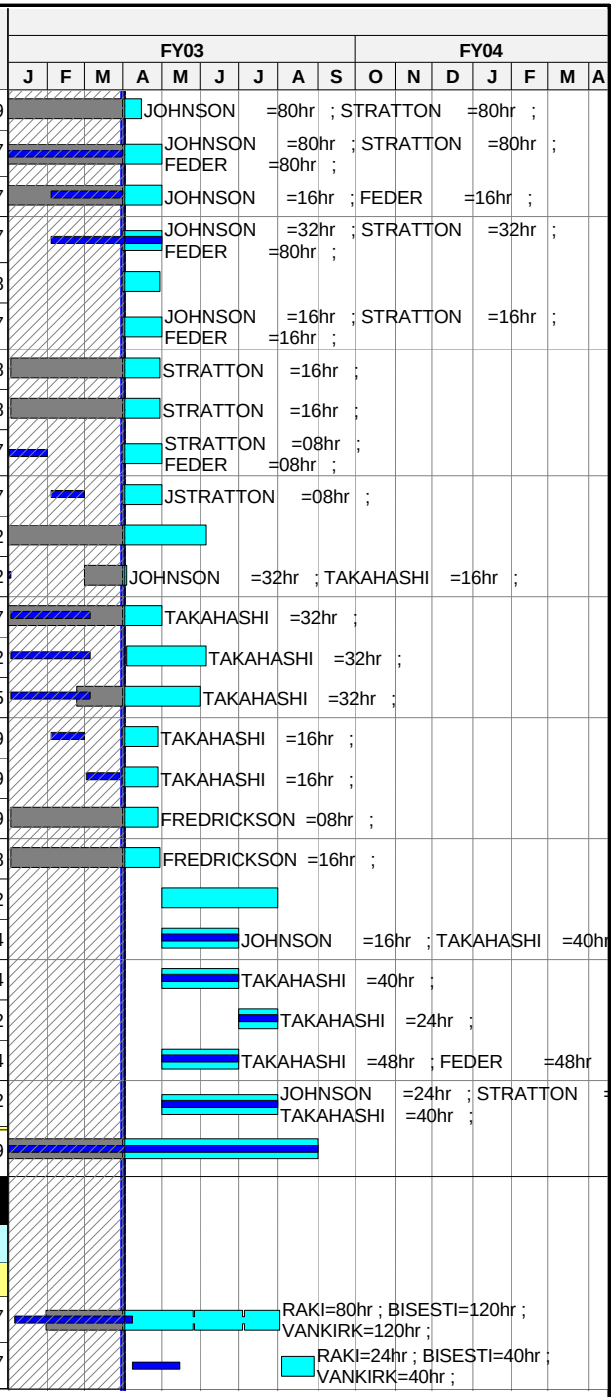
NCSX

FY03 Work Authorization Plan

Sheet 15 of 20

STATUS THROUGH 3/31/03

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
390-203	layouts of diagnostic sightllines	28OCT02A	14APR03	-86	70	19,291.44	27,559.20	2,469
390-204	attend/follow-up wkly meetings on sightlines	02DEC02A	30APR03	-22	50	19,914.00	39,828.00	2,457
390-205	explore cryostat implications	02DEC02A	30APR03	-22	30	1,714.23	5,714.08	2,457
390-206	provide port orientation info f/VV design	01APR03*	30APR03	0		0.00	23,292.48	2,457
390-3	SXR TOMOGRAPHY INTEGRATION INTO VV	01APR03	29APR03	-150		0.00	0.00	2,458
390-301	investigate integration with modified VV wedge	01APR03*	30APR03	-107		0.00	7,965.60	2,457
390-302	invest feasibility of AXUV diode array approach	03JAN03A	29APR03	-86	30	675.46	2,251.52	2,458
390-303	invest feasibility scintillator/fiber optics	03JAN03A	29APR03	-86	20	450.30	2,251.52	2,458
390-304	prepare and present physics meeting presentation	01APR03*	30APR03	-64		0.00	2,352.64	2,457
390-305	provide input to VV PDR	01APR03*	30APR03	-43		0.00	1,125.76	2,457
390-4	MAGNETIC DIAGNOSTICS	02DEC02A	04JUN03	-176		0.00	0.00	2,432
390-401	define measurement reqts for slow magnetics	01MAR03A	03APR03	-65	30	2,631.65	8,772.16	2,432
390-402	invest space envelopes magn sensors inside vsl	02DEC02A	30APR03	-40	70	4,564.45	6,520.64	2,457
390-403	consider altern locations electr vac feedthrus	04APR03	04JUN03	-65		0.00	4,503.04	2,432
390-404	invest space envel for magn sensors outside vsl	24FEB03A	30MAY03	-62	80	3,602.43	4,503.04	2,435
390-405	engr mtg present space envel/mounting concepts	01APR03*	28APR03	-41		0.00	2,251.52	2,459
390-406	document space envelope for slow magnetics	01APR03*	28APR03	-21		0.00	2,251.52	2,459
390-407	define high freq. Mirnov coil requirements	03JAN03A	28APR03	-105	50	562.88	1,125.76	2,459
390-408	conc dsn space envel high freq Mirnov coils	03JAN03A	29APR03	-86	30	675.46	2,251.52	2,458
390-5	E-BEAM CONCEPT EXPLORATION	01MAY03	30JUL03	-216		0.00	0.00	2,392
390-501	define space and time resolution requirements	01MAY03*	30JUN03	0		0.00	8,889.12	2,414
390-502	define vacuum scenarios to be probed	01MAY03*	30JUN03	0		0.00	5,628.80	2,414
390-503	prep physics mtg presenta reqnts, scenarios	01JUL03*	30JUL03	0		0.00	3,377.28	2,392
390-504	continue concept exploration detecting e-beam	01MAY03*	30JUN03	0		0.00	14,115.84	2,414
390-601	Investig Diagn Issues w/other stellartor groups	01MAY03*	30JUL03	0		0.00	16,148.08	2,392
Subtotal		01OCT02A	01SEP03	0		66,744.68	225,448.00	2,369



4 - Electrical Power Systems

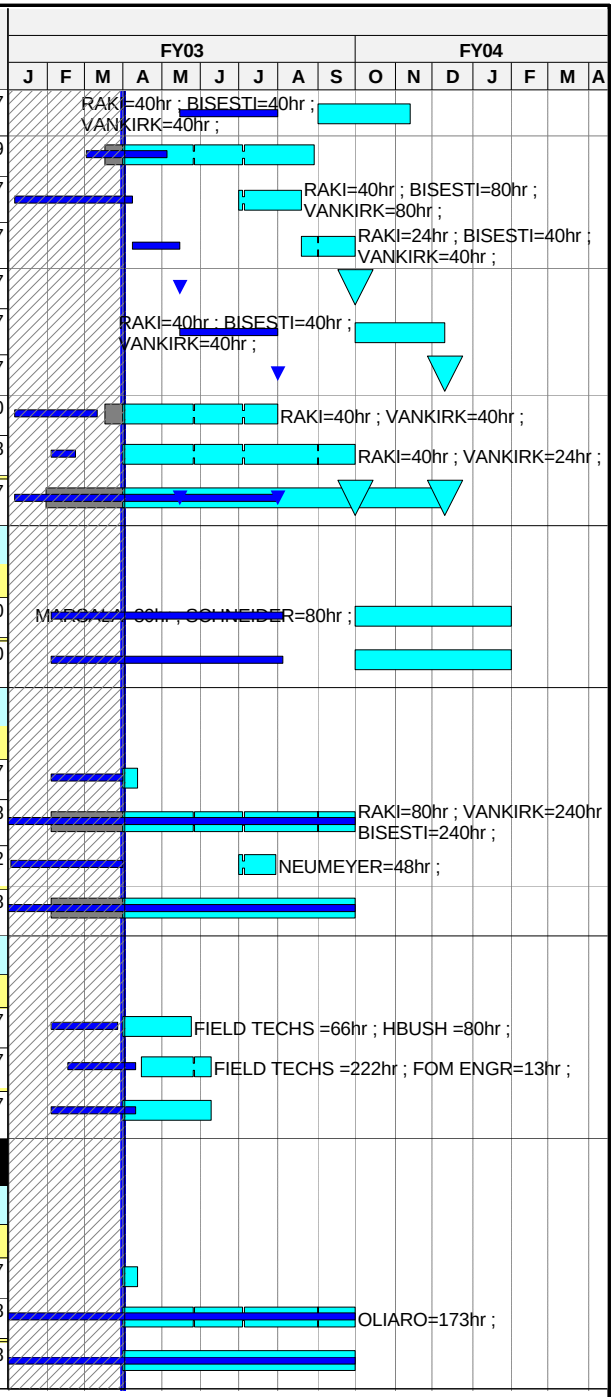
43 - DC Systems

Job: 4301 - ElectrDsn DC SystemsWBS 432&433-RAKI

432-0001	D to C Site DC Cabling -Design & Requisitions	30JAN03A	01AUG03	-82	5	1,770.84	35,416.80	2,317
432-0002	D to C Site DC Cabling -Design Review	04AUG03	29AUG03	-74		0.00	11,424.08	2,317

© Primavera Systems, Inc.

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
432-0004	D to C Site DC Cabling -Final Design	02SEP03	12NOV03	-74		0.00	14,405.69	2,317
432-0006	D Site DC Systems -SOW, IP	17MAR03A	29AUG03	-82	5	0.00	0.00	2,369
433-0001	D Site DC Systems -Design & Requisitions	01JUL03*	19AUG03	-94		0.00	21,703.60	2,297
433-0002	DSite DC Systems -Design Review Prep	20AUG03	29SEP03	-94		0.00	11,424.08	2,297
433-0003	D Site DC Systems and D-C Site DC Cabling-PDR		29SEP03	-94		0.00	0.00	2,297
433-0004	D Site DC Systems -Final Design	30SEP03	10DEC03	-94		0.00	14,852.47	2,297
433-0005	D Site DC Systems and D-C Site DC Cabling-FDR		10DEC03	-94		0.00	0.00	2,297
433-0007	Disconnect & Grid Switch Design	17MAR03A	31JUL03	-101	10	971.80	9,718.00	2,390
433-0008	Disconnect & Grid Switch Procurement spec	01APR03*	30SEP03	-154		0.00	8,119.92	2,348
Subtotal		30JAN03A	10DEC03	-94		2,742.64	127,064.64	2,297
44 - Control and protection Systems								
Job: 4401 - Electr Dsn Control & Protection-RAKI								
445-0001	Coil Protection Design	01OCT03*	30JAN04	-128		0.00	25,393.60	2,260
Subtotal		01OCT03	30JAN04	-128		0.00	25,393.60	2,260
45 - Power System Design and Integration								
Job: 4501 - Electr Sys Design & Integration-RAKI								
451-0000	Update Cost & Schedule Baseline	01APR03*	11APR03	-9		0.00	0.00	2,467
451-0001	Drawings & Documentation Support FY03	03FEB03A	30SEP03	0	5	2,969.40	59,388.00	2,348
451-0002	Calculations FY03	01JUL03*	29JUL03	-84		0.00	6,867.36	2,392
Subtotal		03FEB03A	30SEP03	0		2,969.40	66,255.36	2,348
46 - FCPC Building Modifications								
Job: 4601 - FCPC Bldg Modifications-RAKI								
460-0001	Electrical Clearing (procedures and field)	01APR03*	23MAY03	-41		0.00	18,044.94	2,427
460-0002	Mechanical Clearing (procedures and field)	15APR03	09JUN03	-41		0.00	24,191.46	2,427
Subtotal		01APR03	09JUN03	-41		0.00	42,236.40	2,427
5 - Central I&C Systems								
58 - Central I&C management and Integration								
Job: 5801 -Central I&C Integr & Oversight-OLIARO								
58-2000	Update cost and schedule estimates	01APR03*	11APR03	0		0.00	0.00	2,467
58-2003	Systems Integration and oversight FY03	01APR03*	30SEP03	0		0.00	23,872.27	2,348
Subtotal		01APR03	30SEP03	0		0.00	23,872.27	2,348



Run Date 11APR03 15:07

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

NCSX

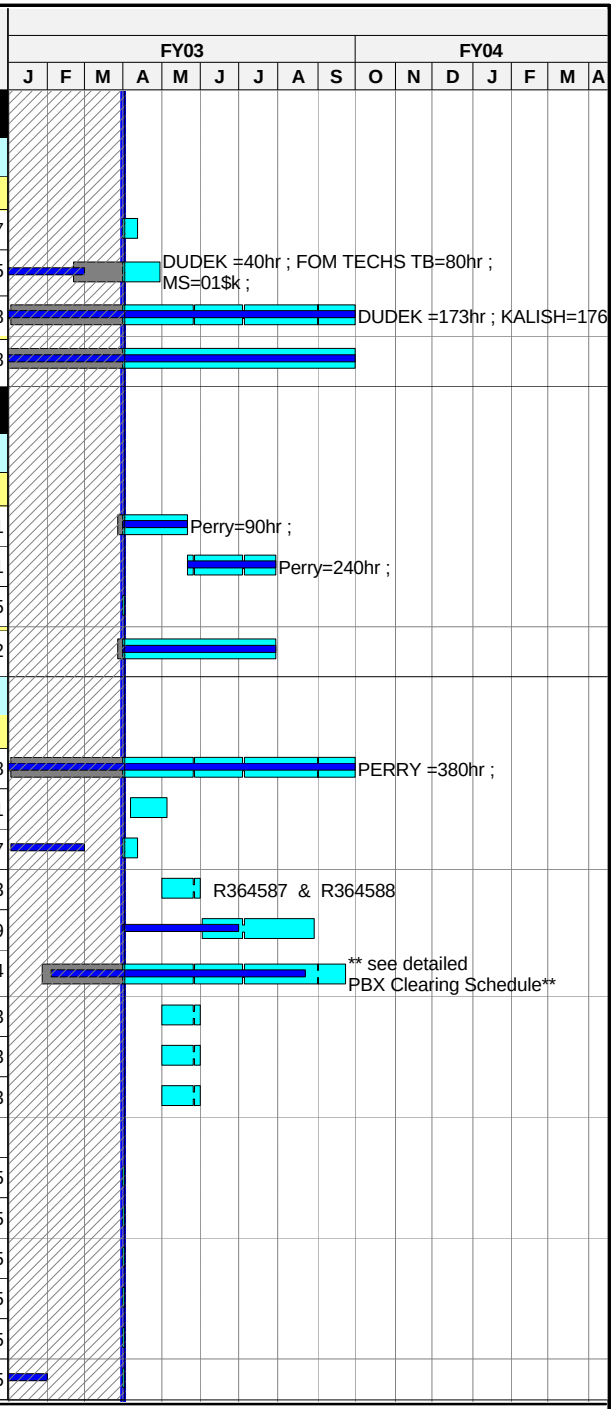
FY03 Work Authorization Plan

Sheet 17 of 20

STATUS THROUGH 3/31/03

© Primavera Systems, Inc.

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
6 - Facility Systems								
65 - Facility Systems Integration								
Job: 6501 - Facility Systems Integration-DUDEK								
611.000	Update cost and schedule estimates	01APR03*	11APR03	0		0.00	0.00	2,467
611.001	Test Decel PS cooling skid	20FEB03A	29APR03	-42	10	1,263.04	12,630.40	2,455
660.101	Integration support (dsn rvws, interfaces, C&S)	01NOV02A	30SEP03	0	LOE	23,007.57	53,381.84	2,348
Subtotal		01NOV02A	30SEP03	0		24,270.61	66,012.24	2,348
7 - Test Cell Preparation and Machine Assy								
71 - Shield Wall Seismic Modifications								
Job: 7101 - Shield Wall Modif Design-PERRY								
613.001	Design	28MAR03A	21MAY03	0		703.92	13,802.40	691
613.005	Final Design	22MAY03	29JUL03	0		0.00	36,806.40	691
613.006	Block relocation **to be scheduled**	01APR03	01APR03	0		0.00	0.00	2,475
Subtotal		28MAR03A	29JUL03	0		703.92	50,608.80	2,392
74 - Machine Assembly Planning and Oversight								
Job: 7401 - TC Prep & Mach Assy Planning-PERRY								
711A.010	LOE FY03	01NOV02A	30SEP03	0	LOE	25,117.30	58,276.80	2,348
711A.010.1	Prep Final Assembly Plan	07APR03*	05MAY03	0		0.00	0.00	2,451
711A.011	Review and update WBS 7 cost/schedule baseline	01APR03*	11APR03	-30		0.00	0.00	2,467
EXFAC001.1	Excess Fac-Crane repairs/mods,CS high bay(cc7230	01MAY03*	30MAY03	0		0.00	0.00	2,433
EXFAC002	Excess Fac.-Savalge vendor remove PBX (cc7230)	02JUN03*	29AUG03	-43		0.00	0.00	2,369
EXFAC003	Excess Fac.-Clear PBX cntrl rm/Safe PBX (cc7230)	27JAN03A	22SEP03	-21		0.00	0.00	2,354
EXFAC004	Remove Fire protection PLT wall (cc9450)	01MAY03*	30MAY03	0		0.00	0.00	2,433
EXFAC005	Remove Fire Protection under platform (cc7230)	01MAY03*	30MAY03	0		0.00	0.00	2,433
EXFAC006	Remove Fire Protection Control rm walls(cc7230)	01MAY03*	30MAY03	0		0.00	0.00	2,433
GPP001	GPP-Upgarde C-Site central chilled wtr plant*TBD	01OCT02A	01OCT02A	0		0.00	0.00	
GPP002	GPP-CS Water sys refurbishment **TBD**	01APR03	01APR03	-120		0.00	0.00	2,475
GPP003	GPP-Demineralizer refurbishment **TBD**	01APR03	01APR03	-120		0.00	0.00	2,475
GPP004	GPP-Roofing **TBD**	01APR03	01APR03	-120		0.00	0.00	2,475
GPP005	GPP-Test Cell lighting **TBD**	01APR03	01APR03	-120		0.00	0.00	2,475
GPP006	GPP-Test Cell HVAC/dew point control **TBD**	01APR03	01APR03	-120		0.00	0.00	2,475
GPP007	GPP-C-Site elevators **TBD**	01APR03	01APR03	-42		0.00	0.00	2,475



Run Date 11APR03 15:07

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

NCSX

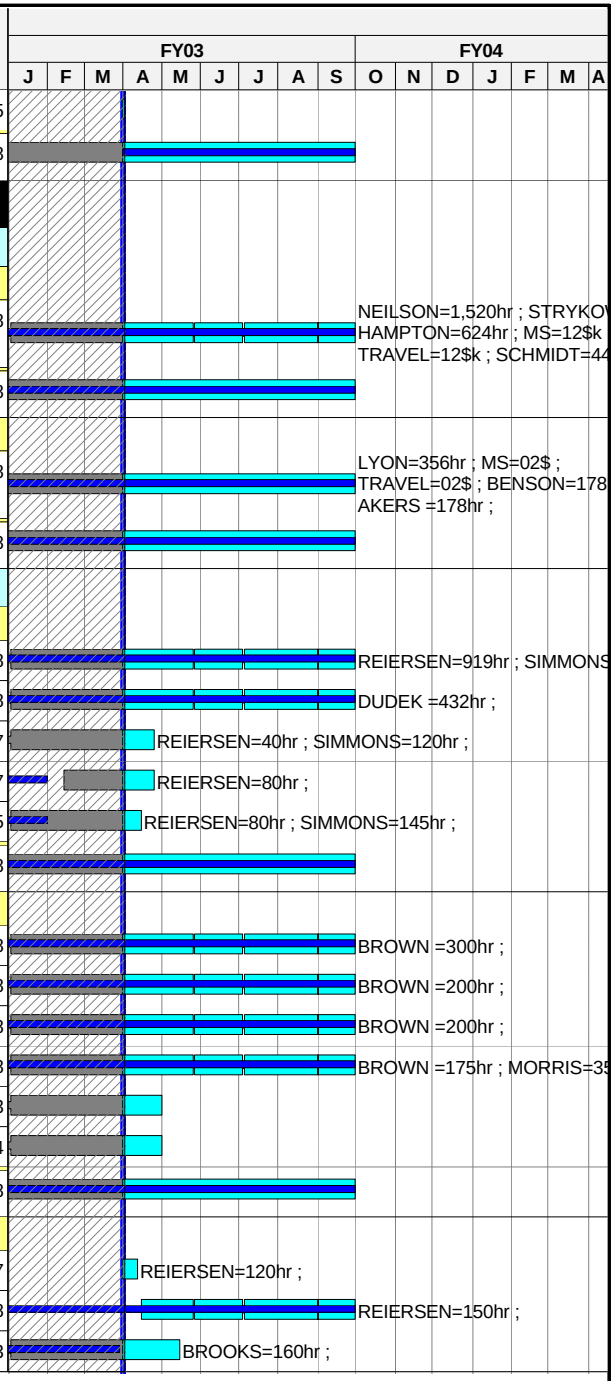
FY03 Work Authorization Plan

Sheet 18 of 20

STATUS THROUGH 3/31/03

© Primavera Systems, Inc.

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
GPP008	GPP-Fire suppression **TBD**	01APR03	01APR03	-120		0.00	0.00	2,475
Subtotal		01OCT02A	30SEP03	0		25,117.30	58,276.80	2,348
8 - Project Oversight and Support								
81 - Project Management and Control								
Job: 8101 - Project Management & Control-NEILSON								
810.001	Project Management Office PPPL FY03	01OCT02A	30SEP03	0	LOE	280,449.87	579,441.91	2,348
Subtotal		01OCT02A	30SEP03	0	LOE	280,449.87	579,441.91	2,348
Job: 8102 - NCSX MIE Management ORNL-LYON								
810.101	Project Management Office ORNL FY03	01OCT02A	30SEP03	-1	LOE	54,348.69	109,133.92	2,348
Subtotal		01OCT02A	30SEP03	-1	LOE	54,348.69	109,133.92	2,348
82 - Project Engineering								
Job: 8202 - Engr Mgmt & Sys Eng Support-REIERSEN								
820.110	General Engr Mgmt & SE support	01OCT02A	30SEP03	0	LOE	146,946.40	303,608.26	2,348
820.111	Oversight of Ancillary Systems WBS 2-6	01OCT02A	30SEP03	0	LOE	32,065.74	66,251.52	2,348
820.112	Compl Project Plans (CMP,ICMP,DMP,DOC,SEMP,RAM	01OCT02A	25APR03	-87	90	23,629.68	26,255.20	2,457
820.113	Prep ISTP Plan	14FEB03A	25APR03	-60	50	6,102.40	12,204.80	2,457
820.114	Complete Dev of Implementing procedures	02JAN03A	15APR03	-52	80	29,244.88	36,556.10	2,465
Subtotal		01OCT02A	30SEP03	0		237,989.10	444,875.88	2,348
Job: 8203 - Design Integration-REIERSEN								
820.150	General Design Integration	01OCT02A	30SEP03	0	LOE	22,151.71	45,768.00	2,348
820.151	Development of Stellarator Core Concepts	01OCT02A	30SEP03	0	LOE	14,767.81	30,512.00	2,348
820.152	Support aux sys interface with WBS 1	01OCT02A	30SEP03	0	LOE	14,767.81	30,512.00	2,348
820.153	Develop/maintain Pro/E model pf NCSX Facility	01OCT02A	30SEP03	0	LOE	29,841.50	61,656.00	2,348
L4-005	Define geometry of TF/PF windings and coil struc	11DEC02A	30APR03	0	80	0.00	0.00	2,453
L400-6	Resolve configuration issues re CS	11DEC02A	30APR03	0	75	0.00	0.00	2,454
Subtotal		01OCT02A	30SEP03	0		81,528.83	168,448.00	2,348
Job: 8204 - Systems Analysis-REIERSEN								
820.170	Develop Technical Data	01APR03*	11APR03	-77		0.00	0.00	2,467
820.171	Update Technical data consistent w/dsn evolution	15APR03*	30SEP03	0		0.00	22,884.00	2,348
820.172	Assess potential sources of field errors in TC	01OCT02A	15MAY03	-34	66	16,110.34	24,409.60	2,443



Run Date 11APR03 15:07

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

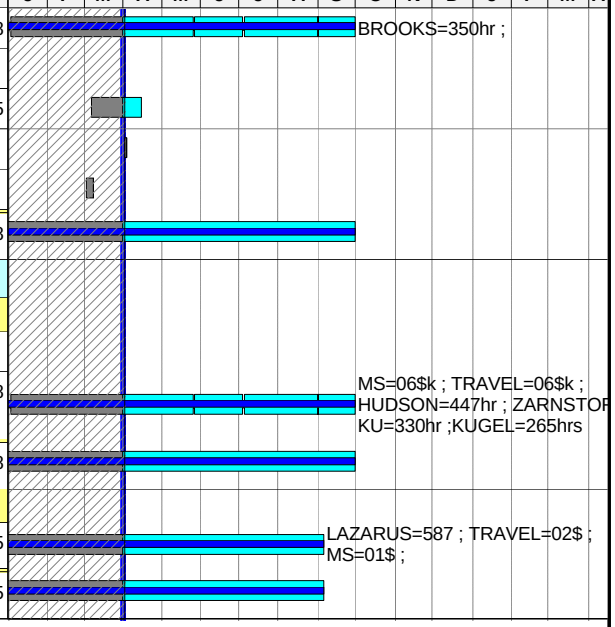
NCSX
FY03 Work Authorization Plan

Sheet 19 of 20

STATUS THROUGH 3/31/03

© Primavera Systems, Inc.

Activity ID	Activity Description	Forecast Start	Forecast Finish	Schedule Slip (days)	% Cmplt	Earned value (BCWP)	Baseline Budget	Total Float
820.173	General syst analysis support	01OCT02A	30SEP03	0	LOE	25,843.66	53,396.00	2,348
L4-007	Define CS coil locations and envelopes	02DEC02A	16DEC02A	0	100	0.00	0.00	
L4-191	Finalize the GRD	07MAR03A	15APR03	0	65	0.00	0.00	2,465
L4-192	GRD spec review	03APR03A	03APR03A	0	100	0.00	0.00	
L4-193	Provide format requirements for performance spec	03MAR03A	08MAR03A	0	100	0.00	0.00	
Subtotal		01OCT02A	30SEP03	0		41,954.00	100,689.60	2,348
84 - Project Physics								
Job: 8401 - Project Physcis-ZARNSTORFF								
840.200	Develop Healed coil design	01OCT02A	16DEC02A	-27		0.00	0.00	
840.201	PPPL Project Physics/Engr Analysis FY03	01OCT02A	30SEP03	0	LOE	121,625.60	251,292.56	2,348
Subtotal		01OCT02A	30SEP03	0		121,625.60	251,292.56	2,348
Job: 8402 - Project Physics MIE ORNL-LYON								
840.301	ORNL Project Physics/Engr Analysis FY03	01OCT02A	05SEP03	0	LOE	52,856.54	99,168.00	2,365
Subtotal		01OCT02A	05SEP03	0	LOE	52,856.54	99,168.00	2,365



Run Date 11APR03 15:07

© Primavera Systems, Inc.

3/1/03 Status (forecast)
WAF 10/1/02 Baseline
Progress Bar
Critical Activity

0303

NCSX

FY03 Work Authorization Plan

STATUS THROUGH 3/31/03