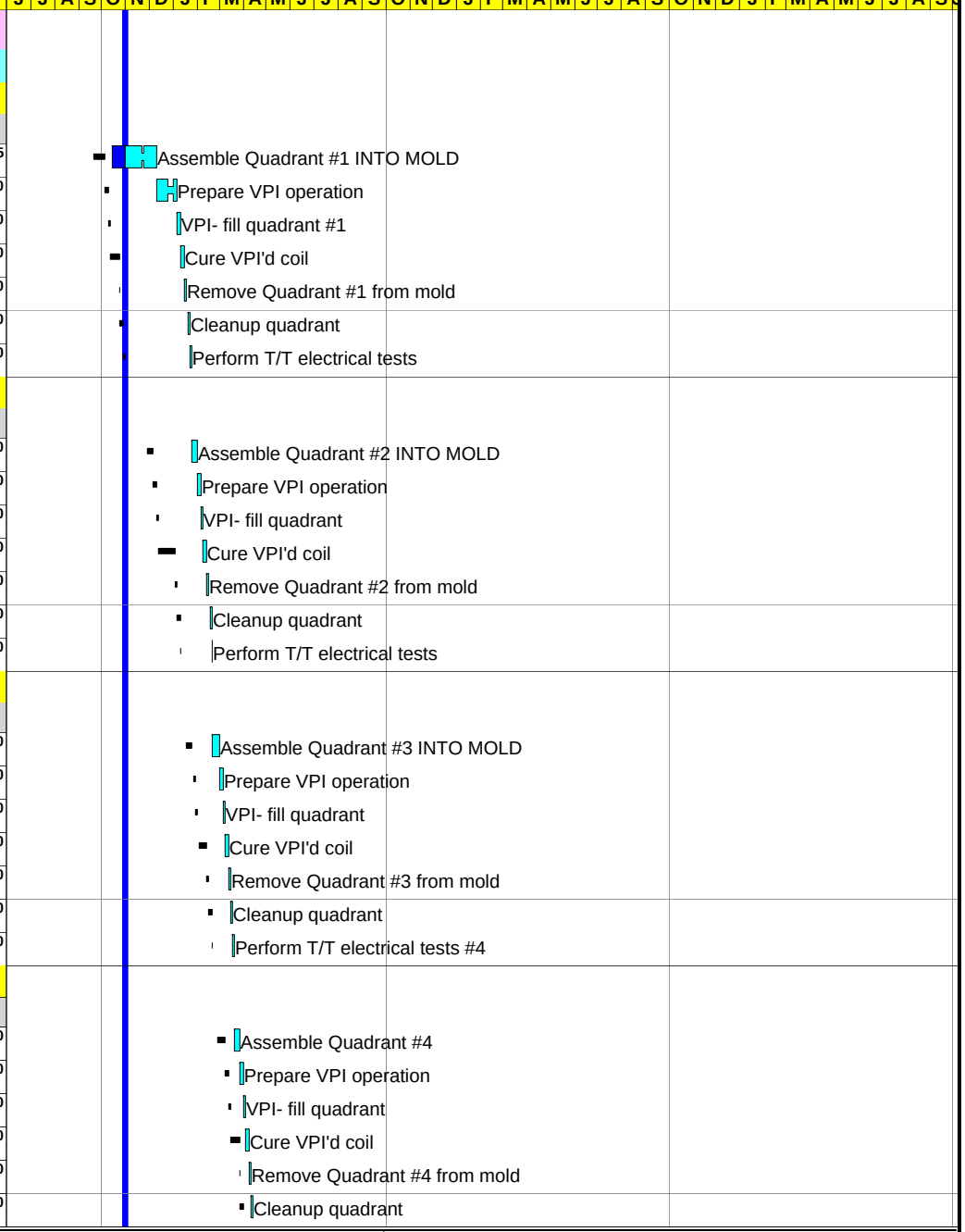
NSTX Upgrade Project

Job: 1305 - OHMIC Heating Coil (OH)-CHRZANOWSKI

Activity ID	Activity Description	Work Days	Forecast Start	Forecast Finish	BL FINISH	Total Float	% Comp
Inner TF Quadrant 1							
CS High Bay							
1304-1530	Assemble Quadrant #1 INTO MOLD	39*	15OCT12A	10DEC12	04OCT12	40	75
1304-1540	Prepare VPI operation	12*	11DEC12	04JAN13	09OCT12	40	0
1304-1550	VPI- fill quadrant #1	4	07JAN13	10JAN13	11OCT12	40	0
1304-1560	Cure VPI'd coil	3	11JAN13	15JAN13	23OCT12	40	0
1304-1570	Remove Quadrant #1 from mold	3	16JAN13	18JAN13	24OCT12	40	0
1304-1580	Cleanup quadrant	2	21JAN13	22JAN13	29OCT12	40	0
1304-1590	Perform T/T electrical tests	1	23JAN13	23JAN13	30OCT12	40	0
Inner TF Quadrant 2							
CS High Bay							
1304-1630	Assemble Quadrant #2 INTO MOLD	6	24JAN13	31JAN13	06DEC12	40	0
1304-1640	Prepare VPI operation	3	01FEB13	05FEB13	11DEC12	40	0
1304-1650	VPI- fill quadrant	2	06FEB13	07FEB13	13DEC12	40	0
1304-1660	Cure VPI'd coil	4	08FEB13	13FEB13	03JAN13	40	0
1304-1670	Remove Quadrant #2 from mold	2	14FEB13	15FEB13	04JAN13	40	0
1304-1680	Cleanup quadrant	2	18FEB13	19FEB13	09JAN13	40	0
1304-1690	Perform T/T electrical tests	1	20FEB13	20FEB13	10JAN13	40	0
Inner TF Quadrant 3							
CS High Bay							
1304-1730	Assemble Quadrant #3 INTO MOLD	6	21FEB13	28FEB13	25JAN13	40	0
1304-1740	Prepare VPI operation	3	01MAR13	05MAR13	30JAN13	40	0
1304-1750	VPI- fill quadrant	2	06MAR13	07MAR13	01FEB13	40	0
1304-1760	Cure VPI'd coil	3	08MAR13	12MAR13	13FEB13	40	0
1304-1770	Remove Quadrant #3 from mold	2	13MAR13	14MAR13	14FEB13	40	0
1304-1780	Cleanup quadrant	2	15MAR13	18MAR13	19FEB13	40	0
1304-1790	Perform T/T electrical tests #4	1	19MAR13	19MAR13	20FEB13	40	0
Inner TF Quadrant 4							
CS High Bay							
1304-1830	Assemble Quadrant #4	6	20MAR13	27MAR13	07MAR13	40	0
1304-1840	Prepare VPI operation	3	28MAR13	01APR13	12MAR13	40	0
1304-1850	VPI- fill quadrant	2	02APR13	03APR13	14MAR13	40	0
1304-1860	Cure VPI'd coil	3	04APR13	08APR13	26MAR13	40	0
1304-1870	Remove Quadrant #4 from mold	2	09APR13	10APR13	27MAR13	40	0
1304-1880	Cleanup quadrant	2	11APR13	12APR13	01APR13	40	0



Data Date 31OCT12
Run Date 03DEC12 08:09

1211
EVMS Rule
A = LOE K = Planning Pkg
B = Milestone
C = % Complete

NSTX UPGRADES
October 31, 2012 Status
Critical Path (total float < 50 days)

Sheet 1 of 5

BASELINE
FORECAST
Progress Bar
Critical Activity

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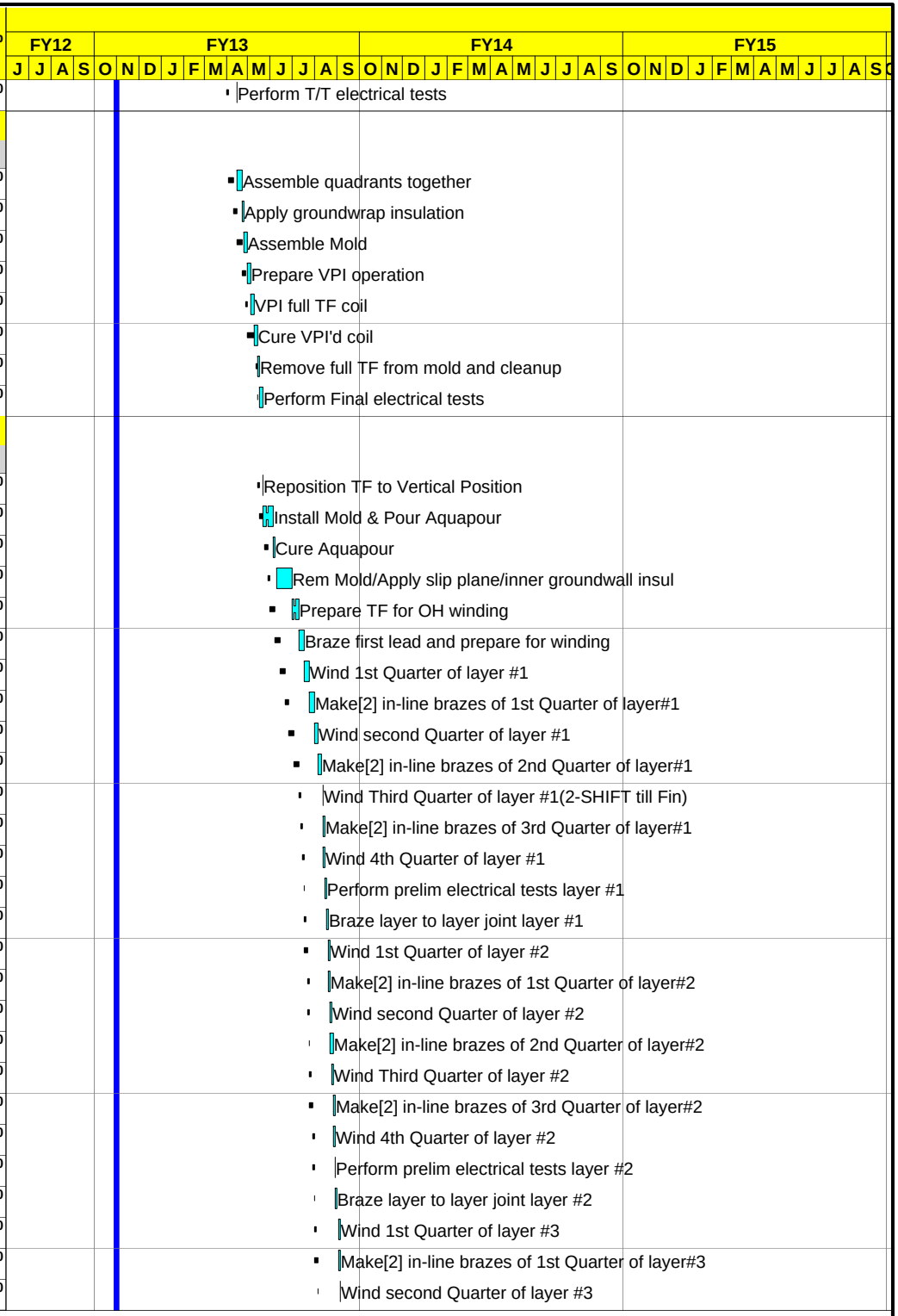
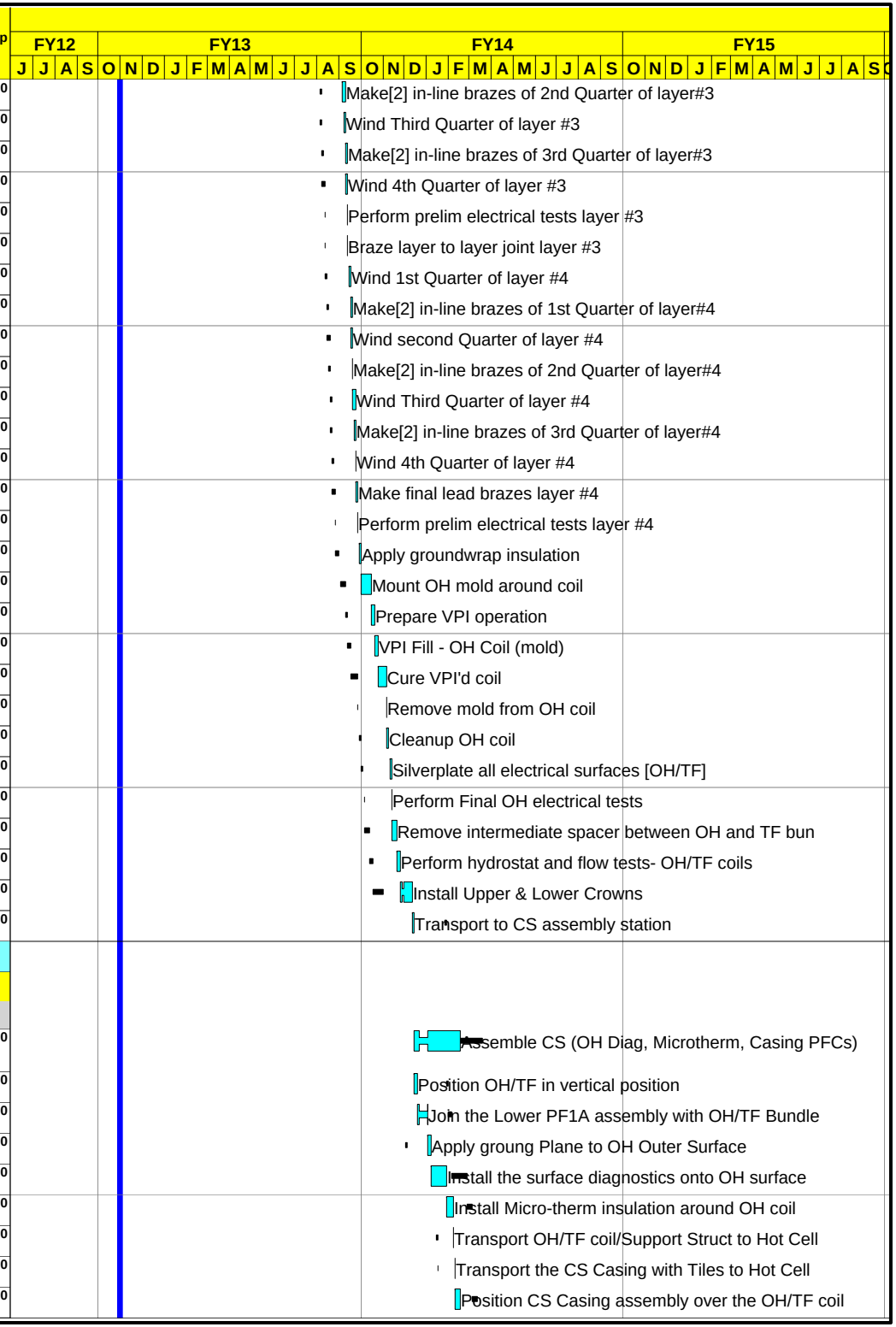
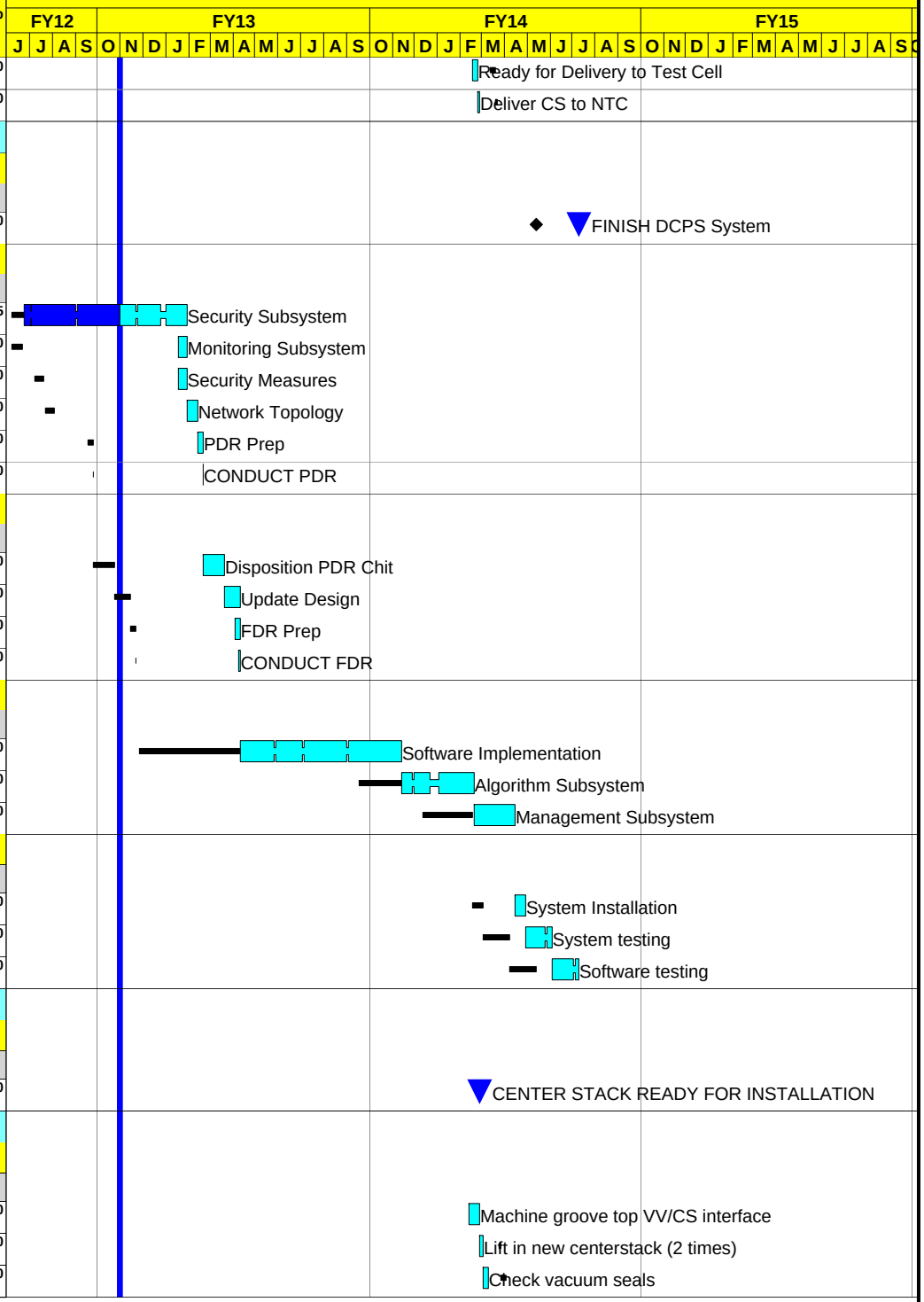
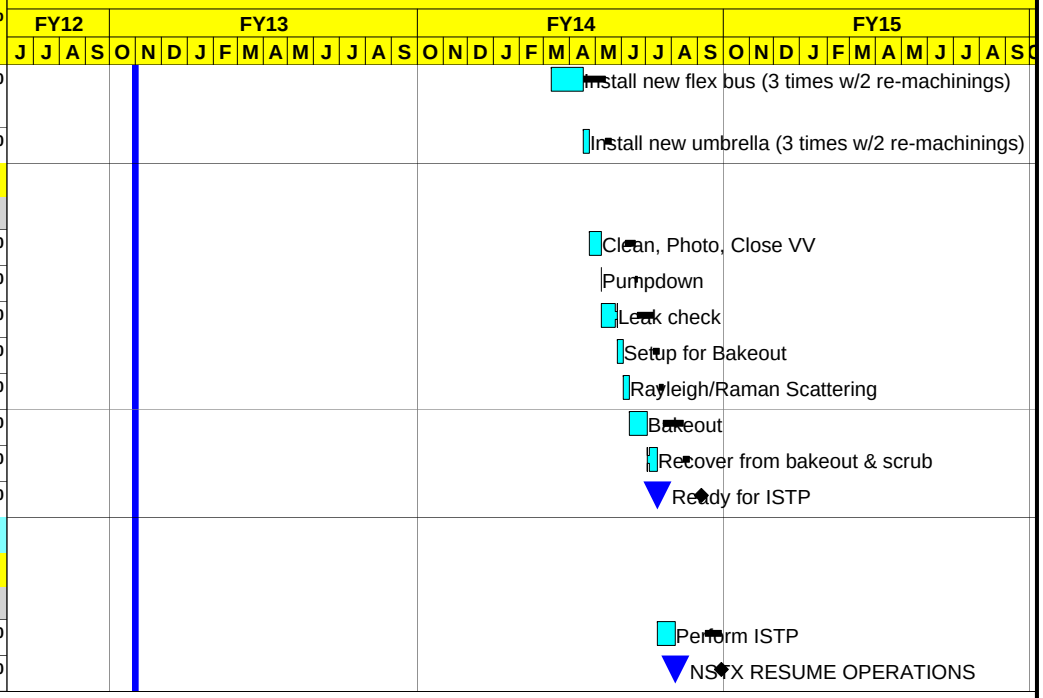
Activity ID	Activity Description	Work Days	Forecast Start	Forecast Finish	BL FINISH	Total Float	% Comp
1304-1890	Perform T/T electrical tests	1	15APR13	15APR13	02APR13	40	0
Inner TF Coil Assemble Quadrants							
CS High Bay							
1304-4800	Assemble quadrants together	5	16APR13	22APR13	11APR13	40	0
1304-4900	Apply groundwrap insulation	2	23APR13	24APR13	16APR13	40	0
1304-4902	Assemble Mold	3	25APR13	29APR13	23APR13	40	0
1304-5000	Prepare VPI operation	4	30APR13	03MAY13	26APR13	40	0
1304-5100	VPI full TF coil	3	06MAY13	08MAY13	30APR13	40	0
1304-5200	Cure VPI'd coil	3	09MAY13	13MAY13	10MAY13	40	0
1304-5300	Remove full TF from mold and cleanup	3	14MAY13	16MAY13	13MAY13	40	0
1304-5400	Perform Final electrical tests	2	17MAY13	20MAY13	14MAY13	40	0
TF/OH Fabrication							
Fabrication / Assembly							
1305-5700A	Reposition TF to Vertical Position	1	21MAY13	21MAY13	15MAY13	40	0
1305-5700B	Install Mold & Pour Aquapour	10	22MAY13	05JUN13	23MAY13	40	0
1305-5700C	Cure Aquapour	2	06JUN13	07JUN13	28MAY13	40	0
1305-5800	Rem Mold/Apply slip plane/inner groundwall insul	16	10JUN13	01JUL13	30MAY13	40	0
1305-5600	Prepare TF for OH winding	4	02JUL13	09JUL13	06JUN13	40	0
1305-5900	Braze first lead and prepare for winding	5	10JUL13	16JUL13	13JUN13	40	0
1305-6000	Wind 1st Quarter of layer #1	5	17JUL13	23JUL13	20JUN13	40	0
1305-6100	Make[2] in-line brazes of 1st Quarter of layer#1	5	24JUL13	30JUL13	26JUN13	40	0
1305-6200	Wind second Quarter of layer #1	4	31JUL13	05AUG13	02JUL13	40	0
1305-6200A	Make[2] in-line brazes of 2nd Quarter of layer#1	4	06AUG13	09AUG13	10JUL13	40	0
1305-6200B	Wind Third Quarter of layer #1(2-SHIFT till Fin)	2	12AUG13	13AUG13	12JUL13	40	0
1305-6200C	Make[2] in-line brazes of 3rd Quarter of layer#1	2	13AUG13	14AUG13	15JUL13	40	0
1305-6200D	Wind 4th Quarter of layer #1	2	14AUG13	15AUG13	16JUL13	40	0
1305-6300	Perform prelim electrical tests layer #1	1	16AUG13	16AUG13	17JUL13	40	0
1305-6400	Braze layer to layer joint layer #1	2	19AUG13	20AUG13	19JUL13	40	0
1305-6500	Wind 1st Quarter of layer #2	2	20AUG13	21AUG13	22JUL13	40	0
1305-6600	Make[2] in-line brazes of 1st Quarter of layer#2	2	21AUG13	22AUG13	23JUL13	40	0
1305-6700	Wind second Quarter of layer #2	2	22AUG13	23AUG13	24JUL13	40	0
1305-6700A	Make[2] in-line brazes of 2nd Quarter of layer#2	2	23AUG13	26AUG13	25JUL13	40	0
1305-6700B	Wind Third Quarter of layer #2	2	26AUG13	27AUG13	26JUL13	40	0
1305-6700C	Make[2] in-line brazes of 3rd Quarter of layer#2	2	27AUG13	28AUG13	29JUL13	40	0
1305-6700D	Wind 4th Quarter of layer #2	2	28AUG13	29AUG13	30JUL13	40	0
1305-6800	Perform prelim electrical tests layer #2	1	29AUG13	29AUG13	30JUL13	40	0
1305-6900	Braze layer to layer joint layer #2	1	30AUG13	30AUG13	31JUL13	40	0
1305-7000	Wind 1st Quarter of layer #3	2	03SEP13	04SEP13	02AUG13	40	0
1305-7100	Make[2] in-line brazes of 1st Quarter of layer#3	2	04SEP13	05SEP13	05AUG13	40	0
1305-7200	Wind second Quarter of layer #3	2	05SEP13	06SEP13	06AUG13	40	0



Activity ID	Activity Description	Work Days	Forecast Start	Forecast Finish	BL FINISH	Total Float	% Comp
1305-7200A	Make[2] in-line brazes of 2nd Quarter of layer#3	2	06SEP13	09SEP13	07AUG13	40	0
1305-7200B	Wind Third Quarter of layer #3	2	09SEP13	10SEP13	08AUG13	40	0
1305-7200C	Make[2] in-line brazes of 3rd Quarter of layer#3	2	10SEP13	11SEP13	09AUG13	40	0
1305-7200D	Wind 4th Quarter of layer #3	2	11SEP13	12SEP13	12AUG13	40	0
1305-7300	Perform prelim electrical tests layer #3	1	12SEP13	12SEP13	12AUG13	40	0
1305-7400	Braze layer to layer joint layer #3	1	13SEP13	13SEP13	13AUG13	40	0
1305-7500	Wind 1st Quarter of layer #4	2	16SEP13	17SEP13	15AUG13	40	0
1305-7600	Make[2] in-line brazes of 1st Quarter of layer#4	2	17SEP13	18SEP13	16AUG13	40	0
1305-7700	Wind second Quarter of layer #4	2	18SEP13	19SEP13	19AUG13	40	0
1305-7700A	Make[2] in-line brazes of 2nd Quarter of layer#4	2	19SEP13	20SEP13	20AUG13	40	0
1305-7700B	Wind Third Quarter of layer #4	2	20SEP13	23SEP13	21AUG13	40	0
1305-7700C	Make[2] in-line brazes of 3rd Quarter of layer#4	2	23SEP13	24SEP13	22AUG13	40	0
1305-7700D	Wind 4th Quarter of layer #4	2	24SEP13	25SEP13	23AUG13	40	0
1305-7700F	Make final lead brazes layer #4	2	25SEP13	26SEP13	26AUG13	40	0
1305-7700E	Perform prelim electrical tests layer #4	1	27SEP13	27SEP13	27AUG13	40	0
1305-7800	Apply groundwrap insulation	3	30SEP13	02OCT13	30AUG13	40	0
1305-7900	Mount OH mold around coil	10	03OCT13	16OCT13	09SEP13	40	0
1305-8000	Prepare VPI operation	3	17OCT13	21OCT13	12SEP13	40	0
1305-8100	VPI Fill - OH Coil (mold)	3	22OCT13	24OCT13	16SEP13	40	0
1305-8200	Cure VPI'd coil	8	25OCT13	05NOV13	26SEP13	40	0
1305-8300	Remove mold from OH coil	1	06NOV13	06NOV13	27SEP13	40	0
1305-8400	Cleanup OH coil	2	07NOV13	08NOV13	01OCT13	40	0
1305-8500	Silverplate all electrical surfaces [OH/TF]	3	11NOV13	13NOV13	04OCT13	40	0
1305-8600	Perform Final OH electrical tests	1	14NOV13	14NOV13	07OCT13	40	0
1305-8700	Remove intermediate spacer between OH and TF bun	5	15NOV13	21NOV13	14OCT13	40	0
1305-8800	Perform hydrostat and flow tests- OH/TF coils	3	22NOV13	26NOV13	17OCT13	40	0
1305-8800A	Install Upper & Lower Crowns	10	27NOV13	12DEC13	31OCT13	40	0
1305-8900	Transport to CS assembly station	1	13DEC13	13DEC13	27JAN14	40	0
Job: 1302 - Center Stack Assembly-CHRZANOWSKI							
Fabrication / Assembly							
1302-1500	Assemble CS (OH Diag, Microtherm, Casing PFCs)	38	16DEC13	17FEB14	20MAR14	45	0
1302-1500A	Position OH/TF in vertical position	3	16DEC13	18DEC13	30JAN14	40	0
1302-1500B	Join the Lower PF1A assembly with OH/TF Bundle	3	19DEC13	02JAN14	04FEB14	40	0
1302-1501B	Apply groung Plane to OH Outer Surface	3	03JAN14	07JAN14	04DEC13	40	0
1302-1500C	Install the surface diagnostics onto OH surface	15	08JAN14	28JAN14	25FEB14	40	0
1302-1500D	Install Micro-therm insulation around OH coil	7	29JAN14	06FEB14	06MAR14	40	0
1302-1501D	Transport OH/TF coil/Support Struct to Hot Cell	1	07FEB14	07FEB14	16JAN14	40	0
1302-1502D	Transport the CS Casing with Tiles to Hot Cell	1	10FEB14	10FEB14	17JAN14	40	0
1302-1500E	Position CS Casing assembly over the OH/TF coil	5	11FEB14	17FEB14	13MAR14	40	0



Activity ID	Activity Description	Work Days	Forecast Start	Forecast Finish	BL FINISH	Total Float	% Comp
1302-1500F	Ready for Delivery to Test Cell	5	18FEB14	24FEB14	20MAR14	40	0
1302-1550	Deliver CS to NTC	1	25FEB14	25FEB14	21MAR14	40	0
Job: 5200 - Digital Coil Protection-HATCHER							
Software Requirement Document							
Hatcher							
5200-1610	FINISH DCPS System	0		10JUL14	12MAY14	42	0
DCPS Software - Preliminary Design							
Erickson							
5200-1090	Security Subsystem	147*	25JUN12A	30JAN13	06JUL12	42	5
5200-1110	Monitoring Subsystem	10	17JAN13	30JAN13	21JUN12	42	0
5200-1190	Security Measures	10	17JAN13	30JAN13	20JUL12	42	0
5200-1180	Network Topology	10	31JAN13	13FEB13	03AUG12	42	0
5200-1200	PDR Prep	5	14FEB13	20FEB13	24SEP12	42	0
5200-1210	CONDUCT PDR	1	20FEB13	20FEB13	25SEP12	42	0
DCPS Software - Final Design							
Erickson							
5200-1220	Disposition PDR Chit	20	21FEB13	20MAR13	23OCT12	42	0
5200-1230	Update Design	15	21MAR13	10APR13	13NOV12	42	0
5200-1250	FDR Prep	5	04APR13	10APR13	20NOV12	42	0
5200-1260	CONDUCT FDR	1	10APR13	10APR13	21NOV12	42	0
DCPS Software - Implementation							
Erickson							
5200-1270	Software Implementation	150	11APR13	12NOV13	16SEP13	42	0
5200-1320	Algorithm Subsystem	60	13NOV13*	18FEB14	11DEC13	42	0
5200-1330	Management Subsystem	40	19FEB14	15APR14	17FEB14	42	0
DCSP Software - Installation							
Erickson							
5200-1370	System Installation	10	16APR14*	29APR14	03MAR14	42	0
5200-1380	System testing	25	30APR14	04JUN14	07APR14	42	0
5200-1390	Software testing	25	05JUN14	10JUL14	12MAY14	42	0
Job: 8210 - Field Supervision & Oversight-PERRY							
Prerequisites							
Installation							
8200-0007	CENTER STACK READY FOR INSTALLATION	0	26FEB14			40	0
Job: 8250 - Remove/Install Centerstack-PERRY							
Install New Centerstack							
Installation							
8250-128	Machine groove top VV/CS interface	10	12FEB14	25FEB14		40	0
8250-129	Lift in new centerstack (2 times)	4	26FEB14	03MAR14	27MAR14	40	0
8250-133	Check vacuum seals	5	04MAR14	10MAR14	03APR14	40	0



Activity ID	Activity Description	Work Days	Forecast Start	Forecast Finish	BL FINISH	Total Float	% Comp
8250-137	Install new flex bus (3 times w/2 re-machinings)	27	11MAR14	16APR14	12MAY14	40	0
8250-141	Install new umbrella (3 times w/2 re-machinings)	6	17APR14	24APR14	20MAY14	40	0
Close Vessel and Pumpdown							
Installation							
8250-145	Clean, Photo, Close VV	9	25APR14	07MAY14	18JUN14	40	0
8250-149	Pumpdown	1	08MAY14	08MAY14	19JUN14	40	0
8250-153	Leak check	12	09MAY14	27MAY14	08JUL14	40	0
8250-157	Setup for Bakeout	5	28MAY14	03JUN14	15JUL14	40	0
8250-161	Rayleigh/Raman Scattering	5	04JUN14	10JUN14	22JUL14	40	0
8250-165	Bakeout	16	11JUN14	02JUL14	13AUG14	40	0
8250-169	Recover from bakeout & scrub	7	03JUL14	14JUL14	22AUG14	40	0
8250-173	Ready for ISTP	0		14JUL14	05SEP14	40	0
Job: 7900 - Integrated System Test-GENTILE							
Integrated System Testing (WBS 1.7 / Job 7900)							
Fabrication / Assembly							
7900-140	Perform ISTP	15	15JUL14	04AUG14	29SEP14	40	0
7900-999	NSTX RESUME OPERATIONS	0		04AUG14	29SEP14	40	0