

NCSX Project Meeting May 14, 2008

Background: This is a report of the Project Meeting held Wednesday, May 14th. The meeting was moved to Wednesday to permit all Job Managers to attend.

The focus of this meeting is to primarily look at the next three weeks and the actions needed to ensure that the scheduled items will be met. The RLMs conduct this meeting using the three month look-ahead schedule that is sent out prior to the meeting. These minutes include:

- Summary of actions identified during the meeting;
- Safety minute briefing;
- Three week look ahead schedule; and
- Action items from previous and the current meeting

Meeting Minutes:

Safety Briefing – Phil Heitzenroeder presented a Safety Minute on sleep deprivation. Sleep deprivation and exhaustion are a major cause of accidents, comparable to alcohol impairment. It is a risk factor that should be taken into account in preparing to perform hazardous activities.

Heitzenroeder (RLM)

- Art Brooks (Job 8204) – it was noted that Art’s group has been performing unplanned and likely unbudgeted work. Art was given an action to add these tasks (i.e., scenario development, fault modes, magnetic materials studies, time constant if inconel hoses are used & insulating breaks eliminated, eddy currents, estimates to the ETC. **(Brooks)**
- Tom Brown (Jobs 8203/8205 Design Integration) – Tom reviewed his work load and was requested to add more granularity of his WAF on the work being performed, **(Brown)**
- Jim Chrzanowski – Mike Kalish reporting - Jobs 1302/1352 – PF coil procurement ready to be awarded – placed on HOLD by OFES pending decision on NCSX.
- Mike Cole (Jobs 1353/1416/1421/1601/1806/1260).
 - Job 1260 (NB Transition Ducts) – new engineer will be assigned in next few weeks – in the interim, Mike Cole will have the lead. Peer review forecast for June 23rd to address personnel access and interface issues. Need interim milestones to assess whether June 23rd date is realistic **(Cole)** Additionally need to get Site Protection (Jim McGuire involved – **Hutch** will contact Jim.
 - Jobs 1416/1421/1806/1901
 - thermal and structural analysis of MC & LN2 cooling is proceeding – expect to get EM an structural analysis to H.M Fan by end of week and cooling analysis next week.

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- Electrical lead cooling analysis schedule for May 27th is at risk due to loss of designer at ORNL. This info is needed to permit Paul to size the cables. **Mike Cole** to develop work around plan.
- Related question – how do VV Title III jobs and unscheduled work get added and charged? => add to WAF, albeit with no budget and will accept variances. Action: work out plan to collect charges for unplanned work that comes up and propose mechanism for collecting charges for such work to Project (**Harris/Strykowski**)
- Station. 3: Forecast models & drawings approved by May 23rd (primarily due to additional comments received from reviews).
- Increase granularity of schedules in Jobs 1355. Increased granularity provided for other ORNL jobs. (**Cole**)
- Good progress on retiring risk mitigation tasks (3 of 7 completed!). Related question – are there more risk mitigation tasks we should add? (**Cole/Heitzenroeder**)
 - Job 1601-161 (LN₂ Manifolds – PDR still on track for June 2nd or 3rd. Working to establish a baseline for the PDR – SRD should be issued (even if incomplete) before Paul goes on vacation (**Harris/Cole**). Need to organize PDR team for LN₂ manifolds (**Heitzenroeder**)
- Fred Dahlgren (Jobs 1353/1501/1702)
 - FDR for Coil Support Structure delayed to update drawings and some analyses – now project May 23rd . (**Dahlgren**). Heitzenroeder to contact reviewers and finalize date.
 - SRD for Base Support Structure out for sign-off
 - SRD for Coil Support Structure out for sign-off
 - FDR for Coil Support Structures due at end of June. Working on TF support brackets and integrated stress analysis. However, if active cooling becomes a requirement, then this date will be in jeopardy.
- Bob Ellis (Job 8205) - Station. 3 Dimensional Control Plan draft issued last week. Comments due back in May 19th.
- Mike Kalish (Jobs 1361 & 1354):
 - Trim coils. Mike is proceeding to finalize documentation and resolve CHITs. (CSPEC and SOW signed on May 15th)
- Steve Raftopoulos (Jobs 1702 & 6201)
 - Contract with Bagley Associates in process placed for cryosystems support. Also pursuing a contract with a Cryostat expert is determine his availability.
 - Question on whether or not we will route all leads out cyrostat – can we series them internally? (**Heitzenroeder set up meeting to resolve this**)
 - Provide greater granularity on proposed cryostat work (FMEA, SRD, R&D, etc.) (**Raftopoulos/Heitzenroeder**)

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Larry Dudek (RLM)

- Tom Brown (Job 1803/05) wedges received.
- Station 3 clearance studies in progress – report expected at end of week.
- Station 5 6 tooling will be delayed until FY2009, but other Station 5 work will proceed to support assembly operations and planning. New envelop study needed to follow up on the port alignment issues. **(Brown and Cole will work together to do this work)**

- Mike Viola Jobs 1810/1815).
 - NCR 3758 issued to resolve reliability issue on leaking hoses. Vendor has determined that the hoses do leak and nothing that PPPL did contributed to this. Assessing their inspection records, but will replace at no cost.
 - DOE review of lift procedures – need schedule for these three reviews (Makiel)

- Brent Stratton (Job 3101) – installation of Rogowski loops scheduled to be completed by end of May. Work plan developed and being implemented to complete checking of thermocouple leads and heater leads by end of May to support assembly operations. **(Stratton)**

- Goranson (Job 12XX) – need to define path forward for enclosing pyrogel in nomex bats. **Harris** follow up with Benson to define what needs to be done (R&D & procedures).

Don Rej/Jeff Makiel

- Briefly discussed status of OFES decision on NCSX – still no indication of what the decision will be or even when. Issue is that OFES really does want to pursue its goals of evaluation alternates to the tokamak (e.g., NCSX, NSTX, mirror, reverse pinch), but sufficient funds not likely to be available.

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Attachments

Safety Minute for May 14

Phil Heitzenroeder

What is thought to be the underlying cause of...

- 100,000-150,000 motor vehicle crashes
- 4% of all fatal motor vehicle crashes
- As many as 100,000 accidents due to medical errors

It's simply drowsiness due to lack of SLEEP!

- “Drivers who have not had enough sleep can have driving problems that are comparable to those experienced by people with modest blood alcohol levels. The loss of as little as three hours of usual sleep affects an ability to maintain a consistent speed and a stable road position.” [AORNL Journal, Oct. 2003]

Sleep deprivation is thought to be a significant factor in major accidents

- **“60 Minutes checked. The Exxon Valdez spill happened after midnight with a man at the helm who'd slept only four hours the night before; Chernobyl and Three Mile Island also occurred late at night and involved human error. And the assistant captain who crashed the Staten Island ferry into a pier, killing 11, admitted that he felt exhausted before the accident.**

Many people want something associated with morals or management or...alcohol," Dinges remarks. "Those are far more glamorous. But, in reality, many of these disasters involve poor judgments and slowed reactions at a time when people were basically tired and made not complicated mistakes. Simple ones. And that is the hallmark of sleep deprivation."

Some other facts from the “60 Minutes” presentation

- **“In fact, sleep is as essential as food** because they (test rats) will die just about as quick from food as from sleep depravation.
- **Sleep, we’ve been finding, actually can enhance your memories**, so that you’ll come back the next day even better than where you were the day before...
- It’s this odd notion that we all think in Western civilization that we have to stay awake to get more done. And I think that’s simply not true. In fact, I think if you have a good night of sleep, **what you’ll find is that you can get more done than if you simply stay awake.**
- **...the first finding, and it stunned us, was there’s a cumulative impairment** that develops in your ability to think fast, to react quickly, to remember things. And it starts right away.....each day adds an additional burden or deficit to your cognizant abilities
- **I would say that sleep deprivation may be a new risk factor for diabetes.”** (as well as heart disease, high blood pressure, and stroke)

For more information

- http://www.cbsnews.com/stories/2008/03/14/60minutes/main3939721.shtml?source=search_story (the entire video is available here).
- http://www.nhlbi.nih.gov/health/prof/sleep/res_plan/section4/section4d.html (Sleep and safety)
- http://findarticles.com/p/articles/mi_m0FSL/is_4_78/ai_108967596

Activity ID	Activity Description	Duration (work days)	Forecast Start	Forecast Finish	Baseline Finish	Schedule slip to baseline (work days)	Remaining Float	% Cmplt	FY08								
									A	MAY	JUN						
Phil Heitzenroeder										28	5	12	19	26	2	9	16
Brooks																	
Job: 8204 - Systems Analysis-BROOKS																	
8204-FY08X	Systems Analysis, studies & tech assurance FY08	250*	01OCT07A	30SEP08	30SEP08	0	1,521	LOE									
Brown																	
Job: 8203 - Design Integration-BROWN																	
8203FY08-2	Facility models update&integration	377*	01APR08A	30SEP09	30SEP09	0	1,272	LOE									
8203FY08-4	General integration activities	170*	01FEB08A	30SEP08	30SEP08	0	1,521	LOE									
Chrzanowski																	
Job: 1302 - PF Design -CHRZANOWSKI																	
1302-275	Resolve FDR Chits	70*	22FEB08A	30MAY08	02MAY08	-19	1,236	90									
Job: 1352 - PF Coil Procurement-CHRZANOWSKI																	
PF Coil Fabrication																	
1352-100	Materials Delivery PF 4,5,6	69*	01APR08A	08JUL08	07JUL08	-1	1,580	16									
141-035E	DOE Approval	0		16MAY08*	09MAY08*	-5	303										
141-038.1	PF Conductor Delivery	105*	21FEB08A	18JUL08	18JUL08	0	356	1									
141-036	PF Coils Awarded	0		30MAY08*	30MAY08*	0	303										
1352-121	Design/Fab Tooling	85	02JUN08*	30SEP08	30SEP08	0	303										
141-031	Title III engr WBS 132	370	02JUN08*	19NOV09	23OCT09	-19	1,236	LOE									
Cole																	
Job: 1416 - Mod Coil Type AB Fnl Dsn-COLE																	
Analysis and closeout documentation																	
1416-601	Prepare EM and structural analysis of leads	75*	31JAN08A	14MAY08	30APR08	-10	1,617	50									
1416-606	Resolve documentation comments	15	01MAY08	21MAY08	20MAY08	-1	1,612										
1416-650	Prepare cooling analysis of lead area	18	01MAY08*	27MAY08	27MAY08	0	1,609										
1416-651	Prepare cooling analysis coefficient for cryosta	18	01MAY08*	27MAY08	27MAY08	0	1,609										
ECN Modifications																	
1416-801	ECN Mods-Resize vertical port boot	40	01MAY08*	26JUN08	27MAY08	-22	1,587										
1416-802	ECN Mods-Revise Type B cooling lines	40	01MAY08*	26JUN08	27MAY08	-22	1,587										
1416-803	ECN Mods-Issue DXF shim files for fab	40	01MAY08*	26JUN08	27MAY08	-22	1,587										
1416-805	ECN Mods-Add TC's at bottom of 101,102,103 dwgs	40	01MAY08*	26JUN08	27MAY08	-22	1,587										
1416-806	ECN Mods-Revise dwg 123-151	40	01MAY08*	26JUN08	27MAY08	-22	1,587										
Job: 1421 - Mod Coil Interface Design-COLE																	
Inboard Interface-CC																	
1421-3155	Resolve C-C shim FDR comments	20	01MAY08*	29MAY08	28APR08	-22	1,607										
INTRF-100																	
INTRF-100	Misc travel, meetings,reporting,job 1416&1421	271*	01MAY07A	30MAY08	30MAY08	0	1,606	LOE									
Job: 1901 - Stellarator Core Mngt&Integr-COLE																	
191 - Stellarator Core Management & Oversight																	
1901-08	WBS 191 FY08	249*	01OCT07A	29SEP08	29SEP08	0	1,522	LOE									
192 - Stellarator Core Integr & Global Analysis																	
1902-08	WBS 192 FY08	249*	01OCT07A	29SEP08	29SEP08	0	1,522	LOE									

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									MAY	JUN
193 - Risk Mitigation Tasks										
RISK-43	Bolt preload could relax with time.	61	03MAR08A	28JUL08	28JUL08	0	-43	10		
RISK-749	Does design meet GRD requirements for failure re	61	25FEB08A	28JUL08	28JUL08	0	445	50		
RISK-752	Pucks held by Nomex felt-demonstrate feasibility	44	05MAY08*	07JUL08	07JUL08	0	460			
RISK-753	Plan to minimize no. of loose components	50	25FEB08A	11JUL08	11JUL08	0	456	50		
RISK-754	Plans for bushing removal demonstrated via mock-	50	25FEB08A	11JUL08	11JUL08	0	456	50		
RISK-755	Relax fit-up tolerances on remotely handled bush	50	25FEB08A	11JUL08	11JUL08	0	456	50		
RISK-696	consider a bringing all 3 120 degree field perio	227	03MAR08A	31MAR09	31MAR09	0	168	20L		
Job: 1806 - FP Assembly specs and drawings-COLE										
Station 3-Modular Coil to VVSA Assembly										
1803-301	Station 3 Assembly Specification	211*	02JUL07A	06MAY08	30APR08	-4	174	90		
1803-305	Station 3 Assembly Drawings	211*	02JUL07A	06MAY08	30APR08	-4	174	90		
Station 5-Final Field Period Assembly										
1803-501	Station 5 Assembly Specification	22*	07MAY08*	06JUN08	06JUN08	0	236			
1803-509	Field period Assy Dwgs	132*	01FEB08A	06AUG08	06AUG08	0	194	30		
6.00-Final Machine Assembly										
1803-601	Station 6 Assembly Specification	120	01MAY08*	20OCT08	02OCT08	-12	360			
1803-605	Station 6 Assembly Drawings	120	01MAY08*	20OCT08	02OCT08	-12	360			
1803-613	Detail dwgs-man access port (deleted)	0	01MAY08	30APR08	30JAN08	-65	480			
1803-010	meetings,reporting/presentations assy models	194*	31JAN08A	31OCT08	31OCT08	0	1,498	LOE		
Dahlgren										
Job: 1702 - Base Support Struct Design-DAHLGREN										
1702-520	Final design. Assy dwgs, fab dwgs, BOMs,specs/SO	81*	01FEB08A	23MAY08	30APR08	-17	221	70		
1702-522	FDR Prep	5	19MAY08	23MAY08	30APR08	-17	221			
1702-525M	Base Support Structure FDR	0		23MAY08	30APR08	-17	221			
1702-530	Resolve chits, issue dwgs for fab,Issue requisit	10	27MAY08	09JUN08	14MAY08	-17	221			
Job: 1501 - Coil Structures Design-DAHLGREN										
1501-533	Detail CAD Drawings,BOM	270*	01JUN07A	30JUN08	16JUN08	-10	211	75		
1501-533F	Integrated Stress Analysis	186*	01OCT07A	30JUN08	16JUN08	-10	211	75		
1501-535	Develop Interfaces with cryostat	0		30MAY08*	01MAY08*	-20	232			
1501-549	Update C.S.Support Attacgment Design	6	01MAY08*	08MAY08	27MAY08	12	223			
1501-550	Peer review C.S.Design	5	28MAY08	03JUN08	03JUN08	0	211			
Dudek										
Job: 1429 - MC Interface R&D-DUDEK										
Outboard Interface-Friction										
1429-3030	G-10 Test	12	01MAY08*	16MAY08	09MAY08	-5	1,615			
Ellis										
Job: 8205 - Dimensional Control Coordin-ELLIS										
Station 3-Modular Coil to VVSA Assembly										
METDCP-3	Dimensional control plans for station 3	68*	01FEB08A	06MAY08	30APR08	-4	174	67		
STAT3	Station 3 preparations	30	01MAY08	12JUN08	09JUN08	-3	166			

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									MAY		JUN									
									28	5	12	19	26	2	9	16				
METFY08R	Support FPA Station 2	442*	01FEB08A	02NOV09	02NOV09	0	1,249	LOE												
Goranson																				
Job: 1601 - Coil Services Design-GORANSON																				
161 - LN2 Distribution																				
191-001	Title I design WBS 161 LN2 manifolds&piping	86*	01FEB08A	02JUN08	02JUN08	0	230	LOE												
162-201	Layout distribution system header geometry&locat	0		09MAY08*	09MAY08*	0	245	50												
162-209	Perform thermohydraulic analyses	0		16MAY08*	16MAY08*	0	240	90												
162-211	Design hose electric break fittings	0		23MAY08*	23MAY08*	0	235	50												
162-213	Route MC, TF, PF hoses	0		30MAY08*	30MAY08*	0	231	25												
162-215	Develop SRD	0		23MAY08*	23MAY08*	0	235													
191-002	Coil Serv-LN2 manifolds&piping-PDR (incl SRD)	1	03JUN08	03JUN08	03JUN08	0	230													
162-217	PDR	0		03JUN08	03JUN08	0	230													
161-100	meetings/reporting/presentations	267	01FEB08A	24FEB09	24FEB09	0	1,425	LOE												
162 - Electrical Leads																				
1416-503C	Complete drawings of MC power cable connections	95*	01FEB08A	13JUN08	31MAR08	-53	288	50												
132-001	Title I design WBS 162 Coil leads	143*	01FEB08A	21AUG08	21AUG08	0	240	LOE												
161-203	Layout MC stubs, terminations	0		09MAY08*	09MAY08*	0	312	75												
161-205	Determine lead gauges	0		16MAY08*	16MAY08*	0	307	10												
162-100	meetings/reporting/presentations	201*	01FEB08A	12NOV08	12NOV08	0	1,490	LOE												
Heitzenroder																				
Job: 8202 - Engr Mgmt & Sys Eng Sprt-HEITZENROED																				
8205DC	document control & admin support	967*	01FEB08A	13DEC11	13DEC11	0	724	LOE												
8205FY08.2	Engr mgt & systems engr FY08	170*	01FEB08A	30SEP08	30SEP08	0	1,521	LOE												
Kalish																				
Job: 1361 - TF Fabrication-KALISH																				
TF Title III and Fabrication Oversight																				
131-033C	Title III engr,inspection, support	214*	02JAN08A	30OCT08	30OCT08	0	1,499	LOE												
TF Fabrication Contract																				
1361C-113	Fab, Test & Deliver Coil #13	1	16MAY08*	16MAY08	16MAY08	0	531													
Job: 1354 - Trim Coil Design &Procurement-KALISH																				
Trim Coil **Updated estimate**																				
TRIM-120	Modifications to allow for mid-plane coils	100*	25MAR08A	13AUG08	13AUG08	0	331	50												
TRIM-160	Approve Trim Coil Procurement Spec	7*	01MAY08	09MAY08	25APR08	-10	233													
TRIM-170	Complete Trim Coil Detailed Drawings	39*	25MAR08A	16MAY08	06MAY08	-8	228	20												
TRIM-200	Assy drawings & parts list	34*	01APR08A	16MAY08	14MAY08	-2	228	20												
TRIM-210	Prepare for FDR	4	01MAY08	06MAY08	02MAY08	-2	231													
TRIM-220	Trim Coil + Structure FDR	1	06MAY08	06MAY08	05MAY08	-1	231													
TRIM-221	** Trim Coil + Structure FDR **	0		06MAY08	05MAY08	-1	231													
TRIM-230	Resolve Chits	5	07MAY08	13MAY08	12MAY08	-1	231													
TRIM-240	Trim Coil Procurement time	29	19MAY08*	27JUN08	19JUN08	-6	228													
Perry																				
Job: 8215 Plant Design																				
FY07 Rebaseline Exercise																				
8210-08	Plant Design	746*	01FEB08A	31JAN11	31JAN11	0	945	LOE												

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									A							
									MAY			JUN				
									28	5	12	19	26	2	9	16
Raftopolous																
Job: 1701 - Cryostat Design																
1701-090 Cryostat Configuration Peer Review 0 21MAY08* 21MAY08* 0 231																
1701-100 Cryostat- Conceptual Design 56 22MAY08* 11AUG08 11AUG08 0 231																
1751-169 Cryogenic consultant 247 01MAY08* 28APR09 28APR09 0 1,380 LOE																
1751-170 Cryostat & Cryogenic systems oversight&reporting 418* 01FEB08A 29SEP09 29SEP09 0 1,273 LOE																
Job: 6201 - Cryogenic Syst																
621 - LN2 Supply & LN2 coil cooling supply																
62122-300 Conceptual Design 71 01MAY08* 11AUG08 11AUG08 0 325																
6201-169 Cryogenic consultant (Vic Garzotto) 493 01MAY08* 26APR10 26APR10 0 1,134 LOE																
623 - GN2 Cryostat Cooling System																
623-099 GN2 Cryostat Cooling Sys Conceptual design 71 01MAY08* 11AUG08 11AUG08 0 231																

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									MAY	JUN
Larry Dudek										
Brown										
Job: 1803/1805- FPA Tooling/Constr-BROWN										
Station 3-Modular Coil to VVSA Assembly										
1803S3-4	Generate laser screen trace drawings (3 periods)	15	28MAY08	17JUN08	12JUN08	-3	166			
1803S3-6	Station 3 simulation detail model	21	01MAY08*	30MAY08	30MAY08	0	178			
1803S3-7	VV/MC clearance study (for VVSA1)	29*	01APR08A	09MAY08	09MAY08	0	180	22		
1803S3-7B	VV/MC clearance study (for VVSA 2 and 3)	11	15MAY08*	30MAY08	30MAY08	0	1,606			
1803S3-8	Station 3 deflection FEA study	12	12MAY08	28MAY08	28MAY08	0	180			
1803S3-10	Complete station 3 design & analysis	0		30MAY08	30MAY08	0	178			
1803S3-9	Oversite, cost and schedules, reviews	171*	31JAN08A	30SEP08	30SEP08	0	1,521	LOE		
1805S3-2	Left side base grout plates	49*	24MAR08A	30MAY08	30APR08	-21	173			
1805S3-3	MCHP lift fixture frame weldment	49*	24MAR08A	30MAY08	30APR08	-21	173			
1805S3-4	Lift fixture mounting bracket weldments	49*	24MAR08A	30MAY08	30APR08	-21	173			
1805S3-5	Reworked laser frame structure	49*	24MAR08A	30MAY08	30APR08	-21	173			
1805S3-6	Right inboard laser frame structure	49*	24MAR08A	30MAY08	30APR08	-21	173			
1805S3-7	Left inboard laser frame structure	49*	24MAR08A	30MAY08	30APR08	-21	173			
1805S3-8	Laser screen lexan sheet (1/8 x 48" x 96")	49*	24MAR08A	30MAY08	30APR08	-21	173			
1805S3-9	Estimate for Station 2 type alignment system	49*	24MAR08A	30MAY08	30APR08	-21	173			
1805S3-100	Hardware & Misc items	49*	24MAR08A	30MAY08	30APR08	-21	173			
1805S3-110	Misc assembly Cost	49*	24MAR08A	30MAY08	30APR08	-21	173			
1805S3-201	MC base support system (left / rt side)	49*	24MAR08A	30MAY08	30APR08	-21	173			
1805S3-202	Hilman roller - 8-OT plus R & U guides	49*	24MAR08A	30MAY08	30APR08	-21	173			
1805S3-203	AirLoc Wedgmount Precision Levelers	49*	24MAR08A	30MAY08	04AUG08	45	173			
1805S3-204	Lift fixture mounting bracket weldments	49*	24MAR08A	30MAY08	30APR08	-21	173			
1805S3-205	Estimate for Station 2 type alignment system	49*	24MAR08A	30MAY08	30APR08	-21	173			
1805S3-206	Hardware & Misc items	49*	24MAR08A	30MAY08	30APR08	-21	173			
1805S3-207	Misc assembly Cost	171*	31JAN08A	30SEP08	30APR08	-106	1,521			
Station 5-Final Field Period Assembly										
1803S5-14	Oversite, cost and schedules, reviews	170	01MAY08*	09JAN09	29SEP08	-65	1,457	LOE		
6.00-Final Machine Assembly										
1803S6-1	Stage 6 FP support and roller system	187*	01APR08A	02JAN09	25SEP08	-62	341	25		
Chrzanowski										
Job: 1408 - MC Winding Supplies-CHRZANOWSKI										
1408-3	Misc and safety supplies (\$7k/mo.)	276*	23MAY07A	30JUN08	30JUN08	0	1,585	LOE		
1408-4.1	Procure Strain Gages	40*	01APR08A	27MAY08	02JUN08	4	184			
1408-6	VPI clean manifold contract	276*	23MAY07A	30JUN08	30JUN08	0	1,585	25		
1408-8	Cutting hardware for flange bolts	276*	23MAY07A	30JUN08	30JUN08	0	1,585	LOE		
1408-7	Misc tech shop support	276*	23MAY07A	30JUN08	30JUN08	0	1,585	80		
Job: 1451 - Mod Coil Winding-CHRZANOWSKI										
Station 3-Casting Prep & Winding										
P1-161	Wind coil A6	35*	28MAR08A	15MAY08	27MAY08	7	122	75		
P1-170	Instl Chill Plates,Tubing,Bag A6	32*	16MAY08	01JUL08	29JUL08	19	122			
Station 4-Winding, Instl Chill Plates,Tubing,Bag										
P3-170	Instl Chill Plates,Tubing,Bag B6	67*	01FEB08A	05MAY08	30APR08	-3	159	99		

Activity ID	Activity Description	Duration (work days)	Forecast Start	Forecast Finish	Baseline Finish	Schedule slip to baseline (work days)	Remaining Float	% Cmplt	FY08									
									MAY	JUN								
											28	5	12	19	26	2	9	16
Station 5-VPI																		
P3-171V	VPI (Station 5) B6	19	06MAY08*	02JUN08	30MAY08	-1	159											
Station 1 Post VPI																		
P3-171C	Final Clamps & Warm Test (Station1) B5	38*	19MAR08A	09MAY08	13MAY08	2	199	60										
P2-171C	Final Clamps & Warm Test (Station1) B6	16	03JUN08	24JUN08	23JUN08	-1	159											
LOE Oversight & Supervision																		
145XSPRV-	Winding Engineering oversight and supervision	314*	01MAY07A	31JUL08	31JUL08	0	1,563	LOE										
145XSPRV-	Winding Engineering oversight and supervision	356*	01MAY07A	30SEP08	30SEP08	0	1,521	LOE										
145XSPRV-	Winding Engineering oversight and supervision	185*	01NOV07A	31JUL08	31JUL08	0	1,563	LOE										
Job: 1459 - Mod Coil Fabr.Punch List-CHRZANOWSKI																		
Punchlist Tech shop/RESA																		
PLTS-C5	Grinding & Drill Holes -C5	22*	01MAY08	02JUN08	18APR08	-30	271	0										
PLTS-A5	Grinding -A5	23*	01MAY08	03JUN08	31JAN08A	-87	183	0										
PLTS-A6	Grinding -A6	5	01OCT07A	22AUG08	19SEP08	19	122	95										
PLTS-C6	Grinding & Drill Holes -C6	20	01MAY08	29MAY08	27FEB08	-65	182											
PLTS-GRIN	Coil to coil fitup modifications (grinding/cp)	165*	01DEC07A	31JUL08	31JUL08	0	1,563	LOE										
Punchlist- Coil Technicians																		
PLCT-A1	Insul,measure,TC, other punch list-A1	228*	01AUG07A	30JUN08	30NOV07A	-143	1,585	77										
PLCT-A2	Insul,measure,TC, other punch list-A2	228*	01AUG07A	30JUN08	30NOV07A	-143	1,585	72										
PLCT-B1	Insul,measure,TC, other punch list-B1	228*	01AUG07A	30JUN08	30NOV07A	-143	1,585	67										
PLCT-C1	Insul,measure,TC, other punch list-C1	228*	01AUG07A	30JUN08	30NOV07A	-143	1,585	74										
PLCT-B2	Insul,measure,TC other punch list-B2	205*	04SEP07A	30JUN08	08JAN08A	-123	1,585	67										
PLCT-C2	Insul,measure,TC, other punch list-C2	248*	03JUL07A	30JUN08	21DEC07A	-128	98	73										
PLCT-A3	Insul,measure,TC, other punch list-A3	247*	05JUL07A	30JUN08	14FEB08	-96	132	76										
PLCT-A4	Insul,measure,TC, other punch list-A4	246*	06JUL07A	30JUN08	05MAR08	-82	132	76										
PLCT-B3	Insul,measure,TC, other punch list-B3	186*	01OCT07A	30JUN08	20MAR08	-71	40	67										
PLCT-C3	Insul,measure,TC, other punch list-C3	186*	01OCT07A	30JUN08	07APR08	-59	105	74										
PLCT-B4	Insul,measure,TC, other punch list-B4	186*	01OCT07A	30JUN08	21APR08	-49	124	59										
PLCT-C4	Insul,measure,TC, other punch list-C4	233*	25JUL07A	30JUN08	02MAY08	-40	210	76										
PLCT-A5	Insul,measure,TC, other punch list-A5	14	30JUL07A	11JUN08	12MAY08	-21	183	63										
PLCT-A6	Insul,measure,TC,SG other punch list-A6	14	01OCT07A	12SEP08	09OCT08	19	122	36										
PLCT-B5	Insul,measure,TC, other punch list-B5	14	01OCT07A	30JUN08	29OCT08	85	183	36										
PLCT-C5	Insul,measure,TC, other punch list-C5	18	01OCT07A	08MAY08	06NOV08	127	219	73										
PLCT-B6	Insul,measure,TC,SG other punch list-B6	14	01OCT07A	22JUL08	21JUL08	-1	159	36										
PLCT-C6	Insul,measure,TC,SG other punch list-C6	14	01OCT07A	18JUN08	18MAR08	-65	182	59										
PLCT-CRAN	Crane support	207*	01DEC07A	30SEP08	30SEP08	0	1,521	LOE										
Cole																		
Job: 1260 NB Transition Ducts- COLE																		
1260-191	Peer Review to Establish Requirements	20	27MAY08*	23JUN08	23JUN08	0	328											
Dudek																		
Job: 1431 - Mod. Coil Interface Hardware-DUDEK																		
Pucks																		
1429-3110	PPPL cut and grind to thickness	290*	04FEB08A	31MAR09	31MAR09	0	16	11										
Shims-Outboard																		
1429-3066	Outboard Shims	135	03MAR08A	03SEP08	03SEP08	0	79	27										

Activity ID	Activity Description	Duration (work days)	Forecast Start	Forecast Finish	Baseline Finish	Schedule slip to baseline (work days)	Remaining Float	% Cmplt	FY08											
																MAY		JUN		
									28	5	12	19	26	2	9	16				
Shims-Inboard																				
1429-3062X	Inboard Shims	208*	03MAR08A	02JAN09	02JAN09	0	73	17												
Studs,Washers,Nuts																				
1421-3070	Order studs & washers for c-c joint	15	12MAY08*	02JUN08	02JUN08	0	534													
1421-3072	Deliver studs & washers for c-c joint	40	03JUN08	29JUL08	29JUL08	0	534													
1421-3073	Deliver supernuts for c-c joint	40	03JUN08*	29JUL08	29JUL08	0	547													
Misc Tech Shop Support																				
1421-4000	Misc Tech Shop support through sta 2 (1/2 mm/mo.	499*	01OCT07A	30SEP09	30SEP09	0	1,272	LOE												
Perry																				
Job: 7401 - TC Prep & Mach Assy Planning-PERRY																				
GPP Projects Required for NCSX (non-MIE cost)																				
GPP-01	CS Crane	0		30MAY08*	30MAY08*	0	470													
714.020	LOE Prior to assy starting	583*	01OCT07A	25JAN10	25JAN10	0	1,221	LOE												
Stratton																				
Job: 3101 - Magnetic Diagnostics-STRATTON																				
Rogowski Coils																				
3101-352	Assy & detail dgws	71*	01FEB08A	09MAY08	03APR08	-26	404													
3101-353	Prep installation procedure	31	12MAY08	24JUN08	16MAY08	-26	404													
3101-370	Check elect characteristics of cables	30	09MAY08*	20JUN08	23APR10	456	1,591													
3101-351	Wind coils	44*	31MAR08A	30MAY08	16APR08	-31	421	66												
3101-357	Fab coil clamps & ends	12*	15MAY08*	02JUN08	02JUN08	0	420													
3101-359	Install Rogowski coils support (in job 1815)	63*	02APR08A	30JUN08	30APR08	-42	499	20												
3101-360	Title III support	165*	09MAY08*	12JAN09	19MAR10	296	1,456	LOE												
TF and PF Co-wound Loops																				
3101-425	Design Protective boxes for PF	227*	01NOV07A	30SEP08	01APR08	-127	1,431	85												
3101-426	Purchase SS Sheet	220*	12NOV07A	30SEP08	18JUN08	-72	255	80												
3101-452	Form Protective boxes	220*	12NOV07A		23JUN08	-69	80													
3101-454	Weld end plates of PF protective boxes	221*	09NOV07A		30JUN08	-64	80													
3101-427	Purchase Heat Shrink tubing	220*	12NOV07A	30SEP08	19MAY08	-93	1,431	80												
3101-428	Purchase add'l CoAxial cable	46	01MAY08*	07JUL08	07JUL08	0	315	50												
3101-458	Fab PF & solenoid co-wound loops	186	02JUL07A	10NOV08	15AUG08	-60	1,431	50												
T/C and Heater Tape Leads																				
1204-141	Drawings Signed T/C and Heater Tape Leads	0		01MAY08*	01MAY08*	0	278													
1204-144	Check elect characteristics T/C & heater port 12	31*	02MAY08	16JUN08	04AUG08	34	324													
1204-147	Field/Fab support (title III) T/C&Heater Tape	65	02MAY08	04AUG08	04AUG08	0	1,561	LOE												
Voltage Loops & Protective Boxes																				
3101-806	Check elect characteristics of coax	20	16MAY08*	13JUN08	13JUN08	0	1,596	LOE												
3101-807	Check elect characteristics ex-vessel flux loops	32*	01MAY08	16JUN08	30OCT08	96	1,595	LOE												
Job: 3901 - Diagnostics sys Integration-STRATTON																				
390-04	LOE Support FY08	249*	01OCT07A	29SEP08	29SEP08	0	1,522	LOE												

Activity ID	Activity Description	Duration (work days)	Forecast Start	Forecast Finish	Baseline Finish	Schedule slip to baseline (work days)	Remaining Float	% Cmplt	FY08	
									MAY	JUN
Viola										
Job: 1802 - FP Assy Oversight&Support-VIOLA										
Oversight and Supervision										
1802ORNLO	ORNL Title III field period assy station 2	441*	04FEB08A	02NOV09	02NOV09	0	0	LOE		
R1802-003	Metrology Engr Super FY08	250*	01OCT07A	30SEP08	30SEP08	0	1,521	LOE		
R1802-007	FPA Management FY08	250*	01OCT07A	30SEP08	30SEP08	0	1,521	LOE		
R1802-009	PU Title III support	630*	04FEB08A	10AUG10	10AUG10	0	0	LOE		
R1802-010	Drexel co-op student support	630*	04FEB08A	10AUG10	10AUG10	0	0	LOE		
R1802-015	HP Coverage in the TFTR TC LOE FY08	250*	01OCT07A	30SEP08	30SEP08	0	1,521	LOE		
1802MISC	Misc materials,tools, GSA vehicle,rigging	615*	01FEB08A	19JUL10	19JUL10	0	1,076	LOE		
8203FY08.2	Title III Design support FY08 PPPL	170*	01FEB08A	30SEP08	30SEP08	0	1,521	LOE		
Station 3 procedures,JHA,ACC,Training,Prep										
R1802-307	Procedures written & approved	23*	14APR08A	14MAY08	14MAY08	0	168			
R1802-309	JHA completed	6	15MAY08	22MAY08	22MAY08	0	168			
R1802-311	Training needs identified & released	6	23MAY08	02JUN08	02JUN08	0	168			
R1802-313	ACC review completed	6	03JUN08	10JUN08	10JUN08	0	168			
Job: 1810 - Field Period AssyStation 1,2,3 VIOLA										
General Assy Support										
R1810-003	LOE Crane support, fixture setupfor FY08	250*	01OCT07A	30SEP08	30SEP08	0	1,521	LOE		
R1810-025	Crane & Rigging inspections	625*	01FEB08A	02AUG10	02AUG10	0	1,066	LOE		
R1810-035	Welding qualifications	625*	31JAN08A	30JUL10	30JUL10	0	1,067	LOE		
R1810-007	LOE Field Supervision for FY08	250*	01OCT07A	30SEP08	30SEP08	0	1,521	LOE		
R1810-2001	Misc Hardware and hardware rework (1/2 fte loe)	615*	01FEB08A	19JUL10	19JUL10	0	1,076	LOE		
S21-4.02	Perform routine metrology set-up and checks (loe)	526*	01FEB08A	12MAR10	12MAR10	0	1,165	LOE		
Station 1-VV Prep (hard surface components) FP#1										
R1810-1110	Install Final Internal&Ext monuments & meas	4	02MAY08A	07MAY08	07MAY08	0	278			
R1810-1114	Install heater tape on all removable ports	25	01MAY08	05JUN08	07MAY08	-20	258			
R1810-1100	Design & Build heater& thermo termination box	41	01MAY08*	27JUN08	01MAY08	-40	1,586			
Station 1- VV Prep (hrd surf cmpntsFP#2										
R1810-1208	Perform final acceptance testing (H/C flow test)	32	01MAY08	16JUN08	30MAY08	-11	329			
Station 1- VV Prep (hrd surf cmpntsFP#3										
R1810-1310	Heater and thermo termination & verification	19*	30APR08A	27MAY08	29OCT08	109	404	50		
Setup										
R1810-2034	Misc Tool and Hardware	375*	01MAY08	28OCT09	28OCT09	0	1,252	LOE		
R1810-2036	Fuji Paper	454*	01MAY08	02MAR10	02MAR10	0	1,173	LOE		
R1810-2080	3rd laser tracker	19*	01MAY08*	28MAY08	28MAY08	0	1,608			
R1810-2081	Removable photogrammetry targets	355*	01MAY08*	30SEP09	30SEP09	0	1,272	LOE		
R1810-2082	Fixed photogrammetry targets	355*	01MAY08*	30SEP09	30SEP09	0	1,272	LOE		
R1810-2083	Replacement photogrammetry targets	355*	01MAY08*	30SEP09	30SEP09	0	1,272	LOE		
R1810-2084	Design and purchase 3 additional wedge supports	44*	01APR08A	02JUN08	02JUN08	0	1,605			
R1810-2024	Rework wedges f/combined assemblies& coil handli	106*	01MAY08	30SEP08	16JUN08	-74	1,521			
R1810-2026	Setup up satellite shop in Mock-up area	43*	01APR08A	30MAY08	22MAY08	-5	1,606	50		
R1810-2087	Coordinate measuring machine	21	01MAY08*	30MAY08	30MAY08	0	1,606			
R1810-2088	HEPA machine tool exhaust system	21	01MAY08*	30MAY08	30MAY08	0	1,606			
R1810-2089	Tools, cabinets & storage shelving	579*	01MAY08*	26AUG10	26AUG10	0	1,048	LOE		
R1810-2002	Purchase grinding machine	21	01MAY08	30MAY08	30MAY08	0	1,606			

Activity ID	Activity Description	Duration (work days)	Forecast Start	Forecast Finish	Baseline Finish	Schedule slip to baseline (work days)	Remaining Float	% Cmplt	FY08										
									MAY		JUN								
									28	5	12	19	26	2	9	16			
R1810-2090	Consulting services nose welding (Parsells)	644	01MAY08*	30NOV10	26AUG10	-65	983	LOE											
S20-4.02	Perform metrology set-up;purchase 6 pillars	21	01MAY08*	30MAY08	30MAY08	0	1,606												
Pre-Measuring and fitup checks																			
Pre measurement of MCHP A2,B2,C2 flanges																			
S22-3.02	Compress shims sort by thickness	50	01MAY08	11JUL08	10JUL08	-1	90												
Station 2 MC subassy A1B1C1																			
AB-C MC Assembly																			
2-1-7.05	Mark nose shim locations & puck locations.	1	05MAY08*	05MAY08	12MAY08	5	60												
2-1-7.06	Place initial set shims (4-8) on Type-B	0	06MAY08	05MAY08	12MAY08	5	60												
2-1-7.08	Lower mating "C" coil into position.	1	06MAY08	06MAY08	13MAY08	5	60												
2-1-7.081	Perform alignment "C" coil tooling balls	1	07MAY08	07MAY08	14MAY08	5	60												
2-1-7.09	Install jack screws & dial indicators	1	08MAY08	08MAY08	15MAY08	5	60												
2-1-7.10	Position coil within ±.002"	1	09MAY08	09MAY08	16MAY08	5	60												
2-1-7.11	Install shims studs, & "wobble"	1	12MAY08	12MAY08	19MAY08	5	60												
2-1-7.12	Torque 50% of final value.	1	12MAY08	12MAY08	19MAY08	5	60												
2-1-7.13	Measure position of all monuments	2	09MAY08	12MAY08	19MAY08	5	60												
2-1-7.14	Measure shim puck height	1	12MAY08	12MAY08	19MAY08	5	60												
2-1-7.15	remove puck locating rings & install all nose s	3	13MAY08	15MAY08	22MAY08	5	60												
2-1-7.16	"Lightly" tack weld nose flex shims	1	16MAY08	16MAY08	23MAY08	5	60												
2-1-7.17	remove "C" coil & place it on a separate fixtur	1	19MAY08	19MAY08	27MAY08	5	60												
2-1-7.18	Recheck part alignment & weld all Type-B flex s	3	20MAY08	22MAY08	30MAY08	5	60												
2-1-7.19	After welding "B" coil nose shims recheck align	1	23MAY08	23MAY08	02JUN08	5	60												
2-1-7.20	Back office assessment of part after weld	2	27MAY08	28MAY08	04JUN08	5	60												
2-1-7.21	Measure "C" fiducials	1	27MAY08	27MAY08	03JUN08	5	61												
2-1-7.22	Weld all Type-C (A-flange) flex shims plasma sid	2	29MAY08	30MAY08	06JUN08	5	60												
2-1-7.23	After welding determine metrology acceptance	1	02JUN08	02JUN08	09JUN08	5	60												
2-1-7.24	Back office assessment	2	03JUN08	04JUN08	11JUN08	5	60												
2-1-7.25	Remove shims for alignment mating coil	0	03JUN08	02JUN08	09JUN08	5	62												
2-1-7.07	Place unfilled shim bags in wing areas	1	03JUN08	03JUN08	10JUN08	5	62												
Station 2 MC subassy A2B2C2																			
A-B MC Assembly																			
2-2-6.15	Recheck part alignment of "A" coil	2	01MAY08	02MAY08	07MAY08	3	94												
2-2-6.151	Weld all Type-A flex shims plasma side	2	19MAY08*	20MAY08	09MAY08	-7	84												
2-2-6.16	recheck alignment	1	21MAY08	21MAY08	12MAY08	-7	84												
2-2-6.17	Back office assessment of part after weld	2	22MAY08	23MAY08	14MAY08	-7	84												
2-2-6.18	Measure "B" fiducials estab coord sys	1	22MAY08	22MAY08	13MAY08	-7	85												
2-2-6.19	Weld all Type-B (A-flange) flex shims plasma sid	2	27MAY08	28MAY08	16MAY08	-7	84												
2-2-6.20	Recheck part metrology acceptance criterion.	1	29MAY08	29MAY08	19MAY08	-7	84												
2-2-6.21	Back office assessment of part after weld	2	30MAY08	02JUN08	21MAY08	-7	84												
2-2-6.22	Remove shims as necessary	0	30MAY08	29MAY08	19MAY08	-7	85												
2-2-6.04	Place unfilled shim bags in wing areas	1	30MAY08	30MAY08	20MAY08	-7	85												
2-2-6.23	Lower mating "B" coil into position.	1	03JUN08	03JUN08	22MAY08	-7	84												
Station 3 Setup/Preparations/General																			
Misc Prep activities																			
R1810-3112	Load Test 3 legged actuator lift fixtur	8	03JUN08*	12JUN08	12JUN08	0	169												
R1810-3113	Procure wire rope slings & 6 17ton shackles	8	03JUN08*	12JUN08	12JUN08	0	169												
R1810-3109	Remove winding stations & enclosures	20	12MAY08*	09JUN08	09JUN08	0	169												
R1810-3107	Test out station 3 equipment and procedures	30	01MAY08*	12JUN08	02JUN08	-8	169												
Station 3-Assemble Mod Coils and VVSA-FP#1																			
Set-up and Prep																			
3-1-1.01	transfer CAD models	7	19MAY08*	28MAY08	28MAY08	0	180												
3-1-1.03	Install floor mounted tracks and the VV base sup	5	02JUN08	06JUN08	07MAY08	-21	173												

Activity ID	Activity Description	Duration (work days)	Forecast Start	Forecast Finish	Baseline Finish	Schedule slip to baseline (work days)	Remaining Float	% Cmplt	FY08										
									MAY		JUN								
									28	5	12	19	26	2	9	16			
Al vonHalle																			
Ramakrishnan																			
Job: 4301 - DC Systems-RAMAKRISHNAN																			
431 - C-Site DC Systems																			
431-240	Simulate each of 6 pwr loops in PSCAD	467*	01APR08A	17FEB10	17FEB10	0	234	20											
431-250	c-site dc sys DGS dsn documentation	466*	01APR08A	16FEB10	16FEB10	0	235	20											
431-261	Redo power loop design	355	01MAY08*	30SEP09	30SEP09	0	324												
431-275A	Power cabling & Installation FY08	85*	02JUN08*	30SEP08	30SEP08	0	486												
431-276	Maint of C-site rectifiers	997*	01OCT07A	30SEP11	30SEP11	0	774	LOE											
Job: 4401 - Control & Protection-RAMAKRISHNAN																			
441 - Electrical Interlocks																			
441-100	PLC Specification	160	01MAY08*	17DEC08	17DEC08	0	314												
445 - Coil Protection Systems																			
445-2-110	Overload Protect-Design	351*	01APR08A	24AUG09	24AUG09	0	337	20											
Sichta																			
Job: 5801 - Central I&C Integr& Oversight-SICHTA																			
R58-20	WBS58 -FY08 Management & Integration LOE	250*	01OCT07A	30SEP08	30SEP08	0	1,521	LOE											

Weekly Meeting Actions Tracking Log Open Action Items

Meeting Date	Job	Action	Responsibility	Date of Status	Status
5/14/2008					
	8204	Add items being work on, but not currently budgeted to WAF - adjust ETC	Brooks	5/14/2008	
	8203	Provide greater ganularity of work that is being performed	Brown	5/14/2008	
	1260	Provide interim milestone leading to June 23rd peer review Contact Site Protection to involve them in this job	Cole Neilson	5/14/2008	
	1601-161	Ensure that SRD issued for review prior to Paul going on vacation Set up PDR date and review team	Goranson Heitzenroeder	5/14/2008	Acceptable to issue incomplete
	1601-162	Resolve designer support of electrical leads	Cole	5/14/2008	
	1901	Identify additional Risk Mitigation tasks needed	Cole/Heitzenroeder	5/14/2008	
	1810	DOE provide schedule for reviewing Station 3 lift procedures	Makiel	5/14/2008	
5/7/2008					
	8101	Provide list of pending GRD changes	Neilson/Simmons	5/14/2008	Markup GRD with pending changes to ensure don't lose track -
	1702	Setup meeting to determine how leads will be routed out of Cryostat	Heitzenroeder	5/14/2008	Working options thru Tom B. & Paul G. => expect to have better picture next week.
4/18/2008					
	1260	Define path forward for enclosing pyrogel in nomex bats	Goranson	5/14/2008	Work with Benson to define scope of R&D needed and procdures. Provide plan and document in a WAF.
4/11/2008					
	1806	Station 3 drawings and CSPEC	Harris/Cole	5/14/2008	Forecast is now May23rd
4/4/2008					
	1501/1551 1702/1752	SRDs for both Coil Support Structure and Base Support Structure	Dahlgren	5/14/2008	Both Base Support Structure and Coil Support Structures SRDs have been updated and are in signature cycle again.

Weekly Meeting Actions Tracking Log
Open Action Items

3/19/2008					
	1355	Need progress milestones	Cole	5/14/2008	Work at ORNL has just begun => will identify progress milestones within a month