

## NCSX Project Meeting April 30, 2008

**Background:** This is a report of the Project Meeting held Wednesday, April 30<sup>th</sup>. 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

***NOTE: Future meetings will be held on Wednesdays at 1:00 pm.***

### **Meeting Minutes:**

**Safety Briefing** – Mike Kalish spoke on “doing the right thing” when it relates to safety. Major messages:

- Be assertive when safety is involved – don’t be hesitant to stop work if you see a potential or real safety hazard
- Ensure that folks do the work right with proper regard for safety – no shortcuts!

### **Heitzenroeder (RLM)**

- Tom Brown (Jobs 8203/8205 Design Integration) – designer issues resolved.
- Jim Chrzanowski – Mike Kalish reporting - Jobs 1302/1352) – PF coil procurement ready to be awarded – hopefully next week after DOE review.
- Mike Cole (Jobs 1353/1416/1421/1806/12xx?).
  - Job 1416-NEW – new work: thermal analysis of MC & LN2 colling. 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**)
  - ORNL will assume responsibility for PF1a work. Cole will be job manager – updated schedules (**Strykowski**)
  - Station. 3: Forecast models & drawings approved by May 6<sup>th</sup> – comments due and received by April 29<sup>th</sup> - expect to issue for approval today or tomorrow to meet May 6<sup>th</sup> date =>should not impact Station 3 work.: (**Harris/Cole**)
  - Station 5 specs and drawings. Need to clarify when CSPEC and drawings actually needed (likely August vs. April time frame. Ensure assembly specs put back into schedule (**Strykowski**)

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- Increase granularity of schedules in Jobs 1355, WBS 16 jobs. Increased granularity provided for Jobs 1806 & 1901. **(Cole)**
- WBS 16 jobs interfaces need to be defined –Stay on current course with LN2 manifolds design concept, including two-phase capability. Expect PDR on June 3<sup>rd</sup>. Need to resolve Electrical leads routing with Tom Brown **(Brwon/Cole/Goranson)**
- Fred Dahlgren (Jobs 1353/1501/1702)
  - FDR for Coil Support Structure delayed until May 6<sup>th</sup> to update drawings and some analyses. **(Dahlgren)**
  - SRDs for both Base Support Structure and Coil Support Structure revised by Fred on April 23<sup>rd</sup> –now out for signature. Simmons to follow up on where these stand **(Simmons)**
- Bob Ellis (Job 8205) - Station. 3 Dimensional Control Plan draft to be issued tomorrow on Friday, May 2<sup>nd</sup>. Has potential to impact Station 3 work, especially acceleration to mitigate risks. **Ellis**
- Mike Kalish (Jobs 1361 & 1354):
  - No issues on TF coil schedules – previous concerns about delivery of wedges appears to now be resolved.
  - Trim coils. On schedule for May 6<sup>th</sup> FDR. Jim Sims (LANL) has agreed to participate. Procurement award now forecast for June 27<sup>th</sup> – looking a feasibility of accelerating this procurement **(Neilson/Kalish)**

### Larry Dudek (RLM)

- Tom Brown (Job 1803/05)
  - Station 2: Wedges to ship May 3rd
  - Station 3 clearance studies moved to late May.
  - 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. ORNL? **Cole and Brown resolve who will do this.**
  - Diagnostic and thermocouple lead boxes on Type A coils have to be moved - now planned for Station 5.
- Mike Viola (Jobs 1810/1815) .
  - Taking time for additional weld development and A2B2 shear plate design. Impacts A1B1 and A2B2. A1B1 and shear plate design on hold pending follow up on welding engineer advice. **Viola**
  - Heating and cooling hoses. We are replacing the damaged/leading hoses. However, reliability issue still a concern. FMECA signed off. NCR to be prepared to document resolution of leaking hoses and larger reliability issues.
- Brent Stratton (Job 3101) – installation of Rogowski loops scheduled to be completed by end of May. Need to develop work plan to complete checking of

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thermocouple leads and heater leads by end of May to support assembly operations. (**Stratton**)

- Goranson (Job 1260) – 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.

## Weekly Meeting Actions Tracking Log Open Action Items

Meeting Date	Job	Action	Responsibility	Date of Status	Status
<b>4/30/2008</b>					
	3101	Check out thermocouple/heater leads on VVSA #1 by May 30th	Stratton/Neilson	4/30/2008	VVSA # 1 will be moved to vertical in prep for initial Station 3 work at end of May - NEED THIS WORK DONE BY THEN.
<b>4/25/2008</b>					
	1416	Add new task for thermal analysis of MC & LN2 cooling	Harris	4/30/2008	Will add to WAF w/o budget => accept variances. ORNL to suggest mechanism for collectiong charges for unplanned work.
<b>4/18/2008</b>					
	1260	Define path forward for enclosing pyrogel in nomex bats	Goranson	4/25/2008	Work with Benson to define scope of R&D needed and procdures. Provide plan and document in a WAF.
<b>4/11/2008</b>					
	1806	Station 3 drawings and CSPEC	Harris/Cole	4/25/2008	Forecast is now May 6th - need by them to preclude impacting Station 3 schedule and potential acceleration of the schedule. <b>Several more comments expected this week =&gt; NEED to issue soon to meet May 6th forecast.</b>
	8203	Station 5 drawings out for review.	Brown	4/25/2008	Being reviewed
<b>4/4/2008</b>					
	1501/1551 1702/1752	SRDs for both Coil Support Structure and Base Support Structure out for comment	Impacting WBS Managers	4/30/2008	Revised 4/23 - now both out for signature on 4/23 - <b>Still not fully signed off. Simmons to follow up.</b>
	1810	Resolve heating/cooling leak issues - assess issue, causes, and mitigation plans	Viola Harris/Cole/Goranson	4/30/2008	<b>Immediate assembly issue is closed (hoses being replaced). NCR to be issued to document immediate fix and longer term reliability issue.</b>
<b>3/19/2008</b>					
	1355 WBS 16	Need progress milestones	Cole	4/30/2008	Identify progress milestones (Increased granularity for Jobs 1901 & 1806 provided)
	1702	Base Support Dwgs comments overdue	Heitzenroeder	4/30/2008	Need comments - followup w/ reviewers

Activity ID	Activity Description	Duration (work days)	Forecast Start	Early Finish	* ADJUSTED * Baseline Finish	SCHEDULE slip (-)/ ahead (+)	Remaining Float	FY08				
								M	APR	MAY	JUN	J
<b>Phil Heitzenroeder</b>												
<b>Brown</b>												
<b>Job: 8203 - Design Integration-BROWN</b>												
8203FY08-1	Service routing within cryostat & TC	46*	29FEB08*	02MAY08	02MAY08	0	1,625					
8203FY08-2	Facility models update&integration	43	02APR08*	02JUN08	02JUN08	0	1,605					
<b>Chrzanowski</b>												
<b>Job: 1302 - PF Design -CHRZANOWSKI</b>												
1302-275	Resolve FDR Chits	51	22FEB08*	02MAY08	02MAY08	0	1,255					
<b>Job: 1352 - PF Coil Procurement-CHRZANOWSKI</b>												
<b>PF Coil Fabrication</b>												
141-038.1	PF Conductor Delivery	105*	21FEB08A	18JUL08	30MAY08	-34	355					
141-039	Bid & Award Materials	21	03MAR08*	31MAR08	31MAR08	0	1,581					
141-040	PF Materials Awarded	0		31MAR08	31MAR08	0	1,581					
1352-100	Materials Delivery PF 4,5,6	68	01APR08	07JUL08	07JUL08	0	1,581					
141-035	Bid & Award PF Coil Fabrication	60*	07MAR08*	30MAY08	30MAY08	0	303					
141-035A	PF Coil Proposals Due	0		02APR08*	02APR08*	0	303					
141-035B	Proposal evaluation complete	0		16APR08*	16APR08*	0	303					
141-035C	SPEB Evaluation complete	0		18APR08*	18APR08*	0	303					
141-035E	DOE Approval	0		16MAY08*	16MAY08*	0	303					
<b>Cole</b>												
<b>Job: 1416 - Mod Coil Type AB Fnl Dsn-WILLIAMSON</b>												
<b>Top level assy models/drawings</b>												
1416-502	Layout of flux loop terminations. (move box)	43	25APR08*	25JUN08	31MAR08	-61	1,588					
<b>Analysis and closeout documentation</b>												
1416-601	Prepare EM and structural analysis of leads	93*	02JAN08A	09MAY08	30APR08	-7	1,620					
1416-605	Prepare Type-ABC closeout documentation	15	10APR08*	30APR08	29APR08	-1	1,612					
1416-606	Resolve documentation comments	15	01MAY08	21MAY08	20MAY08	-1	1,612					
1416-650	Prepare cooling analysis of lead area	40	01APR08*	27MAY08	27MAY08	0	1,609					
1416-651	Prepare cooling analysis coefficient for cryosta	40	01APR08*	27MAY08	27MAY08	0	1,609					
<b>ECN Modifications</b>												
1416-801	ECN Mods-Resize vertical port boot	40	01APR08*	27MAY08	27MAY08	0	1,609					
1416-802	ECN Mods-Revise Type B cooling lines	40	01APR08*	27MAY08	27MAY08	0	1,609					
1416-803	ECN Mods-Issue DXF shim files for fab	40	01APR08*	27MAY08	27MAY08	0	1,609					
1416-804	ECN Mods-Relocate box on Type A	40	01APR08*	27MAY08	27MAY08	0	1,609					
1416-805	ECN Mods-Add TC's at bottom of 101,102,103 dwgs	40	01APR08*	27MAY08	27MAY08	0	1,609					
1416-806	ECN Mods-Revise dwg 123-151	40	01APR08*	27MAY08	27MAY08	0	1,609					
<b>Job: 1421 - Mod Coil Interface Design-WILLIAMSON</b>												
<b>Inboard Interface-AB/BC/AA</b>												
1421-3155	Resolve C-C shim FDR comments	20	01APR08*	28APR08	28APR08	0	1,629					
<b>Job: 1806 - FP Assembly specs and drawings-COLE</b>												
<b>Station 3-Modular Coil to VVSA Assembly</b>												
1803-301	Station 3 Assembly Specification	207*	02JUL07A	30APR08	30APR08	0	141					
1803-305	Station 3 Assembly Drawings	207*	02JUL07A	30APR08	30APR08	0	141					

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								M	APR	MAY	JUN	J
<b>Station 5-Final Field Period Assembly</b>												
1803-509	Field period Assy Dwgs	132*	01FEB08*	06AUG08	06AUG08	0	195					
1803-611	Detail dwgs ports	90	01APR08*	06AUG08	06AUG08	0	195					
<b>6.00-Final Machine Assembly</b>												
1803-601	Station 6 Assembly Specification	120	15APR08*	02OCT08	02OCT08	0	377					
1803-605	Station 6 Assembly Drawings	120	15APR08*	02OCT08	02OCT08	0	377					
<b>Job: 1901 - Stellarator Core Mngt&amp;Integr-COLE</b>												
<b>193 - Risk Mitigation Tasks</b>												
RISK-43	Bolt preload could relax with time.	104*	03MAR08*	28JUL08	28JUL08	0	450					
RISK-696	consider a bringing all 3 120 degree field perio	270*	03MAR08*	31MAR09	31MAR09	0	169					
RISK-749	Does design meet GRD requirements for failure re	109*	23FEB08*	28JUL08	28JUL08	0	450					
RISK-752	Pucks held by Nomex felt-demonstrate feasibility	44*	05MAY08*	07JUL08	07JUL08	0	465					
RISK-753	Plan to minimize no. of loose components	98*	25FEB08*	11JUL08	11JUL08	0	461					
RISK-754	Plans for bushing removal demonstrated via mock-	98*	25FEB08*	11JUL08	11JUL08	0	461					
RISK-755	Relax fit-up tolerances on remotely handled bush	98*	23FEB08*	11JUL08	11JUL08	0	461					
<b>Dahlgren</b>												
<b>Job: 1702 - Base Support Struct Design-DAHLGREN</b>												
1702-520	Final design. Assy dwgs, fab dwgs, BOMs,specs/SO	66*	01FEB08A	02MAY08	30APR08	-2	241					
1702-525M	Base Support Structure FDR	0		02MAY08	30APR08	-2	241					
1702-530	Resolve chits, issue dwgs for fab,issue requisit	10	05MAY08	16MAY08	14MAY08	-2	241					
<b>Job: 1501 - Coil Structures Design-DAHLGREN</b>												
1501-533	Detail CAD Drawings,BOM	260*	01JUN07A	16JUN08	16JUN08	0	212					
1501-533F	Integrated Stress Analysis	176*	01OCT07A	16JUN08	16JUN08	0	222					
1501-536	Issue dwgs for review	0		01APR08*	01APR08*	0	245					
1501-535	Develop Interfaces with cryostat	0		01MAY08*	01MAY08*	0	243					
1501-549	Update C.S.Support Attacgment Design	6	19MAY08	27MAY08	27MAY08	0	212					
<b>Dudek</b>												
<b>Job: 1429 - MC Interface R&amp;D-DUDEK</b>												
<b>Outboard Interface-Friction</b>												
1429-3030	Cryo Friction test	10	28APR08*	09MAY08	11APR08	-20	1,620					
<b>Ellis</b>												
<b>Job: 8205 - Dimensional Control Coordin-ELLIS</b>												
METDCP-3	Dimensional control plans for station 3	65*	31JAN08	30APR08	30APR08	0	141					
<b>Goranson</b>												
<b>Job: 1601 - Coil Services Design-GORANSON</b>												
<b>161 - LN2 Distribution</b>												
191-001	Title I design WBS 161 LN2 manifolds&piping	166*	01OCT07A	02JUN08	02JUN08	0	231					
<b>162 - Electrical Leads</b>												
132-001	Title I design WBS 162 Coil leads	180*	03DEC07A	21AUG08	21AUG08	0	241					
1416-503C	Complete drawings of MC power cable connections	144	31JAN08*	21AUG08	31MAR08	-101	1,548					

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								M	APR	MAY	JUN	J
<b>Kalish</b>												
<b>Job: 1361 - TF Fabrication-KALISH</b>												
TF Fabrication Contract												
1361C-112	Fab, Test & Deliver Coil #12	1	25APR08*	25APR08	30MAY08	24	520					
1361C-113	Fab, Test & Deliver Coil #13	1	19MAY08*	19MAY08	23JUN08	24	530					
<b>Job: 1354 - Trim Coil Design &amp;Procurement-KALISH</b>												
Trim Coil **Updated estimate**												
TRIM-170	Complete Trim Coil Detailed Drawings	30*	25MAR08A	05MAY08	07APR08	-20	246					
TRIM-200	Assy drawings & parts list	5	06MAY08	12MAY08	21APR08	-15	247					
TRIM-210	Prepare for FDR	5	29APR08	05MAY08	28APR08	-5	246					
TRIM-220	Trim Coil + Structure FDR	1	06MAY08	06MAY08	29APR08	-5	246					
TRIM-221	** Trim Coil + Structure FDR **	0		06MAY08	29APR08	-5	246					
TRIM-230	Resolve Chits	5	07MAY08	13MAY08	06MAY08	-5	246					
TRIM-150	Prepare Trim Coil Procurement Spec.	19*	25MAR08*	18APR08	07APR08	-9	258					
TRIM-160	Approve Procurement Spec	5	07MAY08	13MAY08	14APR08	-21	246					
TRIM-240	Trim Coil Procurement	25	14MAY08	18JUN08	11JUN08	-5	246					
<b>Raftopolous</b>												
<b>Job: 1701 - Cryostat Design-RAFTOPOLOUS</b>												
1701-099	Cryostat- Tabletop Prototype	28	30APR08*	09JUN08	09JUN08	0	334					
1701-100	Cryostat- Conceptual Design	15	19MAY08*	09JUN08	09JUN08	0	334					
<b>Job: 6201 - Cryogenic Syst-RAFTOPOLOUS</b>												
621 - LN2 Supply & LN2 coil cooling supply												
62122-300	Conceptual Design	48	01MAY08*	09JUL08	09JUL08	0	248					
623 - GN2 Cryostat Cooling System												
623-099	GN2 Cryostat Cooling Sys Conceptual design	48	01MAY08*	09JUL08	09JUL08	0	254					

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								M	APR	MAY	JUN	J
<b>Larry Dudek</b>												
<b>Brown</b>												
<b>Job: 1803/1805- FPA Tooling/Constr-BROWNDUDEK</b>												
<b>Station 3-Modular Coil to VVSA Assembly</b>												
1803S3-5	Analyze single point lift (proof test of support)	51*	18FEB08A	28APR08	18APR08	-6	217					
1803S3-6	Station 3 simulation detail model	21*	01MAY08*	30MAY08	30MAY08	0	194					
1803S3-7	VV/MC clearance study (for VVSA1)	11	25APR08*	09MAY08	09MAY08	0	196					
1803S3-7B	VV/MC clearance study (for VVSA2 and 3)	11	15MAY08*	30MAY08	30MAY08	0	1,606					
1803S3-8	Station 3 deflection FEA study	12*	12MAY08*	28MAY08	11JUN08	10	196					
1805S3-2	Left side base grout plates	65	31JAN08A	30APR08	30APR08	0	201					
1805S3-3	MCHP lift fixture frame weldment	65	31JAN08A	30APR08	30APR08	0	201					
1805S3-4	Lift fixture mounting bracket weldments	65	31JAN08A	30APR08	30APR08	0	201					
1805S3-5	Reworked laser frame structure	65	31JAN08A	30APR08	30APR08	0	201					
1805S3-6	Right inboard laser frame structure	65	31JAN08A	30APR08	30APR08	0	201					
1805S3-7	Left inboard laser frame structure	65	31JAN08A	30APR08	30APR08	0	201					
1805S3-8	Laser screen lexan sheet (1/8 x 48" x 96")	65	31JAN08	30APR08	30APR08	0	201					
1805S3-9	Estimate for Station 2 type alignment system	65	31JAN08A	30APR08	30APR08	0	201					
1805S3-100	Hardware & Misc items	65	31JAN08A	30APR08	30APR08	0	201					
1805S3-110	Misc assembly Cost	65	31JAN08A	30APR08	30APR08	0	201					
1805S3-201	MC base support system (left / rt side)	65	31JAN08A	30APR08	30APR08	0	201					
1805S3-202	Hilman roller - 8-OT plus R & U guides	65	31JAN08A	30APR08	30APR08	0	201					
1805S3-203	AirLoc Wedgmount Precision Levelers	65	01MAY08*	01AUG08	30APR08	-65	136					
1805S3-204	Lift fixture mounting bracket weldments	65	31JAN08A	30APR08	30APR08	0	201					
1805S3-205	Estimate for Station 2 type alignment system	65	31JAN08A	30APR08	30APR08	0	201					
1805S3-206	Hardware & Misc items	65	31JAN08A	30APR08	30APR08	0	201					
<b>Station 5-Final Field Period Assembly</b>												
1803S3-2	Updated Stations Station 5 sequence plan	43	01APR08*	30MAY08	30MAY08	0	200					
1803S5-4	Station 5 (and 3) lift fixture structures and li	10	15APR08*	28APR08	14APR08	-10	1,629					
1803S5-7	VV work platforms	17	07MAY08	30MAY08	23MAY08	-4	323					
1803S5-8	Station 5 support structural analysis	10	09MAY08*	22MAY08	25APR08	-19	333					
1803S5-10	Station 5 FDR - Base support	22	30APR08*	30MAY08	23MAY08	-4	200					
1803S5-12	Station 5 FDR - Lift fixtures, port tooling and	10	16MAY08*	30MAY08	30MAY08	0	323					
<b>6.00-Final Machine Assembly</b>												
1803S6-1	Stage 6 FP support and roller system	39*	05MAY08*	27JUN08	27JUN08	0	470					
1803S6-2	Spool piece support and roller system	53*	19MAY08*	01AUG08	01AUG08	0	446					
<b>Chrzanowski</b>												
<b>Job: 1408 - MC Winding Supplies-CHRZANOWSKI</b>												
1408-4.1	Procure Strain Gages	55	17MAR08*	02JUN08	02JUN08	0	170					
<b>Job: 1451 - Mod Coil Winding-CHRZANOWSKI</b>												
<b>Station 3-Casting Prep &amp; Winding</b>												
P1-161	Wind coil A6	42*	28MAR08A	27MAY08	27MAY08	0	93					
<b>Station 4-Winding, Instl Chill Plates,Tubing,Bag</b>												
P3-170	Instl Chill Plates,Tubing,Bag B6	42	31JAN08A	30APR08	02JUN08	22	171					
<b>Station 5-VPI</b>												
P3-171V	VPI (Station 5) B6	19	05MAY08*	30MAY08	27JUN08	20	169					



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								M	APR	MAY	JUN	J
<b>Station 1 Post VPI</b>												
P3-171C	Final Clamps & Warm Test (Station1) B5	14	22APR08*	03MAY08	03MAY08	-1	194					
<b>Job: 1459 - Mod Coil Fabr.Punch List-CHRZANOWSKI</b>												
<b>Punchlist Tech shop/RESA</b>												
PLTS-C5	Grinding & Drill Holes -C5	136*	01OCT07A	18APR08	17MAR08	-24	1,635					
PLTS-B5	Grinding -B5	5	12MAY08	16MAY08	15MAY08	-1	194					
PLTS-A6	Grinding -A6	5	01OCT07A	19SEP08	19SEP08	0	93					
PLTS-C6	Grinding & Drill Holes -C6	20	31JAN08	27FEB08	14MAY08	55	248					
PLTS-GRIND	Coil to coil fitup modifications (grinding/cp)	165*	01DEC07A	31JUL08	31JUL08	0	1,563					
<b>Punchlist- Coil Technicians</b>												
PLCT-A3	Insul,measure,TC, other punch list-A3	17	05JUL07A	14FEB08	14FEB08	0	184					
PLCT-A4	Insul,measure,TC, other punch list-A4	17	06JUL07A	05MAR08	05MAR08	0	184					
PLCT-B3	Insul,measure,TC, other punch list-B3	14	01OCT07A	20MAR08	20MAR08	0	184					
PLCT-C3	Insul,measure,TC, other punch list-C3	18	01OCT07A	07APR08	07APR08	0	184					
PLCT-B4	Insul,measure,TC, other punch list-B4	14	01OCT07A	21APR08	21APR08	0	184					
PLCT-C4	Insul,measure,TC, other punch list-C4	14	25JUL07A	02MAY08	02MAY08	0	184					
PLCT-A5	Insul,measure,TC, other punch list-A5	14	30JUL07A	12MAY08	12MAY08	0	184					
PLCT-A6	Insul,measure,TC,SG other punch list-A6	14	01OCT07A	09OCT08	09OCT08	0	93					
PLCT-B5	Insul,measure,TC, other punch list-B5	14	01OCT07A	29OCT08	29OCT08	0	93					
PLCT-C5	Insul,measure,TC, other punch list-C5	18	01OCT07A	06NOV08	06NOV08	0	93					
PLCT-B6	Insul,measure,TC,SG other punch list-B6	14	01OCT07A	21JUL08	18AUG08	20	169					
PLCT-C6	Insul,measure,TC,SG other punch list-C6	14	01OCT07A	18MAR08	04JUN08	55	248					
PLCT-C6M	COMPLETE MODULAR COIL FABRICATION	0		18MAR08	04JUN08	55	248					
<b>Dudek</b>												
<b>Job: 1431 - Mod. Coil Interface Hardware-DUDEK</b>												
<b>Bladders</b>												
1421-3025	Deliver remaining bladders	22*	01APR08A	30APR08	18APR08	-8	106					
1421-3028	Bladders available	0		30APR08	18APR08	-8	106					
<b>Pucks</b>												
1429-3110	PPPL cut and grind to thickness	290*	04FEB08	31MAR09	31MAR09	0	17					
<b>Shims-Outboard</b>												
1429-3066	Outboard Shims	130	03MAR08*	03SEP08	03SEP08	0	79					
<b>Shims-Inboard</b>												
1429-3062X	Inboard Shims	208	03MAR08*	02JAN09	02JAN09	0	74					
<b>Studs,Washers,Nuts</b>												
1421-3070	Order studs & washers for c-c joint	15	12MAY08*	02JUN08	02JUN08	0	534					
<b>Stratton</b>												
<b>Job: 3101 - Magnetic Diagnostics-STRATTON</b>												
<b>Rogowski Coils</b>												
3101-352	Assy & detail dgws	46	31JAN08	03APR08	03APR08	0	431					
3101-353	Prep installation procedure	31	04APR08	16MAY08	16MAY08	0	431					
3101-354	Purchase materials	62	31JAN08	25APR08	25APR08	0	446					
3101-370	Check elect characteristics of cables	503*	16APR08*	23APR10	23APR10	0	1,135					
3101-351	Wind coils	13*	31MAR08*	16APR08	16APR08	0	453					
3101-357	Fab coil clamps & ends	12*	15MAY08*	02JUN08	02JUN08	0	421					
3101-359	Install Rogowski coils (budgeted in job 1815)	21*	02APR08*	30APR08	30APR08	0	255					

Activity ID	Activity Description	Duration (work days)	Forecast Start	Early Finish	* ADJUSTED * Baseline Finsih	SCHEDULE slip (-)/ ahead (+)	Remaining Float	FY08				
								M	APR	MAY	JUN	J
<b>TF and PF Co-wound Loops</b>												
3101-425	Design Protective boxes for PF	118*	01NOV07A	25APR08	01APR08	-18	1,540					
3101-426	Purchase SS Sheet	10	12NOV07A	18JUN08	18JUN08	0	1,585					
3101-452	Form Protective boxes	10	12NOV07A	23JUN08	23JUN08	0	1,585					
3101-454	Weld end plates of PF protective boxes	10	09NOV07A	30JUN08	30JUN08	0	1,585					
3101-427	Purchase Heat Shrink tubing	15	12NOV07A	19MAY08	19MAY08	0	1,495					
3101-428	Purchase add'l CoAxial cable	46	01MAY08*	07JUL08	07JUL08	0	1,462					
3101-458	FabTF,PF & solenoid co-wound loops	186	02JUL07A	15AUG08	15AUG08	0	1,462					
<b>T/C and Heater Tape Leads</b>												
1204-141	Drawings Signed T/C and Heater Tape Leads	0		30APR08*	30APR08	0	248					
1204-144	Check elect characteristics T/C & heater port 12	65	01MAY08*	01AUG08	01AUG08	0	1,562					
<b>Voltage Loops &amp; Protective Boxes</b>												
3101-802	Fab 3 protective Boxes (Use Existing Box)	10	16MAY08*	30MAY08	30MAY08	0	1,606					
3101-806	Check elect characteristics of coax	86*	31JAN08	30MAY08	13JUN08	10	1,606					
<b>Viola</b>												
<b>Job: 1802 - FP Assy Oversight&amp;Support-VIOLA</b>												
<b>Station 3 procedures,JHA,ACC,Training,Prep</b>												
R1802-307	Procedures written & approved	10	01MAY08	14MAY08	14MAY08	0	141					
R1802-309	JHA completed	6	15MAY08	22MAY08	22MAY08	0	141					
<b>Job: 1810 - Field Period AssyStation 1,2,3 VIOLA</b>												
<b>Station 1-VV Prep (hard surface components) FP#1</b>												
R1810-1108	Perform final acceptance testing (H/C flow test)	15	26MAR08*	15APR08	15APR08	0	284					
R1810-1110	Install Final Internal&Ext monuments & meas	4	01MAY08*	06MAY08	06MAY08	0	358					
R1810-1114	Install heater tape on all removable ports	25	01MAY08*	05JUN08	06MAY08	-21	248					
R1810-1100	Design & Build heater& thermo termination box	41	06MAR08*	01MAY08	01MAY08	0	254					
R1810-1101	heater& thermo termination & verification	18	02MAY08	28MAY08	28MAY08	0	254					
<b>Station 1- VV Prep (hrd surf cmpntsFP#2</b>												
R1810-1208	Perform final acceptance testing (H/C flow test)	32	16APR08	30MAY08	30MAY08	0	341					
R1810-1214	Install heater tape on all removable ports	25	06JUN08	11JUL08	08SEP08	40	314					
<b>Setup</b>												
R1810-2045	2 Electric Torque wrench	86*	31JAN08*	30MAY08	30MAY08	0	1,606					
R1810-2080	3rd laser tracker	34*	01APR08A	16MAY08	28MAY08	7	1,615					
R1810-2027	Install THIRD Holding 20 deg fixture	33*	01APR08A	15MAY08	15MAY08	0	1,616					
R1810-2084	Design and purchase 3 additional wedge supports	87*	31JAN08A	02JUN08	02JUN08	0	1,605					
R1810-2024	Rework wedges f(combined assemblies& coil handli	97*	31JAN08	16JUN08	16JUN08	0	1,595					
R1810-2026	Setup up satellite shop in Mock-up area	15	31JAN08	20FEB08	22MAY08	66	1,677					
R1810-2086	Trak 3 axis mill collet set	65	31JAN08*	30APR08	30APR08	0	1,627					
R1810-2087	Coordinate measuring machine	86*	31JAN08*	30MAY08	30MAY08	0	1,606					
R1810-2089	Tools, cabinets & storage shelving	669	31JAN08*	01OCT10	26AUG10	-25	1,023					
R1810-2002	Purchase grinding machine	86*	31JAN08	30MAY08	30MAY08	0	1,606					
S20-4.02	Perform metrology set-up;purchase 6 pillars	86*	31JAN08*	30MAY08	30MAY08	0	1,606					
<b>Pre-Measuring and fitup checks</b>												
<b>Pre measurement of MCHP A2,B2,C2 flanges</b>												
2-2-2.99	Drill Stycast fill holes	3	01MAY08*	05MAY08	29FEB08	-46	127					
S22-3.02	Compress shims sort by thickness	64	08APR08	08JUL08	08JUL08	0	94					
<b>Pre measurement of MCHP A4,B4,C4 flanges</b>												
S24-2.08	Measure C4 "A" flange	8	22APR08*	01MAY08	01MAY08	0	174					

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								M	APR	MAY	JUN	J	
<b>Station 2 MC subassy A1B1C1</b>													
<b>A-B MC Assembly</b>													
2-1-6.37	Fill all loose bushings with Stycast 2850FT	6	28APR08*	05MAY08	21MAY08	12	37						
2-1-6.38	Scan "B" flange (datum "E") of "B" coil,	1	05MAY08	05MAY08	21MAY08	12	37						
<b>AB-C MC Assembly</b>													
2-1-7.01	lift (A-B) coil, along with fixture, onto anot	3	05MAY08	08MAY08	27MAY08	12	37						
2-1-7.02	Select a subset of monuments for initial alignm	1	09MAY08	09MAY08	28MAY08	12	37						
2-1-7.03	Align set of monuments selected in 7.02.	1	12MAY08	12MAY08	28MAY08	11	37						
2-1-7.04	Establish a set of global monuments	1	13MAY08	13MAY08	28MAY08	10	37						
2-1-7.05	Mark nose shim locations & puck locations.	1	14MAY08	14MAY08	29MAY08	10	37						
2-1-7.06	Place initial set alumina shims (4-8) on Type-B	0	15MAY08	14MAY08	29MAY08	10	37						
2-1-7.08	Lower mating "C" coil into position.	1	15MAY08	15MAY08	30MAY08	10	37						
2-1-7.081	Perform alignment "C" coil tooling balls	1	16MAY08	16MAY08	02JUN08	10	37						
2-1-7.09	Install jack screws & dial indicators	1	19MAY08	19MAY08	03JUN08	10	37						
2-1-7.10	Position coil within ±.002"	1	20MAY08	20MAY08	03JUN08	9	37						
2-1-7.11	Install alumina coated shims studs, & "wiggle"	1	21MAY08	21MAY08	04JUN08	9	37						
2-1-7.12	Torque50% of final value.	1	22MAY08	22MAY08	04JUN08	8	37						
<b>Station 2 MC subassy A2B2C2</b>													
<b>A-B MC Assembly</b>													
2-2-6.15	Recheck part alignment of "A" coil	3	01MAY08*	05MAY08	05MAY08	0	94						
2-2-6.151	Weld all Type-A flex shims plasma side	2	06MAY08	07MAY08	07MAY08	0	94						
2-2-6.16	recheck alignment	1	08MAY08	08MAY08	08MAY08	0	94						
2-2-6.17	Back office assessment of part after weld	2	09MAY08	12MAY08	12MAY08	0	94						
2-2-6.18	Measure "B" fiducials estab coord sys	1	09MAY08	09MAY08	09MAY08	0	95						
2-2-6.19	Weld all Type-B (A-flange) flex shims plasma sid	2	13MAY08	14MAY08	14MAY08	0	94						
2-2-6.20	Recheck part metrology acceptance criterion.	1	15MAY08	15MAY08	15MAY08	0	94						
2-2-6.21	Back office assessment of part after weld	2	16MAY08	19MAY08	19MAY08	0	94						
2-2-6.22	Remove alumina shims as necessary	0	16MAY08	15MAY08	15MAY08	0	95						
2-2-6.04	Place unfilled shim bags in wing areas	1	16MAY08	16MAY08	16MAY08	0	95						
2-2-6.23	Lower mating "B" coil into position.	1	20MAY08	20MAY08	20MAY08	0	94						
2-2-6.231	Perform alignment "B" coil tooling balls	1	21MAY08	21MAY08	21MAY08	0	94						
2-2-6.24	"B" coil, position coil accurately in x, y, &	1	22MAY08	22MAY08	22MAY08	0	94						
<b>Station 3 Setup/Preparations/General</b>													
<b>Misc Prep activities</b>													
R1810-3109	Remove winding stations & enclosures	21	12MAY08*	10JUN08	09JUN08	-1	187						
R1810-3107	Test out station 3 equipment and procedures	30	21APR08*	02JUN08	02JUN08	0	193						
<b>Station 3-Assemble Mod Coils and VVSA-FP#1</b>													
<b>Set-up and Prep</b>													
3-1-1.01	transfer CAD models	7	19MAY08*	28MAY08	28MAY08	0	196						

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								M	APR	MAY	JUN	J	
<b>Al vonHalle</b>													
<b>Ramakrishnan</b>													
<b>Job: 4301 - DC Systems-RAMAKRISHNAN</b>													
<b>431 - C-Site DC Systems</b>													
431-261	Redo power loop design	355	01MAY08*	30SEP09	30SEP09	0	324						
<b>Job: 4401 - Control &amp; Protection-RAMAKRISHNAN</b>													
<b>441 - Electrical Interlocks</b>													
441-100	PLC Specification	160	01MAY08*	17DEC08	17DEC08	0	311						