

## **Actions from NCSX Team Meeting of 3/28/08**

**Actions for:** Heitzenroeder, Simmons, Cole, Chrzanowski, Dahlgren, Kalish, Brown, Ellis, Williamson, Ramakrishnan, Viola, Stratton.

1. In walkthrough's, ask techs: "what can the job manager do for them today?" Jerry Levine: new program rolling out.

### **Heitzenroeder jobs**

2. Mike Cole: 1806

Sta. 3 drawings issued; need comments back. Spec to be issued next week.

**Action: Heitzenroeder follow up.**

Sta. 2 spec, no issues. In sign-off.

**Action: Simmons follow up.**

Sta. 5 just starting, but will it be completed on schedule? Schedule says June 6. Deliverable is signed spec & drawings, not draft. What are progress milestones now to completion?

**Action: Cole.**

3. WBS 17. Base support. (Dahlgren) Drawings issued pre-PDR. No comments have come back.

**Action: Simmons expedite comments.**

Lower pedestals to accommodate cryostat. FDR scheduled for 4/30. OK, but sharing designer resources (risk). Mgt. response: Designer OT to manage schedule risks authorized.

Priorities for designers:

1. Base structure
2. Trim coil.

**Action: Chrzanowski manage designer needs w/ Dahlgren, Kalish, Brown**

4. WBS 15. Coil Structures. (Dahlgren) Design complete, except to incorporate trim coil details. Will issue Drawings for review if changes incorporated. Issue now or wait for trim coil details? Phil says: Issue now, don't wait.

**Action: Dahlgren issue drawings for comment.**

5. Job 8205. Ellis. Dim Ctl. plan for Sta.3. Draft next week but will miss 3/31 completion deadline. But what is the revised forecast? (Get-well plan: Issue draft week of 3/31. Sign off week of April 6? What are progress milestones now to completion?)

**Action: Ellis.**

Bob cautions: No prototyping opportunity; first one will be the prototype. Risk? Revisions likely as we go through Sta. 3 for the first time.

6. Job 1416. Dave Williamson, Eddy current analysis behind, but expect to issue day or two.

**Action: Williamson**

7. WBS 16. Paul Goranson. Requests feedback on sizing of leads. Phil says: Paul's responsibility. Isn't there a PDR soon?

**Action: Heitzenroeder** follow up w/ORNL off-line.

Raki: Criteria for routing cooling lines? Offline.

**Phil follow up w/Ramakrishnan.**

PG asks: Bleed resistors? Peer review next Friday.

**Ramakrishnan** following up.

8. Trim coils. Mike Kalish. 1.5 week behind. Trying to catch up & meet FDR date. Designer critical. (Rushinski, Cruikshank). Working with Jim. Trim coils & Fred competing for resources. Manage resources off-line.

**Action: Chrzanowski** (See above discussion re: Base support.)

SRD out for comment. Deadline?

**Action Simmons to help expedite.**

9. Erik Perry. Plant model. General Arrangement drawing issued this a.m. **Good News!** They will be posted on web site for review. Erik will notify WBS managers directly.

### **Dudek jobs**

10. Job 1803/05. Tom Brown. Order placed for new wedge, projecting delivery too late for MV. Workaround: Expedite alternate wedge fab. So it doesn't hold MV up. **Dudek & Viola**

12. WBS 3. Diagnostic loop testing method (Sta. 1): Continuity & resistance. WBS 3 responsible for completing this. Must be done by end of August. **Action: Stratton**

13. WBS 18. Mike Viola. Sta. 1. Problem meeting pressure spec on VV tubes. Requesting feedback from Goranson. Part doesn't meet NCSX spec. (How did that happen?) Lots of leaks. Cryo fitting might be a solution.

**Action: Viola.** Assign Sands/Bartzak to identify one or more solution options. Have peer review to decide. Needs to be fixed in plenty of time for Sta.3 .

15. WBS 18. Mike Viola Sta. 2 ahead of schedule. Key is distortion control. At 75% weld, B1 deflection septum <0.002 in. Body fiducials one went up 0.012. **Good News! Viola**

16. Need a new weld engineer. **Dudek**

17. Issue notes to mgt. Team and WBS managers.

**Action: Neilson this time.** Create a permanent tracking & trending tool for actions items from these meetings.

**Action Simmons**



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# Integrated Safety Management (ISM) Safety in Support of Our Mission

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"For the want of a nail, the shoe was lost; for the want of a shoe the horse was lost; and for the want of a horse the rider was lost, being overtaken and slain by the enemy, all for the want of care about a horseshoe nail." - **Benjamin Franklin**

**Pre-meeting Safety Brief  
Presented to The NCSX Team  
March 28, 2008**

C.A. Gentile



# ISM - Safety in Support of Our Mission

- ◆ Continuously working safe and being perceived as safe is critical to the success of our project.
- ◆ PPPL's **safety objective is simple “ nobody gets hurt “**. Fulfilling this objective takes vigilance, discipline, work, and attention to large and small details. Lets not lose the mission “ for the want and care of a nail “.
- ◆ **ISM... - The core functions.**
- ◆ How do we (PPPL) compare to industry.
- ◆ When it comes to safety we must be our brothers keeper. We must look out for the other guy.
- ◆ As a project and lab we need to be absolutely sure about safety. “Pretty sure“ is not good enough. 99 % sure is not good enough. Would you get on an airplane if it only had a 99 % chance of safely reaching its destination ? We must be absolutely sure of our actions when it comes to safety, our work, our project, our laboratory.

The perception of something being unsafe can be lethal to the mission, independent of investment or facts



SNPS GE BWR

Construction Completed 1984

Final cost = ~ \$ 6 B (1980 dollars) Equivalent to ~ \$ 16 B in 2007 dollars.

Did not operate commercially. Could not get an approved safe evacuation plan.

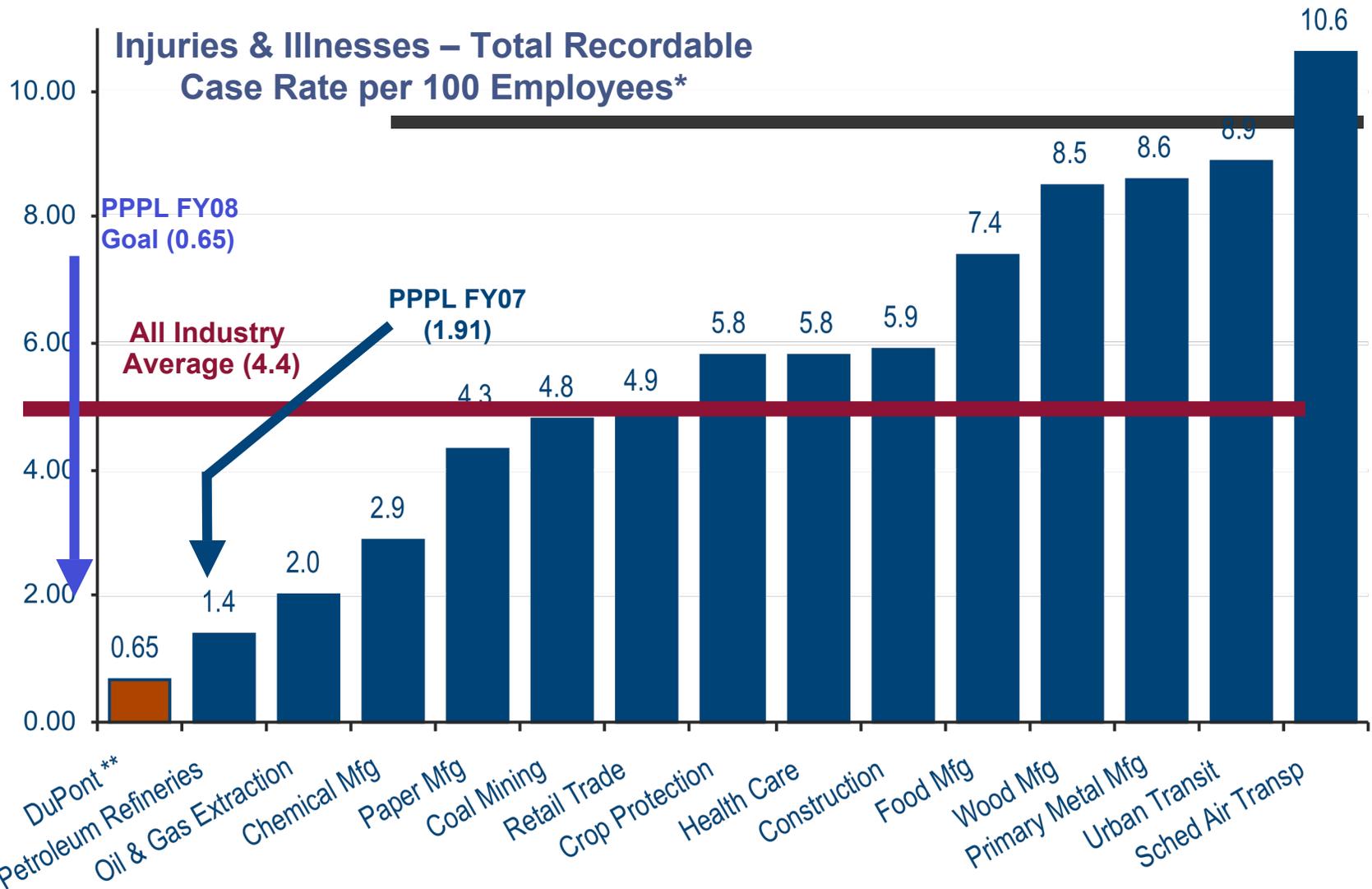
One of the safest commercial nuclear plants ever constructed.

Observation: The year SNPS was cancelled > 10,000 people died in coal mining accidents (mostly in China ).

## ISM core functions We (PPPL) have effective implementing tools

- ◆ (1) Define the scope of work - Translate the mission into work. PPPL work planning form(s) / WAF's, procedures / design reviews ( peer reviews, CDR, PDR, FDR ).
- ◆ (2) Analyze Hazard - JHA, IH Review, FMEA's.
- ◆ (3) Develop and Implement Hazard Controls - Establish a safe working envelope. safety permits & controls ( confined space, LO/TO, RWP, PPE, D-Site Work Permit, Fire Watch, etc... ).
- ◆ (4) Perform Work within Controls - Compliance with documentation, controls, analysis, permits.
- ◆ (5) Provide feedback and continuous improvement - Post job briefs/ what went right/ what went wrong / safety reviews / management safety walk-through, review of near-misses, review of mishaps.

# How Does PPPL Compare to Industry



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## Conclusions

# ISM - Safety in Support of Our Mission

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- ◆ ISM employing PPPL implementing tools provides a stable platform to get NCSX right.
- ◆ Lack of safety, or perceived lack of safety threatens our mission.
- ◆ A good deal of physical work still ahead of us. Need to remain vigilant. Vigorously use the established systems to maintain safety.
- ◆ If you see something not quite right help to fix it. Be part of the solution.
- ◆ Make it easy for the worker to do the right thing, to work safely.
- ◆ We need to be vigilant that “luck” does not creep into our safe work practices. The safe outcome for our work activities must be the expectation not a stochastic event.

Activity ID	MILE STONE LEVEL	Activity Description	Duration (work days)	Forecast Start	Early Finish	Total Float	FY08																				
							FEB				MAR				APR												
							4	11	18	25	3	10	17	24	31	7	14	21									
cc 9450 - NCSX Fabrication (MIE)																											
<b>Phil Heitzenroeder</b>																											
<b>Brown</b>																											
<b>Job: 8203 - Design Integration-BROWN</b>																											
8203FY08-1		Service routing within cryostat & TC	46*	29FEB08*	02MAY08	1,625																					
8203FY08-2		Facility models update&integration	43	02APR08*	02JUN08	1,605																					
<b>Chrzanowski</b>																											
<b>Job: 1302 - PF Design -CHRZANOWSKI</b>																											
1302-275		Resolve FDR Chits	51	22FEB08*	02MAY08	1,255																					
<b>Job: 1352 - PF Coil Procurement-CHRZANOWSKI</b>																											
<b>PF Coil Fabrication</b>																											
141-038.1		PF Conductor Delivery	65	21FEB08A	08MAY08	404																					
141-039		Bid & Award Materials	21	03MAR08*	31MAR08	1,581																					
141-040		PF Materials Awarded	0		31MAR08	1,581																					
1352-100		Materials Delivery PF 4,5,6	68	01APR08	07JUL08	1,581																					
141-035		Bid & Award PF Coil Fabrication	60*	07MAR08*	30MAY08	303																					
141-035A		PF Coil Proposals Due	0		02APR08*	303																					
141-035B		Proposal evaluation complete	0		16APR08*	303																					
<b>Cole</b>																											
<b>Job: 1416 - Mod Coil Type AB Fnl Dsn-WILLIAMSON</b>																											
<b>Top level assy models/drawings</b>																											
1416-503		Complete models/drawings station 3 Assy	185*	01JUL07A	31MAR08	300																					
<b>Analysis and closeout documentation</b>																											
1416-601	3	Prepare EM and structural analysis of leads	86*	02JAN08A	30APR08	1,627																					
1416-603		Update, review and approve FMECA	78*	01NOV07A	29FEB08	1,635																					
1416-604		Finalize draft documents - materials, eddy curre	5	03MAR08	07MAR08	1,635																					
1416-605	3	Prepare Type-ABC closeout documentation	15	09APR08*	29APR08	1,613																					
<b>Job: 1421 - Mod Coil Interface Design-WILLIAMSON</b>																											
<b>Outboard Interface-Bolted Joint Tests-Shear</b>																											
1421-3119B		Document test results	42*	02JAN08A	28FEB08	1,670																					
1421-3999		Peer Review of Test Result	0		29FEB08	1,670																					
<b>Inboard Interface-AB/BC/AA</b>																											
1421-3138		Resolve issues, release assembly	58*	03DEC07A	29FEB08	6																					
<b>Job: 1806 - FP Assembly specs and drawings-COLE</b>																											
<b>Station 2-Modular Coil Sub- Assembly</b>																											
1803-201	3	Station 2 Assembly Specification	164*	01JUL07A	29FEB08	6																					
<b>Station 3-Modular Coil to VVSA Assembly</b>																											
1803-301		Station 3 Assembly Specification	185*	02JUL07A	31MAR08	163																					
1803-305		Station 3 Assembly Drawings	185*	02JUL07A	31MAR08	163																					
<b>Station 5-Final Field Period Assembly</b>																											
1803-501		Station 5 Assembly Specification	48*	01APR08*	06JUN08	237																					
1803-505		Station 5 Assembly Drawings	152*	03SEP07A	15APR08	274																					
1803-509		Field period Assy Dwgs	132*	01FEB08*	06AUG08	195																					
1803-611		Detail dwgs ports	90	01APR08*	06AUG08	195																					

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							FEB				MAR				APR									
							4	11	18	25	3	10	17	24	31	7	14	21						
<b>6.00-Final Machine Assembly</b>																								
1803-601		Station 6 Assembly Specification	120	15APR08*	02OCT08	377																		
1803-605		Station 6 Assembly Drawings	120	15APR08*	02OCT08	377																		
1803-613		Detail dwgs-man access port	120	15APR08*	02OCT08	377																		
<b>Dahlgren</b>																								
<b>Job: 1702 - Base Support Struct Design-DAHLGREN</b>																								
1702-515	3	Base support - PDR	5	31JAN08	06FEB08	202																		
1702-516	3	Disposition PDR chits	5	07FEB08	13FEB08	202																		
1702-520		Final design. Assy dwgs, fab dwgs,	64*	01FEB08A	30APR08	147																		
1702-521	2	Issue dwgs for comment	0		28MAR08*	170																		
1702-525M	2	Base Support Structure FDR	0		30APR08	147																		
<b>Job: 1501 - Coil Structures Design-DAHLGREN</b>																								
1501-533		Detail CAD Drawings,BOM	260*	01JUN07A	16JUN08	212																		
1501-533F		Integrated Stress Analysis	176*	01OCT07A	16JUN08	222																		
1501-536		Issue dwgs for review	0		01APR08*	245																		
<b>Dudek</b>																								
<b>Job: 1429 - MC Interface R&amp;D-DUDEK</b>																								
<b>Outboard Interface-Friction</b>																								
1429-3030		G-10 Test	30	03MAR08*	11APR08	1,640																		
<b>Ellis</b>																								
<b>Job: 8205 - Dimensional Control Coordin-ELLIS</b>																								
METDCP-3	3	Dimensional control plans for station 3	40	05FEB08	31MAR08	163																		
<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	231																		
<b>162 - Electrical Leads</b>																								
132-001		Title I design WBS 162 Coil leads	180*	03DEC07A	21AUG08	199																		
<b>Kalish</b>																								
<b>Job: 1361 - TF Fabrication-KALISH</b>																								
<b>TF Fabrication Contract</b>																								
1361C-108		Fab, Test & Deliver Coil #8	21*	31JAN08	28FEB08	497																		
1361C-109		Fab, Test & Deliver Coil #9	1	24MAR08*	24MAR08	496																		
1361C-110		Fab, Test & Deliver Coil #10	1	15APR08*	15APR08	496																		
<b>Job: 1354 - Trim Coil Design &amp;Procurement-KALISH</b>																								
<b>Trim Coil **Updated estimate**</b>																								
TRIM-020		Trim Coil System Requirements Document	12	07FEB08A	15FEB08	251																		
TRIM-030		Review and Approve SRD	5	18FEB08*	22FEB08	251																		
TRIM-070		Prelim trim coil concept & reqmnts	50*	02JAN08A	11MAR08	259																		
TRIM-071		Layout/Design coils & supports	29*	31JAN08*	11MAR08	259																		
TRIM-080		Analysis	50*	02JAN08A	11MAR08	259																		
TRIM-090		Prepare for PDR	20*	25FEB08	21MAR08	251																		
TRIM-100		Trim Coil PDR	1	24MAR08	24MAR08	251																		
TRIM-101	2	** Trim Coil PDR **	0		24MAR08	251																		

Activity ID	MILE STONE LEVEL	Activity Description	Duration (work days)	Forecast Start	Early Finish	Total Float	FY08																
							FEB				MAR				APR								
							4	11	18	25	3	10	17	24	31	7	14	21					
TRIM-110		Procure Trim Coil Insulation	50	25MAR08	03JUN08	337																	
TRIM-130		Prepare Conductor Procurement Spec	3	25MAR08	27MAR08	279																	
TRIM-140		Review and Approve Conductor Spec.	5	28MAR08	03APR08	279																	
TRIM-120		Procure Trim Coil Conductor	100	04APR08	25AUG08	279																	
TRIM-170		Complete Trim Coil Detailed Drawings	10	25MAR08	07APR08	251																	
TRIM-200		Assy drawings & parts list	10	08APR08	21APR08	251																	
TRIM-150		Prepare Trim Coil Procurement Spec.	10	25MAR08	07APR08	256																	
TRIM-160		Approve Procurement Spec	5	08APR08	14APR08	256																	
<b>Perry</b>																							
<b>Job: 1353 - CS Structure Procurement-PERRY</b>																							
<b>CS Support Structure</b>																							
1353-001		Design PF1a upper to lower interconnect bus	12	15APR08*	30APR08	664																	
<b>Job: 8215 Plant Design</b>																							
<b>FY07 Rebaseline Exercise</b>																							
8210-07		Update plant model	19	31JAN08	26FEB08	1,673																	

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							FEB				MAR				APR										
							4	11	18	25	3	10	17	24	31	7	14	21							
<b>Larry Dudek</b>																									
<b>Brown</b>																									
<b>Job: 1803/1805- FPA Tooling/Constr-BROWN/DUDEK</b>																									
<b>Station 3-Modular Coil to VVSA Assembly</b>																									
1803-3.11		Deliver Support Cart (PE 007703)	69*	15OCT07A																					
1803S3-1		Flange bolt/VV support access platform	10*	03MAR08*	14MAR08	248																			
1803S3-2		Updated Stations 3 and 5 sequence plan	43*	31JAN08*	31MAR08	208																			
1803S3-3		Station 3 alignment FDR and clean-up activities	15	01APR08*	21APR08	208																			
1803S3-5		Analyze single point lift (proof test of support	10*	18FEB08*	29FEB08	258																			
1803S3-6		Station 3 simulation detail model	15*	04FEB08*	22FEB08	263																			
1803S3-7		VV/MC clearance study (for VVSA1, 2 and 3)	11*	01APR08*	15APR08	196																			
1803S3-8		Station 3 deflection FEA study	30	16APR08	28MAY08	196																			
1805S3-2		Left side base grout plates	85	31JAN08	29MAY08	181																			
1805S3-3		MCHP lift fixture frame weldment	85	31JAN08	29MAY08	181																			
1805S3-4		Lift fixture mounting bracket weldments	85	31JAN08	29MAY08	181																			
1805S3-5		Reworked laser frame structure	85	31JAN08	29MAY08	181																			
1805S3-6		Right inboard laser frame structure	85	31JAN08	29MAY08	181																			
1805S3-7		Left inboard laser frame structure	85	31JAN08	29MAY08	181																			
1805S3-8		Laser screen lexan sheet (1/8 x 48" x 96")	85	31JAN08	29MAY08	181																			
1805S3-9		Estimate for Station 2 type alignment system	85	31JAN08	29MAY08	181																			
1805S3-100		Hardware & Misc items	65	31JAN08	30APR08	201																			
1805S3-110		Misc assembly Cost	65	31JAN08	30APR08	201																			
1805S3-201		MC base support system (left / rt side)	65	31JAN08	30APR08	201																			
1805S3-202		Hilman roller - 8-0T plus R & U guides	65	31JAN08	30APR08	201																			
1805S3-203		AirLoc Wedgmount Precision Levelers	65	31JAN08	30APR08	201																			
1805S3-204		Lift fixture mounting bracket weldments	65	31JAN08	30APR08	201																			
1805S3-205		Estimate for Station 2 type alignment system	65	31JAN08	30APR08	201																			
1805S3-206		Hardware & Misc items	65	31JAN08	30APR08	201																			
<b>Station 5-Final Field Period Assembly</b>																									
1803S5-4		Station 5 (and 3) lift fixture structures and li	10*	04FEB08*	15FEB08	371																			
1803S5-5		Port 4 assembly tooling, models and dwgs	31	18FEB08	31MAR08	371																			
1803S5-6		Complete external platform models	33*	17MAR08*	30APR08	332																			
1803S5-8		Station 5 support structural analysis	10*	03MAR08*	14MAR08	382																			
1803S5-9		Station 5 PDR activities	14	21FEB08*	11MAR08	385																			
1803S5-10		Station 5 FDR - Base support	22*	05MAR08*	03APR08	240																			
1803-5.6	3	Station 5 FDR	0		03APR08	240																			
1803S5-11		Base support release for fabrication	5	04APR08	10APR08	363																			
1803S5-12		Station 5 FDR - Lift fixtures, port tooling and	10	08APR08*	21APR08	351																			
1805S5-1		FPA base support system	105	04APR08	02SEP08	240																			
1805S5-2		Type-C side support structure	105	04APR08	02SEP08	240																			
1805S5-3		NB side stabilizing support structure	105	04APR08	02SEP08	240																			
1805S5-4		TF local temporary supports	105	04APR08	02SEP08	240																			
1805S5-5		20 ton screw jacks	105	04APR08	02SEP08	240																			
1805S5-6		AirLoc Wedgmount Precision Levelers	105	04APR08	02SEP08	240																			
1805S5-7		Port 4 handling structure	105	04APR08	02SEP08	240																			
1805S5-8		Small port handling structure	105	04APR08	02SEP08	240																			
1805S5-9		Station 5 (and 3) lift fixture structures	105	04APR08	02SEP08	240																			
1805S5-102		Hardware & Misc. items	105	04APR08	02SEP08	240																			
1805S5-103		Misc. assembly Cost	105	04APR08	02SEP08	240																			

Activity ID	MILE STONE LEVEL	Activity Description	Duration (work days)	Forecast Start	Early Finish	Total Float	FY08																		
							FEB				MAR				APR										
							4	11	18	25	3	10	17	24	31	7	14	21							
<b>Chrzanowski</b>																									
<b>Job: 1408 - MC Winding Supplies-CHRZANOWSKI</b>																									
1408-4.0 Order Strain Gages 1 14MAR08* 14MAR08 170																									
1408-4.1 Procure Strain Gages 55 17MAR08* 02JUN08 170																									
<b>Job: 1451 - Mod Coil Winding-CHRZANOWSKI</b>																									
<b>Station 3-Casting Prep &amp; Winding</b>																									
P1-151 Receive A6, Prep& Instl Cladding 97* 01NOV07A 27MAR08 93																									
P1-161 Wind coil A6 75 28MAR08 27MAY08 93																									
<b>Station 4-Winding, Instl Chill Plates,Tubing,Bag</b>																									
P3-170 Instl Chill Plates,Tubing,Bag B6 42 31JAN08A 30APR08 171																									
<b>Station 1 Post VPI</b>																									
P2-051C Final Clamps & Warm Test (Station1) C6 43 31JAN08 31MAR08 205																									
P3-171C Final Clamps & Warm Test (Station1) B5 16 01APR08 22APR08 207																									
<b>Job: 1459 - Mod Coil Fabr.Punch List-CHRZANOWSKI</b>																									
<b>Punchlist Tech shop/RESA</b>																									
PLTS-C3 Grinding & Drill Holes -C3 102* 01OCT07A 03MAR08 187																									
PLTS-C4 Grinding & Drill Holes -C4 5 01OCT07A 10MAR08 214																									
PLTS-C5 Grinding & Drill Holes -C5 5 01OCT07A 17MAR08 1,659																									
PLTS-A6 Grinding -A6 5 01OCT07A 19SEP08 93																									
PLTS-C6 Grinding & Drill Holes -C6 20 01APR08 28APR08 205																									
PLTS-GRIND Coil to coil fitup modifications (grinding/cp) 165* 01DEC07A 31JUL08 1,563																									
<b>Punchlist- Coil Technicians</b>																									
PLCT-A3 Insul,measure,TC, other punch list-A3 17 05JUL07A 14FEB08 174																									
PLCT-A4 Insul,measure,TC, other punch list-A4 17 06JUL07A 05MAR08 174																									
PLCT-B3 Insul,measure,TC, other punch list-B3 14 01OCT07A 20MAR08 174																									
PLCT-C3 Insul,measure,TC, other punch list-C3 18 01OCT07A 07APR08 174																									
PLCT-B4 Insul,measure,TC, other punch list-B4 14 01OCT07A 21APR08 174																									
PLCT-C4 Insul,measure,TC, other punch list-C4 14 25JUL07A 02MAY08 184																									
PLCT-A5 Insul,measure,TC, other punch list-A5 14 30JUL07A 12MAY08 184																									
PLCT-A6 Insul,measure,TC,SG other punch list-A6 14 01OCT07A 09OCT08 93																									
PLCT-B5 Insul,measure,TC, other punch list-B5 14 01OCT07A 29OCT08 93																									
PLCT-C5 Insul,measure,TC, other punch list-C5 18 01OCT07A 06NOV08 93																									
PLCT-B6 Insul,measure,TC,SG other punch list-B6 14 01OCT07A 17JUL08 171																									
PLCT-C6 Insul,measure,TC,SG other punch list-C6 14 01OCT07A 16MAY08 205																									
<b>Dudek</b>																									
<b>Job: 1431 - Mod. Coil Interface Hardware-DUDEK</b>																									
<b>Bladders</b>																									
1421-3024 Prep Req, Bid,& Award Remaining Bladders 21* 03MAR08* 31MAR08 114																									
1421-3025 Deliver remaining bladders 14* 01APR08 18APR08 114																									
<b>Shims-Outboard</b>																									
1429-3066H Deliver 1st HP shims to PPPL 1 31JAN08* 31JAN08 26																									
1429-3069 Outboard Shims Available for 1st 3 pack MC 0 28FEB08 6																									
S21-5.04X Shims required for 1st 3 pack MC assy 0 29FEB08 6																									
<b>Shims-Inboard</b>																									
1429-3062X Inboard Shims 208 03MAR08* 02JAN09 74																									

Activity ID	MILE STONE LEVEL	Activity Description	Duration (work days)	Forecast Start	Early Finish	Total Float	FY08															
							FEB				MAR				APR							
							4	11	18	25	3	10	17	24	31	7	14	21				
1429-3060B		PPPL water jet cut inboard shims	3	03JAN08A	05FEB08	19																
1429-3060A		PPPL mill inboard shims to thickness (for A-B)	5	06FEB08	12FEB08	19																
1429-3060D		PPPL mill inboard shims to thickness (for B-C)	10	13FEB08	26FEB08	93																
1429-3060C		PPPL anneal inboard shims	3	13FEB08	15FEB08	19																
<b>Studs,Washers,Nuts</b>																						
1421-3063		Stud kits available for balance of MC assy	0		30JAN08	156																
<b>Stratton</b>																						
<b>Job: 3101 - Magnetic Diagnostics-STRATTON</b>																						
<b>Rogowski Coils</b>																						
3101-352		Assy & detail dgws	46	31JAN08	03APR08	431																
3101-353		Prep installation procedure	31	04APR08	16MAY08	431																
3101-354		Purchase materials	62	31JAN08	25APR08	446																
3101-370		Check elect characteristics of cables	503*	16APR08*	23APR10	1,135																
3101-351		Wind coils	13*	31MAR08*	16APR08	453																
3101-359		Install Rogowski coils (budgeted in job 1815)	21*	02APR08*	30APR08	542																
<b>TF and PF Co-wound Loops</b>																						
3101-425		Design Protective boxes for PF	100*	01NOV07A	01APR08	1,558																
3101-426		Purchase SS Sheet	10	12NOV07A	18JUN08	320																
3101-452		Form Protective boxes	10	12NOV07A	23JUN08	320																
3101-454		Weld end plates of PF protective boxes	10	09NOV07A	30JUN08	320																
3101-427		Purchase Heat Shrink tubing	15	12NOV07A	19MAY08	1,495																
3101-458		FabTF,PF & solenoid co-wound loops	186	02JUL07A	15AUG08	1,462																
<b>T/C and Heater Tape Leads</b>																						
1204-140.1		Peer Review T/C and Heater Tape Leads	12	15APR08*	30APR08	183																
<b>Voltage Loops &amp; Protective Boxes</b>																						
3101-802		Fab 3 protective Boxes (Use Existing Box)	10	31JAN08	13FEB08	1,682																
<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	01APR08	14APR08	163																
R1802-309		JHA completed	6	15APR08	22APR08	163																
<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	284																
R1810-1100		Design & Build heater& thermo termination box	41	06MAR08*	01MAY08	254																
<b>Station 1- VV Prep (hrd surf cmpntsFP#2</b>																						
R1810-1208		Perform final acceptance testing (H/C flow test)	32	16APR08	30MAY08	341																
<b>Setup</b>																						
R1810-2047		Calibrate stud tensioner	44	31JAN08	01APR08	1,648																
R1810-2036		Fuji Paper	20	31JAN08	27FEB08	1,672																
R1810-2038		Purchase 5 ton gantry	65	31JAN08	30APR08	1,627																
R1810-2045		2 Electric Torque wrench	56	31JAN08*	17APR08	1,636																
R1810-2080		3rd laser tracker	65	31JAN08*	30APR08	1,627																
R1810-2081		Removable photogrammetry targets	108*	31JAN08*	01JUL08	1,584																
R1810-2082		Fixed photogrammetry targets	108*	31JAN08*	01JUL08	1,584																
R1810-2083		Replacement photogrammetry targets	65	31JAN08*	30APR08	1,627																

Activity ID	MILE STONE LEVEL	Activity Description	Duration (work days)	Forecast Start	Early Finish	Total Float	FY08															
							FEB				MAR				APR							
							4	11	18	25	3	10	17	24	31	7	14	21				
R1810-2027		Install THIRD Holding 20 deg fixture	10	01APR08*	14APR08	1,639																
R1810-2084		Design and purchase 3 additional wedge	87*	31JAN08	02JUN08	18																
R1810-2024		Rework wedges f/combined assemblies& coil	10	31JAN08	13FEB08	1,682																
R1810-2026		Setup up satellite shop in Mock-up area	15	31JAN08	20FEB08	1,677																
R1810-2085		Trak 3 axis mill	65	31JAN08*	30APR08	1,627																
R1810-2086		Trak 3 axis mill collet set	65	31JAN08*	30APR08	1,627																
R1810-2087		Coordinate measuring machine	65	31JAN08*	30APR08	1,627																
R1810-2088		HEPA machine tool exhaust system	65	31JAN08*	30APR08	1,627																
R1810-2089		Tools, cabinets & storage shelving	65	31JAN08*	30APR08	1,627																
R1810-2002		Purchase grinding machine	45	31JAN08	02APR08	1,647																
S20-3.03		Compress G10 shims & sort (initial 300 shims	6	31JAN08*	07FEB08	22																
S20-4.01		Install MCHP fixtures & metrology equipt	67	01APR08*	03JUL08	1,582																
S20-4.02		Perform metrology set-up;purchase 6 pillars	43	31JAN08*	31MAR08	1,649																
<b>Pre-Measuring and fitup checks</b>																						
<b>Pre measurement of MCHP A1,B1,C1 flanges</b>																						
2-1-2.99		Drill Stycast fill holes	10	14MAR08*	27MAR08	56																
<b>Pre measurement of MCHP A2,B2,C2 flanges</b>																						
2-2-2.99		Drill Stycast fill holes	3	27MAR08*	31MAR08	152																
S22-3.02		Compress shims sort by thickness	20	07MAR08*	03APR08	96																
<b>Pre measurement of MCHP A3,B3,C3 flanges</b>																						
S23-1.01		Verify mating MC's of MCHP will come together	4	31JAN08	05FEB08	144																
2-3-2.99		Drill Stycast fill holes	3	01APR08	03APR08	156																
S23-3.02		Compress shims sort by thickness	6	14APR08	21APR08	90																
S23-4.01		Install MCHP fixtures & metrology equipt	6	14APR08	21APR08	90																
<b>Pre measurement of MCHP A4,B4,C4 flanges</b>																						
2-4-2.99		Drill Stycast fill holes	3	04APR08	08APR08	191																
<b>Station 2 MC subassy A1B1C1</b>																						
<b>A-B MC Assembly</b>																						
2-1-6.09		torque50% of final value & recheck.	1	11MAR08*	11MAR08	0																
2-1-6.10		Measure position of all monuments	2	12MAR08	13MAR08	0																
2-1-6.11		Measure shim puck height	1	14MAR08	14MAR08	0																
2-1-6.12		Remove puck locating rings & install all nose s	3	17MAR08	19MAR08	0																
2-1-6.13		"Lightly" tack weld nose flex shims "A" & "B"	1	20MAR08	20MAR08	0																
2-1-6.14		Unfasten bolts & remove "B" coil place it on sep	1	21MAR08	21MAR08	0																
2-1-6.15		Recheck part alignment of "A" coil	2	24MAR08	25MAR08	0																
2-1-6.151		Weld all Type-A flex shims plasma side	2	26MAR08	27MAR08	0																
2-1-6.16		recheck alignment	1	28MAR08	28MAR08	0																
2-1-6.17		Time for a back office assessment (first weld on	10	31MAR08	11APR08	0																
2-1-6.18		Measure "B" fiducials estab coord sys	1	31MAR08	31MAR08	9																
2-1-6.19		Weld allType-B (A-flange) flex shims plasma	2	14APR08	15APR08	0																
2-1-6.20		Recheck part metrology acceptance criterion.	1	16APR08	16APR08	0																
2-1-6.21		Back office assessment of part after weld	5	17APR08	23APR08	0																
2-1-6.22		Remove alumina shims as necessary	0	17APR08	16APR08	4																
2-1-6.04		Place unfilled shim bags in wing areas	1	17APR08	17APR08	4																