

## NCSX Project Meeting May 28, 2008

**Background:** This is a report of the Project Meeting held Wednesday, May 28<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

### **Meeting Minutes:**

**Safety Briefing** – Bob Simmons presented a Safety Minute on ladder safety, including around the home. An accident occurred in a home ladder use experience several years ago, causing considerable pain and rehabilitation time.

Don Rej then provided a caution to not allow project situation distract us from putting safety first.

**Project Status** – Don Rej updated the Project on the current status and plans for providing an “orderly shutdown” on NCSX. Project will identify priority list of closeout tasks, per DOE guidance. Proposal will have to be approved by DOE and must be acceptable to OMB and Congress. Project will provide a menu of options, aimed at maximizing the value produced for the investment made. Will finish tasks close to completion to capture their value.

### **Heitzenroeder (RLM)**

- Art Brooks (Job 8204) – will cancel magnetic materials study until (or if) a facility model is provided. However, still need increased granularity and update of ETC on certain task that will continue (i.e., scenario development, fault modes, magnetic materials studies, time constant if inconel hoses are used & insulating breaks eliminated, eddy currents). **(Brooks)**
- Tom Brown (Jobs 8203/8205 Design Integration) – Confirmed that facility model work will be stopped. Despite increased granularity being provided for Jobs 1701 and 6201, Steve and Tom still need to meet to ensure that this granularity is sufficient to permit Tom to better plan his work load. **(Raftopoulos and Brown)**
- Jim Chrzanowski – Mike Kalish reporting - Jobs 1302/1352 – FDR CHIT resolution still in progress and expect to complete this week. Proceeding to cancel material orders (e.g., PF conductor, etc.)

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- Mike Cole (Jobs 1353/1416/1421/1601/1806/1260).
  - Job 1416 (Mod Coils Type A&B) - Cooldown analysis proceeding. Should proceed with LN cooling after a shot (**Freudenberg**)
    - Determine the heat loss from the cladding and chill plates cooling tubes as a function of the length of the tube. This calculation is more difficult and will not be completed as described in the three week look ahead schedule. Proceed with this.
    - Modular Coil Lead Cooling analysis on the modular coil. Proceed with this.
    - Weld analysis is probably going to be revisited due to the latest findings so estimate few days to a week for that one. (20 hrs). Proceed with this.
  - Should also continue with ECN modifications. (**Williamson**)
  - Job 1421 (Mod Coil Interface Design) - C-C shim FDR comments resolution delayed until the end of June.
  - Job 1601 (LN2 Manifolds & Electrical Leads) – proceeding towards June 5<sup>th</sup> PDR for the LN2 Manifolds – incorporating comments into the SRD. Interfaces may still need further discussion. Follow-up discussions on electrical lead routing planned, but it appears that current thought is to bring all lead pairs out and then route them vertically downward (**Cole/Brown/Goranson**)
  - Job 1806 (FP Assembly Specs & Drawings) – Station 3 spec and drawings now forecast for mid-June. (**Cole**) Station 5 spec and drawings and Station 6 spec and drawings work continue to at least do model or sufficient drawings to permit someone to understand the process. Specs should be stopped. (**Cole**)
  - Job 1901 (ORNL Design Integration) - Stereolithography models to reduce/retire Station 6 risks- proceed. (**Fogarty**). On May 29<sup>th</sup>, it was decided to add the Nomex Batt proof of principle work to the Risk Mitigation tasks – need resources and schedule identified. (**Cole**)
  
- Fred Dahlgren (Jobs 1353/1501/1702)
  - FDR for Base Support Structure held on May 27<sup>th</sup> – successful and CHITs being resolved (**Dahlgren**)
  - SRDs for Base Support Structure Coil Support Structure signed and posted.
  - Stress Analysis for Base Support Structure in checking (**Dahlgren/Fan**)
  - FDR for Coil Support Structures due at end of June. Design detailing in progress – progress on Trim Coil interfaces, but cryostat interfaces still an issue. Analysis of global model proceeding. Need to decide on Fault Modes (**Dahlgren**)
  
- Bob Ellis (Job 8205) - Station. 3 Dimensional Control Plan draft issued two weeks ago. Plan on resolving comments and issuing for signature first week in June. Meeting on May 29<sup>th</sup> to discuss metrology tolerances.

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- Mike Kalish (Jobs 1361 & 1354):
  - TF#13 released for shipping. Other TF work on schedule.
- Steve Raftopoulos (Jobs 1702 & 6201)
  - Contract with Bagley Associates in process placed for cryosystems support.
  - Pursuing a contract with a Cryostat expert. Requisition 406447 submitted. Expect to have Pat Kelley onboard by June 8<sup>th</sup>.
  - Provide drawings of test stand to Raftopoulos. **(Fogarty)**
  - Provide Cryostat design granularity from TechSource contract to Strykowski. **(Simmons) – provided on May 29<sup>th</sup>.**

**Larry Dudek (RLM) – Phil Heitzenroeder**

- Tom Brown (Job 1803)
  - Station 3 clearance studies in progress – report expected at end of next week. Proceed with study for all VVSAs. Proceeding to finish models for Stations 3/5/6.
- Jim Chrzanowski (Job 1451) – has estimate for completing punch list items and this has been provided to Strykowski.
- Mike Viola (Jobs 1810/1815) .
  - Some issues reported on heater tape inspection – proceeding to disposition items. Procedure for testing loops end to end and heaters, thermocouples, and flux loops being reviewed – expect to issue shortly.
  - B1 C1 shims will be tacked later this week – almost ready to lower B2 onto A2..
- Brent Stratton (Job 3101) – installation of Rogowski loops still on track 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.

**Al vonHalle (RLM)**

- Raki Ramakrishnan (WBS 4 Jobs) – tentatively planning for peer review of Power Systems Controls in mid-June. Ramakrishnan needs to provide info to Strykowski. Meeting to discuss Coil Protection Systems scheduled for May 29<sup>th</sup>.

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**Attachments**

# The Tale of an Idiot and a Perfectly Good Ladder

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# The Scenario

- On a bright sunny Saturday in September 1999, the idiot and his wife had planned to go shopping
- But ... before they went out, the idiot decided to do a “quick fix” on a seam for his greenhouse
- Selected a perfectly good step ladder in good condition and attempted to use it to access the loose seam
- Set the ladder “firmly” on muddy ground and scaled the ladder
- Climbed to the very top of the ladder and promptly fell off, landing on the ground and broke his back

# Errors Made by the Idiot

- Attempted to do a “quick fix” without fully assessing that:
  - The ladder was not quite tall enough
  - The ground was muddy and not a real firm base
- Then violated “don’t go beyond” the second rung from the top rule (clearly marked on ladder)

# What Happened

- The only possible “good thing” that came out of this was that the idiot avoided a likely very expensive trip to Liberty Village
- However, the resulting pain and suffering was not worth it:
  - First time the idiot got to ride in an ambulance
  - Was in the hospital for over a week and then on a walker and in an upper body brace for 6 weeks
  - Had to undergo physical therapy for another 6 weeks

# Five Rules for Ladder Safety

- Select the right ladder for the job – wood or fiberglass preferred
- Select a good ladder and inspect it
  - Includes checking the ground upon which the ladder will rest
- Set up the ladder with care
  - Ensure stepladder is locked
  - Ensure straight ladder secured and lean ratio from the wall is  $\frac{1}{4}$  the ladder extended length
- Climb and descend with caution
- Work safe! Work smart!

# The Idiot



# NCSX Project Closeout Update: May 28, 2008



- **Attention to Safety in Times of Uncertainty**
- **Conversations with DOE**
- **Closeout Planning**
- **Near-Term Actions**



# Guidance from DOE



- Project to propose NCSX closeout activities
- Proposal must be sufficiently compelling to earn buy-in from Congress & OMB
- Activities should capture \$81M Project investments to date
  - Wrap-up work packages so there is value, documenting corporate memory and lessons learned
  - Retire risks, specifically cryostat and assembly, to a level that would pass a SC review, if DOE wants one
- FY08 allocation is fixed and available
- Finish MIE project in FY09
  - Funding dependent on Congressional appropriations
    - use ~ 1/3 of President's request for planning purposes

# Closeout Plan Options



- Complete fabrication of major stellarator components very close to completion
  - Modular coils
  - Toroidal field coils
  - Vacuum vessel sectors with installed services
- Complete design integration of the stellarator core
  - Cryostat and cryogen supply and distribution system design through PDR
  - Complete electrical leads and neutral beam transition duct design through PDR
  - Complete FDRs of conventional coil support structures
  - Complete and document magnet analyses: coil protection limits and strategy; operating scenarios and fault modes; coil cooling
  - Update the assembly sequence plan and assembly estimates
- Prototype critical assembly operations
  - Assemble one complete field period through installation of two half-periods over a vacuum vessel sector (Station 3).
- Document and publish contributions to fusion engineering knowledge made by the NCSX project.
- Secure equipment with supporting documentation

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# Draft Plan for Remainder of FY08

(Ron will soon provide you a detailed resource-loaded schedule)



- Design
  - Continue stellarator core on current schedule
  - Scale back on ancillary systems and start-up planning effective immediately
- Construction
  - Complete modular coil VPIs
- Assembly
  - Continue vacuum vessel services
  - Continue Station-2 through the 2<sup>nd</sup> half period assembly only
  - Continue Station-3 through the 1<sup>st</sup> field period assembly only
  - Scale back on Station-5 & 6 planning
- Procurements
  - Complete TF contract & orders that support Stations 2 & 3 first articles
  - Purchase card orders must be pre-approved by J. Chrzanowski, R. Strykowski, or M. Viola
- Prepare Estimates for New Scope
  - Documentation completion & archival
  - Equipment disposition

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## Weekly Meeting Actions Tracking Log Open Action Items

Meeting Date	Job	Action	Responsibility	Date of Status	
5/28/2008		Discuss "strawman" close out work scope with Job Managers	Strykowski	5/28/2008	To be done in next two weeks.
5/21/2008					
	1701 6201	Provide list of near term needs from Design Integration to Tom Brown to enable him to plan his work load and priorities	Raftopoulos Heitzenroeder	5/28/2008	Increased granularity provided, but Steve & Tom need to review to ensure that this provides sufficient level of detail.
5/14/2008					
	8204	Add items being work on, but not currently budgeted to WAF - adjust ETC	Brooks	5/21/2008	Working on this - will provide greater granularity & adjusted ETC to Strykowski by June 6th.
	8203	Job Managers provide near term support needed from Design Integration for Cryostat/Cryosystems work	Raftopoulos/Heitzenroeder	5/28/2008	Brown to add to WAF when info provided
	1901	Identify additional Risk Mitigation tasks needed	Cole/Heitzenroeder	5/28/2008	ORNL to add Nomex batt proof of principle task to this list & identify resources needed to accomplish.
5/7/2008					
	1702	Determine how leads will be routed out of Cryostat	Brown/Cole/Goranson	5/28/2008	Tom to review with Mike C. on 5/29 - appears that "down" option favored by Paul can be done.
4/11/2008					
	1806	Station 3/5/6 drawings and CSPEC	Harris/Cole	5/28/2008	Station 3 spec & drawings now expected to complete by mid-June. Continue to develop models for Station 5 & 6. Advance drawings for Station 5 to near completion (but not signed off) and prepare Station 6 drawings showing minimal assembly concepts. Station 5 & 6 CSPEC work has stopped.

Activity ID	Activity Description	Duration (work days)	Forecast Start	Forecast Finish	Baseline Finish	Remaining Float	Schedule slip to baseline (work days)	FY08					
								MAY		JUN			
								26	2	9	16	23	
<b>Phil Heitzenroeder</b>													
<b>Brooks</b>													
<b>Job: 8204 - Systems Analysis-BROOKS</b>													
8204-FY08X	Systems Analysis, studies & tech assurance	250*	01OCT07A	30SEP08	30SEP08	1,521	0						
1000	magnetic Material Study	21*	01MAY08	30MAY08		1,606	0						
<b>Brown</b>													
<b>Job: 8203 - Design Integration-BROWN</b>													
8203FY08-2	Facility models update&integration	377*	01APR08A	30SEP09	30SEP09	1,272	0						
8203FY08-3	Cryostat design revw & integration update	41	05JUN08*	01AUG08	01AUG08	1,562	0						
8203FY08-4	General integration activities	170*	01FEB08A	30SEP08	30SEP08	1,521	0						
<b>Chrzanowski</b>													
<b>Job: 1302 - PF Design -CHRZANOWSKI</b>													
1302-275	Resolve FDR Chits	70*	22FEB08A	30MAY08	02MAY08	1,236	-19						
<b>Job: 1352 - PF Coil Procurement-CHRZANOWSKI</b>													
<b>PF Coil Fabrication</b>													
1352-100	Materials Delivery PF 4,5,6	69*	01APR08A	08JUL08	07JUL08	1,580	-1						
141-035E	DOE Approval	0		30MAY08*	09MAY08*	294	-14						
141-038.1	PF Conductor Delivery	105*	21FEB08A	18JUL08	18JUL08	356	0						
141-036	PF Coils Awarded	0		12JUN08*	30MAY08*	294	-9						
1352-121	Design/Fab Tooling	85	13JUN08*	13OCT08	30SEP08	294	-9						
141-031	Title III engr WBS 132	370	02JUN08*	19NOV09	23OCT09	1,236	-19						
<b>Cole</b>													
<b>Job: 1416 - Mod Coil Type AB Fnl Dsn-COLE</b>													
<b>Analysis and closeout documentation</b>													
1416-601	Prepare EM and structural analysis of leads	82*	31JAN08A	23MAY08	30APR08	1,610	-17						
1416-606	Resolve documentation comments	15	01MAY08	21MAY08	20MAY08	1,612	-1						
1416-650	Prepare cooling analysis of lead area	52*	01MAY08*	15JUL08	27MAY08	1,575	-34						
1416-651	Prepare cooling analysis coefficient for cryosta	60*	01MAY08*	25JUL08	27MAY08	1,567	-42						
<b>ECN Modifications</b>													
1416-801	ECN Mods-Resize vertical port boot	40	01MAY08*	26JUN08	27MAY08	1,587	-22						
1416-802	ECN Mods-Revise Type B cooling lines	40	01MAY08*	26JUN08	27MAY08	1,587	-22						
1416-803	ECN Mods-Issue DXF shim files for fab	40	01MAY08*	26JUN08	27MAY08	1,587	-22						
1416-805	ECN Mods-Add TC's at bottom of 101,102,103	40	01MAY08*	26JUN08	27MAY08	1,587	-22						
1416-806	ECN Mods-Revise dwg 123-151	40	01MAY08*	26JUN08	27MAY08	1,587	-22						
<b>Job: 1421 - Mod Coil Interface Design-COLE</b>													
<b>Inboard Interface-CC</b>													
1421-3155	Resolve C-C shim FDR comments	20	01MAY08*	29MAY08	28APR08	1,607	-22						
INTRF-100	Misc travel, meetings,reporting,job 1416&1421	271*	01MAY07A	30MAY08	30MAY08	1,606	0						
<b>Job: 1901 - Stellarator Core Mngt&amp;Integr-COLE</b>													
<b>191 - Stellarator Core Management &amp; Oversight</b>													
1901-08	WBS 191 FY08	249*	01OCT07A	29SEP08	29SEP08	1,522	0						

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								MAY		JUN			
								26	2	9	16	23	
<b>192 - Stellarator Core Integr &amp; Global Analysis</b>													
1902-08	WBS 192 FY08	249*	01OCT07A	29SEP08	29SEP08	1,522	0						
<b>193 - Risk Mitigation Tasks</b>													
RISK-43	Bolt preload could relax with time.	61	03MAR08A	28JUL08	28JUL08	-43	0						
RISK-752	Pucks held by Nomex felt-demonstrate feasibility	44	05MAY08*	07JUL08	07JUL08	460	0						
RISKMIT	Field Period Assy Risk Mitigation Tasks	0		30APR08	28JUL08	506	61						
RISK-696	consider a bringing all 3 120 degree field perio	227	03MAR08A	31MAR09	31MAR09	168	0						
<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	224*	02JUL07A	23MAY08	30APR08	161	-17						
1803-305	Station 3 Assembly Drawings	226*	02JUL07A	28MAY08	30APR08	159	-19						
<b>Station 5-Final Field Period Assembly</b>													
1803-501	Station 5 Assembly Specification	9*	27MAY08*	06JUN08	06JUN08	236	0						
1803-509	Field period Assy Dwgs	132*	01FEB08A	06AUG08	06AUG08	194	0						
<b>6.00-Final Machine Assembly</b>													
1803-601	Station 6 Assembly Specification	120	01MAY08*	20OCT08	02OCT08	360	-12						
1803-605	Station 6 Assembly Drawings	120	01MAY08*	20OCT08	02OCT08	360	-12						
1803-613	Detail dwgs-man access port (deleted)	21*	01MAY08	30MAY08	30JAN08	459	-86						
1803-010	meetings,reporting,/presentations assy models	194*	31JAN08A	31OCT08	31OCT08	1,498	0						
<b>Dahlgren</b>													
<b>Job: 1702 - Base Support Struct Design-DAHLGREN</b>													
1702-520	Final design. Assy dwgs, fab dwgs,	81*	01FEB08A	23MAY08	30APR08	221	-17						
1702-522	FDR Prep	19*	01MAY08	28MAY08	30APR08	219	-19						
1702-525M	Base Support Structure FDR	0		28MAY08	30APR08	219	-19						
1702-530	Resolve chits, issue dwgs for fab,Issue requisit	10	29MAY08	11JUN08	14MAY08	219	-19						
<b>Job: 1501 - Coil Structures Design-DAHLGREN</b>													
1501-533	Detail CAD Drawings,BOM	270*	01JUN07A	30JUN08	16JUN08	211	-10						
1501-533F	Integrated Stress Analysis	186*	01OCT07A	30JUN08	16JUN08	211	-10						
1501-535	Develop Interfaces with cryostat	0		30MAY08*	01MAY08*	232	-20						
1501-549	Update C.S.Support Attachment Design	21*	01MAY08*	30MAY08	27MAY08	208	-3						
1501-550	Peer review C.S.Design	5	02JUN08	06JUN08	03JUN08	208	-3						
1501-554	Resolve CS peer review Chits	5	09JUN08	13JUN08	10JUN08	208	-3						
1501-562	Prepare Specs for Coil Structure & CSS h/w	14	16JUN08	03JUL08	30JUN08	208	-3						
<b>Dudek</b>													
<b>Job: 1429 - MC Interface R&amp;D-DUDEK</b>													
<b>Outboard Interface-Friction</b>													
1429-3030	G-10 Test	12	01MAY08*	16MAY08	09MAY08	1,615	-5						
<b>Ellis</b>													
<b>Job: 8205 - Dimensional Control Coordin-ELLIS</b>													
<b>Station 3-Modular Coil to VVSA Assembly</b>													
METDCP-3	Dimensional control plans for station 3	85*	01FEB08A	30MAY08	30APR08	157	-21						
STAT3	Station 3 preparations	30	01MAY08	12JUN08	09JUN08	166	-3						

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								MAY		JUN		
								26	2	9	16	23
METFY08R	Support FPA Station 2	442*	01FEB08A	02NOV09	02NOV09	1,249	0					
<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	86*	01FEB08A	02JUN08	02JUN08	228	0					
162-201	Layout distribution system header	0		30MAY08*	09MAY08*	229	-14					
162-209	Perform thermohydraulic analyses	0		16MAY08*	16MAY08*	238	0					
162-211	Design hose electric break fittings	0		23MAY08*	23MAY08*	233	0					
162-213	Route MC, TF, PF hoses	0		30MAY08*	30MAY08*	229	0					
162-215	Develop SRD	0		23MAY08*	23MAY08*	233	0					
191-002	Coil Serv-LN2 manifolds&piping-PDR (incl SRD)	3*	03JUN08	05JUN08	03JUN08	228	-2					
162-011A	R&D pressure drop simulation	15	06JUN08	26JUN08	24JUN08	278	-2					
162-217	PDR	0		05JUN08	03JUN08	228	-2					
161-003	Resolve PDR comments	5	06JUN08	12JUN08	10JUN08	228	-2					
191-011	Title II design WBS 161 LN2 manifolds&piping	60	13JUN08	08SEP08	04SEP08	228	-2					
161-110	Fabrication specifications	65	09JUN08	09SEP08	05SEP08	228	-2					
161-100	meetings/reporting/presentations	267	01FEB08A	24FEB09	24FEB09	1,425	0					
<b>162 - Electrical Leads</b>												
1416-503C	Complete drawings of MC power cable	95*	01FEB08A	13JUN08	31MAR08	288	-53					
161-209	Route MC leads	0		13JUN08*	13JUN08*	288	0					
132-001	Title I design WBS 162 Coil leads	143*	01FEB08A	21AUG08	21AUG08	240	0					
161-203	Layout MC stubs, terminations	0		30MAY08*	09MAY08*	298	-14					
161-205	Determine lead gauges	0		16MAY08*	16MAY08*	307	0					
161-207	Locate Thermal Transition Boxes (TTB)	0		09JUN08*	09JUN08*	292	0					
162-100	meetings/reporting/presentations	201*	01FEB08A	12NOV08	12NOV08	1,490	0					
<b>HEITZENROEDER</b>												
<b>Job: 1260 NB Transition Ducts- COLE</b>												
1260-191	Peer Review to Establish Requirements	20	27MAY08*	23JUN08	23JUN08	328	0					
<b>Job: 8202 - Engr Mgmt &amp; Sys Eng Sprt-HEITZENROED</b>												
8205DC	document control & admin support	967*	01FEB08A	13DEC11	13DEC11	724	0					
8205FY08.2	Engr mgt & systems engr FY08	170*	01FEB08A	30SEP08	30SEP08	1,521	0					
<b>KALISH</b>												
<b>Job: 1361 - TF Fabrication-KALISH</b>												
<b>TF Title III and Fabrication Oversight</b>												
131-033C	Title III engr,inspection, support	214*	02JAN08A	30OCT08	30OCT08	1,499	0					
<b>TF Fabrication Contract</b>												
1361C-113	Fab, Test & Deliver Coil #13	8*	16MAY08*	28MAY08	16MAY08	524	-7					
<b>Job: 1354 - Trim Coil Design &amp;Procurement-KALISH</b>												
<b>Trim Coil **Updated estimate**</b>												
TRIM-120	Modifications to allow for mid-plane coils	100*	25MAR08A	13AUG08	13AUG08	331	0					
TRIM-200	Structure Assy drawings & parts list	43*	01APR08A	30MAY08	14MAY08	219	-11					
TRIM-240	Trim Coil Procurement time	29	16MAY08A	11JUL08	19JUN08	219	-15					

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								MAY		JUN			
								26	2	9	16	23	
<b>Perry</b>													
<b>Job: 1752 - Base Support Proc-PERRY</b>													
<b>172 - Base Support Structure</b>													
161-038	Title III	306	12JUN08*	01SEP09	05AUG09	1,292	-19						
<b>Job: 8215 Plant Design</b>													
<b>FY07 Rebaseline Exercise</b>													
8210-08	Plant Design	746*	01FEB08A	31JAN11	31JAN11	945	0						
<b>Raftopolous</b>													
<b>Job: 1701 - Cryostat Design</b>													
1701-090	Cryostat Configuration Peer Review	0		21MAY08*	21MAY08*	247	0						
62122-306	Review of current baseline cryo system dsn	0		10JUN08*	10JUN08*	234	0						
1701-120	Design PPPL prototype	5	19MAY08*	23MAY08		0	0						
1701-130	Design ORNL prototype	5	19MAY08*	23MAY08		0	0						
1701-140	Procure materials for PPPL prototype	7	14MAY08A	22MAY08		223	0						
1701-150	Procure material for ORNL prototype	7	14MAY08A	22MAY08		223	0						
1701-160	Fabricate prototype PPPL	10	27MAY08	09JUN08		222	0						
1701-170	fabricate prototype ORNL	10	27MAY08	09JUN08		222	0						
1701-180	Develop test criteria	5	27MAY08	02JUN08		227	0						
1701-190	Test PPPL prototype warm	3	10JUN08	12JUN08		222	0						
1701-200	Test ORNL prototype warm	3	10JUN08	12JUN08		222	0						
1701-210	Test PPPL prototype cold	10	13JUN08	26JUN08		222	0						
1701-220	Test ORNL prototype cold	10	13JUN08	26JUN08		222	0						
1701-230	Cryostat Consultant/Expert Award Contract	0		29MAY08*		0	0						
1701-240	SRD Draft	20*	01MAY08A	29MAY08		1,607	0						
1701-250	FMECA Draft	15*	09MAY08A	30MAY08		1,606	0						
1701-260	Interface Document Draft	6	22MAY08*	30MAY08		0	0						
1751-169	Cryogenic consultant/Expert start	247	30MAY08*	27MAY09	28APR09	1,360	-20						
1751-170	Cryostat & Cryogenic systems	418*	01FEB08A	29SEP09	29SEP09	1,273	0						
<b>Job: 6201 - Cryogenic Syst</b>													
<b>621 - LN2 Supply &amp; LN2 coil cooling supply</b>													
62122-300	Conceptual Design	71	01MAY08*	11AUG08	11AUG08	325	0						
6201-169	Cryogenic consultant (Vic Garzotto)	493	01MAY08*	26APR10	26APR10	1,134	0						
<b>623 - GN2 Cryostat Cooling System</b>													
623-099	GN2 Cryostat Cooling Sys Conceptual design	71	01MAY08A	11AUG08	11AUG08	231	0						

Activity ID	Activity Description	Duration (work days)	Forecast Start	Forecast Finish	Baseline Finish	Remaining Float	Schedule slip to baseline (work days)	FY08					
								MAY		JUN			
								26	2	9	16	23	
<b>Larry Dudek</b>													
<b>Brown</b>													
<b>Job: 1803/1805- FPA Tooling/Constr-BROWN</b>													
<b>Station 3-Modular Coil to VVSA Assembly</b>													
1803S3-4	Generate laser screen trace drawings (3 periods)	15	28MAY08	17JUN08	12JUN08	166	-3						
1803S3-6	Station 3 simulation detail model	21*	01MAY08A	30MAY08	30MAY08	178	0						
1803S3-7	VV/MC clearance study (for VVSA1)	42*	01APR08A	29MAY08	09MAY08	167	-13						
1803S3-7B	VV/MC clearance study (for VVSA 2 and 3)	11	15MAY08*	30MAY08	30MAY08	1,606	0						
1803S3-8	Station 3 deflection FEA study	12	30MAY08	16JUN08	28MAY08	167	-13						
1803S3-9	Oversite, cost and schedules, reviews	171*	31JAN08A	30SEP08	30SEP08	1,521	0						
1805S3-2	Left side base grout plates	49*	24MAR08A	30MAY08	30APR08	173	-21						
1805S3-3	MCHP lift fixture frame weldment	49*	24MAR08A	30MAY08	30APR08	173	-21						
1805S3-4	Lift fixture mounting bracket weldments	49*	24MAR08A	30MAY08	30APR08	173	-21						
1805S3-5	Reworked laser frame structure	49*	24MAR08A	30MAY08	30APR08	173	-21						
1805S3-6	Right inboard laser frame structure	49*	24MAR08A	30MAY08	30APR08	173	-21						
1805S3-7	Left inboard laser frame structure	49*	24MAR08A	30MAY08	30APR08	173	-21						
1805S3-8	Laser screen lexan sheet (1/8 x 48" x 96")	49*	24MAR08A	30MAY08	30APR08	173	-21						
1805S3-9	Estimate for Station 2 type alignment system	49*	24MAR08A	30MAY08	30APR08	173	-21						
1805S3-100	Hardware & Misc items	49*	24MAR08A	30MAY08	30APR08	173	-21						
1805S3-110	Misc assembly Cost	49*	24MAR08A	30MAY08	30APR08	173	-21						
1805S3-201	MC base support system (left / rt side)	49*	24MAR08A	30MAY08	30APR08	173	-21						
1805S3-204	Lift fixture mounting bracket weldments	49*	24MAR08A	30MAY08	30APR08	173	-21						
1805S3-205	Estimate for Station 2 type alignment system	49*	24MAR08A	30MAY08	30APR08	173	-21						
1805S3-206	Hardware & Misc items	49*	24MAR08A	30MAY08	30APR08	173	-21						
1805S3-207	Misc assembly Cost	171*	31JAN08A	30SEP08	30APR08	1,521	-106						
<b>Station 5-Final Field Period Assembly</b>													
1803S5-14	Oversite, cost and schedules, reviews	170	01MAY08*	09JAN09	29SEP08	1,457	-65						
<b>6.00-Final Machine Assembly</b>													
1803S6-1	Stage 6 FP support and roller system	187*	01APR08A	02JAN09	25SEP08	341	-62						
<b>Chrzanowski</b>													
<b>Job: 1408 - MC Winding Supplies-CHRZANOWSKI</b>													
1408-3	Misc and safety supplies (\$7k/mo.)	276*	23MAY07A	30JUN08	30JUN08	1,585	0						
1408-6	VPI clean manifold contract	276*	23MAY07A	30JUN08	30JUN08	1,585	0						
1408-8	Cutting hardware for flange bolts	276*	23MAY07A	30JUN08	30JUN08	1,585	0						
1408-7	Misc tech shop support	276*	23MAY07A	30JUN08	30JUN08	1,585	0						
<b>Job: 1451 - Mod Coil Winding-CHRZANOWSKI</b>													
<b>Station 3-Casting Prep &amp; Winding</b>													
P1-170	Instl Chill Plates,Tubing,Bag A6	43*	01MAY08	01JUL08	29JUL08	122	19						
<b>Station 1 Post VPI</b>													
P3-171C	Final Clamps & Warm Test (Station1) B5	52*	19MAR08A	30MAY08	13MAY08	185	-12						
P2-171C	Final Clamps & Warm Test (Station1) B6	16	01MAY08	22MAY08	23JUN08	181	21						
<b>LOE Oversight &amp; Supervision</b>													
145XSPRV-2	Winding Engineering oversight and supervision	314*	01MAY07A	31JUL08	31JUL08	1,563	0						
145XSPRV-3	Winding Engineering oversight and supervision	356*	01MAY07A	30SEP08	30SEP08	1,521	0						
145XSPRV-A	Winding Engineering oversight and supervision	185*	01NOV07A	31JUL08	31JUL08	1,563	0						
<b>Sheet 5 of 10 27MAY08 14:04</b>			084T	<b>NCSX Project</b>			SORTED BY RLM AND JOB MANAGER						
				<b>3 week look-ahead</b>									
© Primavera Systems, Inc.													

Activity ID	Activity Description	Duration (work days)	Forecast Start	Forecast Finish	Baseline Finish	Remaining Float	Schedule slip to baseline (work days)	FY08					
								MAY		JUN			
								26	2	9	16	23	
<b>Job: 1459 - Mod Coil Fabr.Punch List-CHRZANOWSKI</b>													
<b>Punchlist Tech shop/RESA</b>													
PLTS-C5	Grinding & Drill Holes -C5	22*	01MAY08	02JUN08	18APR08	271	-30						
PLTS-A5	Grinding -A5	23*	01MAY08	03JUN08	31JAN08A	183	-87						
PLTS-B5	Grinding -B5	5	04JUN08	10JUN08	20MAY08	183	-14						
PLTS-A6	Grinding -A6	5	01OCT07A	22AUG08	19SEP08	122	19						
PLTS-B6	Grinding -B6	5	23MAY08	30MAY08	30JUN08	181	21						
PLTS-C6	Grinding & Drill Holes -C6	20	01MAY08	29MAY08	27FEB08	182	-65						
PLTS-GRIND	Coil to coil fitup modifications (grinding/cp)	165*	01DEC07A	31JUL08	31JUL08	1,563	0						
<b>Punchlist- Coil Technicians</b>													
PLCT-A1	Insul,measure,TC, other punch list-A1	228*	01AUG07A	30JUN08	30NOV07A	1,585	-143						
PLCT-A2	Insul,measure,TC, other punch list-A2	228*	01AUG07A	30JUN08	30NOV07A	1,585	-143						
PLCT-B1	Insul,measure,TC, other punch list-B1	228*	01AUG07A	30JUN08	30NOV07A	1,585	-143						
PLCT-C1	Insul,measure,TC, other punch list-C1	228*	01AUG07A	30JUN08	30NOV07A	1,585	-143						
PLCT-B2	Insul,measure,TC other punch list-B2	205*	04SEP07A	30JUN08	08JAN08A	1,585	-123						
PLCT-C2	Insul,measure,TC, other punch list-C2	248*	03JUL07A	30JUN08	21DEC07A	98	-128						
PLCT-A3	Insul,measure,TC, other punch list-A3	247*	05JUL07A	30JUN08	14FEB08	132	-96						
PLCT-A4	Insul,measure,TC, other punch list-A4	246*	06JUL07A	30JUN08	05MAR08	132	-82						
PLCT-B3	Insul,measure,TC, other punch list-B3	186*	01OCT07A	30JUN08	20MAR08	40	-71						
PLCT-C3	Insul,measure,TC, other punch list-C3	186*	01OCT07A	30JUN08	07APR08	105	-59						
PLCT-B4	Insul,measure,TC, other punch list-B4	186*	01OCT07A	30JUN08	21APR08	124	-49						
PLCT-C4	Insul,measure,TC, other punch list-C4	233*	25JUL07A	30JUN08	02MAY08	210	-40						
PLCT-A5	Insul,measure,TC, other punch list-A5	14	30JUL07A	11JUN08	12MAY08	183	-21						
PLCT-A6	Insul,measure,TC,SG other punch list-A6	14	01OCT07A	12SEP08	09OCT08	122	19						
PLCT-B5	Insul,measure,TC, other punch list-B5	14	01OCT07A	30JUN08	29OCT08	183	85						
PLCT-C5	Insul,measure,TC, other punch list-C5	165*	01OCT07A	30MAY08	06NOV08	204	112						
PLCT-B6	Insul,measure,TC,SG other punch list-B6	14	01OCT07A	19JUN08	21JUL08	181	21						
PLCT-C6	Insul,measure,TC,SG other punch list-C6	14	01OCT07A	18JUN08	18MAR08	182	-65						
PLCT-CRAN	Crane support	207*	01DEC07A	30SEP08	30SEP08	1,521	0						
<b>Dudek</b>													
<b>Job: 1431 - Mod. Coil Interface Hardware-DUDEK</b>													
<b>Pucks</b>													
1429-3110	PPPL cut and grind to thickness	290*	04FEB08A	31MAR09	31MAR09	16	0						
<b>Shims-Outboard</b>													
1429-3066	Outboard Shims	135	03MAR08A	03SEP08	03SEP08	79	0						
<b>Shims-Inboard</b>													
1429-3062X	Inboard Shims	208*	03MAR08A	02JAN09	02JAN09	73	0						
<b>Studs,Washers,Nuts</b>													
1421-3070	Order studs & washers for c-c joint	264	12MAY08*	02JUN09	02JUN08	285	-249						
1421-3073	Deliver supernuts for c-c joint	40	03JUN08*	29JUL08	29JUL08	547	0						
<b>Misc Tech Shop Support</b>													
1421-4000	Misc Tech Shop support through sta 2 (1/2	499*	01OCT07A	30SEP09	30SEP09	1,272	0						
<b>Perry</b>													
<b>Job: 7401 - TC Prep &amp; Mach Assy Planning-PERRY</b>													
<b>GPP Projects Required for NCSX (non-MIE cost)</b>													
GPP-01	CS Crane	0		30MAY08*	30MAY08*	470	0						

Activity ID	Activity Description	Duration (work days)	Forecast Start	Forecast Finish	Baseline Finish	Remaining Float	Schedule slip to baseline (work days)	FY08					
								MAY		JUN			
								26	2	9	16	23	
714.020	LOE Prior to assy starting	583*	01OCT07A	25JAN10	25JAN10	1,221	0						
<b>Stratton</b>													
<b>Job: 3101 - Magnetic Diagnostics-STRATTON</b>													
<b>Modular Coil C-wound Loops</b>													
3101-230	Check elect characteristics of T/C	20	13JUN08*	11JUL08	27OCT08	1,577	75						
<b>Rogowski Coils</b>													
3101-352	Assy & detail dgws	78*	01FEB08A	20MAY08	03APR08	397	-33						
3101-353	Prep installation procedure	31	21MAY08	03JUL08	16MAY08	397	-33						
3101-370	Check elect characteristics of cables	30	09MAY08*	20JUN08	23APR10	1,591	456						
3101-357	Fab coil clamps & ends	12*	15MAY08A	02JUN08	02JUN08	420	0						
3101-359	Install Rogowski coils support (in job 1815)	63*	02APR08A	30JUN08	30APR08	499	-42						
3101-360	Title III support	165*	09MAY08*	12JAN09	19MAR10	1,456	296						
<b>TF and PF Co-wound Loops</b>													
3101-425	Design Protective boxes for PF	227*	01NOV07A	30SEP08	01APR08	1,431	-127						
3101-426	Purchase SS Sheet	220*	12NOV07A	30SEP08	18JUN08	252	-72						
3101-452	Form Protective boxes	223*	12NOV07A	03OCT08	23JUN08	252	-72						
3101-454	Weld end plates of PF protective boxes	224*	09NOV07A		30JUN08		-67						
3101-427	Purchase Heat Shrink tubing	220*	12NOV07A	30SEP08	19MAY08	1,431	-93						
3101-428	Purchase add'l CoAxial cable	46	01MAY08*	07JUL08	07JUL08	315	0						
3101-458	Fab PF & solenoid co-wound loops	186	02JUL07A	10NOV08	15AUG08	1,431	-60						
<b>T/C and Heater Tape Leads</b>													
1204-141	Drawings Signed T/C and Heater Tape Leads	20*	02MAY08A	30MAY08	01MAY08*	258	-20						
1204-144	Check elect characteristics T/C & heater port 12	11*	02JUN08	16JUN08	04AUG08	324	34						
1204-147	Field/Fab support (title III) T/C&Heater Tape	65	02JUN08	02SEP08	04AUG08	1,541	-20						
<b>Voltage Loops &amp; Protective Boxes</b>													
3101-806	Check elect characteristics of coax	20	16MAY08*	13JUN08	13JUN08	1,596	0						
3101-807	Check elect characteristics ex-vessel flux loops	32*	01MAY08	16JUN08	30OCT08	1,595	96						
<b>Job: 3901 - Diagnostics sys Integration-STRATTON</b>													
390-04	LOE Support FY08	249*	01OCT07A	29SEP08	29SEP08	1,522	0						
<b>Viola</b>													
<b>Job: 1802 - FP Assy Oversight&amp;Support-VIOLA</b>													
<b>Oversight and Supervision</b>													
1802ORNLO	ORNLO Title III field period assy station 2	441*	04FEB08A	02NOV09	02NOV09	0	0						
R1802-003	Metrology Engr Super FY08	250*	01OCT07A	30SEP08	30SEP08	1,521	0						
R1802-007	FPA Management FY08	250*	01OCT07A	30SEP08	30SEP08	1,521	0						
R1802-009	PU Title III support	630*	04FEB08A	10AUG10	10AUG10	0	0						
R1802-010	Drexel co-op student support	630*	04FEB08A	10AUG10	10AUG10	0	0						
R1802-015	HP Coverage in the TFTR TC LOE FY08	250*	01OCT07A	30SEP08	30SEP08	1,521	0						
1802MISC	Misc materials,tools, GSA vehicle,rigging	615*	01FEB08A	19JUL10	19JUL10	1,076	0						
8203FY08.2	Title III Design support FY08 PPPL	170*	01FEB08A	30SEP08	30SEP08	1,521	0						
<b>Station 3 procedures,JHA,ACC,Training,Prep</b>													
R1802-307	Procedures written & approved	34*	14APR08A	30MAY08	14MAY08	157	-11						
R1802-309	JHA completed	6	02JUN08	09JUN08	22MAY08	157	-11						

Activity ID	Activity Description	Duration (work days)	Forecast Start	Forecast Finish	Baseline Finish	Remaining Float	Schedule slip to baseline (work days)	FY08				
								MAY		JUN		
								26	2	9	16	23
R1802-311	Training needs identified & released	6	10JUN08	17JUN08	02JUN08	157	-11					
<b>Job: 1810 - Field Period AssyStation 1,2,3 VIOLA</b>												
<b>General Assy Support</b>												
R1810-003	LOE Crane support, fixture setupfor FY08	250*	01OCT07A	30SEP08	30SEP08	1,521	0					
R1810-025	Crane & Rigging inspections	625*	01FEB08A	02AUG10	02AUG10	1,066	0					
R1810-035	Welding qualifications	625*	31JAN08A	30JUL10	30JUL10	1,067	0					
R1810-007	LOE Field Supervision for FY08	250*	01OCT07A	30SEP08	30SEP08	1,521	0					
R1810-2001	Misc Hardware and hardware rework (1/2 fte loe)	615*	01FEB08A	19JUL10	19JUL10	1,076	0					
S21-4.02	Perform routine metrology set-up and checks	526*	01FEB08A	12MAR10	12MAR10	1,165	0					
<b>Station 1-VV Prep (hard surface components) FP#1</b>												
R1810-1110	Install Final Internal&Ext monuments & meas	4	02MAY08A	05JUN08	07MAY08	258	-20					
R1810-1114	Install heater tape on all removable ports	25	01MAY08	05JUN08	07MAY08	258	-20					
R1810-1100	Design & Build heater& thermo termination box	41	01MAY08*	27JUN08	01MAY08	1,586	-40					
R1810-1111	Final Scan	4	06JUN08	11JUN08	03JUN08	258	-6					
R1810-1113	Prepare &transfer completed VV to holding area	5	12JUN08	18JUN08	10JUN08	258	-6					
<b>Station 1- VV Prep (hrd surf cmpntsFP#2</b>												
R1810-1208	Perform final acceptance testing (H/C flow test)	32	01MAY08	16JUN08	30MAY08	329	-11					
R1810-1216	Install Final Internal&Ext monuments & meas	20	17JUN08	15JUL08	27JUN08	329	-11					
R1810-1214	Install heater tape on all removable ports	25	17JUN08	22JUL08	09SEP08	324	34					
<b>Station 1- VV Prep (hrd surf cmpntsFP#3</b>												
R1810-1308	Perform final acceptance testing (H/C flow test)	22	17JUN08*	17JUL08	01JUL08	368	-11					
R1810-1310	Heater and thermo termination & verification	19*	30APR08A	27MAY08	29OCT08	404	109					
<b>Setup</b>												
R1810-2034	Misc Tool and Hardware	375*	01MAY08	28OCT09	28OCT09	1,252	0					
R1810-2036	Fuji Paper	454*	01MAY08	02MAR10	02MAR10	1,173	0					
R1810-2081	Removable photogrammetry targets	355*	01MAY08*	30SEP09	30SEP09	1,272	0					
R1810-2082	Fixed photogrammetry targets	355*	01MAY08*	30SEP09	30SEP09	1,272	0					
R1810-2083	Replacement photogrammetry targets	355*	01MAY08*	30SEP09	30SEP09	1,272	0					
R1810-2084	Design and purchase 3 additional wedge	44*	01APR08A	02JUN08	02JUN08	1,605	0					
R1810-2024	Rework wedges f/combined assemblies& coil	106*	01MAY08	30SEP08	16JUN08	1,521	-74					
R1810-2026	Setup up satellite shop in Mock-up area	43*	01APR08A	30MAY08	22MAY08	1,606	-5					
R1810-2087	Coordinate measuring machine	21	01MAY08*	30MAY08	30MAY08	1,606	0					
R1810-2088	HEPA machine tool exhaust system	21	01MAY08*	30MAY08	30MAY08	1,606	0					
R1810-2089	Tools, cabinets & storage shelving	579*	01MAY08*	26AUG10	26AUG10	1,048	0					
R1810-2002	Purchase grinding machine	21	01MAY08	30MAY08	30MAY08	1,606	0					
R1810-2090	Consulting services nose welding (England)	644	01MAY08*	30NOV10	26AUG10	983	-65					
S20-4.02	Perform metrology set-up;purchase 6 pillars	21	01MAY08*	30MAY08	30MAY08	1,606	0					
<b>Pre-Measuring and fitup checks</b>												
<b>Pre measurement of MCHP A2,B2,C2 flanges</b>												
S22-3.02	Compress shims sort by thickness	50	01MAY08	11JUL08	10JUL08	90	-1					
<b>Pre measurement of MCHP A5,B5,C5 flanges</b>												
S25-1.01	Verify mating MC's of MCHP will come together	4	06JUN08	11JUN08	10OCT08	183	85					
S25-2.01	Set the B5 coil on fixture, & measure	1	12JUN08	12JUN08	13OCT08	183	85					
S25-2.02	Align to the conical seats locking into min of 8	2	13JUN08	16JUN08	15OCT08	183	85					
S25-2.03	Measure monuments on fixture and walls.	7	17JUN08	25JUN08	24OCT08	183	85					
<b>Station 2 MC subassy A1B1C1</b>												
<b>AB-C MC Assembly</b>												
2-1-7.12	Torque50% of final value.	7*	15MAY08*	23MAY08	19MAY08	0	-4					

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								MAY		JUN			
								26	2	9	16	23	
2-1-7.13	Measure position of all monuments	17*	01MAY08	23MAY08	19MAY08	51	-4						
2-1-7.14	Measure shim puck height	17*	01MAY08	23MAY08	19MAY08	51	-4						
2-1-7.15	remove puck locating rings & install all nose s	3	27MAY08	29MAY08	22MAY08	51	-4						
2-1-7.16	"Lightly" tack weld nose flex shims	1	30MAY08	30MAY08	23MAY08	51	-4						
2-1-7.17	remove "C" coil & place it on a separate fixtur	1	02JUN08	02JUN08	27MAY08	51	-4						
2-1-7.18	Recheck part alignment & weld all Type-B flex s	3	03JUN08	05JUN08	30MAY08	51	-4						
2-1-7.19	After welding "B" coil nose shims recheck align	1	06JUN08	06JUN08	02JUN08	51	-4						
2-1-7.20	Back office assessment of part after weld	2	09JUN08	10JUN08	04JUN08	51	-4						
2-1-7.21	Measure "C" fiducials	1	09JUN08	09JUN08	03JUN08	52	-4						
2-1-7.22	Weld all Type-C (A-flange) flex shims plasma sid	2	11JUN08	12JUN08	06JUN08	51	-4						
2-1-7.23	After welding determine metrology acceptance	1	13JUN08	13JUN08	09JUN08	51	-4						
2-1-7.24	Back office assessment	2	16JUN08	17JUN08	11JUN08	51	-4						
2-1-7.25	Remove shims for alignment mating coil	0	16JUN08	13JUN08	09JUN08	53	-4						
2-1-7.07	Place unfilled shim bags in wing areas	1	16JUN08	16JUN08	10JUN08	53	-4						
<b>Station 2 MC subassy A2B2C2</b>													
<b>A-B MC Assembly</b>													
2-2-6.15	Recheck part alignment of "A" coil	21*	01MAY08	30MAY08	07MAY08	80	-16						
2-2-6.16	recheck alignment	0*	02JUN08	30MAY08	12MAY08	80	-13						
2-2-6.17	Back office assessment of part after weld	2	02JUN08	03JUN08	14MAY08	80	-13						
2-2-6.18	Measure "B" fiducials estab coord sys	1	02JUN08	02JUN08	13MAY08	81	-13						
2-2-6.20	Recheck part metrology acceptance criterion.	1	04JUN08	04JUN08	19MAY08	80	-11						
2-2-6.21	Back office assessment of part after weld	2	05JUN08	06JUN08	21MAY08	80	-11						
2-2-6.22	Remove shims as necessary	0	05JUN08	04JUN08	19MAY08	81	-11						
2-2-6.04	Place unfilled shim bags in wing areas	1	05JUN08	05JUN08	20MAY08	81	-11						
2-2-6.23	Lower mating "B" coil into position.	1	09JUN08	09JUN08	22MAY08	80	-11						
2-2-6.231	Perform alignment "B" coil tooling balls	1	10JUN08	10JUN08	23MAY08	80	-11						
2-2-6.24	"B" coil, position coil accurately in x, y, &	1	11JUN08	11JUN08	27MAY08	80	-11						
2-2-6.25	Install shims;studs,supernuts, wiggle t	1	12JUN08	12JUN08	28MAY08	80	-11						
2-2-6.26	Torque50% of final value.	1	13JUN08	13JUN08	29MAY08	80	-11						
2-2-6.27	Measure position of all monuments	2	16JUN08	17JUN08	02JUN08	80	-11						
<b>Station 3 Setup/Preparations/General</b>													
<b>Misc Prep activities</b>													
R1810-3112	Load Test 3 legged actuator lift fixtur	8	03JUN08*	12JUN08	12JUN08	169	0						
R1810-3113	Procure wire rope slings & 6 17ton shackles	8	03JUN08*	12JUN08	12JUN08	169	0						
R1810-3109	Remove winding stations & enclosures	20	12MAY08*	09JUN08	09JUN08	169	0						
R1810-3107	Test out station 3 equipment and procedures	30	01MAY08*	12JUN08	02JUN08	169	-8						
<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	180	0						
3-1-1.02	Install Station 3 site monuments	3	13JUN08	17JUN08	12JUN08	166	-3						
3-1-1.03	Install floor mounted tracks and the VV base sup	5	02JUN08	06JUN08	07MAY08	173	-21						

Activity ID	Activity Description	Duration (work days)	Forecast Start	Forecast Finish	Baseline Finish	Remaining Float	Schedule slip to baseline (work days)	FY08						
								MAY		JUN				
								26	2	9	16	23	30	
<b>Al vonHalle</b>														
<b>Ramakrishnan</b>														
<b>Job: 4301 - DC Systems-RAMAKRISHNAN</b>														
<b>431 - C-Site DC Systems</b>														
431-240	Simulate each of 6 pwr loops in PSCAD	467*	01APR08A	17FEB10	17FEB10	234	0							
431-250	c-site dc sys DGS dsn documentation	466*	01APR08A	16FEB10	16FEB10	235	0							
431-261	Redo power loop design	355	01MAY08*	30SEP09	30SEP09	324	0							
431-275A	Power cabling & Installation FY08	85*	02JUN08*	30SEP08	30SEP08	486	0							
431-276	Maint of C-site rectifiers	997*	01OCT07A	30SEP11	30SEP11	774	0							
<b>Job: 4401 - Control &amp; Protection-RAMAKRISHNAN</b>														
<b>441 - Electrical Interlocks</b>														
441-100	PLC Specification	160	01MAY08*	17DEC08	17DEC08	314	0							
<b>445 - Coil Protection Systems</b>														
445-2-110	Overload Protect-Design	351*	01APR08A	24AUG09	24AUG09	337	0							
<b>Sichta</b>														
<b>Job: 5801 - Central I&amp;C Integr&amp; Oversight-SICHTA</b>														
R58-20	WBS58 -FY08 Management & Integration LOE	250*	01OCT07A	30SEP08	30SEP08	1,521	0							