24 June 2013

12 GeV Upgrade
Hall C Superconducting Magnet Status

(Text in red font was modified or added last week.)

Dipole (Sigma Phi)

- 20-June-2013
  - Modification of mandrel for VPI potting has been completed and mandrel is back at SigmaPhi. Other parts for VPI are expected to arrive by the end of June.
  - JLab will collect samples from each reel of conductor still stored here so that they may be shipped to SigmaPhi, consolidated, and tested for mechanical properties. This will support the selection of the most appropriate conductor for each portion of the magnet coil.
  - Because of design challenges, SigmaPhi may opt to triplicate the existing manual conductor-consolidation machine rather than fabricate an automated device.

Task	Finish Date Original Report	Finish Date Last Week Report	Finish Date New Projection	Status
Dipole (Sigma Phi)				
Accept JLab Superconductor	15-Oct-2012	29-Apr-2013		COMPLETE Vendor indicated that they do accept the JLab-provided conductor and will consolidate it for use in the magnet. Formal agreement still awaits the contract mods which are under negotiation.
Final Design Review	26-Apr-2013	01-May-2013		COMPLETE. Punch-list of several items remaining which do not impact critical path. Items added as new tasks below.
D12 Magnetic Analysis Final Update	15-May-2013	15-May-2013		FDR Punch-list item added for detail. COMPLETE.

Dipole (Sigma Phi)				
Begin modification of mandrel for use with VPI mold.	15-May-2013	20-May-2013		Shipped to vendor 20-May. COMPLETE.
Finish manual consolidation of 1500m of conductor for prototype coil.	14-Jun-2013	22-May-2013		COMPLETE (early)
Technical (Contract Mod-4) and financial (Contract Mod-5) agreement reached	28-Feb-2013	26-Apr-2013	TBD	JLab evaluating responses to vendor's very conservative engineering approach.
D7 Stress Analysis Final Report	14-Jun-2013	14-Jun-2013	30-Sep-2013	FDR Punch-list item added for detail. Postponed (without other schedule impact) to minimize required software license term.
SigmaPhi Test: develop/design production-scale consolidation tooling. Complete drawings.	24-Oct-2012	22-Jun-2013	30-Jun-2013	Design difficulty – SP may opt to triplicate existing manual device. Decision by end of June.
Receive modified mandrel for use with VPI mold.	30-June-2013	30-June-2013	20-Jun-2013	COMPLETE
Fabricate final coil spacers	01-No	Meeting at Sigmaphi on June 27th with the supplier to deal with this issue		In progress. Expect 2-week delay for delivery. Vendors chosen.
D8 QA/QC Punch-list complete	19-Jul-2013	19-Jul-2013		FDR Punch-list item. On track.
D6 Magnet Traveler Complete	19-Jul-2013	19-Jul-2013		FDR Punch-list item. On track.
D15 Drawing Package Final Construction Update	19-Jul-2013	19-Jul-2013		FDR Punch-list item. On track.
Finish manual consolidation of 1500m of conductor for 1st dipole coil.	30-Nov-2012	30-A	Completed on June 25th	In progress. Going well. On track.
SigmaPhi: obtain production-scale consolidation tooling.	21-Feb-2013	30-Aug-2013		SigmaPhi may opt to triplicate existing manual device.
Prepare full-size Prototype Coil	31-Oct-2012	30-Aug-2013		Planned: 1-July to 30-Aug-2013.
Begin consolidation using automatic equipment	02-Sep-2013	02-Sep-2013		On track. (But machine may not be automatic (see above).
Begin winding coil #1.	11-Jar	May be one month later if we cannot fix the spacers delivery issue with the machining company		On track.

Dipole (Sigma Phi)				
Begin winding coil #2.	08-Mar-2013	30-Sep-2013		Questions regarding inconsistent dates in detailed schedule have been resolved. Both coils expected complete by date shown below.
Procure Coil Tooling Station #2	31-Oct-2012	30-Sep-2013		Date estimated from vendor's winding plan. (This step does not appear explicitly in vendor's schedule). Note that accelerated production plan DOES use both winding stations for dipole coils.
D11 ASME Code Analysis Complete	31-Oct-2013	31-Oct-2013		FDR Punch-list item. On track.
D13 Internal Sensor Specs Complete		31 Oct 2013	TBD	FDR Punch-list item added for detail.
Dipole Coil Winding Complete	15-Mar-2013	26-Nov-2013		On track.
Qualify Welding Plan	01-Dec-2013	01-Dec-2013		ASME & Weld Design cert's subcontracted to *APAVE International Inspection*
Cryostat Assembled & Tested	15-Mar-2013	17-July-2014		Vendor is subcontracting to expedite.
Final Factory Tests	01-Oct-2013	23-Dec-2014		Schedule confirmed.
Delivery to JLab	09-Dec-2013	09-Feb-2015		Schedule confirmed.
Acceptance Test at JLab Complete	23-Apr-2014	17-Aug-2015		Subject to revision as we coordinate with installation schedule.
Magnet Accepted	23-Apr-2014	26-Aug-2015		Subject to revision as we coordinate with installation schedule.

Q2/Q3 (Sigma Phi)

- 20-June-2013
  - Preparing documents for Intermediate Design Review.

Task	Finish Date Original Report	Finish Date Last Week Report	Finish Date New Projection	Status
Q2/Q3 (Sigma Phi)				
Intermediate Design Review	15-Nov-2012	10-July-2013		Scheduled and travel arranged for 10/11-July meeting. On track.
Final Design Review	15-Dec-2012	19-Sep-2013		3-week delay.
Cryostat Components Complete Procurement	07-Jul-2013	17-Feb-2014		
Q2 Winding Complete	31-Aug-2013	09-Apr-2014		
Q2 Cold Mass Assembled & Warm Tested	31-Oct-2013	27-May-2014		
Complete Q2 Helium Vessel, Shield, and Outer Vessel	18-Jun-2014	18-Jun-2014		
Q3 Winding Complete	28-Feb-2014	06-Aug-2014		
Complete Q3 Helium Vessel, Shield, and Outer Vessel	12-Aug-2014	12-Aug-2014		
Q3 Cold Mass Assembled & Warm Tested	30-Apr-2014	18-Sep-2014		
Q2 Cryostat assembled & Tested	03-Nov-2014	03-Nov-2014		
Q3 Cryostat assembled & Tested	26-Jan-2015	26-Jan-2015		
Q2 Final Factory Tests Complete	05-Mar-2015	05-Mar-2015		
Q2 Delivery to JLab	30-Jun-2014	16-Apr-2015		
Q3 Final Factory Tests Complete	28-Apr-2015	28-Apr-2015		
Q3 Delivery to JLab	31-Oct-2014	11-Jun-2015		
Q2 Magnet Accepted	31-Mar-2015	30-Oct-2015		Subject to revision as we coordinate with installation schedule.
Q3 Magnet Accepted	31-Mar-2015	30-Oct-2015		Subject to revision as we coordinate with installation schedule.

LEGEND:

- Finish Date Original Report = date listed in first report where task appeared
- Finish Date Last Week Report = **JLab** estimate of task completion date as of previous week's Report

- Finish Date New Projection = any change to a “Finish Date Last Week Report” date, will be shown in red font for a date shift
- New Task = task that either was not in previous report, or has been revised since previous report, typically indicates further detailing of a larger task