

**Office of Science
Energy Systems Acquisition Advisory Board (ESAAB)**

MEETING MINUTES

Date: September 4, 2013, 11:30 a.m. (EDT)

Critical Decision: **Baseline Change Proposal for the 12 GeV CEBAF Upgrade Project**

Location: Conference call between DOE Headquarters (Office of Science)
Germantown and the Thomas Jefferson Site Office

Attendees:

ESAAB-Equivalent Board

Patricia M. Dehmer
Acquisition Executive

Kurt Fisher, SC-28
Joe May, SC-24

DOE Observers

Casey Clark, SC-28
Tim Hallman, SC-26
Jim Hawkins, SC-26
Ethan Merrill, SC-28
Ray Won, SC-28

Thomas Jefferson Site Office

Mike Epps, FPD
Joe Arango, Site Office Manager

Minutes:

Mike Epps, Federal Project Director for the 12 GeV CEBAF Upgrade Project, presented a Baseline Change Proposal Request documenting the Congressional action to cut the FY 2012 budget by \$16 million from \$66 to \$50 million, and procurement and technical issues associated with the superconducting magnets in Halls B&C—funds are schedule to be restored in FY 2014 and FY 2015. Dr. Dehmer and ESAAB representatives asked questions about the Baseline Change. There were no other issues, the ESAAB representatives recommended approval of the project's BCP, and Acquisition Executive Patricia Dehmer signed the approval document.

Project ID Number: 06-SC-01 Project Title: 12 GeV CEBAF Upgrade
 BASELINE CHANGE PROPOSAL (BCP) FORM

1) BCP Number: CR13-014	2) BCP Title: 12 GeV CEBAF Upgrade Re-Baseline
3) DOE Program: Office of Nuclear Physics	4) Project Location: Jefferson Lab
5) Point of Contact: Claus H. Rode	6) Phone: 757-269-7511
7) Email: Rode@jlab.org	
8) Directed Change(Check all that apply): <input checked="" type="checkbox"/> Congressional Budget Rescission/Cut <input type="checkbox"/> Regulatory Change <input type="checkbox"/> DOE Policy Change	9) Other causes of Baseline Change (Check all that apply): <input type="checkbox"/> OMB Budget Cut/Rescission <input type="checkbox"/> DOE Budget Cut/Rescission <input checked="" type="checkbox"/> Technical Challenges <input checked="" type="checkbox"/> Scope Change <input type="checkbox"/> Funding Partner Cut/Rescission <input type="checkbox"/> Other- Please explain below
10) Causes of Baseline Change : Congressional action cut FY12 budget by \$16M from \$66M to \$50M, and procurement and technical issues associated with the superconducting magnets in Halls B & C. Funds are scheduled to be restored in FY14 and FY15.	
11) Change Description: Delay CD-4B by 27 months to September 2017 (58% Schedule Contingency); increase the \$310M TPC by \$28M to \$338M (Estimate To Complete cost of \$61.1M with cost contingency of \$21.1M or 34.5% (\$19.6M DOE contingency; \$1.5M Management Reserve)). Change includes de-scope of the spare Hall D solenoid magnet - (\$8M), and additional magnet risk mitigation actions for the Hall B Torus and Hall C Dipole/Q2/Q3 magnets at the additional cost of \$2.4M.	
12) Change Justification: The FY12 funding shortfall forced the project to reduce its FY12 & 13 staffing levels, lengthen the "Long Shutdown" for accelerator installation, and postpone procurements up to three years. The longer project duration drives an increase in project costs. In addition, magnet vendor performance, including the cancellation and re-bidding of several magnet contracts, contributed to the overall impact to the TPC and schedule extension. The desire to maintain a minimum of 12 months of schedule contingency for the critical path items, i.e. the superconducting magnets in Halls B and C, contributed to the extension of the CD-4B completion date.	
13) Impact of Non-Approval: The project will not meet its baseline CD-4B completion date and cannot be completed within its CD-2 approved cost baseline; the Project currently has 8 months of negative Schedule Contingency which is not recoverable.	

14) Impact on Cost Baseline:	Baseline (As of 28-Feb-13)	Proposed	Change
TEC	\$276,838k	\$294,325k	\$17,487k
OPC	\$22,321k	\$22,581k	\$260k
TEC Contingency	\$10,662k	\$16,175k	\$5,513k
OPC Contingency	\$179k	\$4,919k	\$4,740k
TPC	\$310,000k	\$338,000k	\$28,000k

15) Impact on Funding Profile (BA): The FY12 funding shortfall has already been captured in the baseline.

	Prior FY	FY13	FY14	FY15	FY16	FY17	Total
Baseline (\$M)							
DOE TPC	\$230,928k	\$43,072k	\$30,000k	\$6,000k	\$0k	\$0k	\$310,000k
DOE TEC	\$220,428k	\$40,572k	\$26,000k	\$500k	\$0k	\$0k	\$287,500k
DOE OPC	\$10,500k	\$2,500k	\$4,000k	\$5,500k	\$0k	\$0k	\$22,500k
Proposed (\$M)							
DOE TPC	\$230,928k	\$43,072k	\$30,000k	\$21,000k	\$12,000k	\$1,000k	\$338,000k
DOE TEC	\$220,428k	\$40,572k	\$25,500k	\$16,500k	\$7,500k	\$0k	\$310,500k
DOE OPC	\$10,500k	\$2,500k	\$4,500k	\$4,500k	\$4,500k	\$1,000k	\$27,500k
Change (\$M)							
DOE TPC	\$0k	\$0k	\$0k	\$15,000k	\$12,000k	\$1,000k	\$28,000k
DOE TEC	\$0k	\$0k	-\$500k	\$16,000k	\$7,500k	\$0k	\$23,000k
DOE OPC	\$0k	\$0k	\$500k	-\$1,000k	\$4,500k	\$1,000k	\$5,000k

16) Explanation of Impact on Cost and Funding Baseline:

WBS	Description	Current Budget	Proposed Changes	New Budget
1.0-1.1	CDR, R&D	\$10,497k	\$0k	\$10,497k
1.2	PED	\$20,993k	\$0k	\$20,993k
1.3	Construction - Accelerator Systems	\$99,471k	\$4,273k	\$103,744k
1.4.1	Construction - Hall A	\$622k	\$41k	\$663k
1.4.2	Construction - Hall B	\$44,265k	\$14,812k	\$59,077k
1.4.3	Construction - Hall C	\$27,011k	\$3,259k	\$30,270k
1.5	Construction - Hall D	\$45,514k	-\$5,518k	\$39,996k
1.6	Construction - Conventional Facilities	\$30,306k	\$60k	\$30,366k
1.7	Construction - Project Management	\$8,656k	\$560k	\$9,216k
1.8	Pre-Ops	\$11,824k	\$260k	\$12,084k
	TEC Contingency + Mgmt Reserve	\$10,662k	\$5,513k	\$16,175k
	OPC Contingency + Mgmt Reserve	\$179k	\$4,740k	\$4,919k
Total		\$310,000k	\$28,000k	\$338,000k

17) Impact on Schedule Baseline:

Milestone (No. & Description)	Baseline(Month/Year)	Proposed (Month/Year)	Change
2-11 Installation of Hall D Solenoid Completed	Jun-13	Jun-13	0
2-26M Accelerator Installation Complete except for all Power Supplies		Dec-13	NEW
2-08M Hall A Equipment Installation Complete	Mar-15	Dec-13	-15
2-03 Accelerator Commissioned	Jan-14	Jan-14	0
2-09 Hall A Beam Commissioning Completed	Mar-14	Mar-14	0
2-12 Hall D Equipment Installation Completed	Jun-14	Sep-14	3
2-28M Hall C HB Magnet Delivered		Sep-14	NEW
2-34M Hall B Torus Cold Mass Delivered		Sep-14	NEW
2-25M Box Supply Installation Complete		Oct-14	NEW
2-27M Hall C Q1 Magnet Delivered		Oct-14	NEW
2-13M Hall D Beam Commissioning Completed	Dec-14	Dec-14	0
2-35M Hall B Solenoid Cryostated Coil Delivered		Dec-14	NEW
2-29M Hall C Dipole Magnet Delivered		Jun-15	NEW
2-30M Hall C Q2 Magnet Delivered		Jul-15	NEW
2-31M Hall C Q3 Magnet Delivered		Aug-15	NEW
2-32M Hall C Equipment Installation Complete	Mar-15	Dec-15	9
2-36M Hall B Equipment Installation Complete	Mar-15	Dec-15	9
2-38M Conventional Facilities Complete		Dec-15	NEW
2-33M Hall C Beam Commissioning Complete		Mar-16	NEW
2-37M Hall B Beam Commissioning Complete		Mar-16	NEW

18) Explanation of Impact on Schedule Baseline:

CD-4B is being delayed by 27 months. This breaks down into the following components: 12 months delay due to FY12 funding reduction from \$66M to \$50M; 3 months additional delay due to the Hall B and Hall C superconducting magnets; and 12 months of schedule contingency for the critical path items. Note that the CD-2 baseline schedule contingency for Halls B and C was 6 months; the rebaseline increases this to 18 months (58%) to account for remaining risks.

19) Impact on Scope Baseline:

The spare Hall D Solenoid magnet scope, which was added to the project in June 2011, is being removed now that the existing Hall D Solenoid magnet has been successfully operated. Further risk mitigation scope has been added for the Hall B Torus magnet, including a pre-production coil and a spare cryostated coil, both of which will be cold-tested prior to completion of magnet assembly. Further risk mitigation scope has been added for the Hall C Dipole and Quadrupole (Q2/Q3) magnets including the production of one spare Dipole and one spare Quadrupole potted coil. The development of risk mitigation plans for surplus magnet raw materials such as copper and conductor has been added, as well as risk mitigation plans via adjustment to the refrigeration/cryostat systems for the Hall B Solenoid magnet in the event of an underperforming magnet.

20) Explanation of Impact on Scope Baseline:

Project Key Performance Parameters /CD-4 Deliverables are unchanged. Substantial risk mitigation has been added for the superconducting magnets in Halls B and C. The new Hall B Torus magnet mitigation scope will delay the installation of some Hall B Detectors. The new Hall C magnet mitigation scope will not impact the project schedule. The sum of the new scope added to the baseline will result in a cost contingency of 34.5%.

21) Other Impacts(Health, Safety, Environment, etc):

None.

22) Interim or Corrective Actions:

Project is closely monitoring the critical path items (Superconducting Magnets (SC) in Halls B & C). Lab senior management is also actively engaged. A Magnet Advisory Group (MAG) was formed to receive expert input on a monthly basis as the project progresses. The Lab Director has also increased the frequency of Director's Reviews where necessary. Oversight of the vendors has increased resulting in increased vendor visits, continued formal involvement of Jefferson Lab procurement reps, new hires with SC magnet expertise, and a plan for frequent presence and long durations at two vendors which are providing the magnets on the critical path schedule. The revised baseline also incorporates additional mitigation plans such as spare coils to further ensure that the project can be completed on time and within budget.

APPROVALS

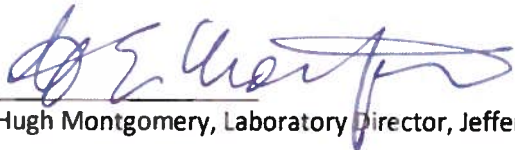
23) Submitted by:



Claus H. Rode, Project Manager, Jefferson Lab

8/23/2013

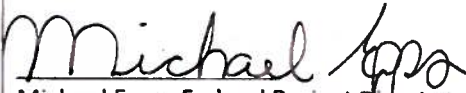
Date



Hugh Montgomery, Laboratory Director, Jefferson Lab

8/23/2013

Date



Michael Epps, Federal Project Director
Thomas Jefferson Site Office, DOE

8/27/2013

Date



Joseph Arango, Manager
Thomas Jefferson Site Office, DOE

8/27/13

Date



James Hawkins, Program Manager for Major Initiatives
Office of Nuclear Physics, Office of Science, DOE

8/28/13

Date

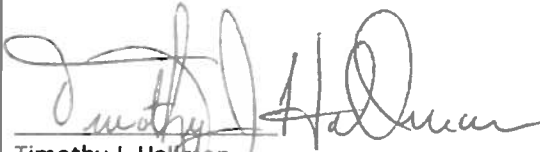


Jehanne Gillo
Director, Facilities and Project Management Division
Office of Nuclear Physics, Office of Science, DOE

8/29/13

Date

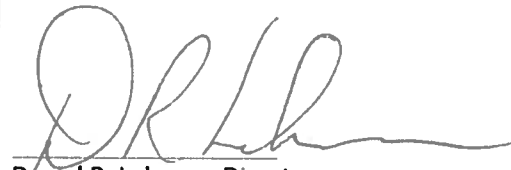
23) Submitted by (Continued):



Timothy J. Hallman
Associate Director of the Office of Science
for Nuclear Physics, DOE

August 29, 2013
Date

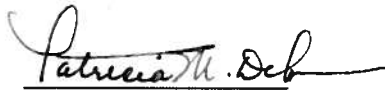
24) Concurrence:



Daniel R. Lehman, Director
Office of Project Assessment
Office of Science, DOE

9/4/2013
Date

25) Acquisition Executive Approval:



Patricia M. Dehmer
Deputy Director of Science Programs
Office of Science


9/4/2013
Date

26) ESAAB Board Recommendations:

The Undersigned "Do Recommend" (Yes) or "Do Not Recommend" (No) approval of the 12 GeV CEBAF Upgrade Project Baseline Change Proposal.

 9-4-13 Yes No
ESAAB Secretariat, Office of Project Assessment Date

Representative, Non-Proponent SC Program Office Date Yes No

 9/4/13 Yes No
Representative, Non-Proponent SC Program Office Date