

OPA (SC-28) Mini-Report

Technology and Engineering Development Facility (TEDF) Project

REVIEW DATE: June 21, 2011
LOCATION OF PROJECT: Thomas Jefferson National Accelerator Facility
PROGRAM MANAGER: Gordon Fox
FEDERAL PROJECT DIRECTOR: Rick Korynta
ACQUISITION EXECUTIVE: Marc Jones
CURRENT CRITICAL DECISION: CD-4A (progress review)

PROJECT STATUS (period ending May 2011)		
Project Type	Line Item	
CD-1	Planned: 09/08	Actual: 09/08
CD-2	Planned: 12/09	Actual: 11/09
CD-3A (Early Construction & Procurement)	Planned: 03/10	Actual: 03/10
CD-3B (Approve Start of General Constr.)	Planned: 09/10	Actual: 08/10
CD-4A (Approve Operations - New Constr)	Planned: 03/12	Forecast: 03/12
CD-4B (Approve Operations - Renovation)	Planned: 03/14	Forecast: 03/13
TPC Percent Complete	Planned: 42.9%	Actual: 40.3%
TPC Cost to Date	\$26.6M	
TPC Committed to Date	\$45.7M	
TPC	\$73.2M	
TEC	\$72.2M	
Contingency Cost (w/Mgmt Reserve)	\$6.58M	16.4% to go
Contingency Schedule on CD-4b	12 months	57% to go
CPI Cumulative	1.01	
SPI Cumulative	0.94	

FUNDING CHART						
	FY08	FY09	FY10	FY11	FY12	Total
DOE	314	3,700	27,687	28,419	12,394	72,514

1. SUMMARY

A Department of Energy (DOE) independent project review of the TEDF project was chaired by Raymond Won. **Overall, the Committee found that the project is generally well managed and has a high probability of meeting the CD-4B milestone, however the schedule for CD-4A is at risk.** Construction of the new Technology and Engineering Development building and site work are progressing well. In contrast, the construction schedule for the Test Lab Addition has zero float remaining. Recommend the project work with the General Contractor (Mortenson) to correct the deficiencies, revise the schedule, and verify the new construction completion dates. CD-4B is not at risk.

2. TECHNICAL

Design documents are complete and support the technical baselines in the Project Execution Plan. The project is in construction. Sustainability performance is high, and both new construction and renovation buildings are on track to achieve LEED Gold certification.

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3. COST, SCHEDULE, FUNDING and MANAGEMENT

Construction of the new Technology and Engineering Development building is progressing on schedule and a total construction period of 14 months is anticipated. However, in anticipation of potential FY 11 budget reductions, the project team significantly modified the construction schedule for the Test Lab Addition to reduce construction spending in FY 11. Three months of float were used to address the proposed FY 11 funding reductions. This baseline change resulted in a delay of new construction completion baseline date from September to December 2011. The baseline completion date for new construction is December 2011, and the current forecast is February 3, 2012. Commissioning and the ESAAB process use up the remaining float to the CD-4A date of March 30, 2012.

The project evaluates progress and cost and schedule variances and risks every two weeks and reviews with the project director. Over the last two months the schedule index, SPI, has dropped from 1.0 to 0.94. The cumulative cost index, CPI, is on-target at 1.01. The current cost contingency is \$6.58M or 16.4%.

JLAB brought in Alpha Corporation to perform an independent schedule review of the Mortenson schedule. This was very commendable for the lab to bring in an independent schedule reviewer. The Alpha review resulted in several serious concerns about the validity of the construction schedule that must be resolved. The forecasted dates for completing new construction along with the schedule methodology concerns put the CD-4A date at risk. The schedule variance of 0.94 should be closely watched over the next several months to determine if corrective actions are required. It is important to identify negative trending and not wait to reach the preset variance limit of 0.9

The baseline CD-4B completion date for the project is March 2014, and the current forecast is March 2013. The 12 months of float on the CD-4B date is adequate at this point in the project. Based on our review of the risk analysis, the current cost contingency of \$6.58M is adequate at this point in the project.

Recommendations:

- Work with Mortenson to revise the construction schedule to address the recommendations in the Alpha independent schedule review, and then verify the new construction completion dates.

4. ENVIRONMENT, SAFETY AND HEALTH

ES& H aspects are properly addressed and Integrated Safety Principles are fully integrated and validated. Weekly walk-throughs are conducted. Issues are tracked in Corrective Action Tracking System. The DuPont Safety Training Observation Problem is in place and operational. The General Contractor (Mortenson) has a full-time safety manager on-site, and safety performance is very good.

Prepared By: Raymond Won

Date: June 22, 2011

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Appendix A:
Charge to the Committee



Department of Energy

Office of Science
Washington, DC 20585

MAY 19 2011

MEMORANDUM FOR DANIEL R. LEHMAN

DIRECTOR
OFFICE OF PROJECT ASSESSMENT

FROM:

MARCUS E. JONES *M. Jones*
ASSOCIATE DIRECTOR OF SCIENCE FOR
SAFETY, SECURITY AND INFRASTRUCTURE

SUBJECT:

Progress Review of the Technology and Engineering
Development Facility at Thomas Jefferson National Accelerator
Facility

I would like to request that you organize and lead an Office of Science (SC) status review of the Technology and Engineering Development Facility (TEDF) project at Thomas Jefferson National Accelerator Facility (TJNAF) on June 21, 2011. The purpose of this review is to evaluate progress in all aspects of the project: technical, cost, schedule, management, and Environment, Safety, and Health (ES&H).

The project is approximately 33 percent complete overall as of the end of April 2011. The new Technology and Engineering Development (TED) building is progressing with metal studs, sheathing, masonry and rough mechanical, electrical and plumbing work in progress. The TED roof is approximately 75 percent complete as of the end of April 2011. The Test Lab Addition (TLA) steel erection is approximately 95 percent complete as of the end of April.

In carrying out this review, the committee should evaluate the project's status against its overall cost, schedule, and technical baselines. Special attention should be given to assessing whether the amount of remaining contingency is adequate to address the risks associated with completing the project on schedule, and whether construction safety is being adequately emphasized and properly implemented.

In carrying out its charge, the review committee should respond to the following questions:

1. Are the project's cost, schedule, and technical baselines consistent with those in the current DOE-approved Project Execution Plan, and is there adequate progress to meet the baseline objectives?
2. Is the schedule of remaining project work credible and reasonable? Is there adequate contingency to address the risks inherent in the remaining work and is it being properly managed? Is the contingency supported by and consistent with an appropriate project-wide risk analysis?



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3. Are ES&H aspects being properly addressed given the project's current stage of development? Are Integrated Safety Management Principles being followed?

Gordon Fox will serve as the Office of Safety, Security, and Infrastructure point of contact for this review. If you have any questions, please call at 301-903-1457.

cc:

D. Lehman, SC-28

R. Won, SC-28

J. Arango, TJSO

R. Korynta, TJSO

R. Sprouse, TJNAF

J. McBrearty, SC-3

S. Short, SC-31

G. Fox, SC-31

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Appendix B:
Review Committee

Department of Energy Review of the Technology and Engineering Development Facility (TEDF) Project June 21, 2011

REVIEW COMMITTEE PARTICIPANTS

Department of Energy

Ray Won, DOE/SC, Chairperson

Review Committee

Jack Stellern, ORNL

Observers

Gordon Fox, DOE/SC
Rick Korynta, DOE/TJSO
Scott Mallette, DOE/TJSO

**Department of Energy Review of the
Technology and Engineering Development Facility (TEDF) Project
June 21, 2011**

AGENDA

Tuesday, June 21, 2011—VARC (Building 28), Conference Room 53

8:00 am	DOE Executive Session	R. Won
8:15 am	Welcome and Introductions	M. Dallas
8:20 am	Project Status (Address Charge)	K. Royston. Sprouse, Korynta
10:00 am	Tour	
11:30 am	CD-4a Issues & Options	K. Royston. Sprouse, Korynta
12:30 pm	Working Lunch (VRAC 53)	All
1:15 pm	Question/Discussion	All
2:30 pm	DOE Executive Session	DOE/Review Committee
3:30 pm	Closeout Presentation.....	All
4:00 pm	Adjourn	All