



U.S. DEPARTMENT OF  
**ENERGY**

OFFICE OF  
**SCIENCE**

**DOE/SC CD-2/3b Review**  
of the  
**Muon to Electron Conversion  
Experiment (Mu2e) Project**  
**Fermi National Accelerator Laboratory**  
**February 4, 2015**

**Kurt Fisher**  
**Committee Chair**  
**Office of Science, U.S. Department of Energy**

<http://www.science.doe.gov/opa/>



## **DOE EXECUTIVE SESSION AGENDA**

**Wednesday, February 4, 2015—Comitium, Wilson Hall**

- 8:00 a.m. DOE Executive Session..... K. Fisher  
8:10 a.m. Program Perspective..... T. Lavine  
8:15 a.m. Federal Project Director Perspective..... P. Carolan  
8:25 a.m. Questions  
8:30 a.m. Adjourn

**Project and review information is available at:**

**<http://mu2e.fnal.gov/public/project/reviews/cd2-review-followup/cd2-followup-index.shtml>**

**Username: reviewer**

**Password: mu2ereviewer**



# Review Committee Participants

**Kurt Fisher, DOE/SC, Chairperson**

## Review Committee

### *Subcommittee 1—Technical*

\*Steve Gourlay, LBNL  
Ken Marken, DOE/SC  
Bruce Strauss, DOE/SC

### *Subcommittee 2—Cost and Schedule*

\*Jerry Gao, DOE/ASO  
Ron Lutha, DOE/ASO

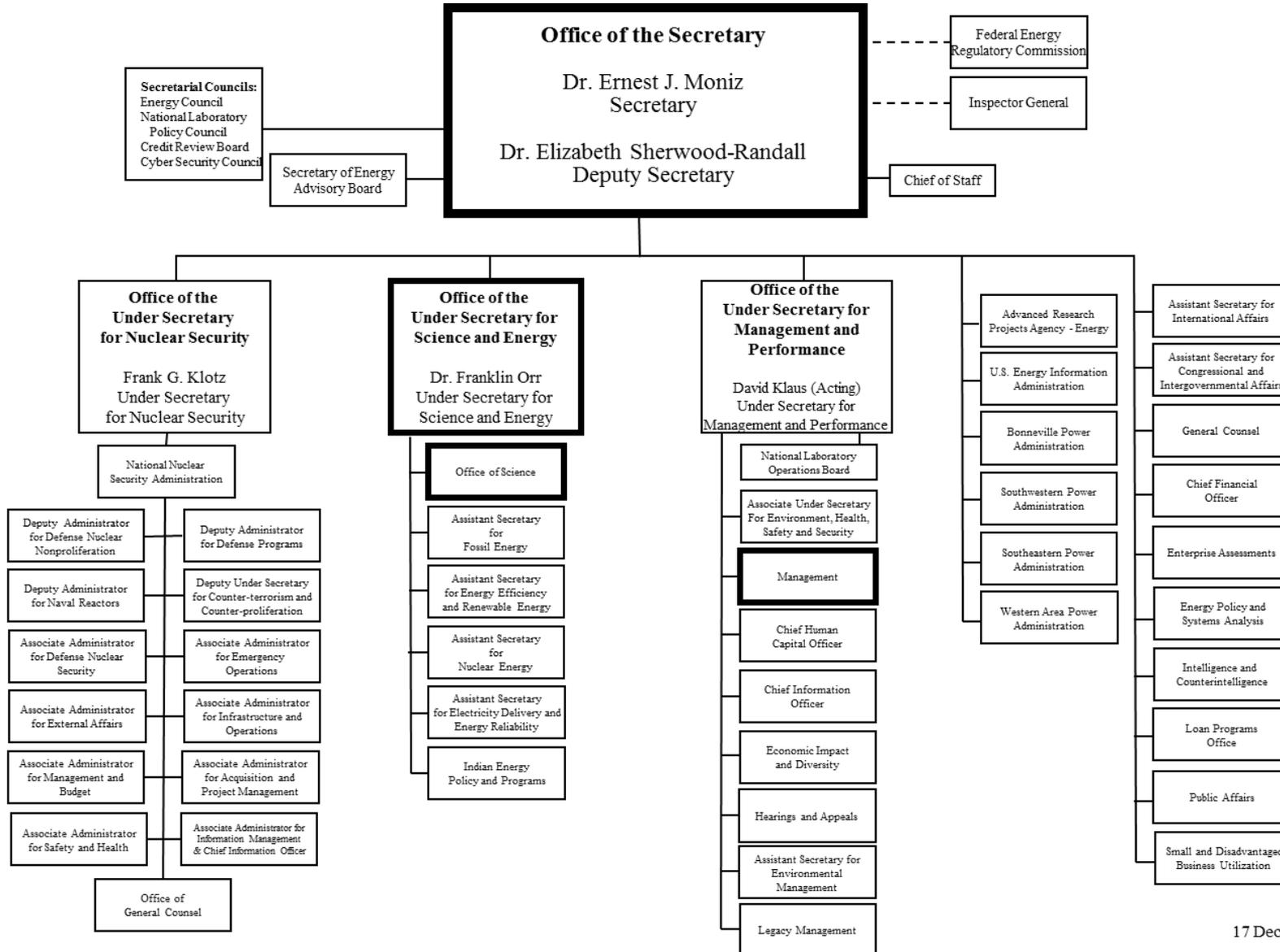
### *Subcommittee 3—Management*

\*Dan Green, Fermilab  
Steve Meador, DOE/SC

\*Lead

## Observers

Mike Procaro, DOE/SC  
Ted Lavine, DOE/SC  
Pepin Carolan, DOE/FSO



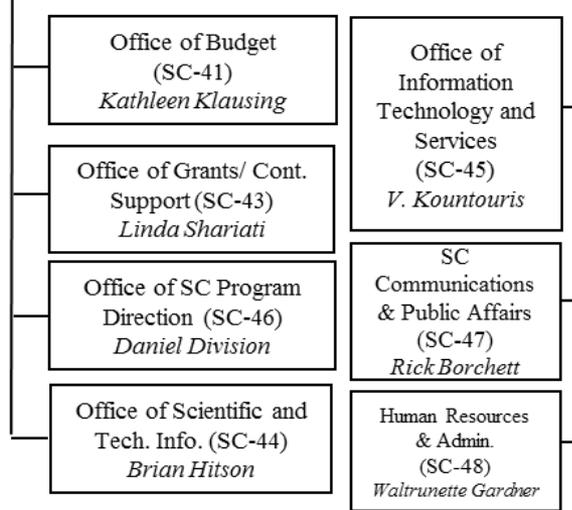
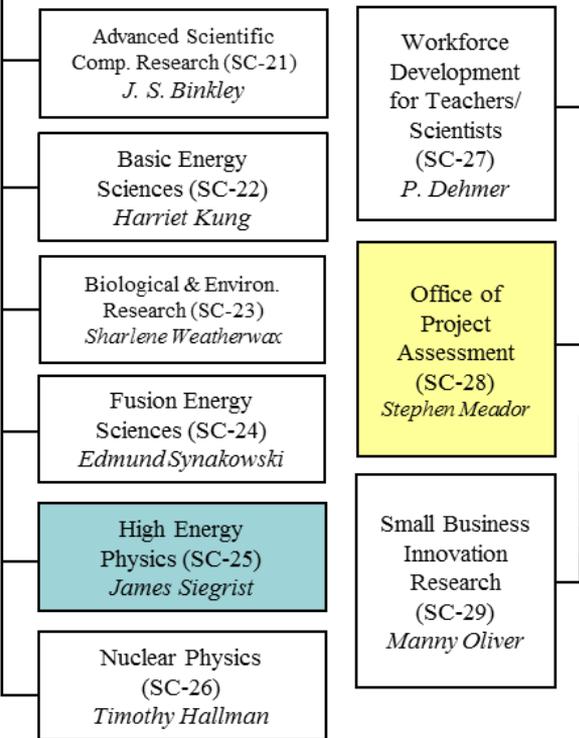
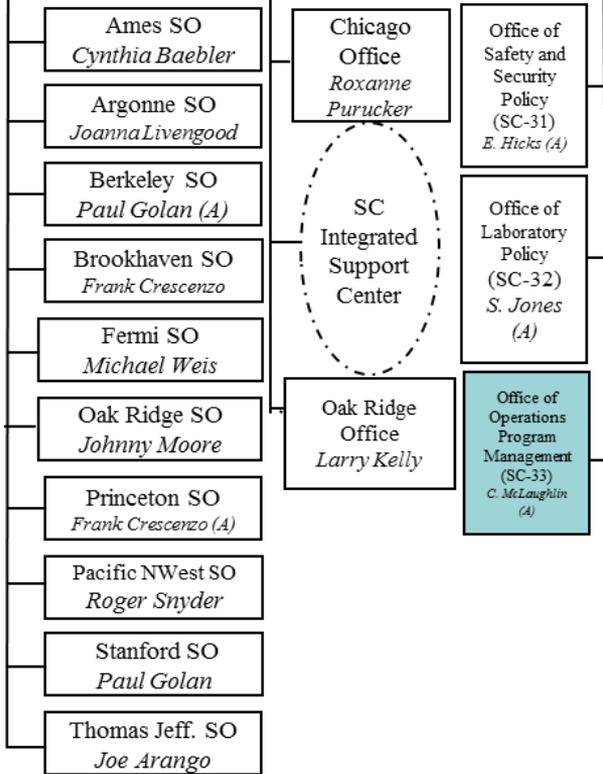


Office of the Director (SC-1)  
*Patricia M. Dehmer (A)*

Deputy Director for Field Operations (SC-3)  
*Joseph McBrearty*

Deputy Director for Science Programs (SC-2)  
*Patricia M. Dehmer*

Deputy Director for Resource Management (SC-4)  
*Jeffrey Salmon*



(A) Acting



1. Have the Project and the Laboratory responded satisfactorily to the recommendations of the previous DOE review?
2. Is the detailed design sufficiently mature and appropriately reviewed so that the project can continue, as planned, with the procurement and fabrication work that will be approved by CD-3b?
3. Are there any outstanding issues that need to be addressed?



## Wednesday, February 4, 2015—Comitium, Wilson Hall

8:00 am	Executive Session .....	K. Fisher
8:30 am	Welcome and Fermilab Context— <b>Comitium</b> .....	N. Lockyer
8:45 am	Laboratory Role and Project Support .....	M. Lindgren
9:00 am	Project Overview .....	R. Ray
	• Response to DOE Review Recommendations	
10:00 am	Break	
10:20 am	Transport Solenoid (TS) .....	M. Lamm
	• TS Module Design Review/Final Design Status	
	• TS Prototype Module Status, Test, and Acceptance Plan	
	• TS Module Procurement and Fabrication Readiness	
11:00 am	Committee Questions and Discussion	
11:30 am	Full Committee Executive Session	
12:00 pm	Working Lunch	
1:00 pm	Committee Reconvene with Project Management (if needed)	
2:30 pm	Closeout	
3:00 pm	Adjourn	



# Report Outline/Writing Assignments

Executive Summary .....Fisher

1. Introduction ..... Lavine

2. Technical (Charge Questions 1, 2, 3) ..... Gourlay\*/Marken/Strauss

3. Cost and Schedule (Charge Questions 1, 2, 3) ..... Gao\*/Lutha

4. Management (Charge Questions 1, 2, 3) ..... Green\*/Meador

\*Lead



# **Closeout Presentation and Final Report Procedures**



**(Use PowerPoint / No Smaller than 18 pt Font)**

## **2.1 Use Section Number/Title corresponding to writing assignment list.**

**List Review Subcommittee Members**

**List Assigned Charge Questions and Review Committee Answers**

### **2.1.1 Findings – What the project told us**

- In bullet form, include your account of factual technical, cost, schedule, and management. Information provided/presented by the Project

### **2.1.2 Comments – What we think about what the project told us**

- In bullet form, include your assessment of project status (observations, concerns, feedback, suggestions, etc.) based on the findings. This section carries more emphasis than the Findings, but does not require an action as do the Recommendations. Do not number your comments.

### **2.1.3 Recommendations – What we think the project needs to do**

- 1. Beginning with an action verb, provide a brief, concise, and clear statement with a due date.**

**For Critical Decision reviews, include a specific recommendation addressing how the Committee judged the readiness for the CD, *i.e.*:**

- **The project is ready to proceed to CD-2; *or***
- **The project is ready to proceed to CD-2, after addressing the following recommendations**



# Format: Final Report

(Use MS Word / 12pt Font)

## 2.1 Use Section Number/Title corresponding to writing assignment list.

### 2.1.1 Findings – What the project told us

Include a brief narrative description of technical, cost, schedule, management information provided by the project. Each subcommittee will emphasize their area of responsibility.

**Cost and schedule subcommittee should provide attachments for approved project cost breakdown and schedule. Management subcommittee should provide attachment for approved project organization and names of personnel.**

### 2.1.2 Comments – What we think about what the project told us

Descriptive material assessing the findings and making observations and conclusions based on the findings. **The committee's answer to the charge questions should be contained within the text of the Comments Section.** Do not number your comments.

### 2.1.3 Recommendations – What we think the project needs to do

1. Beginning with an action verb, provide a brief, concise, and clear statement with a due date.
- 2.

**Please Note: Recommendations are approved by the full committee and presented at the review closeout briefing. Recommendations SHOULD NOT be changed or altered from the closeout report to the Final Report.**



- **Present closeout reports in PowerPoint.**
- **Forward your sections for each review report (in MSWord format) to Casey Clark, [casey.clark@science.doe.gov](mailto:casey.clark@science.doe.gov), by Monday, February 9, 8:00 a.m. (EST).**



# **Closeout Report on the DOE/SC CD-2/3b Review of the**

## **Muon to Electron Conversion Experiment (Mu2e) Project**

**Fermi National Accelerator Laboratory**

**February 4, 2015**

**Kurt Fisher**

**Committee Chair**

**Office of Science, U.S. Department of Energy**

<http://www.science.doe.gov/opa/>



1. Have the Project and the Laboratory responded satisfactorily to the recommendations of the previous DOE review?
2. Is the detailed design sufficiently mature and appropriately reviewed so that the project can continue, as planned, with the procurement and fabrication work that will be approved by CD-3b?
3. Are there any outstanding issues that need to be addressed?
  - **Findings**
  - **Comments**
  - **Recommendations**



1. Have the Project and the Laboratory responded satisfactorily to the recommendations of the previous DOE review?
2. Is the detailed design sufficiently mature and appropriately reviewed so that the project can continue, as planned, with the procurement and fabrication work that will be approved by CD-3b?
3. Are there any outstanding issues that need to be addressed?

- **Findings**
- **Comments**
- **Recommendations**



<b>PROJECT STATUS</b>		
Project Type	MIE / Line Item / Cooperative Agreement	
CD-1	Planned:	Actual:
CD-2	Planned:	Actual:
CD-3	Planned:	Actual:
CD-4	Planned:	Actual:
TPC Percent Complete	Planned: _____%	Actual: _____%
TPC Cost to Date		
TPC Committed to Date		
TPC		
TEC		
Contingency Cost (w/Mgmt Reserve)	\$	
Contingency Schedule on CD-4b	_____ months	_____ %
CPI Cumulative		
SPI Cumulative		



1. Have the Project and the Laboratory responded satisfactorily to the recommendations of the previous DOE review?
2. Is the detailed design sufficiently mature and appropriately reviewed so that the project can continue, as planned, with the procurement and fabrication work that will be approved by CD-3b?
3. Are there any outstanding issues that need to be addressed?

- **Findings**
- **Comments**
- **Recommendations**