

**Director's Preliminary Review: Assessment of Readiness for CD-1  
of the  
Muon to Electron Conversion Experiment (Mu2e) Project  
November 17, 2010**

**Charge**

The Committee is to conduct a Director's Preliminary Review of the Muon to Electron Conversion Experiment (Mu2e) Project to assess its progress towards a planned CD-1 Lehman Review, anticipated to take place in March 2011. The Mu2e Project will construct a new facility to enable the world's most sensitive search for charged lepton flavor violation by searching for the conversion of a muon to an electron in the field of a nucleus. Mu2e will be ~10,000 more sensitive than the world's current best limit. The project consists of modifications to the existing Fermilab accelerator complex, construction of a new external beamline, construction of a new detector hall on the Fermilab site and construction of a new detector to search for muon conversion. The detector includes a complex system of superconducting solenoids, a collimation and charge selection scheme for producing the world's most intense muon beam, a low mass tracking detector operating in vacuum, a crystal calorimeter and a cosmic ray veto. Many aspects of the project will be executed by other collaborating National Laboratories and universities.

Mu2e received CD-0 on November 25, 2009. The Project is now working towards CD-1, with the goal of being ready for a Lehman Review in March 2011. The purpose of this review is to assess the progress that the project team is making towards readiness for CD-1, evaluate the likelihood of being ready for a CD-1 review by March of 2011 and to recommend any actions to be taken to improve the likelihood of being ready on that time scale.

The review team is asked to address the following questions:

1. Is the Project making adequate progress on the development of the technical designs and alternatives to create a sound Conceptual Design Report, as required to be ready for a successful CD-1 Review in March?
2. Is the Project making adequate progress in developing the resource loaded schedules required to support the cost and schedule ranges to be presented for CD-1?
3. Is the Project making adequate progress in the preparation of other required documentation for CD-1?
4. Are the Project organization and staffing levels, both current and planned, adequate to manage the work leading to a successful CD-1 review and beyond?
5. Are there other issues related to CD-1 readiness that the Project needs to address?
6. Does it appear likely that the Mu2e Project can be ready for a CD-1 review in March of 2011?

The review is scheduled to last one day. At the close of the review the Committee is asked to present its answers to the charge questions and include recommendations concerning actions that need to be taken to ensure a successful CD-1 Review on the planned time scale. The report presented at the closeout should be in written form and will be the final report from this review.