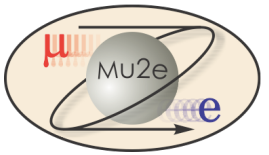
Fermilab

SC6 HW Question #1 - Transition to Operations



D. Glenzinski

Mu2e Co-spokesperson

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SC6 HW Question #1

- Provide more information on the transition to operations, including scope, schedule, overlap of activities, outfitting, and who is responsible for what

Introduction

- Once Mu2e Project is formally complete (ie. KPPs have been satisfied), Fermilab and the Mu2e Collaboration have responsibility for safely and efficiently operating the experiment

  - Roles and responsibilities are formally spelled-out in increasing detail in a series of documents
    - Project Management Plan (doc-508)
    - Technical Scope of Work (by CD-3c)
    - Experiment Operations Plan (by CD-4)

  - Initial discussion with the lab management have occurred
    - in a PMG meeting and dedicated one-on-one meetings

Transition to Operations Schedule

- The transition happens in a few steps
  - Beneficial Occupancy of the building (26 Feb 2016)
  - External beam line ready for beam to diagnostic absorber (29 Jan 2020)
  - As KPPs are satisfied

Transition to Operations - Building

- Beneficial Occupancy of the building (26 Feb 2016)

  (nb. yesterday I mistakenly said “summer 2016”, which is the T2 milestone instead of the T5)

  - At that time PPD
    - Is responsible for the maintenance and upkeep of the building.
    - Has ESH authority for activities taking place in the building.
    - This is the model used for all buildings on site.
  - At that time PPD will provide
    - Outfitting
    - Consumables
    - Building manager (Jamie Grado)
    - Floor manager (Dervin Allen)
  - Mu2e Operations included in PPD budget beginning FY2016.

Transition to Operations – Ext. beam line

- External beam line ready for beam to diagnostic absorber (29 Jan 2020)
  - At that time AD
    - Is responsible for the maintenance and upkeep of the external beam line up to the diagnostic absorber.
    - Has ESH authority for activities related to operations and maintenance of external beam line.
    - This is the model used for all beam lines on site.
  - At that time AD will provide
    - Consumables
    - Muon Campus machine coordinator
  - Head of AD has asked AD Muon Dept. to develop a resource loaded schedule to begin planning for Mu2e operations.

Transition to Operations – KPPs Satisfied

- The KPPs are satisfied within a month of each other
  - Solenoids (Aug 2020)
  - Detectors (Sep 2020)
  - Resonant Extraction ready for commissioning (Sep 2020)
- PPD will take responsibility for the maintenance and operations of the Solenoids and Detectors and the associated ESH
- AD will take responsibility for the maintenance and operations of the entire beam line and the associated ESH

Experiment Operations

- Fermilab
  - Provides ESH and operations oversight via regular meetings run by the Directorate and annual reviews.
  - Provides an operations budget and support personnel.
  - Liaisons with collaboration to support the hardware and to ensure safe and efficient data-taking and analysis.
- Collaboration
  - Provides an operations structure that includes Online Operations, Offline Operations, and Data Analysis.
  - Provides “in kind” personnel and expertise for data-taking shifts, detector maintenance and operations, and physics analysis.
- Computing needs will be specified in the Tech. Scope of Work with CD. Collaboration offsite computing used as appropriate.
- AD operates the beam line and is responsible for ESH.
- This is the model used for all on-site experiments.

Summary

- The transition points from the Mu2e project to lab operations
  - are well defined in scope
  - are tracked via milestones in project RLS.

- Responsibilities at each transition are well defined.

- The Mu2e transitions are typical for experiments at Fermilab and have been executed many times before. They are governed by a well defined process that includes readiness reviews, safety sign-offs, the development of operations procedures, etc.