

**PARTICLE PHYSICS DIVISION OPERATING MANUAL
REVIEW AND APPROVAL RECORD**

**CONTROLLED ACCESS PROCEDURES
FOR THE MESON TEST BEAM FACILITY (MTEST)**

Revised by Wayne Schmitt 10038_N Date 11/10/08
Name/ID#

Approved by Robert L. Dwyer Date 11/24/08
AD Head

Approved by [Signature] Date 12/11/08
PPD Head

CONTROLLED ACCESS PROCEDURES FOR THE MESON TEST BEAM FACILITY (MTEST)

INTRODUCTION

The Meson Test Beam Facility (MTBF or MTEST) is located in the Meson Detector Building and consists of the two sections of the MT6 enclosure (MT6 Section 1 and MT6 Section 2). These enclosures house detectors under test by various users. Each experiment at MTest has been assigned an experiment number by the directorate. This document outlines the PPD approved procedures for making controlled accesses at MTest.

PROCEDURE OVERVIEW

To ensure that controlled access procedures are correctly and completely followed, each access must be overseen by a Controlled Access Leader (CAL), who must be present and is responsible for managing the accesses into the MTEST experimental enclosures. The CAL will coordinate all aspects of the controlled access, including communication with the Main Control Room (MCR), requesting, handing out and replacing keys in the key tree, and checking the interlocked area at the end of each access to ensure that no one is left behind. The CAL records details of each controlled access on the MTEST Controlled Access Log, which is present at each interlocked gate. No controlled accesses will be allowed unless an authorized CAL is present.

The CAL will receive area-specific training from the MTEST Access Coordinator (MAC), who is assigned by the head of PPD. This training consists of a briefing on the responsibilities and MTEST site specific procedures and being “walked through” the controlled access procedures by the MAC the first time the CAL performs a controlled access. The CAL will be responsible, in turn, for giving this training to each member of that and subsequent access parties. The MAC will provide the Accelerator Division’s Operations Group with a list of CALs for each week of scheduled running at the test beam facility.

MTEST CONTROLLED ACCESS PROCEDURE

I. Purpose

This procedure is to be followed when a controlled access into the Meson Test Area enclosures MT6 Section 1 or MT6 Section 2 is requested.

II. Prerequisites

A qualified Controlled Access Leader (CAL) must be present in the Meson Test Area to execute this procedure for controlled access into MT6 Section 1 or MT6 Section 2. The CAL will be present in the Meson Test Beam Facility for the duration of the access but is not required to be a part of the access team.

III. Making the Controlled Access

a) **Actions taken by MTEST Controlled Access Leader (CAL):**

- 1) Document the controlled access using the MTEST Controlled Access Key Sign-Out Log.
- 2) Inform the access team of the maximum expected duration of the access after consultation with the Main Control Room (MCR).
- 3) Train first-time users in this procedure and give them hands-on instruction on their first access. For subsequent accesses by a user, verify that each person on the access team has reviewed and understands this procedure and has received hands-on instruction from a Controlled Access Leader. Document this fact on the MTEST Controlled Access Key Sign-Out Log.
- 4) Verify that each person is wearing a dosimetry badge.
- 5) Call the MCR and ask them to release the key tree door.
- 6) Issue a key to each member of the access team, giving the MCR their FNAL ID numbers and controlled access key numbers. Record each key number in the MTEST Controlled Access Key Sign-Out Log.

NOTE *One MTEST controlled access key must remain in the key tree at all times. This key is for emergency use only.*

- 7) Close the key tree door and verify that it is re-secured.
- 8) Inform the access team that the access can begin.
- 9) Observe the controlled access entry and remain in the area for the duration of the access.

b) Actions taken by each member of access team:

- 1) Receive the controlled access key from the Controlled Access Leader and keep it on their person until the access is complete. These keys must never leave the building.
- 2) Enter the MT6 enclosure using the proper entry procedure.

c) Actions taken by MCR:

- 1) Make sure the person requesting the controlled access is an MTest Controlled Access Leader by comparing to list given to them from the PPD MTest Access Coordinator.
- 2) Release the key tree door.
- 3) Ask for and enter the FNAL ID numbers and controlled access key numbers into the key logger AND verify that each person requesting to make an access is qualified.

IV. Ending the Controlled Access**a) Steps taken by MTEST Controlled Access Leader:**

- 1) Record the exit time of each person on the access team using the MTEST Controlled Access Key Sign-Out Log.
- 2) Inform the MCR when the access team has completed its tasks and left the enclosure and request that the key tree door be released.
- 3) Retrieve each key and return it to the key tree, informing the MCR of each key number as it is returned.
- 4) Close the key tree door and verify that it has been re-secured.
- 5) IF this is the last access team to leave the enclosure AND all keys are in the key tree, THEN do the following:
 - i. Inform the MCR that all personnel are out of the enclosure and that the access has ended.
 - ii. Confirm that the electrical permit/warning siren sounds.
- 6) Place the Controlled Access Key Sign-Out Log in the MTest Controlled Access Binder. A copy of each completed sheet is to be forwarded to the PPD Radiation Safety Officer at MS 355 within one week of its first use.

b) Actions taken by each member of access team:

- 1) Exit the enclosure using proper controlled access procedures.

NOTE *If any member(s) of an access team of three people or more wish to exit the enclosure before the others, at least two people must remain within the enclosure. Otherwise, all access team members must exit together.*

- 2) Inform the Controlled Access Leader that you have left the enclosure, and surrender your key so it can be returned to the key tree.

c) **Actions taken by MCR:**

- 1) Disable Secondary Critical Device Controller (CDC) for MTest.
- 2) Release the key tree door.
- 3) Enter the key numbers of the returned keys into the key logger.

V. Departure From Proper Procedure

a) **Steps taken by MTEST Controlled Access Leader:**

- 1) If there is a departure from the controlled access procedures during the access that could lead to a safety concern (for example, someone has entered the enclosure without a key), THEN do the following:
 - a.) Drop the enclosure interlocks by opening the controlled access gate.
 - b.) Inform the MCR Crew Chief.

NOTE *At this point the MCR Crew Chief will disable beam and begin contacting necessary personnel according to their procedures.*

- c.) Prepare a written account of the situation.
- d.) Await further instructions
- 2) If the enclosure interlocks are dropped unintentionally (for example, as the result of human or hardware failure), THEN do the following:
 - a) Consult with MCR on how to proceed.
 - b) Obtain statements from each person involved and attempt to determine the reason(s) why the interlocks were dropped.
 - c) Prepare a note to summarize what happened

NOTE *It should be noted that dropping the interlocks due, for example, to inadvertently executing an incorrect sequence with the controlled access keys, results in the need to search and secure the enclosure, and will delay the re-establishment of the beam. This is an inconvenience which should be avoided. However, it is not a safety issue, and is not considered by itself to be a significant violation of controlled access procedures.*

VI. **Supporting Documentation**

- 1) Jim Strait/Roger Dixon Memo on 8/11/2006.
- 2) Restarting Meson Test Task Force Charter and Final Report
- 3) Documentation on Controlled Access Leader (CAL) and Meson Test Controlled Access Leader (MAC) Training Plan including forms.
- 4) Policy on Controlled Access at the Meson Test Beam Facility, PPD_ESH_015
- 5) MTest Controlled Access Key Sign-Out Log Form (from PPD_ESH_015).

Revision History

Author(s)	Description	Revision	Date
A. Sands	Add document control disclaimer and revision history page	7/31/09	7/31/09