

ACCELERATOR DIRECTORATE ADMINISTRATIVE PROCEDURE

ADAP-11-0005

ACCELERATOR DIRECTORATE TUNNEL GUIDE PROCEDURE

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The current version of this ADAP Procedure is found at:
[http://ad.fnal.gov/hq/AD AP.html](http://ad.fnal.gov/hq/AD_AP.html).

1.0 PURPOSE AND SCOPE

Accelerator Directorate (AD) Tunnel enclosures are unique locations to Fermilab that are not frequently accessed by most lab employees. AD Tunnel enclosures pose unique hazards: radiation areas, high radiation areas, contamination areas, poor lighting conditions, tight/narrow spaces, confined spaces, wet conditions, and high power and high voltage electrical equipment.

Comprehensive training, procedures and policies ensure that qualified personnel accessing these areas have the needed resources to work safely in these areas. In addition to traditional classroom instruction training methods, familiarity with the domain and on-the-job practice implementing the training is also needed to ensure safe operations in these areas. Non-AD personnel who require access to AD enclosures who do not regularly enter the enclosures, or who may not be familiar with a particular area in the enclosures, need additional assistance.

Accelerator Directorate employees who are familiar with the procedures for entering and operating these enclosures and are familiar with the hazards will serve as tunnel guides to lab employees from other Directorates, Divisions, and Departments.

The RunCo/ShutCo in consultation with the AD Beams Division Director can waive the need to have an AD Escort if the situation warrants it.

2.0 DEFINITIONS

- Tunnel Guide: A knowledgeable AD employee that has been designated as the contact for the area being accessed.
- Tunnel Visitor: A non-Accelerator Directorate employee who will be completing work in an Accelerator Directorate enclosure; they must be qualified (including all appropriate training) to obtain a tunnel key for that enclosure.
- Exemption Listing: Individuals exempt from the tunnel guide requirement include the following:
 - ES&H
 - DSO (AD Safety Officer)
 - RSO (Radiation Safety Officer)
 - RCT (Radiation Control Technician)
 - Interlock Group
 - PPD
 - Alignment Group

3.0 TUNNEL GUIDE QUALIFICATIONS

A Tunnel Guide must be an AD employee, have a current Fermilab ID badge, and be qualified (be able to get a key) to enter the enclosure for which they are serving as a guide. Tunnel Guides must also be familiar with the enclosure and its hazards, as determined by the RunCo/ShutCo in consultation with machine Department Heads.

At times tunnel activities may require some level of safety

oversight. This can present itself in several different forms; Rad Worker Permit requirement, Training waivers, unique tunnel conditions, etc. Under these conditions the RCT, RSO and DSO may act as tunnel escorts depending on the situation.

3.1 TUNNEL GUIDE RESPONSIBILITIES

- Confirm that Tunnel Visitors are knowledgeable about the local hazards and requirements for the designated enclosure and the area of work.
 - **If you are unfamiliar with local hazards and requirements, contact the RunCo/ShutCo to identify a more appropriate Tunnel Guide for the access.**
- Act as Tunnel Guide for no more than one work crew at any time.
- Meet Tunnel Visitors in the Main Control Room (MCR).
- Prior to access, ensure the following has taken place:
 - Review the job to understand where the work will take place and what the work entails.
 - Read and sign the correct RWP for the enclosure. This should be acknowledged and signed by both the Tunnel Guide and Tunnel Visitor(s).
 - Identify the correct LOTO point and ensure it is locked out with the appropriate type of lock and tag for access. Tunnel Guides do not provide oversight for LOTO when individuals are working on equipment.
 - The correct key has been obtained for the enclosure that Tunnel Visitor(s) plan to enter.
 - Tunnel Visitor(s) have been provided the assigned Tunnel Guide's contact information.
- While in the enclosure:
 - Identify and communicate signage, postings, hazards, emergency exits, and emergency phones to Tunnel Visitors.
 - Familiarize Tunnel Visitors with the enclosure and their work location.
 - A graded approach may be utilized for guiding Tunnel Visitors if work is being performed in a static location and will not be traversing through HRA or contaminated areas. Tunnel Visitors must be informed of who to contact in the event questions arise during work. All other tunnel requirements must be maintained (two-person rule, etc.).
 - Ensure that all tunnel postings are acknowledged and highlight hazards present in the area.
 - Act as a resource for any questions that may come during the access period.
- Exercise stop work authority if appropriate. Contact RSO/DSO if Tunnel Visitor(s) ignore requirements/restrictions stated in work authorization documents or tunnel postings, or Tunnel Guide instructions.

4.0 PROCESS

Non-AD employees requesting enclosure access must meet with their designated Tunnel Guide at the MCR prior to entering the enclosure to obtain a key, sign the RWP and perform the LOTO. If the task requires additional permitting and LOTO configuration, then the appropriate experts must be notified. If changes are needed, then the task may be postponed. The Tunnel Guide and the Tunnel Visitor(s) should agree that all is in place prior to the start of any work. Prior to entry, the potential for any change in the working environment in the tunnel needs to be acknowledged and discussed. Further guidance from radiation or conventional safety may be needed. Listed below are the proper procedures:

- The Tunnel Visitor(s) will go the MCR to meet their Tunnel Guide.
- A briefing will occur between the Tunnel Guide and the Tunnel Visitor(s) to discuss the general scope of the job and hazards that they may encounter on the way to the work/visit site and for the work site as well. The briefing includes expectations as to what work/ activity will occur in the enclosure. All parties must agree on the entry point to the accelerator enclosure and meet at that location.
- During the tunnel access, the Tunnel Guide will provide general guidance regarding hazards they may/will encounter and guidance (if needed) on how to proceed with the work plan. This guidance will consist of who may need to be contacted and what additional permissions may be needed to proceed.
- A graded approach will be used in cases where Tunnel Guides must escort Tunnel Visitors for the duration of the work.
 - If the same path is used to get to the worksite for leaving the enclosures and they are not traversing HRA or Contaminations areas the Guide.
- Tunnel Visitor(s) are provided contact information so Tunnel Guides can be reached if questions arise. Tunnel Visitor(s) must remain in the designated work area except to exit the tunnel the same way they entered. In case of emergency, Tunnel Guides should make their way to the nearest exit.
- Tunnel Visitors must return to the MCR and return their tunnel key remove LOTO locks immediately upon the completion of work.
- Stop work authority: Contact RSO/DSO if a Tunnel Visitor ignores requirements/restrictions stated in work authorization documents or tunnel postings, or Tunnel Guide instructions.

5.0 DISTRIBUTION

An electronic controlled copy of this procedure is maintained on the AD website at: <http://ad.fnal.gov/hq/AD AP.html>.