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C-A OPERATIONS PROCEDURES MANUAL

12.41 Instructions for Entering MP-7

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Hand Processed Changes

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Approved: \_\_\_\_\_ *Signature on File* \_\_\_\_\_  
Collider-Accelerator Department Chairman Date

C. Carlson

## 12.41 Instructions for Entering MP-7

### 1. Purpose

The purpose of this procedure is to define the steps required to enter the MP-7 tank.

### 2. Responsibilities

It is the responsibility of the person or persons executing this procedure to observe all safety rules and to complete [C-A-OPM-ATT 12.41.a "MP-7 Tank Entry Checklist"](#).

### 3. Prerequisites

- 3.1 Tandem Operator training
- 3.2 Confined Space Training
- 3.3 A valid Confined Space Entry Permit must exist for the MP-7 tank.

### 4. Precautions

None

### 5. Procedure

- 5.1 Vacuum pump tank to 1000 microns as per [C-A-OPM 12.42 "Transfer Gas from MP-7 to East Bank"](#).
- 5.2 Close HOV-30. Lock this valve CLOSED. Remove key and insert into the corresponding lock on L.E. Manway Door of MP-7.
- 5.3 Check that Valve V-52 is CLOSED. Lock this valve. Remove key and insert into corresponding lock on L.E. Manway Door of MP-7.
- 5.4 Open bleed valve V-29.
- 5.5 Open Vent Valve on L.E. North end of Tank and allow Tank to vent to atmospheric pressure.
- 5.6 Insure that the Radiation Source is retracted and locked.
  - 5.6.1 Record Gamma level of Tank
  - 5.6.2 Record Gamma level of Source
- 5.7 Open the two South 24" Manway Doors.

- 5.8 If posted, have Health Physics Representative do a contamination survey using an extended tool (i.e. Masslin mop) with a large area swipe. Do not enter the confined space to perform this survey. Contamination results greater than 5000 dpm/wipe will require the use of a HEPA filtered ventilation system to exhaust tank air. Levels less than or equal to 5000 dpm/wipe require no special ventilation. Record findings.

**Caution:**

If levels are above Rad Con Manual Table 2.2, Do Not Enter Tank! Contact TVDG Operations Supervisor. Have Health Physics Representative post tank appropriately.

- 5.9 Insert Air Plenum into the H.E. Manway Door.
- 5.10 Turn on Tank Exhaust Air at A.C. Control Panel near Shielding Door. Insure that air is being drawn into L.E. Manway Door. Allow Tank to purge for at least 5 minutes before Main Door is opened.
- 5.11 Check that the Portable Oxygen and Gamma Monitors are working.
- 5.12 Check that the Miran Gas Analyzer is working and set controls as per checklist on the Front Panel of the Miran Gas Analyzer.
- 5.13 Before entering Tank, check the Oxygen Level at the Bottom Center of the tank with the Portable Oxygen Monitor and Miran Gas Analyzer. Insure that there is no Radiation Hazard using the Portable Gamma Monitor.
- 5.14 Lock out the HE and LE Drive Shaft and Pelletron motors.
- 5.15 Initially enter Tank only through Main Door.
- 5.16 Whenever the Tank is classified as a 'Class 2C Confined Space' (physical hazards present), at least one contact person shall be in close proximity and shall always be in communication with the personnel in the Tank (eg. Radio Communication). (See BNL Environment, Safety and Health Manual [Section 2.2.4](#))
- 5.17 Install the Terminal Jackscrew Support if any work is to be done in the Terminal or on the Column.

5.18 Responsibilities of the Contact Person

5.18.1 ***THE PRIMARY RESPONSIBILITY OF THE CONTACT PERSON IS THE SAFETY OF THE PERSONNEL IN THE TANK***

5.18.2 If communication is broken, the Contact Person should immediately check on the personnel in the Tank.

5.18.3 In an emergency, the Contact Person should not enter the Tank until communication with the Fire Rescue Group has occurred, apprising them of the emergency situation.

5.19 The Oxygen Monitor, Gas Analyzer and Gamma Monitor shall remain in the Tank at all times or personnel shall leave the Tank.

5.20 At the beginning of each shift, perform steps 5.9, 5.10 and 5.11 again.

**6. Documentation**

None

**7. References**

7.1 [C-A-OPM 12.42 “Transfer Gas from MP-7 to East Bank”](#).

**8. Attachments**

8.1 [C-A-OPM-ATT 12.41.a “MP-7 Tank Entry Checklist”](#).