

**Procedure to Secure from**  
**Beam On Status to**  
**Supervised Access Status**  
**in the CDF Collision Hall**  
( this is a Safety Procedure )

This procedure details the steps to be followed in changing the CDF Collision Hall status from Beam On / Controlled Access to Supervised Access during Collider Runs.

Approvals:

\_\_\_\_\_  
( RD/CDF Department Head )

\_\_\_\_\_  
( Date )

\_\_\_\_\_  
( Research Division Head )

\_\_\_\_\_  
( Date )

\_\_\_\_\_  
( Accelerator Division Head )

\_\_\_\_\_  
( Date )

**1.0    Controlled Copies of this procedure.**

Four controlled copies of this procedure will exist:

1. In the CDF Control Room in the CDF Assembly Building
2. In the RD / CDF Department Office
3. In the Research Division Office
4. In the Accelerator Division Office

All other copies will be marked, " INFORMATIONAL COPY ONLY"

**2.0 The Procedure to Secure the CDF Collision Hall  
from Beam On / Controlled Access Status  
to Supervised Access Status.**

The CDF SOD Operator is responsible for carrying out the following steps:

**NOTE:** This procedure requires an SOD Operator and a Cryo Operator.

Both must have current Controlled Access training, one must be qualified as a "Controlled Access Escort" for the CDF Collision Hall.

Both must be ODH qualified.

**NOTE:** The Cryo Operator must bring the catwalk key

1. SOD Operator gets authorization to begin this procedure from the CDF Operations Manager.  
( It is the responsibility of the CDF Operations Manager to get approval from the Accelerator Run Coordinator ).
2. SOD Operator asks the CDF Cryo Operator to turn off the Solenoid.  
The Cryo Operator will in return tell the SOD Operator when the Solenoid is off.
3. SOD Operator asks the CDF Gas Tech to turn off the Toroids.  
The CDF Gas Tech will in return tell the SOD Operator when the Toroids are off.
4. SOD Operator checks the Controlled Access training status of all individuals executing this procedure.

Note ODH training is required because you must survey on the catwalks.

5. The SOD Operator controls the Controlled Access Key Tree.  
Check out a key to each person making the access.
6. The SOD Operator obtains required equipment from the Access Cabinet:
  - a) Log Survey Meter (LSM)
  - b) dosimeters  
( log initial readings )
  - c) Radiation Survey Clipboard  
( Contains Rad Survey maps and appropriate Rad tags )
7. The SOD Operator turns off the four fan-coil recirculation units for the Collision Hall.  
Fan controls are labeled FC1, FC2, FC3, FC4 on the Environment Control Panel next to the stairwell at the Control Access Door level.
8. Follow the procedure for a Controlled Access into the CDF Collision Hall.

**WARNING: Discontinue access and contact RD / RSO  
if any point measures > 100 mR / hr @ 1 foot.**

9. SOD Operator does the required beam off radiation survey, including the MR pipe on the catwalk, the TeV pipe in the alcoves, the TeV pipe next to the CDF Toroids, and the fragile(!) TeV pipe next to the CDF Central Detector.
  - 9.1. Record observed values on the survey sheet ( sample attached ).
  - 9.2. **Post any survey points > 20 mR / hr @ 1 foot.**
  - 9.3. **Discontinue survey and contact RD / RSO  
if any survey point is > 100 mR / hr @ 1 foot.**
  - 9.4. If the survey is discontinued, contact the CDF Operations Manager.

10. Leave the catwalk locked when you are done.  
The Cryo Operator controls the catwalk key.
  
11. If radiation levels were all within limits, the SOD Operator breaks the interlock at the Controlled Access Door, **but leaves the door locked.**
  
12. Open the 50 Ton shield door.  
Make sure the Supervised Access Gate is locked.
  
13. SOD Operator contacts the MCR to report CDF in Supervised Access.
  
14. Return all equipment.  
Record final dosimeter readings.
  
15. SOD Operator pastes the completed Radiation Survey Map  
in the SOD Logbook in the CDF Control Room.  
  
SOD Operator sends a copies of the completed Radiation Survey Map to the  
RD RSO and to the AD RSO.
  
16. SOD Operator may now begin issuing "White Supervised Access Keys",  
following the CDF Supervised Access Procedure.
  
17. If appropriate ( i.e. personnel expected to work on the catwalk ), the SOD  
Operator asks the Cryo Operator to unlock the hatches to the catwalk.

### **3.0 Checklists**

A CDF Collision Hall Radiation Survey Map is required as a checklist.

This survey map appears on the next page.

Copies of this survey map can be found in the front pocket of the procedure residing in the CDF Control Room in the CDF Assembly Building, and on the Rad Survey clipboard in the CDF Access Cabinet.

#### **4.0 Deviations**

None are allowed.

**5.0 Required Training and Authorized Training Personnel.**

**Prerequisite Training:**

All personnel must have:

- a) General Radiation Safety Training ( Course#30)
- b) Rad Waste Training ( Course#204 )
- c) Radioactive Source Training ( Course#197 )
- d) CDF Supervised Access Training
- e) Controlled Access Training ( Course#72 )
- f) ODH training and medical clearance

One person must have Controlled Access Escort Training  
for the CDF Collision Hall.

**Additional Training:**

SOD Operators must attend a training class on this procedure where the steps  
are discussed with a qualified instructor.

LIST OF AUTHORIZED INSTRUCTORS FOR THIS PROCEDURE:

<u>Name</u>	<u>I.D.#</u>
Steve Butala, RD / RSO	4234

(additional instructors may be authorized by the RD /RSO)

The training should be documented on a standard Fermilab Training Form and  
the Training Expiration date should be tied to the end date of the Collider Run  
( e.g. "the end of Collider Run Ia" ).

The completed forms must be inserted in the CDF Department Office copy of  
this procedure.

## **6.0 Training Materials.**

A copy of this procedure and a sample Rad Survey map.

The course must include review instruction in use of an LSM and of the Radiation posting stickers.

**7.0 List of Trained People for this procedure.**

Eventually the list may reside in a lab-wide database.

Until that time, a list of trained personnel for this procedure should be kept in the CDF Department copy of the procedure in a separate section at the end of the procedure.

**8.0 References and Supporting Documentation.**

none.