Search and Secure of the CDF Collision Hall during Collider Runs

(this is a Safety Procedure)

This procedure details the steps to be followed in the Search and Secure of the CDF Collision Hall during Collider Runs. The object of this procedure is to ensure that no personnel are left inside the CDF Collision Hall to be harmed by accelerator Main Ring or Tevatron beam, by powered low beta quads, by the powered CDF solenoid, or by the powered CDF Toroids.

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 Search and Secure Procedure

NOTE: This procedure requires
one RD / SOD Operator,
one RD / Cryo Operator,
one RD / CDF Gas Tech, and
one RD / CDF Operations Manager ,

NOTE: All members of the Search and Secure team must have Controlled Access Training (see section 5.0).

NOTE: The SOD Operator and Cryo Operator must have current ODH training and medical clearance (see section 5.0).

NOTE: The SOD Operator is the team leader and is responsible for proper execution of this Search and Secure procedure.

NOTE: If people are found in the Collsision Hall at any time during this procedure, abort the procedure, remove the people, and contact the RD / RSO.

NOTE: If "Rad Dummies" are found in the Collision Hall at any time during this procedure, finish securing the Collision Hall.
Remove the dummies, then contact the RD / RSO and Accelerator Main Control Room to report the names of the dummies.

The procedure steps are as follows:

1. SOD Operator counts the "White Supervised Access Keys" and the "Green Controlled Access Keys".
   Do not begin this procedure unless you can properly account for all the access keys.

2. While in the CDF Control Room, SOD Operator gets the following keys:
   a) Lower level "Access Cabinet",
   b) Access hatches under the detector,
   c) Muon Wall

   Before coming to the CDF Control Room, the Cryo Operator gets the Catwalk key.

3. While in the CDF Control Room, SOD Operator checks out Dual Function Gas Monitors to each team member.

4. SOD Operator controls the Green Controlled Access Key Tree.
Check out a key to each member of the Search and Secure Team.

SOD Operator takes the Green Reset Key in addition to a Green Controlled Access Key.

Team gets flashlights available in the lower level "Access Cabinet".

5. The entire team proceeds to the 50 ton shield door.

WARNING: Two people must watch the 50 ton door opening, one from each side, while a third uses a Controlled Access Key to activate the door controls and close the door.

CAUTION: Remove any debris from the tracks before closing the 50 Ton door.

6. Close the 50 Ton Shield Door .

7. The team enters the Collision Hall through the Controlled Access Door. SOD Operator locks the Controlled Access Door behind the team.

8. See CDF Collision Hall Search and Secure Map #1 for the following steps.

NOTE: Each person on the Search and Secure is represented by a letter on the map.
The numbers in parentheses correspond to the steps outlined below.

8.1. Cryo Operator unlocks both catwalk hatches.

8.2. SOD Operator stations Gas Tech and Cryo Operator under the catwalk hatches to maintain the lines of sight indicated by dotted lines on Map #1.

The Gas Tech and Cryo Operator are not specifically trained in this procedure. The SOD Operator should instruct them on the

spot to watch for additional people in the hall and to report any such individuals to the SOD Operator.

8.3 SOD Operator and CDF Operations Manager proceed to the Southeast corner of the Collision Hall, search the stairwell, and reset Interlock Box #1 at the top of the stairs.

9. See CDF Collision Hall Search and Secure Map #2 for the following steps:

NOTE: If the SOD locks for the hatches under the Central Detector are not in place, the SOD Operator must search under the detector and attach an SOD lock to the hatches.
(If neccessary, a search is accomplished by the SOD Operator entering one hatch while the CDF Operations Manager enters the other hatch on the opposite side of the detector. Once under the detector these two team members can see each other and see the entire area under the detector.)

NOTE: If a Muon Wall is in the "IN" position and the SOD lock on the Muon Wall is not in place, abort the Search and Secure.

NOTE: If a Muon Wall is in the retracted or "OUT" position, the SOD Operator must search the area between the Muon Wall and the Central Detector.

9.1. SOD Operator climbs the ladder into the East Alcove, searches the area, and resets Interlock Box #2.

9.2. SOD Operator and CDF Operations Manager split to search the Northeast and Southeast sides of the East Toroids and East Forward Detectors.

9.3. SOD Operator and CDF Operations Manager meet under the beampipe in the East detector aisle and check that the SOD lock for the hatch under the detector is in place.

9.4. SOD Operator and CDF Operations Manager make a search sweep together around the Central Detector South side and check that the SOD lock for the Muon Wall is in place.

9.5. SOD Operator and CDF Operations Manager make a search sweep together around the Central Detector West side and check that the SOD lock for the hatch under the detector is in place.

9.6. SOD Operator and CDF Operations Manager make a search sweep together around the Central Detector North side and check that the SOD lock for the Muon Wall is in place.

10. See CDF Collision Hall Search and Secure Map #3 for the following steps:

NOTE: The SOD Operator is responsible for the Search and Secure of the catwalk and the top of the CDF Detector.
The Cryo Operator serves only to satisfy the two-man rule on the catwalk and is not trained in this procedure.

NOTE: ODH required escape packs are stored on the catwalk at both the East and West entrances.

10.1 CDF Operations Manager replaces the Cryo Operator in keeping the floor area around the Central Detector under observation (dotted lines indicate line of sight).

10.2. SOD Operator and Cryo Operator climb to the catwalk on the East side.
Search the catwalk and the top of the detector and exit at the West side.

11. See CDF Collision Hall Search and Secure Map #4 for the following steps:

11.1. Cryo Operator locks both access hatches to the catwalk.

11.2. SOD Operator and CDF Operations Manager search a loop around the West Forward Detector and Toroid areas.

11.3. SOD Operator climbs into the West Alcove to search.

11.4. The SOD Operator resets Interlock Box #3 next to the 1200 Ton door.

12. The entire team moves to the Controlled Access Door.

    The SOD Operator resets Interlock Box #4 at the Controlled Access door and the interlock is complete.

13. The team makes a Controlled Access Exit from the Collision Hall.

3.0 Checklists

No checklist is required.

4.0 Deviations

None are allowed.

5.0 Required Training and Authorized Training Personnel.

Prerequisite Training:

1. All members of the Search and Secure Team must have Controlled Access Training for the CDF Collision Hall

2. Team members accessing the catwalk area must be ODH Qualified.

Additional Training:

The SOD Operator and the CDF Operations Manager must be trained in this Search and Secure Procedure.

LIST OF AUTHORIZED INSTRUCTORS FOR THIS PROCEDURE:
(The people listed below are qualified due to their involvement in writing and checking this procedure).

Name	I.D.#
Johnson, Dan	5157
Hahn, Steve	8372
Hylen, James	9463

The training must be documented on a standard Fermilab Training Form and the Training Expiration date should be tied to the end of a Collider Run, not to a specific date (e.g. " end of Collider Run Ia ").

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

6.0 Training Materials.

The attached set of four maps are to be used by the authorized instructors in conjunction with a hand-out of section 2.0.

The training must include a walk-through of the procedure in the Collision Hall with the maps in hand.

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 Search and Secure Procedure should be maintained in the CDF Department Office copy and CDF Control Room copy of the procedure in a separate section at the end of the procedure.

The CDF Department Office is responsible for the list and for updating all the copies.

The training forms (see section 5.1) must be placed in the CDF Department Office copy of this procedure.

8.0 References and Supporting Documentation.

none.