

## Search the MICE Hall and DSA

<b>Change Log</b>	<b>Version</b>	<b>Date</b>
Revision by Ken Long, Paul Smith and Paul Kyberd	03.3	01 February 2010
Revision for 2010 – draft one	03.2	01 January 2010
Completion of cages and North Wall shielding	03.1	01 September 2009
Clarifications to procedure by David Findlay	02.1	02 February 2009
Search while beam stop isolates the DSA from the ISIS machine	02.0	30 January 2009
Addition of shielding wall	01.4	15 September 2008
Hall search for the period when there is engineering work in the Hall and the PPS system is not commissioned..	01.3	08 June 2008
Clarifications after comments from David Findlay. Title altered to Hall and DSA. Lack of Hall search explicitly noted.	01.2	31 October 07
References to Hall search removed	01.1	24 October 07
First draft	01.0	17 October 07

## **Introduction**

This note covers the first quarter of 2010. The MICE Hall (R5.2) connected to the ISIS vault via the Decay Solenoid bore. Because there is radiation hazard in the DSA whenever ISIS is running, the DSA must be searched and locked before ISIS can run and this must be done by the ISIS crew. Because there would be a radiation hazard in the Hall when ISIS is running and the beam stop at the end of the DSA is open, the beam stop must never be opened unless the whole of the Hall has been searched and cleared. This is true even if the Decay Solenoid is unpowered and the target is disabled.

## ***DSA***

### **Pre-conditions.**

The top north door (Emergency Exit) is locked and the key is returned to the ISIS MCR

### **The search**

This part of the search is under the control of the ISIS crew.  
The first person is to stand at the DSA Entrance.

#### Second Person

- Enter the DSA.
- Move far enough into the DSA to ensure no people are present behind the magnets.
- Ensure that nothing has been left in a dangerous state.
- Climb up the platform to the DS turret and visually check behind the refrigerator tank.
- Return to the DSA door and lock it.

### **Post-search**

The key is returned to the ISIS control room.

## ***The Cages***

### **Pre-conditions.**

None

### **The search**

There are a number of areas of the hall which are separated from the main hall by cages. These cages will eventually be integrated into the PPS system, but at present they need to be searched and locked separately. They can be searched in any order.

All of these areas require two people to search. Each closed area has a key container on the wall which contains the key needed to leave the area, but not accessible from outside the area. During the search the presence of these escape keys should be confirmed.

### **The Trench**

The first person should stand at the top of the stairs that leads into the trench.

Second Person

- Descend the stairs into the trench.
- Both ends should be searched including the narrow end towards ISIS (East) and the cable duct at this end should be inspected..
- A visual inspection should be done underneath the false floor at the West end of the trench. The gate that allows access to the false floor should be closed and locked.
- Return to the top of the trench stairs and lock the gate.

### **South Mezzanine**

The first person should stand at the bottom of the stairs that leads up to the mezzanine.

Second Person

- Go up the stairs and enter the cable store. Check the cable store carefully.
- Enter the Mezzanine and check both the east and west sides thoroughly for people.
- Go down the stairs and lock the gate.

### **North Mezzanine**

This has two doors and it is not possible to lock them from the inside.

NOTE: One of the magnet power supplies is located on the North Mezzanine floor so it will need turning on before the cage is locked.

- The first person enters the gate at ground level by the west wall and is locked inside by the second person.
- The first person walks up the stairs and across the North Mezzanine towards the second gate whilst the second person walks towards the second gate through the MICE hall.
- The first person should also visually check the crane rails on the north and south walls whilst walking along the North Mezzanine.
- The two people meet at the second gate and the second gate is locked.

The keys for the padlocks which lock the cages should be given to the ISIS crew along with the rest of the hall keys.

## **Hall**

### **Pre-conditions**

Searchers to sign in (book next to MICE Control Room)

1. The Decay Solenoid Area (DSA) needs to have been searched and locked.
2. Check signing book for personnel. Everyone but the searchers must sign out.
3. The main door and side door at the front of the hall should be locked.
4. The side door over the linac should be locked.
5. The three cages should have been searched and locked.

### **Search**

Three people are needed to carry out the search. Entry to the hall should be through the door beside the MICE control room.

One person should be left near the door between the south wall and south shield wall to ensure that no one follows the two searchers into the hall.

The search starts in the north-east corner of the hall.

One searcher should stand at the foot of the stairs while the second searcher checks that the passage over the linac to the door is clear and that the doors to the north mezzanine and the DSA are locked

**Whilst on the Mezzanine the second searcher should visually check the access route to the cranes as well as the top of the cranes. The gap between the ceiling on the top of the East wall between the MICE Hall and the synchrotron vault should be visually inspected.**

From the foot of the stairs the searchers should move east checking the area around the magnet power supplies. The lock on the trench cage should be checked

The searchers then separate, one sweeping behind the north iron wall down into the end of the hall and the other moving to the end of the MICE beam line and remaining there to stop entry from the south side of the hall. The north wall search checks the locks on the cages to the north and south wall mezzanines.

The searchers join up at the end of the beam line and move towards the DSA checking the complex of units all the way to the DSA door. The status of the DSA should be confirmed and the searchers then exit the hall.

Searchers to sign out (book next to MICE Control Room)

## **Controlled Access**

Access is allowed without breaking the search if someone is left at the entrance who notes anybody who enters the hall and ensures that they all leave before the hall is locked. People entering under these conditions should sign in and out as normal.