

C-AD

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DB

Radiation

Safety

Minutes of RSC Subcommittee of January 18, 2013

Committee

Subject: Review of the as Built AGS Access Control System

Present: D. Beavis, E. Lessard, C. Theisen, J. Sandberg, and J. Reich

The subgroup reviewed the as built AGS Access Control System (ACS) to the minutes of the RSC^{1,2,3,4}. The V&V and functional checks of the AGS ACS are complete. Items that are being transferred to the ATS system will be closed after they are transferred. If they are not mandatory items the status will be changed to ATS indicating that they are being transferred. The AGS will be allowed to startup without the completion of items that are deemed as improvements. Many of these items are desired improvements in which there may not be sufficient resources to complete.

Some of the items have been updated after the meeting on Jan. 18, 2013.

Minutes of April 7, 2011

The sweep gate was not completed. The sweep procedure for the AGS ring uses a static watch rather than a sweep gate.

The sweep gate completion will be placed into ATS for completion during the next summer shutdown. The Minutes of April 7, 2011 specify the committee requirements. Adding the gate was a recommended improvement for sweeping the AGS ring. (check-off items 750 and 751).

Complete AGS sweep gate

ATS-H. Huang-AGS-August 1, 2013

The Northwest Target building corner and the TtB alcove have approved sweep procedures and locks. Filling in the access port for the old direct HITL inject was a recommended improvement. (check-off item 752) A decision should be made within two months.

Improve HITL Injection Spur

ATS-H. Huang-AGS-August 1, 2013

The utility tunnels to the Siemens building. Locks on the inner gates were used instead of bolting. RS LOTO tags should be placed on the locks. The outer barrier is in the trench

and only need to be checked on initial startup. If the barrier has a lock it must have RS LOTO. The trench covers between the retaining wall and the outer barrier must be posted as a radiation barrier. The covers are difficult to move and were not bolted.

The south wiring tunnel hatch, the north wiring tunnel hatch, and the RF tunnel barriers inside and out must be RS LOTOed rather than just locked. Closed. Due to other hazards in the outside trench it was decided not to apply RS LOTO to the lock.

The two stub tunnels are no longer interlocks. They are considered part of the U upstream area. The U upstream area must be secured for beam to be introduced into the AGS. (close 753)

New crash bars have been installed at the two AGS escape hatch fence gates. The crash bars must not be easy to open the gate from the outside. Ray and Asher will approve the setup as it involves both radiation safety and life safety code. It is open but on the check-off list. This is a required item and is on the check-off list in MCR. (754 open)

The details of the plug doors need to be checked. There are dual micro-switches and the door can only be opened with an MCR-operator Controlled Access key. (open-755)

The RF tunnel barriers are locked rather than bolted. These locks will have RS LOTO applied and that requirement will also be added for the north and south wiring tunnel hatches. These will be tracked via a new **check-off list item 853** and Paul Sampson has been notified and expected to apply RS LOTO in the morning of Jan. 23, 2013. (Close 756, 757, and 758) (close 853)

Minutes of April 13, 2011

The Siemens and Westinghouse systems are in the new system ACS. (Closed 759)

A mode to accommodate heat runs was added into the PLC logic system. (close 760)

AGS RF will not generate external x-rays. (close 761)

There are no other HV devices that are a risk of exposure in the AGS ring. (close762)
ODH readout is not yet available. It will be placed into ATS for consideration as an improvement.

Consider ODH readout for cold snake ATS-H. Huang-AGS-April 1, 2013

J10 scrapper was move to the AGS beam permit system⁴. It has been verified that it is in the beam permit system. (Close 763)

The beam permit system is in progress. (Close 764).

Alternate critical devices are activated by selector switch. (Close 765)

One-to-one correspondence between division and critical device was used. (close 766)

New contactors were placed on F6 and DH2/3. The beam stops were not modified but do have position checking and reachback. (Close 767)

The design for keeping the divisions separate in reachback circuits was followed. A latch exists if a reachback occurs. (Close 768)

There is a permit A in system B and a permit B in system A. (Close 769)

Keys are released by a RFID tag rather than an iris scanner. (Close 770)

Review gate watch procedure. Closed Minor discrepancies between 771, 772 and 776 will be addressed by an ATS item within one-two weeks time. This may require a revision to OPM 4.1. MCRGL will implement changes and then have it reviewed by reviewed by Access Controls Physicist (ACP), RSC Chair (RSCC), and ESSHQ.

For controlled access the key (token) must be returned to the same gate and a person is allowed to exit other gates via calling MCR for a gate release.

The limit on the number of keys remains to be checked. (close 772)

Considered as part of OPM 4.1

The Controlled Access details were discussed. There is a bypass scheme for lost keys are failure in the database. To replace a key the tumbler in the keytree is required to be changed through the ACS configuration control procedure. The lost key if recovered will not work in any tumblers. Check if the admin. procedure on gate limits and ring limits are in procedure. Considered as part of OPM 4.1(close 776ags) (from April 20, 2011 minutes)

**Reconcile AGS OPM 4.1 for Controlled Access with RSC minutes
ATS-P. Ingrassis-AGS-Feb 15, 2013**

Two gates in SWT converted to escape gates. (Close 773)

The catwalk gate lock is checked as part of the SWT sweep procedure in OPM 4.56.a steps 79-100. (Close 774)

The chipmunks were placed into one division only. With the administrative limit and present operating modes there is no location where the chipmunks are required to be in both systems. However, if the administrative limit on the AGS intensity is increased then the following areas must be examined. Several have been improved and the fault studies showed the levels smaller than the estimated values. However, the fault studies have not been carefully examined for the chipmunks in one system at this time. The areas are:

- AGS ring road
- Berm over north conjunction area

- Areas at the north end of the target building.
- J7 retaining wall

This will be entered into ATS. Determine the highest AGS intensity in which two chipmunks can be in one interlock system for the AGS ring.

(ck-ags-fy13-775—open but okay for polarized proton configuration)

In addition there are items from other minutes on the AGS administrative limit. These include consideration of Thompson Road if there is extraction to U line and also the protection at the North gate. It may be that these conditions should be placed into the procedure for limiting AGS beam to close out the item. This potentials is a long term item. But the modification of procedure for limiting AGS beam should be completed in two months.

Update Beam Limit procedure for AGS

ATS-P. Ingrassia-AGS-March 16, 2013

Minutes of April 20, 2011

The beam permit system requires the J15 shutter to be out for permission to inject beam. The FEB sub tunnel is not a zone and entrance into the U upstream area will interlock the AGS. (close 778)

The logic of the B15 transformers was not in the AGS access control system. The logic remains the same as before. (close 779)

Close 780

Conduct a status review of the linac access control status upgrade before the end of Feb.

Status Review of Linac ACS Upgrade

ATS-J. Reich-Linac-Feb. 28, 2013.

RSC procedure for designs with long duration should require periodic review of status.

Update RSC Design review Procedures

ATS-RSCC-Procedures-March 15, 2013

References

1. RSC Minutes of April 7, 2013; http://www.c-ad.bnl.gov/esfd/RSC/Minutes/04_07_11Minutes.pdf
2. RSC Minutes of April 13, 2011; http://www.c-ad.bnl.gov/esfd/RSC/Minutes/04_13_11Minutes.pdf
3. RSC Minutes of April 20, 2011; http://www.c-ad.bnl.gov/esfd/RSC/Minutes/04_20_11Minutes.pdf
4. D. Beavis and J. Reich memorandum of July 27, 2012; http://www.c-ad.bnl.gov/esfd/RSC/Memos/ACS_Update_07272012.pdf

CC:

RSC

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