

Canadian Light Source

11ID POE Access Control Interlock System Lockup Procedure

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Signature

Date

Original on File – Signed by:

Prepared by: _____
Grant Cubbon
Radiological Control Coordinator

Reviewed by: _____
R. Tanner
Controls Engineer

Reviewed by: _____
Ian Coulthard
Beamline Scientist

Approved by: _____
M. Benmerrouche
Health Safety and Environment Manager

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Canadian Light Source
101 Perimeter Road
University of Saskatchewan
Saskatoon, Saskatchewan Canada
S7N 0X4

REVISION HISTORY

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1.0 PURPOSE

The Beamline Access Control Interlock System (ACIS) Lockup is required to ensure safe operation of the 11ID (SGM/PGM Beamline) Primary Optical Enclosure (POE). Safety is ensured by clearing all personnel from the interlocked enclosure prior to opening the safety shutter to allow synchrotron light into the FOE.

The purpose of this procedure is to ensure the 11ID POE is clear of all personnel, and then activate the Access Control Interlock System (ACIS) when it is safe to do so.

2.0 SCOPE

This procedure describes the steps required to search and secure the 11ID POE. This procedure applies to this POE only and is intended for persons performing the lockup of the 11ID POE.

3.0 APPLICATION REQUIREMENTS

3.1 CONTEXT

The number and location of inspection stations in a lockup area determines the prescribed path and preset time limit for each area. The inspector is required to follow the prescribed path through each area within the time limit.

All entrance/exit doors form an integral part of the inspection area. These doors must be closed to complete the lockup. All doors other than the exit door [1] must be closed prior to starting the lockup sequence. If a door other than the exit door is opened during the lockup sequence it is aborted and will have to be started again from the beginning.

In the course of an inspection, lockup stations must be activated sequentially. A timer for the inspection procedure allows the inspectors to leave the area through the open exit door without altering the status of the inspection. The exit door must then be closed within the prescribed time limit to complete the lockup.

Opening any other door will cause the lockup to fail irrespective of exit timer. In this case the area has to be inspected again.

3.2 PERSONNEL QUALIFICATION

Personnel who have successfully completed the training module for this lockup procedure become qualified lockup inspectors and are authorized to carry out the

lockup of the 11ID hutch only. The CLSI HSE department maintains a list of qualified inspectors. A qualified inspector is required to perform the lockup.

3.3 SUPERVISION & VERIFICATION

The Health Safety and Environment Manager or designates shall validate the lockup procedure to ensure that it is performed as described herein.

The inspector must verify that no individual is left inside the POE during the lockup process.

4.0 REFERENCE MATERIAL

4.1 SUPPORTING DOCUMENTS

[1] "11ID-1 FOE Access Control Interlock System (ACIS) General Layout" Document No. RAD/0102500, Rev 2

[2] CLS Pneumatic Door Control Design Note 7.2.39.22.Rev.0

[3] "Beamline Station User Interface Panel 10ID-1 & 11ID Front Panel Layout and Device List" Document No. 11ID-1\EE\PROTLOCK\0090793, Rev 1

4.2 GLOSSARY

ACIS	Access Control Interlock System
All Clear	refers to the timed interval between search completion and before the area is considered secure in which the horns sound and strobes flash
LUS	Lockup Station
POE	Primary Optical Enclosure

5.0 LOCKUP PROCEDURE

5.1 PRE-INSPECTION

1. Check ACIS Control Panel P1610.1-01.
2. IF any fault lights are on or other technical problems are apparent
THEN contact the floor coordinator.

Note: In the event a lockup is only partially completed, inspectors must wait a full **30 seconds** before attempting another lockup to allow the area timer to reset.

5.2 11ID POE PERIMETER DOORS

1. Check ACIS Control Panel P1611.3-01.
2. IF Perimeter Doors are locked
THEN proceed to section 5.3.
3. Proceed to door D1.
4. Check area on both sides of beam line for personnel.
5. Close door D1.
6. Proceed to door D2.
7. Ensure no personnel remain in the hutch, then close door D2.
8. Proceed to main door (D3 and D4).
9. Close door D3 but leave door D4 open.
10. Proceed to Panel P1611.1-01 and verify the "Perimeter Doors" green light is on.

5.3 11ID POE AREA LOCKUP

1. Proceed to LUS1611.03-01 and ensure there are no personnel remaining in the hutch.
2. Press LUS1611.03-01.
3. Proceed to LUS1611.03-02 and ensure there are no personnel remaining in the hutch.
4. Press LUS1611.03-02.
5. Exit through door D4.
6. Proceed to panel P1611.1-01

WARNING: Ensure that no personnel or other objects are in the path of the door prior to proceeding to the next step. Be prepared to use emergency stop button if necessary.

DANGER: Do not allow personnel to pass through door opening while pneumatic door is in motion [2].

7. Press and Hold the 'Main Door Close' button until door is closed and 'All Clear' horn begins to sound.
8. Verify the "Perimeter Doors" and "Enclosure Search" green lights turn on when the door is closed. The "All Clear" horn will sound. After the "All Clear" interval, the "Enclosure Secure" green light will turn on.

Note: Releasing 'Main Door Close' button prior to door being fully closed will cause door to default back to open position. [2]

Note: After power loss to PLC, "Main Door Close" button will be inactive. Pushing "Main Door Open" button will initiate reset cycle in PLC. Door may be unresponsive for a few seconds until cycle complete. [2]

Note: The Safety Shutters cannot be opened until after the "All Clear" Interval has elapsed.