



Canadian Light Source Centre canadien de rayonnement synchrotron

Beamline Specific Orientation (BSO): 05B1-1 POE-2 (BMIT BM) & 05ID-2 SOE-1 (BMIT ID) Endstations

26.11.37.4 Rev. 3

Date: 2019-Feb-27

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Beamline Responsible (BMIT)

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The Beamline Staff or designate will complete the eBSO for each User.

Each User must be instructed in the safe operation of the beamline. The training is valid for 2 years. The Beamline Scientists must make available all relevant instructions and safety documents. Additional training may be required.

Emergency and Safety

- **Building Evacuation:** evacuate via the nearest safe exit and meet outside the Main Entrance on the North side of the building. The nearest exit and alternative exits are:
 - Vestibule door on NE corner of building
 - Door midway along East wall of building next to BMIT
 - Door at BMIT loading dock on East wall (emergency use only)
 - Exit door on North wall of building in front of Brockhouse
- **First Aid Kits:** Located in Lab 1112, Lab 1113 and at the Beamline Health and Safety Information Board in the entrance hallway to BMIT area. An injury report must be completed immediately if any items are used.
- **Fire Extinguishers:** CO₂ fire extinguishers are located:
 - In each hutch and each lab
 - At Beamline Health and Safety Information Board
 - Outside BMIT Control Room 1129
 - Outside POE-3
 - On East wall of building near exit door
- **Fire Alarm Pull Stations:** Located at each exit. Closest locations are:
 - Vestibule door on NE corner of building
 - Midway along East wall of building next to BMIT
 - At BMIT loading dock on East wall
 - Exit door on North wall of building in front of Brockhouse
- **Emergency eye wash/shower:** located in the Large Animal Lab 1113
- **Fire blanket, sharps disposal bins and biohazard disposal containers:** located in each of the labs (Lab 1112 and Lab 1113)
- **Beamline Health & Safety Information Centre**
 - MSDS access information, emergency procedures and beamline contact list
 - MSDS located online, submitted with permit or paper copy
- **Spill kit:** located in Lab 1113.
- **Emergency Off Switch (EOS):** located on each wall of each hutch. EOS is used to shut down or interlock the radiation sources



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Emergency Contacts

- Emergency Contact information is listed on the Beamline Health and Safety Information Centre and in each BMIT Control Room (Room 1128 and Room 1129)
- **Floor Coordinator (FC):**
 - From CLS Phone: 3639
 - From External Phone: 306-657-3639
 - Report any accidents or incidents
 - Large or dangerous chemical spill
 - Any fault lights or technical problems on the ACIS Control Panel
 - For assistance when beamline staff are unavailable
 - If appropriate, the FC will contact the Beamline Staff
- **Emergency Number** for Fire, Ambulance and Police
 - 911
- **University of Saskatchewan Protective Services**
 - From CLS Phone: 9-306-966-5555
- **Beamline Staff:** Refer to Beamline Health & Safety Information Centre
- **Health, Safety and Environment Department:**
 - From CLS Phone: 3663
 - From External Phone: 306-657-3663



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Hazards and Health Safety

- **Hazards** to be aware of include:
 - Radiation hazard
 - Fall / trip hazards
 - Overhead crane
 - Ladder / stair use
 - Sharps / glassware
 - Pinch hazard from stages, shutters
 - High voltage / current
 - Compressed gas
 - Beryllium parts
 - Lead
 - Lasers in use in hutches
 - Manual lifting
 - Potential ergonomic issues
 - Potential biological hazards (only if part of an approved permit)
 - Potential chemical hazards (only if part of an approved permit)
- **Waste Disposal:** types (liquid/solid/sharps/biohazard). Biohazard and sharps disposals located in each of the labs (Lab 1112 and Lab 1113)
- **Food/Drink Policy:**
 - Food & drink are not allowed on surfaces being used for sample preparation
 - Food & drink are not allowed in the BMIT hutches, labs, or the workshop
 - Food is only allowed in the BMIT User Lounge, Room 1125
 - Drinks (in covered cups) may be brought into the BMIT control rooms (Rooms 1128, 1129)
- Recognize that ergonomic factors, fatigue, and distraction may be issues.

Beamline Operation

- **Building Access:** All required training must be valid. Wear dosimeter at all times in the building. Signed experimental permit must be posted at all times. Lab permit must be posted at all times, if use of the labs is required.
- **No User Access** to BMIT areas: POE-1, SOE-1 pit, BMIT electrical room (Room 1126). Restricted User Access to POE-3.
- **ACIS (Access Control Interlock System) Panel:** indicator lights and buttons
- **Beamline Hutch Lock-up Training:** Each user shall demonstrate the ability to lock-up the hutch, and know how to stop a lock-up.
 - Lockup Station (LUS) → Close the door → All-Clear horn → ACIS Panel indicator lights
 - Emergency Off Switch (EOS); Door Open button on ACIS panels releases the magnetic locks and opens door; Green Exit Buttons inside hutch for opening hutch door
- **Beamline Enable / Disable Key:** Used in case of unsafe/unauthorized operation of the beamline as determined by the FC
- **Beamline Unattended:** If away from beamline for > 30 minutes, submit Beamline Unattended form via the CLS User Portal software.



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- **Sample Preparation and Handling**
 - Biological and hazardous samples must be prepared in the BMIT labs or the CLS Wet or Life Science Labs. Required PPE includes lab coat, safety glasses. This PPE is required for all work in the BMIT Labs, regardless of sample type
 - Additional PPE may be required for handling of hazardous samples
 - Non-hazardous samples preparation can be done at the beamline. PPE recommended: nitrile gloves and eye protection
 - Safety glasses are required for any work in the BMIT workshop (Room 1127) which might result in flying debris
- **Vacuum/Power Issues:** immediately contact FC and Beamline staff.
- **Data Storage and Transfer:** how long the data will be kept, and means to transfer data.
- **Laboratory Safety Training** is required in order to access the BMIT Labs.
- **Additional training** may be required for some beamline equipment, hazardous materials, biological materials, use of the labs, and experiments involving live animals.
- Users are not permitted to change configuration or operate some beamline equipment.
- Users are not permitted to install any beamline equipment.
- Modifications to experimental setup, beamline equipment or instruments should never be conducted without explicit approval or assistance from beamline staff.

Close Out

- **Housekeeping:** users are required to keep the area clean and tidy during their time at the beamline, and clean up after themselves after beamtime is complete.
- **Samples:** remove all samples or arrange storage/shipping with beamline staff.
- **Signing off** experimental permit in the CLS User Portal software. Fill out User Experience Survey.
- **Publications:** report publications on CLS website.



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REVISION HISTORY

<i>Revision</i>	<i>Date</i>	<i>Description</i>	<i>Author</i>
A	2014-May-21	This document combines 26.11.37.1 and 26.11.37.2 into one. Original Draft	Tomasz W. Wysokinski
0	2014-Sept-11	Issued for use.	Tomasz W. Wysokinski
0A	2014-Sept-18	Made minor updates by leaving the "Name" and "Date" areas blank. Also updated some of the wording on the form.	Tomasz W. Wysokinski
1	2014-Oct-06	Final text formatting. Issued for use.	Tomasz W. Wysokinski
1A	2017-Jul-13	Updated content based on Systematic Approach to Training process. Updated format to current document control standard.	Denise Miller
2	2017-Jul-21	Incorporated reviewers' comments. Issued for use.	Denise Miller
2A	2019-02-12	Updated to change references to paper permits to User Portal software	Denise Miller
3	2019-02-27	Issued for use	Denise Miller