

Beamline Specific Orientation (BSO): Very Sensitive Elemental and Structural Probe Employing Radiation from a Synchrotron (VESPERS) 07B2-1

28.11.37.1 Rev. 2

Date: 2020-June-12

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REVISION HISTORY

<i>Revision</i>	<i>Date</i>	<i>Description</i>	<i>Author</i>
0	2011-May-17	Issued for use	Lavina Carter
0A	2017-Mar-07	Updated with revised BSO template: 11.1.37.4.	Renfei Feng
1	2017-Mar-22	Issued for use	Renfei Feng
1A	2020-May-28	Updated with new BSO template	Renfei Feng
2	2020-June-12	Issued for use	Renfei Feng



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Notes:

- The completed BSO form will serve as a checklist to be used when beamline staff gives the BSO to users.
- Each beamline, please use this template to generate a Beamline Specific Orientation (BSO).
- In the "Hazards and Health Safety at the Beamline" section, list all hazards that were checked in the second column of "Beamline Hazard Disclosure" form of your beamline (document 11.11.37.29 Beamline Hazard Analysis and Mitigation), so that users are aware of the hazards in the beamline area.
- In the "Beamline Operation" section, add relevant information specific to your beamline, such as (highlighted):
 - Vacuum Safety Procedure,
 - Cryogenic Safety procedure,
 - Sample loading and removing procedure, etc.
- Handling certain materials, such as biological and radioactive samples, requires additional training. Providing basic information during BSO does not qualify the users for handling such materials.
- The Author and one reviewer for the completed BSO shall be beamline staff (must include BR); two other reviewers are Training Specialist and HSE reviewer; the approver is the Science Manager of your department.



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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: EE05 or EE04, and meet outside the Main Entrance on the North side of the building.
- **Fire Extinguishers:** CO₂ type near exit EE04 and EE05, also inside of the SOE hutch; Dry Chemical type in user room 1607.12.
- **Fire Alarm Pull Stations:** Beside exit EE05 and EE04.
- **Emergency eye wash/shower:**
 - Emergency eyewash station: in Room 1080
 - Emergency shower: Room 1080
- **Spill station:** Room 1080 under the sink
- **Beamline Health & Safety Information Centre**
 - Located on the external wall of Room 1607.12
 - Beamline Hazard Disclosure and beamline contact list. Online e-Permit and online MSDS.
- **First Aid Room and Kit:** Room 1607.12. An injury report must be completed immediately if any items are used.
- **Emergency Off Switch (EOS):**
 - Located at upstream inboard and downstream outboard corners in the SOE hutch
 - Used to shut down or interlock the radiation sources

Emergency Contacts

- **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: 9-306-966-3663



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Code of Conduct at the CLS (Doc #0.1.1.45 for details)

- User activities shall be in compliance with the laws and regulations. Users shall exercise high academic integrity, and respect the applicable confidentiality of information.
- Users shall show respect for the dignity and diversity of other people. Any harassment and violence will not be tolerated. Users shall not be impaired by alcohol and/or drug use.



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Hazards and Health Safety at the Beamline

- **Hazards** to be aware of include:
 - Hazardous chemicals
 - Beryllium parts
 - Pinch hazard
 - Laser
 - Sharps and glassware
 - Ladder usage
 - Radioactive materials
 - Ergonomic
 - Working alone
- **Waste Disposal:** Liquid/solid/sharps disposal location in Room 1080
- **Food/Drink Policy:** Food & drink are not allowed on surfaces being used for sample preparation
- Recognize that ergonomic, fatigue, and distraction may be issues.
- Users cannot escort visitors on the experimental floor. Only CLS staff can escort visitors on the floor.

Beamline Operation

- **Facility Access:** All facility access trainings must be valid. (Doc #8.7.1.1 for details)
- **Beamline Use:** A valid on-line experimental permit must be in place when the beamline is in-use.
- **ACIS (Access Control Interlock System) Panel:** Indicator lights and buttons
- **Beamline Enable/Disable Key:** Used in case of unsafe/unauthorized operation of the beamline as determined by the FC
- **Beamline Hutch Lock-up Training:** For beamline requiring hutch access, 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) location and use; Green Exit Button releases the magnetic locks on exit door; Door release button
- **Manuals and Documents:** Beamline procedures and manuals are located on the shelves in Room 1607.12; and also available on the beamline website.
- **Computer Control:** Control software, data acquisition and display, personal computer.
- **Beamline Unattended:** If away from beamline for >30 minutes, please fill in the contact information in "Beamline Unattended" window, accessible from your online e-Permit.
- **Sample Preparation and Handling**
 - Non-hazardous samples may be prepared in Room 1607.12. PPE recommended: nitrile gloves and eye protection.
 - Hazardous samples must be prepared in wet labs or Life Sci Lab. Laboratory Safety Training 11.14.55.3 required; Appropriate PPE required.
 - Temporary sample storage available upon request
- **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.
- **Additional training** may be required for some beamline/lab equipment, or hazardous materials.
- Modifications to experimental setup, beamline equipment or instruments should never be conducted without explicit approval or assistance from beamline staff.



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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** the experimental permit. Fill out the on-line User Feedback.
- **Publications:** Report publications on CLS website.