Canadian Light Source | Centre canadien de rayonnement synchrotron

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

28.11.37.1 Rev. 1

Date: 2017-Mar-22

Canadian Light Source Inc.
44 Innovation Boulevard
Saskatoon, Saskatchewan
S7N 2V3 Canada

	Signature	Date
	Original on File –Signed by:	
Author	Senior Scientist, Beamline Responsible - VESPERS	
Reviewer #1	Training Coordinator	
Reviewer #2	Materials and Chemical Sciences Manager	
Approver	Health Safety and Environment Manager	

REVISION HISTORY

Revision	*Date*	*Description*	*Author*
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

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Notes:

- This form serves as a checklist to go through the steps of the BSO.
- In the "Hazards and Health Safety" section, list all hazards that were checked in the second column of Beamline Hazard Analysis form 11.11.37.29, so that users are aware of the hazards present in the beamline area.
- In the "Beamline Operation" section, add relevant information specific to your beamline, such as:
    - 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 relevant information during BSO does not qualify the users for handling such materials.

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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 in the parking lot on the North side of the building.
- **First Aid Room and Kit**: Room 1607.12. An injury report must be completed immediately if any items are used.
- **Fire Extinguishers:** CO_2 type near exit EE05 and EE04, also inside of sOE hutch.
- **Fire Alarm Pull Stations:** Beside exit EE05 and EE04.
- **Emergency eye wash/shower:**
  - Emergency eyewash station: beside exit EE05, and in Room 1080
  - Emergency shower: Room 1080
- **Beamline Health & Safety Information Centre**
  - Located on the external wall of Room 1607.12
  - Signed experimental permit must be posted at all times during the experiment
  - MSDS is online, provided with the permit, brought in by hard copy
  - Emergency Procedures are posted
  - Beamline contact list is posted
- **Spill station**: Room 1080 under the sink
- **Emergency Off Switch (EOS):**
  - Located upstream inboard and downstream outboard corners of sOE hutch
  - Used to shut down or interlock the radiation sources

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Emergency Contacts

- **Floor Coordinator (FC)**:
  - Internal: 3639
  - External: 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**
  - 9-306-966-5555
- **Beamline Staff**: Refer to Beamline Health & Safety Information Centre
- **Health, Safety and Environment Department:**
  - Internal: 3663
  - External: 306-657-3663

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Hazards and Health Safety

- **Hazards** to be aware of include:
  - Hazardous chemicals
  - Beryllium parts
  - Laser
  - Vacuum and pressure
  - Radioactive materials
- **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.

Beamline Operation

- **Building Access**: All required training must be valid. Wear dosimeter at all time in the building
- **ACIS (Access Control Interlock System) Panel**: Indicator lights and buttons
- **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); Green Exit Button releases the magnetic locks on exit door; Door release button
- **Beamline Enable/Disable Key**: Used in case of unsafe/unauthorized operation of the beamline as determined by the FC
- **Manuals and Documents**: Beamline procedures and manuals are located on the shelves in Room 1607.12.
- **Computer Control**: Control software, data acquisition and display, personal computer.
- **Beamline Unattended**: If away from beamline for >30 minutes complete pink Beamline Unattended Card and display beside the experimental 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.

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 User Experience Survey.
- **Publications**: Report publications on CLS website.