

ACCESS

- F TLD Issued User must wear TLD: Obtain at User Admin, exchange monthly, use only your own TLD, locate badge board
- F Training NSLS-II Training must be valid (1) GERT (2) NSLS-II Safety (3) Cyber Sec (4) GSO (5) Other training per SAF or beamline
- F Signs and Placards Locate and discuss all posted signs and placards (Hazard Info Placard, contact info, PPE)
- F Hutch Access Train user for Beamline Hutch Search and Secure and Breaking Security
- F Safety Approval Form Users must review SAF; significant changes must be added (new users, equipment, materials added/increased)
- F Lead Experimenter Lead Experimenter must ensure that safety, training, and reporting requirements are completed
- F Tricycles Review whether tricycles are available for user; if so, review safe operation, where to store

EMERGENCIES

- F FLOCO/Control Rm Discuss process to contact a Floor Coordinator (FLOCO) and the Control Room for assistance
- F Beamline Staff Discuss process to contact Beamline Staff for assistance and operations (emergency contact info, phones)
- F Emergencies Discuss where to go and who to contact during an emergency
- F Emergency Lights May come on for self-test with lights and buzzer
- F Exits Locate routes to nearest exits
- F Fire Extinguishers/Alarms Locate fire extinguisher(s) and fire alarm pull(s)
- F Eye Wash/Shower Locate eye wash/shower
- F Spill Station Locate spill control station
- F Emergency Beam Stop Locate emergency beam stop buttons, discuss purpose and operation
- F Oxygen Monitors/Alarms Locate hutch ODH monitors, discuss alarm response, verify green light is on, discuss LOB receiving room access
- F Radiation Monitors Identify radiation locations and monitors, move away from area, call control room if area monitors sound off

BEAMLINE EQUIPMENT

- F Config Control Identify the configuration control signs and follow configuration control policy
- F Mezzanine Access Access to mezzanine, areas above hutch roof, staircase is not permitted
- F Hutch Door Use caution when opening, closing, locking motorized hutch doors (limited space, heavy door, pinch hazard) watch out for objects and personnel when closing automatic doors
- F User Authorization User is authorized to operate ONLY the equipment the user has been trained on
- F User Labyrinth Discuss proper steps and precautions to take for use of the user labyrinth
- B Ergonomics Use caution when moving around equipment and under beam pipes, changing chambers, during equipment alignment (limited space, low pipe, trip hazards, awkward positions, personnel injury, equipment damage)
- B Detector Review detector location, operations, hookups, cables, fill frequency, cautions for high voltage and equip damage
- B High Temp Apparatus User is is not authorized to change apparatus and temp controls (review operations; prevent burns)
- B Ion Chamber Point out Red Cables or High Voltage (HV) Supply for ion chamber (do not touch)
- B Ion Pumps Review location and operations for ion pumps and associated power failures
- B1 Mirror Review mirror location, operations [Grating Change Yes NA][Adjustment Yes NA][Rotation Yes NA][Tilt Yes NA]
- B1 Monochromator Review operations for energy ranges, set up, and operation of monochromator drive, motors, bearings, gas feeds, power, software; User is is not authorized to adjust monochromator
- B1 Optical System Review optical system set up, operations, water gauge for optics system, mirror, camera
- B1 Sample Chamber Review operations for sample chamber and mounter; User is is not authorized to modify sample chamber or add new equipment to existing flanges (if authorized, review requirements and extension policy)
- B1 Sample Chamber (Robot) User is is not authorized to make changes to device (review operations)
- B Shutters Review location, operations, indicators, and required sequence for beamline shutter controls
- B3 Table (in Hutch) User is is not authorized to make adjustments to table (review operations; do not place objects on table)
- B Vacuum (End Sta Eq) User is is not authorized to evacuate or vent the end station sample chamber (if authorized, review location, indicators, and operations); user is not authorized to perform any other work on beamline vacuum
- B Water System Review location, indicators, alarms, trips, and operations for system and shut off
- B Window (Be) Review location, operations, and cautions for window
- B WebCam Be aware of WebCams and/or Remote Monitoring

BEAMLINE OPERATIONS

- F Manuals/Documents Review location of manuals and beamline documentation (must be readily available)
- B Computer Operations Review operations for computer operations, control software, data acquisition software, machine status
- B Computer Software Do not install any computer software on beamline computers

[B] Beamline Specific [E] Determined by ESH [EB] Determined by ESH and Beamline [F] Required by Facility for ALL Beamlines

During initial form development: If there is a number next to the designation (e.g., B1, B2, etc), select the most appropriate content.

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|---|--|
| <input type="checkbox"/> B Computer Data | Review data storage, data transfer, and back up process |
| <input type="checkbox"/> F Unattended Ops | Beamline may be unattended up to 24 hours unless SAF states "no unattended operations" (discuss process) |

ESH & HAZARDS

- | | |
|--|---|
| <input type="checkbox"/> EB Beryllium | Identify location of beryllium articles or beryllium windows and process for notification in case of breakage |
| <input type="checkbox"/> EB Chemicals | Discuss use, labeling, storage, spills, labs, disposal, and transportation of chemicals |
| <input type="checkbox"/> F Electrical Work 50V | No work on exposed electrical components >50V without appropriate electrical training |
| <input type="checkbox"/> EB Electrical Connections | User is not authorized to adjust any high voltage, motor connections or in-hutch beamline electronics |
| <input type="checkbox"/> EB Electrical Equipment | User is not permitted to modify or service any electrical equipment on the beamline |
| <input type="checkbox"/> EB Electrical Breakers | In case of power failure, contact the FLOCO or Beamline Staff |
| <input type="checkbox"/> EB Red & Yellow Tags | Provide information about any beamline equipment or systems that are yellow or red tagged |
| <input type="checkbox"/> EB Gas | Show location, operations, use, fills, storage of gas (inc cabinets if any), and if authorized: valve operations, gas interlocks, switching cylinders, operating transfer lines |
| <input type="checkbox"/> EB Ladders | Review step ladder use if needed; if ladder required, discuss set up, safety and 3-point rule |
| <input type="checkbox"/> EB Lifting | If lifting heavy objects (>30 lbs), keep weight close to the body (between shoulders and knees) or use lifting and/or mechanical aids or two person lifts |
| <input type="checkbox"/> EB Nano Materials | Review approved locations and controls for nanomaterial use |
| <input type="checkbox"/> EB PPE (Safety Glasses) | Safety glasses may be required inside hutch (discuss with beamline staff if required) |
| <input type="checkbox"/> EB Food | Food consumption is permitted in designated food areas (LOBs) |

LAB/TECH AREAS & SAMPLE PREP

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|---|---|
| <input type="checkbox"/> EB Lab Use | Discuss use of lab (including forms and PPE) and/or tech space (non-lab) area |
| <input type="checkbox"/> EB Sample Prep | Discuss location for sample prep; prepare samples only where instructed |
| <input type="checkbox"/> EB Soldering Station | Avoid skin contact with soldering iron to prevent burns to the skin; advise of process for solder scrap |

WASTES

- | | |
|---|--|
| <input type="checkbox"/> F Hazardous Wastes | Do not generate hazardous wastes without talking with beamline staff. Anyone generating Hazardous Waste must have Lab Standard and Hazardous Waste Generator training. |
| <input type="checkbox"/> F Waste Location | Show relevant waste collection areas and discuss training requirements (sharps, razor blades, pipet tips, broken glass, hazardous waste Satellite Accumulation Area/SAA) |
| <input type="checkbox"/> F Sharps | Place cover slips, tips, needles in sharps container |

CLOSE OUT

- | | |
|---|---|
| <input type="checkbox"/> B1 Samples (Take Home) | Take samples back to home institution |
| <input type="checkbox"/> B2 Samples (Storage) | Review storage process for samples |
| <input type="checkbox"/> B3 Samples (Store or Ship) | Discuss with beamline staff whether to store samples or ship back to home institution |
| <input type="checkbox"/> B Shipping Haz Mat | Review shipping process for hazardous materials |
| <input type="checkbox"/> B Data Log Book | Complete entries in Experiment Data Logbook |
| <input type="checkbox"/> F End of Run Form | Complete the End of Run form for NSLS-II |
| <input type="checkbox"/> B1 Shut Down/Secure BL | Secure beamline and inform the Beamline Staff experiment is complete |
| <input type="checkbox"/> F Housekeeping | Check housekeeping (beamline area neat, clean, free of hazards), recycling, tools returned or stored |
| <input type="checkbox"/> F2 Publications | Send a copy of your publication to <input checked="" type="checkbox"/> NSLS-II User Administration <input checked="" type="checkbox"/> the beamline |

Instructions to Trainer:

(1) Provide training to each user listed on the SAF as they arrive and complete the information below. Training is valid for 1 year at this beamline only.
 (2) Send completed forms to NSLS-II Training, Building 745, immediately after all users listed on the SAF (who plan to arrive for this run) have been trained. Training will be entered in the user's training history.

SAF # _____

Instructions to User:

Ensure that your name and life number are correct and sign in the space below that you understand the instructions provided to you in this beamline specific operations training.

Trainer: Place \checkmark next to your name:

- Fukuto, Masafumi
- Li, Ruipeng
- Yager, Kevin

PRINT User Name	Life #	User Signature	Date	Trainer's Signature	\checkmark Training Entered