

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 Electrical Outlets Note outlet colors; do not plug equipment into sensitive or UPS outlets w/o beamline staff approval
- B1 Equip Stop Buttons Review operations for equipment stop buttons and when to use them
- 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 Ergonomics/Table Use caution when approaching the Optical End Bench or Monochromator; vertical motion of the supporting granite tables can cause a pinch hazard
- B CryoCooler Ops If cryocooler will be used, review status of normal operations; call beamline staff if problems arise
- B CryoStat Ops If cryostat will be used, review status of normal operations; call beamline staff if problems arise
- B CryoStream If cryostream will be used, review status of normal operations; call beamline staff if problems arise
- B Detectors Review locations, 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 High Temp Device User is is not authorized to make changes to device (review operations)
- 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
- B Laser Present Laser present at this beamline (avoid direct eye exposure)
- 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
- B4 Tables (in Hutch) User is is not authorized to make adjustments to the hutch tables (review operations)
- B1 Vacuum (End Sta Eq) User is is not authorized to perform vacuum work and bleed ups on end station equipment; if authorized, review location, indicators, and operations
- B Water System Review location, indicators, alarms, trips, and operations for system and shut off

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.

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

ESH & HAZARDS

- EB Cryogen Fill Station Reqs For Cryogen Filling Station, NSLS-II training and PPE required; BNL cryogen training required
- EB Chemicals Discuss use, labeling, storage, spills, labs, disposal, and transportation of chemicals
- EB Cryogen Use For cryogen/cryostat use, discuss fill operations, ODH, demonstrate use, wear PPE (eye and skin protection)
- EB Cryogen Dewar Fills Liquid Nitrogen is filled by beamline staff only
- EB Cryogen Transfer Lines Discuss dewar autofill process, ODH; if user is authorized to operate transfer lines, review operations
- EB LN2 Shut Off Review operations for LN2 shutoff buttons and when to use them
- F Electrical Work 50V No work on exposed electrical components >50V without appropriate electrical training
- EB Electrical Connections User is not authorized to adjust any high voltage, motor connections or in-hutch beamline electronics
- EB Electrical Equipment User is not permitted to modify or service any electrical equipment on the beamline
- EB Electrical Pwr Supplies Review process to check power supplies and cables; User is is not authorized to change PS; User is is not authorized to power down PS; if authorized, review operations
- EB Red & Yellow Tags Provide information about any beamline equipment or systems that are yellow or red tagged
- 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
- EB Nano Hood/Box For nano hood or glove box use, verify nano training and review operations
- EB PPE (Safety Glasses) Safety glasses may be required inside hutch (discuss with beamline staff if required)
- EB Ventilation Review use and operations for ventilation system and alarms, if present
- EB Food Food consumption is permitted in designated food areas (LOBs)

LAB/TECH AREAS & SAMPLE PREP

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

WASTES

- 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.
- 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)
- F Sharps Place cover slips, tips, needles in sharps container

CLOSE OUT

- B3 Samples (Store or Ship) Discuss with beamline staff whether to store samples or ship back to home institution
- B Shipping Haz Mat Review shipping process for hazardous materials
- F End of Run Form Complete the End of Run form for NSLS-II
- B1 Shut Down/Secure BL Secure beamline and inform the Beamline Staff experiment is complete
- F Housekeeping Check housekeeping (beamline area neat, clean, free of hazards), recycling, tools returned or stored
- F1 Publications Send a copy of your publication to NSLS-II User Administration 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 \surd next to your name:

- Dooryhee, Eric
- Ghose, Sanjit

| PRINT User Name | Life # | User Signature | Date | Trainer's Signature | \surd Training Entered |
|-----------------|--------|----------------|------|---------------------|--------------------------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |