## ACCESS

- **☐ F** Signs and Placards: Locate and discuss all posted signs and placards (Hazard Info Placard, contact info, PPE)
- **☐ E8** Hutch Access: Train user for Beamline Hutch Search and Secure and Breaking Security. Be aware of moving door hazards
- **☐ F** Safety Approval Form: Users must review SAF; review controls and other training for SAF or beamline
- **☐ F** Lead Experimenter: Lead Experimenter must ensure that safety, training, and reporting requirements are completed

## 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. Locate exits and fire alarm pull boxes
- **☐ F** Emergency Lights: May come on for self-test with lights and buzzer
- **☐ 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** Radiation Monitors: Identify radiation monitor locations, move away from area, call control room if area monitors sound off
- **☐ F** Oxygen Monitors/Alarms: Locate hut ODH monitors, discuss alarm response, verify green light is on, discuss LOB receiving room access
- **☐ E8** Gas Alarms: Discuss any gas systems and alarms in the area, and the appropriate response to alarms

## BEAMLINE EQUIPMENT

- **☐ F** Config Control: Identify the configuration control signs and follow configuration control policy
- **☐ F** Mezzanine Access: Access to mezzanine, areas above hut roof, staircase is not permitted
- **☐ F** User Authorization: User is authorized to operate ONLY the equipment the user has been trained on - review operation and hazards
- **☐ E8** User Labyrinth: Discuss proper steps and precautions to take for use of the user labyrinth
- **☐ B2** Electrical Outlets: 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** CryoStat: User ☐ is ☐ is not authorized to make changes to cryostat; if authorized, review operations
- **☐ B** Detectors: Review locations, operations, hookups, cables, cautions for high voltage and equip damage
- **☐ B** Ion Chamber(s): Point out Red Cables or High Voltage (HV) Supply for ion chamber(s) (do not touch)
- **☐ B** Laser Training & PPE: If operating Class 3B or 4 laser, verify BNL laser training, beamline laser training, eye exam, PPE
- **☐ B** Laser Present: Laser present at this beamline (avoid direct eye exposure)
- **☐ B** Laser Interlocks: Only beamline staff and FLOCOs are permitted to reset laser interlocks
- **☐ B4** Monochromator: Review operations for energy ranges, set up, and operation of monochromator drive, motors, bearings, power, software; User ☑ is ☐ is not authorized to adjust monochromator
- **☐ B** Growth Chamber: Review operations for sample chamber; User ☑ is ☐ is not authorized to modify sample chamber or add new equipment to existing flanges (if authorized, review requirements and extension policy)
- **☐ B** Shutters: Review location, operations, indicators, and required sequence for beamline shutter controls
- **☐ B1** Vacuum (End Sta Eqp): 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
- **☐ B** Webcam: Be aware of WebCams and/or Remote Monitoring

## BEAMLINE OPERATIONS

- **☐ 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** Computer Data: Review data storage, data transfer, and back up process
- **☐ E8** Unattended Ops: User ☐ is ☐ is not requested to attend beamline at all times, as per SAF. Discuss process

## ESH & HAZARDS

- **☐ E8** Beryllium: Identify location of beryllium articles or beryllium windows and process for notification in case of breakage
- **☐ E8** Cryogen Fill Station: For Cryogen Filling Station, NSLS-II training and PPE required; BNL cryogen training recommended
- **☐ E8** Chemicals: Discuss use, labeling, storage, spills, labs, disposal, and transportation of chemicals
- **☐ E8** Cryogen Use: For cryogen/cryostat use, discuss fill operations, ODH, demonstrate use, wear PPE (eye and skin protection)
- **☐ E8** Cryogen Dewar Fills: Liquid Nitrogen is filled by beamline staff only
- **☐ E8** Cryogen Transfer Lines: Discuss dewar autofill process, ODH; if user is authorized to operate transfer lines, review operations

During initial form development: If there is a number next to the designation (e.g., B1, B2, etc), select the most appropriate content.
NSLS-II Beamline Specific Training Form 4-ID

☐ 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 or perform any bake-outs
☐ EB Electrical Breakers In case of power failure, contact the FLOCO or Beamline Staff
☐ 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), emergency response actions, and if authorized: valve operations, gas interlocks, switching cylinders, operating transfer lines
☐ EB Ladders Review step ladder use if needed; if ladder required, discuss set up, safety and 3-point rule
☐ EB Lifting If lifting objects <30 lbs, keep weight close to the body (between shoulders and knees); If lifting objects >/=30 lbs, use lifting and/or mechanical aids or two person lifts
☐ EB Magnetic Fields Magnetic fields present at this beamline - Users with medical devices/implants should stay 1’ away from source
☐ 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
☐ EB 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.
☐ EB Waste Location Show relevant waste collection areas and discuss training requirements (sharps, razor blades, pipet tips, broken glass, hazardous waste Satellite Accumulation Area/SAA)
☐ EB Sharps Place cover slips, tips, needles in sharps container

CLOSE OUT
☐ B1 Samples (Take Home) Take samples back to home institution
☐ B Shipping Haz Mat Review shipping process for hazardous materials
☐ B Data Log Book Complete entries in Experiment Data Logbook
☐ F End of Run Form Complete the End of Run form for NSLS-II
☐ B Systems & Equip Power down systems and turn off equipment voltages as required, perform PC security check
☐ 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: ______________________  SAF # ______________________  Instructions to User: ______________________
(1) Provide training for each checkbox to each user listed on the SAF as they arrive and complete the information below. If a checkbox does not apply, cross out that line.
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.

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

Print User Name ____________ Life # ____________ User Signature ____________ Date ____________ Trainer’s Signature ____________ ☑ Training Entered

[ ] B1 [ ] E [ ] EB [ ] F
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