NSLS-II Beamline Specific Training Form 17-BM  
Course Code PS-BST-17-BM  
Rev Date: 6/1/2018

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

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

BEAMLINE EQUIPMENT
☐ F Config Control  
ʼ  Identify the configuration control signs and follow configuration control policy
☐ F Mezzanine Access  
ʼ  Access to mezzanine, areas above hut roof, staircase is not permitted
☐ F User Authorization  
ʼ  User is authorized to operate ONLY the equipment the user has been trained on - review operation and hazards
☐ EB User Labyrinth  
ʼ  Discuss proper steps and precautions to take for use of the user labyrinth
☐ B End Station Equip  
ʼ  Point out Red Cables or High Voltage (HV) Supply for end station equip (do not touch)
☐ B Ergonomics  
ʼ  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 CryoCooler  
ʼ  If cryocooler will be used, review operations for water use and shut-off valves
☐ B CryoStat  
ʼ  User ☐ is ☐ is not authorized to make changes to cryostat; if authorized, review operations
☐ B Detector  
ʼ  Review detector location, operations, hookups, cables, fill frequency, cautions for high voltage and equip damage
☐ B Ion Chamber(s)  
ʼ  Point out Red Cables or High Voltage (HV) Supply for ion chamber(s) (do not touch)
☐ B4 Mirror  
ʼ  Review mirror location, operations [Grating Change ☐Yes ☐NA][Adjustment ☐Yes ☐NA][Rotation ☐Yes ☐NA][Tilt ☐Yes ☐NA]
☐ B1 Monochromator  
ʼ  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
☐ B5 Sample Chamber  
ʼ  Review operations for sample mounting and sample changing
☐ B Sample Environ and Cell  
ʼ  Review operations and sample mounting
☐ B Shutters  
ʼ  Review location, operations, indicators, and required sequence for beamline shutter controls
☐ B4 Tables (in Hutch)  
ʼ  User ☐ is ☐ is not authorized to make adjustments to the hutch tables (review operations)
☐ B1 Vacuum (End Sta Eqp)  
ʼ  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  
ʼ  Review location, indicators, alarms, trips, and operations for system and shut off

BEAMLINE OPERATIONS
☐ B Computer Operations  
ʼ  Review operations for computer operations, control software, data acquisition software, machine status
☐ B Computer Software  
ʼ  Do not install any computer software on beamline computers
☐ B Computer Data  
ʼ  Review data storage, data transfer, and back up process
☐ EB Unattended Ops  
ʼ  User ☐ is ☐ is not requested to attend beamline at all times, as per SAF. Discuss process

ESH & HAZARDS
☐ EB Beryllium  
ʼ  Identify location of beryllium articles or beryllium windows and process for notification in case of breakage
☐ EB Cryogen Fill Station  
ʼ  For Cryogen Filling Station, NSLS-II training and PPE required; BNL cryogen training recommended
☐ EB Chemicals  
ʼ  Discuss use, labeling, storage, spills, labs, disposal, and transportation of chemicals
☐ EB Cryogen Use  
ʼ  For cryogen/cryostat use, discuss fill operations, ODH, demonstrate use, wear PPE (eye and skin protection)
☐ EB Cryogen Dewar Fills  
ʼ  Liquid Nitrogen is filled by beamline staff only
☐ EB Cryogen Transfer Lines  
ʼ  Discuss dewar autofill process, ODH; if user is authorized to operate transfer lines, review operations
☐ EB LN2 Shut Off  
ʼ  Review operations for LN2 shutoff buttons and when to use them


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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☐  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 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  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  Magnetic Fields  Magnetic fields present at this beamline - Users with medical devices/implants should stay 1’ away from source
☐  EB  Nano Materials  Review approved locations and controls for nanomaterial use
☐  EB  PPE (Safety Glasses)  Safety glasses may be required inside hutch (discuss with beamline staff if required)
☐  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

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
☐  B3  Samples (Store or Ship)  Discuss with beamline staff whether to store samples or ship back to home institution and confirm before leaving
☐  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
☐  F2  Publications  Send a copy of your publication to ☑ NSLS-II User Administration ☑ the beamline

Instructions to Trainer:  SAF #

Instructions to User:  Trainer: Place ✓ next to your name:

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.

<table>
<thead>
<tr>
<th>PRINT User Name</th>
<th>Life #</th>
<th>User Signature</th>
<th>Date</th>
<th>Trainer’s Signature</th>
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