OPERATIONS INFO

☐ E	Operations Status	Beamline is in commissioning status; Lead BL Scientist must contact M Corwin to finalize this form and provide names of trainers before using this form to train users

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
☐ B	Equipment 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	CryoCooler	If cryocooler will be used, review operations for water use and shut-off valves
☐ B	CryoStat	User ☐is ☐is not authorized to make changes to cryostat; if authorized, review operations
☐ 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
☐ 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 OPCOs are permitted to reset laser interlocks
☐ B	Lenses	Review location and operations for lens focusing
☐ B	Mirror	Review mirror location, operations [Grating Change☐Yes☐NA][Adjustment ☐Yes ☐NA][Rotation ☐Yes ☐NA][Tilt ☐Yes ☐NA]
☐ B	Monochromtr	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
☐ B	Optical System	Review optical system set up, operations, water gauge for optics system, mirror, camera
☐ B	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)
☐ B	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
☐ B	Spectrometer	Review spectrometer operations and limits

☐ B	Table	User ☑is ☐is not authorized to make adjustments to the hutch table (review operations; do not place objects on table)
☐ B	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	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	Computer Data	Review data storage, data transfer, and back up process
☐ B	Passthrough Beamlines	Review operations for passthrough beamlines
☐ F	Unattended Ops	Beamline may be unattended up to 24 hours unless SAF states "no unattended operations" (discuss process)

ESH & HAZARDS

☐ EB	Beryllium	Identify location of beryllium articles or beryllium windows and process for notification in case of breakage
☐ EB	Cryogen Fill Station	For Cryogen Filling Station, NSLS-II training and PPE required; BNL cryogen training recommended
☐ 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 Breakers	In case of power failure, contact the FLOCO or Beamline Staff
☐ 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	Ladders	Review step ladder use if needed; if ladder required, discuss set up, safety and 3-point rule
☐ 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
☐ 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	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

☐ B2	Samples (Take Home)	Take samples back to home institution
☐ B2	Samples (Storage)	Review storage process for samples
☐ B2	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

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☐ 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
☐ B1	Shut Down/Contact Staff	Secure beamline and contact the Beamline Staff to disable the shutters before you leave
☐ F	Housekeeping	Check housekeeping (beamline area neat, clean, free of hazards), recycling, tools returned or stored
☐ F	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 √ next to your name:

☐ Evans-Lutterodt, Kenneth
☐ Nelson, Christie

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