Safety and Operational Instrument Training for Users of Instruments Located in the HFIR Neutron Scattering Experimental Facilities

Please indicate the instrument(s) for which training is being provided:

❑ HB-1 Triple-Axis Spectrometer	❑ HB-2B Residual Stress	❑ HB-2D SNS Detector
❑ HB-1A Triple-Axis Spectrometer	❑ HB-2C WAND	❑ CG-2 Sans
❑ HB-3 Triple-Axis Spectrometer	❑ HB-2D Mirror Reflectometer	❑ CG-3 Bio-Sans

This training must be completed by external users for each visit before being allowed to work independently. Neutron Scattering Science Division (NSSD) certified research personnel must complete the training once a year.

- Radiological worker training is required to obtain unescorted access to the HFIR beam room and/or guide hall experimental area when the reactor is operating. The instructions and conditions in the HFIR beam room radiological work permit (RWP)* and all radiological postings must be observed at all times. Questions regarding the RWP should be directed to the Radiation Protection Office in Bldg. 7900, Room 206. Users shall be provided with appropriate personal dosimetry by the NSSD User Office.

  * I have read and understand the HFIR beam room RWP (HFIR 17003) and have been authorized to work under the RWP. ☐ (please initial)

- Evacuation route and assembly points.
- Demonstrate ability to open beam-room doors under negative pressure.
- Correct badging, use of electronic dosimetry, and the use of personnel radiation monitors.
- The locations of neutron beams and other areas of potentially high radiation in the beam room or guide hall.
- Locations of roll-around shielding panels and configuration controls.
- Operation of all hardware components of the instrument(s) checked above and completion of instrument-specific training. Users of HB-2B are required to read the Instrument Technical Operating Guideline.
- All changes to the instrument setup and configuration must be documented in the instrument log book.
- The use of cadmium in places where it can be exposed to the main neutron beam will produce high gamma radiation. Do not use cadmium in these locations unless authorized by NSSD staff or radiation protection personnel.
- Monochromator changes and changes of pre- and post-sample collimation, either within the shielding or outside the main shield, can only be changed under the supervision of NSSD staff, unless specifically authorized (see page 2). Not applicable for SANS instruments.
- Operation of computer control software.
- Additional on-the-job training (if applicable) listed on page 2.
- All irradiated samples must be surveyed by health physics staff. (Reference: NSSD Technical Guideline, "Handling of Samples that Have Been Irradiated with Neutrons"), and must be green-tagged if to be removed from the neutron scattering experimental facilities.
- Users may not perform any work within the neutron scattering experimental facilities without prior authorization of the NSSD local contact or instrument scientist. Any concerns or questions should be referred to the local contact or instrument scientist.

Additional On-The-Job Training for Users of Instruments Located in the HFIR Neutron Scattering Experimental Facilities

	Items Covered	
	Yes	No
• Standard sample environment/mounting	☐	☐
• Change of beam diaphragms/slits	☐	☐
• Change of monochromator setting (HB-2B, HB-2C)	☐	☐
• Helium transfer	☐	☐
• Liquid nitrogen transfer	☐	☐
• High pressure cell	☐	☐
• Chemistry lab	☐	☐
• Furnace	☐	☐
• Glove box	☐	☐
• NRSF2's Load Frame	☐	☐
• Other (list below)	☐	☐

_____

_____

I certify that I have completed the Safety and Operational Instrument Training, that I have been trained in the items listed on Page 1, and that I received any applicable on-the-job training listed above.

_____	_____	_____
User Name (print)	User Signature	Badge No.
_____	_____	
Certified Research Personnel Signature	Date	

This form shall be signed and dated BEFORE users will be allowed to work independently on the specified instrument(s). Forward the completed form to Kaye Carter, Bldg. 8600, MS-6460. A copy shall be given to the user.

(Revised 05/04/2007)