Brookhaven National Laboratory – Photon Sciences - National Synchrotron Light Source						
Beamline Hazard Analysis - Beamline X4A						
LS-BHA-X4A	Revision:	02	Effective: 9/15/11	Page 1 of 1		
The following tasks are included in the beamline safety review. Any operations not listed here, or performed by others than						
those listed, need additional review by ES&H personnel and/or beamline personnel.						

Prepared By:	J. Schwanof, R. Abramowitz	Approved By:	Lori Stiegler

Tasks / Equipment	Performed by:		Controls	
., 4. 1	Beamline Staff	Users		
Inert compressed gas	Υ	N	 Compressed gas training – TQ-COMPGAS1 or NSLS User training Transport cylinders using a cylinder cart Properly secure cylinders Wear safety glasses with side shields while connecting lines Leak check gas lines 	
Solvents	Υ	Y	 Limit quantities at beamline to < 250 ml Use PPE - safety glasses, nitrile gloves 	
Pouring cryogens < 5L	Υ	Y	 Use goggles Long pants and sleeves - avoid clothing which can trap cryogens (pockets, cuffs) Cryogen or heavy gloves Enclosed shoes Never pour from above chest level 	
Using the LN2 Fill Station or pressurized transfer	Y	N	 LS-PROC-LN2FILL-MANL training for fill station Use full face shield along with goggles or safety glasses Long pants and sleeves - avoid clothing which can trap cryogens (pockets, cuffs) Cryogen or heavy gloves Enclosed shoes 	
Manipulating cryogenic samples	Y	Y	 Use goggles Long pants Impervious disposable gloves over cotton liners Enclosed shoes Use tongs or tools whenever possible 	
Cryogenic autofill system	Υ	Υ	Ensure hutch ventilation system is operating	
Soldering	Υ	N	Use a designated area, periodically clean surfaces	
Material Handling/Crane – beam component movement	Υ	N	Training	