

Beamline Hazard Analysis - Beamline X1B

LS-BHA-X1B

Revision: 01

Effective: 10/09/09

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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.

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Tasks / Equipment	Performed by:		Controls
	Beamline Staff	Users	
Inert compressed gas	Y	Y	<ul style="list-style-type: none"> 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
Flammable compressed gases	Y	Y	<ul style="list-style-type: none"> Compressed gas training – TQ-COMPGAS1 or NSLS User training Transport cylinders using a cylinder cart Properly secure cylinders Use small quantities or a ventilated gas cabinet Use a flash arrestor Wear safety glasses with side shields while connecting lines Leak check gas lines
Solvents	Y	Y	<ul style="list-style-type: none"> Limit quantities at beamline to < 250 ml Use PPE - safety glasses, nitrile gloves
Pouring cryogenics \leq 5L	Y	Y	<ul style="list-style-type: none"> Use goggles Long pants and sleeves - avoid clothing which can trap cryogenics (pockets, cuffs) Cryogen or heavy gloves Enclosed shoes Never pour from above chest level
Using the LN2 Fill Station or pressurized transfer	Y	Y	<ul style="list-style-type: none"> LS-PROC-LN2FILL-0709 training for Auto station Use full face shield along with goggles or safety glasses Long pants and sleeves - avoid clothing which can trap cryogenics (pockets, cuffs) Cryogen or heavy gloves Enclosed shoes
Liquid helium transfer	Y	Y	<ul style="list-style-type: none"> Use full face shield along with goggles or safety glasses Long pants and sleeves - avoid clothing which can trap cryogenics (pockets, cuffs)

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			<ul style="list-style-type: none"> • Cryogen or heavy gloves • Enclosed shoes • Use guidance/checklist from PRM 5.1.0
Ergonomics concerns – moving/lifting Baker's scaffold used to remove/replace cryostat sample chamber	Y	N	<ul style="list-style-type: none"> • Be aware of body posture, • Ask for help in moving or lifting
High temperature	Y	Y	<ul style="list-style-type: none"> • Warning signs • Training
Working at heights	Y	Y	<ul style="list-style-type: none"> • Be aware of body posture, training
Material Handling/Crane	Y	N	<ul style="list-style-type: none"> • Training
Spot Welder	Y	N	<ul style="list-style-type: none"> • Use safety glasses with side shields • Use heavy or insulated gloves