

Beamline Hazard Analysis - Beamline X19A

LS-BHA-X19A

Revision: 03

Effective: 3/14/2012

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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
Toxic 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 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
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-MANL training for fill 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

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			<ul style="list-style-type: none"> • Enclosed shoes
Class 2/3a laser	Y	N	<ul style="list-style-type: none"> • Laser registration, warning signs
Ergonomics concerns – moving/lifting	Y	Y	<ul style="list-style-type: none"> • Be aware of body posture, • Ask for help in moving or lifting
Soldering	Y	N	<ul style="list-style-type: none"> • Use a designated area, periodically clean surfaces
High temperature	Y	Y	<ul style="list-style-type: none"> • Warning signs • Training
Nanoparticulate work	Y	Y	<ul style="list-style-type: none"> • Nanomaterial fixed, or HEPA filtered exhaust
Cutting/razor blades	Y	Y	<ul style="list-style-type: none"> • Be aware of hand positioning • Use safety knife when possible • Consider using cut resistant gloves for frequent cutting tasks