

Building 130 Laser Labs (AHA)

Title: Laser labs in building 130

Location: bldg 130 : July 30, 2008

This Area Hazard Analysis (AHA) is a process that is used to evaluate the area to 1) determine the hazards that may be present 2) determine appropriate controls for these hazards and 3) provide a mechanism to communicate these hazards to someone entering the area. Job/task specific hazards and controls are not covered by this AHA but should be covered by the JHAM process.

Processes / Equipment in Area	Hazards	Recommended Controls & Actions
Sitting > 4 hours laser work bench.	Fatigue, sore muscles, eye strain.	<ul style="list-style-type: none"> • Have work station reviewed by SLAC Medical Department for ergonomics and implement recommendations. • Take frequent breaks and walk around stretching arms and upper body.
Operating and repairing laser in Laser Rooms	<ul style="list-style-type: none"> • Eye damage from laser radiation • Skin damage from laser radiation • Shock/electrocution from laser power supplies, flashlamps and Pockel Cells • Chemical burns from solvents • Poisoning from solvents 	<ul style="list-style-type: none"> • Laser room protected from access during laser operation with laser safety system • Only trained operators may be in laser rooms when laser is on. • Wear PPE (laser goggles) as required by SLAC safety rules • Never look into a laser beam even with laser eye protection in place. • Contain laser beams on the laser table. • Follow Lock Out and Tag Out procedures for work on Laser HV power supplies. • Assure proper labeling of alcohol and acetone containers • Dispose of wastes properly • See document "Standard Operating)
Using cable crimper to attach connectors to cables.	<ul style="list-style-type: none"> • Hand fatigue, pinch fingers 	<ul style="list-style-type: none"> • Don't rush and make sure fingers are clear of pincers before closing. • Take frequent breaks and walk around stretching fingers.
Use drill press to drill holes into chassis panels.	<ul style="list-style-type: none"> • Cuts or bruises from drill bit, flying metal pieces or rotating panel not properly secured 	<ul style="list-style-type: none"> • Wear eyeglasses. Make sure shield is in place. • Complete qualification process with equipment manager before operation. • Secure panel or work piece with vise securely before drilling. • Keep hands away from point of operation.

<p>Use DVM, oscilloscope, amp meter and CAMAC and VXI test equipment for testing and trouble shooting.</p>	<ul style="list-style-type: none"> • Shocks and burns 	<ul style="list-style-type: none"> • Assess currents, voltages and stored power of equipment to be tested before testing. If > 0.5 A, > 50 V, > 10 Joules, complete Non-Routine JHAM. • Complete ES&H Electrical Safety for R&D Equipment (251) • Complete On the Job Training with BLE Electrical Engineer. • Set up test probes with power off. • Make sure all equipment has EELP stickers or approved equipment to use
<p>Compressed (house) air</p>	<ul style="list-style-type: none"> • Eye injury from blown debris • Air injection through skin 	<ul style="list-style-type: none"> • Safety glasses required at all times in shop. (Shop is posted accordingly.) • All nozzles ported to prevent dead-ending on skin.
<p>Walking and working surfaces</p>	<ul style="list-style-type: none"> • Slips, trips, and falls over transient hazards (power cords, temporarily stored machinery, and work-in-progress 	<ul style="list-style-type: none"> • Remove trip hazards to keep aisles clear. • Clean up spills immediately. • Do not run. Keep eyes on path while walking.
<p>General working environment</p>	<ul style="list-style-type: none"> • Egress • Emergency response 	<ul style="list-style-type: none"> • Know location of exits, fire equipment, and safety equipment such as eyewashes. • Never work alone in the area. • Signage: "Fire Extinguisher" sign above each fire extinguisher. • Single turn handles on exit doors. • Doors remain unlocked when occupied. • Aisle space maintained. <p>Emergency lighting system in each room</p> <ul style="list-style-type: none"> • Signage: "Exit" or "Not an Exit" on portals.
<p>Hand tools</p>	<p>Personal exposure via:</p> <ul style="list-style-type: none"> • Inappropriate use of tools for task at hand. • Lack of attention to task 	<ul style="list-style-type: none"> • Use correct tools(s) for the job and make sure they are in good condition. • GFCI for all electrical plug in tools. • Pay attention to your own job and your surroundings. • Report all unsafe tools to machine shop manager. • PPE: Protective eyewear, gloves, machine shop garb as required for level of hazard.

Completed by	Print Name	Date
Area Responsible:	Behzad Bozorg-Chami	7-30-2008
Participants:		