

Task or Employee: EMC Worker

Routine

Non-routine

Retention: Completed Routine JHAMs are retained by the employee and supervisor. Non-routine JHAMs are retained until the task is fully closed out. In the case of an accident, the form is to be retained for use by the review team.

Complete instructions and supporting information is available at <https://www-internal.slac.stanford.edu/esh/SLACsafety/jham/>. Enter information into boxes which will expand to accommodate whatever length of text is entered. Once this JHA is complete, all participants should sign in the Acknowledgment section. Add rows by placing cursor in the right box of the last row and entering a tab.

Sequence of Basic Job Steps	Potential Hazards	Controls & Recommended Actions
Refilling fluorinert in chillers. Transporting heavy canisters to chiller.	Back strain.	Use appropriate lifting technique. Use supplied pump. Use cart to move canisters.
Switching over chillers: Switching on a chiller Switch over valves	<ul style="list-style-type: none"> • Arc flash and electrical shock (panels are rated a class 1 arc flash hazard) • Fluorinert spills from incorrect valve settings. 	<ul style="list-style-type: none"> • Only turn breaker switch mounted on the panel door, then start pump and compressor • If chiller doesn't start, call electrician • DO NOT open the door and reach inside panel • Follow posted procedure to switch valves carefully.
Replacing low voltage power supplies.	Trapping of fingers. Minor electrical hazards. Burning fingers on heat sinks	Keep fingers clear when replacing. Turn off PS and neighbours or crate. Keep fingers out of crate.
Unplugging/replugging bias voltage cables in electronics house.	Minor electrical hazards (Voltage < 50V, low current)	Switch off PS before work. Keep fingers out of PS.
<ul style="list-style-type: none"> • Replacing front end electronics boards: • Working on manlifts and other elevated platforms • Using harnesses 	<ul style="list-style-type: none"> • Falls • Pinch hazards with manlift. • Bruising and Scrapes • Crushing hazard with moving manlift • amputation from moving manlift 	<ul style="list-style-type: none"> • Wear fall protection • Look around manlift to ensure area is clear. • Keep all body parts away from mech. of manlift at all times. • Read manual before use of manlift. • Follow manufacturers' and all posted instructions

Sequence of Basic Job Steps	Potential Hazards	Controls & Recommended Actions
<ul style="list-style-type: none"> • Replacing front end electronics boards: • Working with low voltage electrical devices. 	<ul style="list-style-type: none"> • Minor electrical hazards 	<ul style="list-style-type: none"> • Switch off power (low and bias) to entire crate being worked on.
<ul style="list-style-type: none"> • Testing and repairing electronics board in test lab. • Use of teststand. • Soldering • Use of hand tools 	<ul style="list-style-type: none"> • Minor electrical hazards. • Cuts and pinches from tools. • Burns, fumes from soldering. • Fire risk from defective equipment. 	<ul style="list-style-type: none"> • Switch off power supplies when working on boards. • Use appropriate tool and caution. • Ensure appropriate ventilation and clothing when soldering and use caution. • Switch off equipment when leaving unattended.
<ul style="list-style-type: none"> • Controlled Access to IR2 	<ul style="list-style-type: none"> • Failure to follow procedures properly can lead to serious personal injury by radiation or to delays in accelerator operation 	<ul style="list-style-type: none"> • Complete required training (on mock-up in Bldg.3 or in IR-2 with an experienced person) • Follow entry and exit procedures detailed in chap. 3 of the Care & Feeding manual (see http://www.slac.stanford.edu/cgi-bin/12hredirect/BFROOT/www/Detector/Operations/CareAndFeeding/care?access)
<p>Various activities in IR-2.</p>	<p>Multiple hazards in common with those described in BABAR shifter JHAM and IR-2 AHA</p>	<p>See BABAR shifter JHAM and IR-2 AHA</p>

Acknowledgments	Print Name	Signature or Initialed	Date
<p>Supervisor:</p>			
<p>Participants:</p>			