

Name(s) of Risk Team Members: J. Scott, Paul Sparrow, Shelby Williams			Point Value → Parameter ↓		1	2	3	4	5	
Area/Facility Description Title: Collider-Accelerator Department, Buildings 918&926			Occupancy or Use		≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift	
Area/Facility # (if applicable): Area-Wide FRA 18-06			Severity		First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability	
Area/Facility Description: Area-Wide Warehouses			Likelihood		Extremely Unlikely	Unlikely	Possible	Probable	Multiple	
Approved by: <i>E. Lessard</i> Date: 5-18-06      Rev.#: 0										
Reason for Revision (if applicable): Yearly update							Comments:			
			Before Additional Controls				After Additional Controls			
Physical Item or Activity	Hazard(s)	Control(s)	Occupancy A	Severity B	Likelihood C	Risk* AxBxC	Control(s) Added to Reduce Risk			% Risk Reduction
Material Handling	See <a href="#">Facility-Wide Material Handling Evaluation</a>	See Facility-Wide Material Handling Evaluation								
House Keeping	See <a href="#">Facility-Wide House Keeping Evaluation</a>	See Facility-Wide House Keeping Evaluation								
Fire	See <a href="#">Facility-Wide Fire Evaluation</a>	See Facility-Wide Fire Evaluation								
Electrical, up to 480 V ac	Shock or electrocution from exposed wiring, flash hazard, overheated wiring if not properly installed, overused or in disrepair, improper grounding	Equipment is listed or reviewed by CEE, Tier 1 inspections, disconnected cable policy, installations comply with applicable codes, procedures, training, distribution drawings, LOTO, working hot permits, qualified electricians and technicians, postings, locked areas, guarding, work planning, GFCI, grounding standards, emergency procedures, PPE, Notes 1,3,&4 completed or dispositioned. Note 2 training complete, full reviews and approvals on track.	4	4	1	16	See Notes 1 through 4			
Manual material handling	Overexertion – injuries caused by excessive lifting, pushing, pulling, holding, carrying or throwing of an object	Gloves, hardhat, handcarts, dollies, training, safety shoes, weight limit of 44 lbs. work planning	4	3	3	36				
Work at heights	Falls to lower level, such as falling from a ladder or over a railing	Postings, barriers, fall protection, maintenance, training, work planning, procedures, Tier 1 inspections, PPE, approved scaffolding and platforms, approved ladders, anti-slip surfaces	4	5	2	40				

Pressurized Systems	Being struck by an object due to a pressure release	Postings, PPE, maintenance, training, work planning, certification/testing of pressure related equipment, Tier 1 inspection	4	3	2	24					
Pressurized Systems	Contact with temperature – steam that result in burns	Postings, PPE, maintenance, training, work planning, certification/testing of pressure related equipment, Tier 1 inspection	3	3	2	18					
Walking Surfaces	Falls on same level	Postings, barriers, maintenance, work planning, work platforms, Tier 1 inspection	4	3	2	24					
Chemical Handling	Burns	Procedures, compliance with regulations, training, CMS inventory, MSDS, volume controls, Fire/Rescue group response, PPE as required, locked or controlled areas, postings, labeling, proper containers, segregation, spill cleanup equipment available, Tier 1 inspections	3	3	2	18					
Chemical Handling	Asphyxiation	Procedures, compliance with regulations, training, CMS inventory, MSDS, volume controls, Fire/Rescue group response, PPE as required, locked or controlled areas, postings, labeling, segregation, Tier 1 inspections	3	3	2	18					
Chemical Handling	Eye exposure	Procedures, compliance with regulations, training, CMS inventory, MSDS, volume controls, PPE as required, eyewash and showers, locked or controlled areas, postings, labeling, proper containers, segregation, Tier 1 inspections	3	4	2	24					
Storage in general	Being struck by an object due to improperly secured material or loss of control	Inventory controls, load limits, Tier 1 inspections, housekeeping	4	4	2	32					
Storage in general	Bee stings, airborne pathogens	Training, work planning, Tier 1 inspections, clinic, PPE, maintenance.  The C-AD ESHQ Office stocks Deep Woods OFF, which contains 25% DEET. Raid Wasp Killer is also stocked by the C-AD ESHQ Office for use as self-protection.	4	5	2	40					
Storage in General	Cuts, abrasions from damaged crates	Training, PPE, Tier 1 and other inspections, PE carpenter for repairs, housekeeping, work planning	4	2	3	24					
Security	None	Locks, Inventory control, Posting, OPM procedures, bar coding, camera surveillance, security tours, key control	4	1	1	4					
Roofs	Leaks	Tier 1 inspections, maintenance, work planning, postings, temporary roof, janitors, PE maintenance	4	3	4	48					
Roofs	Mold, mildew	Tier 1 inspections, maintenance	4	3	2	24					
Roofs	Electrical equipment damage	Tier 1 inspections, maintenance, work planning, postings, temporary roof, janitors, PE maintenance and surveillance	4	3	3	36					
Lighting	Poor visibility	Tier 1 inspections, maintenance, emergency lighting, temporary lighting	4	2	2	16					
Lighting	Falls on same level due to poor visibility	Tier 1 inspections, maintenance, emergency lighting, temporary lighting	4	2	2	16					
Lighting	Being struck against an object, such as a carpenter walking into a door frame due to poor lighting	Tier 1 inspections, maintenance, emergency lighting, temporary lighting	4	2	2	16					

Further Description of Controls Added to Reduce Risk:

NOTE 1: OSHA Teams visited C-AD during the period October 20 through October 31, 2003 and recorded electrical non-compliances. All OSHA findings will be closed by 2007 by full compliance or with an equivalent level of safety.. The status of the OSHA items are maintained in BNL's Compliance suite, and closed on a schedule commensurate with funding.

NOTE 2: A compliance plan to have all electrical installations accepted by an Authority Having Jurisdiction (AHJ), as per 29CFR1910 Subpart S, has been implemented by BNL. UL, CSA, LLC or other NRTL accepted equipment will be acquired at BNL for all future installations. Prior installations shall be reviewed and accepted by qualified AHJs. The plan must be completed by 2009.

NOTE 3: Full compliance with NFPA 70E was adopted by the C-AD in December 2005. NFPA 70E prescribes protective clothing to protect against shock and arc blast; thus reducing the severity and likelihood of an injury. It also prescribes training, which is currently fulfilled by taking the 2005 version of Electrical Safety 1 and by attending the C-AD 3-hour classroom course on electrical safety rules and PPE.

NOTE 4: Contractor and vendor training in work planning and electrical safety has been improved. Plans to reach all contractors and vendors with regard to NFPA 70E requirements prior to performing work at BNL have been implemented. C-AD has obtained lists of all its vendors and suppliers and is ensuring that they take Electrical Safety 1 or have equivalent training if needed.

*Risk:	0 to 20	21 to 40	41-60	61 to 80	81 or greater
	Negligible	Acceptable	Moderate	Substantial	Intolerable