NSLS OHSAS Job Risk Assessment

The only official copy of this file is the one on-line in the NSLS ESH website. Before using a printed copy, verify that it is the most current version by checking the document issue date on the NSLS ESH website.

Name(s) of Risk Team Members: Keith Klaus, Ron Beauman, Mike Schwarz, Lenny Santangelo	**Point Value → Parameter ↓**	**1**	**2**	**3**	**4**	**5**
Job Title: **Work with Cooling Water Systems** **Job Number or Job Identifier:** **LS-JRA-0012**	**Frequency (B)**	**≤once/year**	**≤once/month**	**≤once/week**	**≤once/shift**	**>once/shift**
Job Description: Much NSLS equipment requires cooling to reduce heat loads generated during operation. This JRA addresses hazards associated with installation and maintenance of the mechanical equipment associated with cooling water systems	**Severity (C)**	**First Aid Only**	**Medical Treatment**	**Lost Time**	**Partial Disability**	**Death or Permanent Disability**
Training and Procedure List (Optional):	**Likelihood (D)**	**Extremely Unlikely** <<1x/20yrs	**Unlikely** 1x/10-20yrs	**Possible** >1x/10-20yrs	**Probable** 1x/yr	**Multiple** >1x/yr
Approved by: Andrew Ackerman Date: 08/20/08 Rev. # 2 Revison Log						
Stressors (if applicable, please list all): work in warm environments and tight quarters; work in wet floor and surfaces		**Reason for Revision (if applicable):**			**Comments:**	

		Before Controls							**After Initial Controls**						**After Additional Controls**					
Job Step / Task	**Hazard**	**Stressors Y/N**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Initial Controls**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Control(s) Added to Reduce Risk**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**% Risk Reduction**
Lock-out/tag-out of equipment	See **LS-JRA-0005**																			
Use of portable ladders	See **LS-JRA-0036**																			
Work with commercial	See **LS-JRA-0021**																			

NSLS OHSAS Job Risk Assessment

The only official copy of this file is the one on-line in the NSLS ESH website. Before using a printed copy, verify that it is the most current version by checking the document issue date on the NSLS ESH website.

		Before Controls							After Initial Controls						After Additional Controls					
Job Step / Task	**Hazard**	**Stressors Y/N**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Initial Controls**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Control(s) Added to Reduce Risk**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**% Risk Reduction**
chemicals, including strong acids and caustics																				
Work with hand tools	See **LS-JRA-0014**																			
Work with hand held power tools	See **LS-JRA -0013**																			
Work with pressurized systems	See **LS-JRA -0009**																			
Discharge of water to sanitary sewer (this hazard is environmental and was not scored.)	Release of chemicals above discharge limit							Training, procedures												
Installation, operation, or maintenance of mechanical equipment & systems	Work in warm environment resulting in potential for heat exhaustion	N	2	3	3	4	72	Safety awareness, training	2	3	3	3	54							
Installation, operation, or maintenance of mechanical equipment & systems	Injury from rotating parts	N	1	3	3	4	36	Guards, procedures, safety awareness	1	3	3	3	27							

NSLS OHSAS Job Risk Assessment

The only official copy of this file is the one on-line in the NSLS ESH website. Before using a printed copy, verify that it is the most current version by checking the document issue date on the NSLS ESH website.

		Before Controls							After Initial Controls						After Additional Controls					
Job Step / Task	**Hazard**	**Stressors Y/N**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Initial Controls**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Control(s) Added to Reduce Risk**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**% Risk Reduction**
Installation, operation, or maintenance of mechanical equipment & systems	Slip or fall caused by water leak	N	1	5	3	3	45	Safety awareness, procedures	1	5	3	2	30							
Installation, operation, or maintenance of mechanical equipment & systems	Exposure to noise levels above limits	N	4	5	4	4	320	Monitoring, posting, training, protective ear plugs, safety awareness	4	4	1	2	32							
Installation, operation, or maintenance of mechanical equipment & systems	Electric shock	N	1	5	5	2	50	Procedures, training, barriers, design, safety awareness	1	5	5	1	25							
Installation, operation, or maintenance of mechanical equipment & systems	Work in tight spaces resulting in strains or bruises from unusual body positions or contortions	Y	1	4	3	4	48	safety awareness, discussion of past experience	1	4	3	3	36							
Installation, operation, or maintenance of mechanical equipment & systems	Injury to back or other body part from lifting or over-exertion	N	1	4	3	3	36	Training, safety awareness, appropriate equipment, design	1	4	3	2	24							

NSLS OHSAS Job Risk Assessment

The only official copy of this file is the one on-line in the NSLS ESH website. Before using a printed copy, verify that it is the most current version by checking the document issue date on the NSLS ESH website.

		Before Controls							After Initial Controls						After Additional Controls					
Job Step / Task	**Hazard**	**Stressors Y/N**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Initial Controls**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Control(s) Added to Reduce Risk**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**% Risk Reduction**
Installation, operation, or maintenance of mechanical equipment & systems	Thermal burns resulting from hot and cold surfaces	N	1	5	2	3	30	Training, proper labeling, safety awareness, proper clothing	1	5	2	3	30							
Installation, operation, or maintenance of mechanical equipment & systems	Cuts, abrasions, pinch and other minor injuries	N	1	4	2	4	32	Safety awareness, PPE	1	4	2	3	24							
Installation, operation, or maintenance of mechanical equipment & systems	Fall from elevated platforms	Y	1	3	5	3	45	Work planning, guards, safety awareness, fall protection	1	3	5	2	30							
Maintenance or repair of water tower	Exposure to chemicals and bacteria associated with standard cooling tower application	N	2	2	3	3	36	Procedures, safety awareness, training	2	2	3	2	24							
Installation, operation, or maintenance of mechanical equipment & systems	Thermal burns resulting from soldering, welding, and or brazing	N	1	3	3	3	27	Training, safety awareness, proper clothing	1	3	3	2	18							
Installation, operation, or	Oxygen deficiency due to release of gases	N	2	5	5	2	100	Training, monitoring, design reviews,	2	5	5	1	50							

NSLS OHSAS Job Risk Assessment

The only official copy of this file is the one on-line in the NSLS ESH website. Before using a printed copy, verify that it is the most current version by checking the document issue date on the NSLS ESH website.

		Before Controls							After Initial Controls						After Additional Controls					
Job Step / Task	**Hazard**	**Stressors Y/N**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Initial Controls**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Control(s) Added to Reduce Risk**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**% Risk Reduction**
maintenance of mechanical equipment & systems								ventilation systems												

Further Description of Controls Added to Reduce Risk:

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