

NSLS OHSAS Job Risk Assessment

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Name(s) of Risk Team Members: R. Abramowitz, B. Chmiel, J. Newburgh	Point Value → Parameter ↓	1	2	3	4	5
Job Title: General Flammable Gas Work	Frequency (B)	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift
Job Number or Job Identifier: LS-JRA-0011						
Job Description: Work with flammable gas cylinders and systems, including brazing and welding use.	Severity (C)	First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability
	Likelihood (D)	Extremely Unlikely <<1x/20yrs	Unlikely 1x/10-20yrs	Possible >1x/10-20yrs	Probable 1x/yr	Multiple >1x/yr
Training and Procedure List (Optional):						
Approved by: A. Ackerman Date: 7/29/08 Rev. #: 2 Revision Log						
Stressors (if applicable, please list all): Weather related (cylinders stored outdoors)			Reason for Revision (if applicable):			Comments:

Job Step / Task	Hazard	Before Controls						Initial Controls	After Initial Controls					Control(s) Added to Reduce Risk	After Additional Controls					
		Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD		# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD		# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	% Risk Reduction
Transporting gas cylinders between storage area and area of use.	Overexertion injuries – excessive lifting, pushing, pulling, holding or carrying.	Y	1	3	3	4	36	Wheeled gas carts, training, cylinders secured properly, storage area well maintained, door threshold design	1	3	3	3	27							

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Transporting gas cylinders between storage area and area of use.	Fire or explosion due to ignition of flammable gas release.	N	1	3	5	3	45	Cylinder certification, training, cylinders capped and secured.	1	3	5	2	30							
	Being struck by an object (cylinder or surrounding items) due to pressure release.	N	1	3	3	3	27	Proper strapping at area of use.	1	3	3	2	18							
	Being stung by bees or wasps nesting in cylinder caps	N	1	3	2	2	12	Check for nest before moving cylinder	1	3	2	2	12							
Connecting and disconnecting: Regulator to/from cylinder Or Regulated cylinder to/from manifold or system	Fire or explosion due to ignition of flammable gas release.	N	1	3	4	3	36	Use of proper regulator, Experimental Review, No adapters permitted, training	1	3	4	1	12							
	Strain injuries	N	1	3	2	3	18	Use of proper tools, Tighten the assembly with one hand only to prevent overtightening.	1	3	2	2	12							
	Being struck by object (cylinder, regulator or surrounding materials) due to pressure release.	N	1	3	3	3	27	Regulator design, gas system design/review, cylinders secured, training.	1	3	3	2	18							

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Use of flammable gas for experiments	Fire or explosion due to ignition of gas.	N	1	3	4	3	36	System design review, training, experimental review, ventilation, limit quantities of gas in use, spark resistant tools, explosion proof rated components.	1	3	3	2	24							
	Being struck by object (cylinder, regulator, hose or surrounding materials) due to pressure release.	N	1	3	3	3	27	Equipment inspection, gas system design/review, cylinders secured, training, Tier I	1	3	3	2	18							
Use of flammable gas for soldering, brazing or welding.	Fire or Explosion due to improper gas mixture or leaking hoses, nozzles or valves	N	1	3	4	3	36	Setting regulators properly for gas in use, hot work permit, fire watch, fire extinguisher training, inspection of equipment before use, training	1	3	4	2	24							
	Fire due to ignition of surrounding combustible materials	N	1	3	4	3	36	Hot work permit, fire watch, fire extinguisher training, remove combustibles from the area.	1	3	4	2	24							
	Contact with temperature extremes (burns).	N	1	3	2	3	18	Personal Protective Equipment (gloves, long pants, safety glasses), training	1	3	2	2	12							

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	Eye injury from visible light/UV exposure and hot material splash	N	1	3	4	5	60	Properly rated welding goggles, helmet, or safety glasses, flash curtains	1	3	4	1	12								
Use of oxidizing gases (in addition to flammable gas use hazards)	Fire due to reaction of gas with surrounding materials.	N	1	2	4	3	24	Work planning, ventilation, limit quantities of gas in use, limit combustible storage, training	1	2	4	2	16								
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				