

Light Sources Directorate OHSAS Job Risk Assessment

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Name(s) of Risk Team Members: M. Buckley, B. Chmiel, K. Klaus, J. Trunk, S. Wirick	Point Value → Parameter ↓	1	2	3	4	5
Job Title: Work with Compressed Gas Cylinders and Systems	Frequency (B)	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift
Job Number or Job Identifier: LS-JRA-0009						
Job Description: Work with non-flammable compressed gas cylinders and systems (including oxidizers)	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): Compressed Gas Safety (TQ-COMPGAS1)						
Approved by: A. Ackerman Date: 9/28/10 Rev. # 3 Revision Log						
Stressors (if applicable, please list all): Weather related (storage area is outside the building)	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	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	1	3	3	3	27							

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use.	Exposure to release of toxic substances.	Y	1	2	4	2	16	maintained, door threshold design, Tier I	1	2	4	1	8							
Handling and transporting gas cylinders between storage area and area of use.	Being struck by an object due to pressure release.	N	1	3	3	3	27	Cylinder certification, training, cylinders capped and secured. 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							
	Caught between objects (pinch hazard)	Y	1	3	3	4	36	Cylinders stored and secured properly	1	3	3	3	27							
Connecting and disconnecting: Regulator to/from cylinder Or Regulated cylinder to/from manifold or system	Strain injuries	N	1	3	2	3	18	Use of proper tools, Do not overtighten fittings	1	3	2	2	12							
	Being struck by object due to pressure release.	N	1	3	3	3	27	Use of proper regulator, regulator design, gas system design/review, cylinders secured, training.	1	3	3	2	18							
Use of non-flammable gases (including toxic gases)	Being struck by object due to pressure release.	N	1	3	3	3	27	Equipment inspection, gas system design/review, gas lines secured, cylinders secured, training, Tier I	1	3	3	2	18							

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	Injuries caused by exposure to release of toxic substances	N	1	2	5	4	40	Experimental review, gas system design/review ventilation, equipment inspection, limit quantities in use	1	2	3	2	12								
	Oxygen deficiency hazard	N	1	2	5	2	20	Experimental review, ventilation, equipment inspection, limit quantities in use	1	2	3	1	6								
Use of oxidizing gases (in addition to non – flammable gas use hazards)	Fire due to reaction of gas with surrounding materials.	N	1	2	4	3	24	System design review, experimental review, ventilation, limit quantities of gas in use, limit combustible storage, Tier I	1	2	4	2	16								
Storing reactive gas cylinders	Over pressurized cylinder, release of gas	N	1	1	3	5	15	Tier I inspection of cylinders, User inspection	1	1	2	5	10								
*Risk:	0 to 20 Negligible	21 to 40 Acceptable					41 to 60 Moderate					61 to 80 Substantial					81 or greater Intolerable				