

Name(s) of Risk Team Members: R. Karol, A. Etkin, S. Seberg, A. Nicoletti, A. Warkentien, T. Tallerico			Point Value → Parameter ↓	1	2	3	4	5				
Area/Facility Description Title: Collider-Accelerator Department Area/Facility # (if applicable): Facility-Wide FRA 4-05			Occupancy or Use (A)	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift				
Area/Facility Description: Facility-Wide ODH			Severity (B)	First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability				
			Likelihood (C)	Extremely Unlikely	Unlikely	Possible	Probable	Multiple				
Approved by: <i>E. Lessard</i> Date: 1/11/05 Rev.#: 0			Reason for Revision (if applicable): Annual review			Comments:						
				Risk with Controls in Place			Risk with Additional Controls in Place					
Physical Item or Activity	Hazard(s)	Control(s)	Occupancy A	Severity B	Likelihood C	Risk* AxBxC	Control(s) Added to Reduce Risk	Occupancy A	Severity B	Likelihood C	Risk* AxBxC	% Risk Reduction
Cryogenic fluids and systems	Oxygen deficiency	ODH analyses, ODH controls, ASSRC reviews, ESRC reviews, training, postings, interlocked emergency exhaust fans, PPE, remote/local audible/visible alarms, emergency response, EMTs, work planning, procedures, POMs, medical clearance, escape pack, MSDS, LOTO, postings, Cryo-system designs to consensus codes, inspections, relief valve testing	5	5	2	50	See Note below					
Gasses	Oxygen deficiency, toxic/flammable gas	ODH analyses, ODH controls, training, ASSRC reviews, ESRC reviews, interlocked emergency exhaust fans, remote/local audible/visible alarms, emergency response, EMTs, work planning, POMs, medical clearance, escape pack, MSDS, LOTO, postings, designs to consensus codes, flammable gas alarms, cylinder storage controls, cylinder labels, gas volume limits, inspections, cylinder hydrostatic testing	4	5	2	40						
Fire extinguishing agents	Oxygen deficiency	Posting, emergency response, EMTs, LOTO, training, L18A CO2 bypass, use of Halon and Inergen	3	5	2	30						
Confined spaces	Oxygen deficiency, toxic/flammable gas	Training, atmospheric testing before entry and periodically, entry procedures, Permits, work planning, LOTO, respirators, forced ventilation, personnel rescue equipment, emergency planning and response, EMTs	2	5	2	20						
Further Description of Controls Added to Reduce Risk: ASSRC is currently reviewing the controls for ODH safety during working on open RHIC magnets with nitrogen purging. See ATS #2189.												
*Risk:	0 to 20	21 to 40	41-60			61 to 80			81 or greater			
	Negligible	Acceptable	Moderate			Substantial			Intolerable			