Job/Task Hazard Assessment Form

General Information

Date of Review		Type of Assessment	THA	Reference Number		Revision #	0

Job/Task Details	Job Title/Task Description	SCDMS - Detector Tower Surface to UG Transfer (Forklift to Forklift)	Assessment Team Members *(list each team member along with their designation and department)*	Alex Claveau - Project Co-ordinator Thejus Tom - EHS Technician
	Location/ Equipment *(if applicable)*	Surface warehouse to UG SNOLAB Facility via Creighton 9 shaft		

Task Lead/ Supervisor	Alex Claveau	Task Lead/ Supervisor Signature	Line Manager Name	Michel Seguin	Line Manager Signature

Job/Task Specific Training *List any training that is required for this job/task outside of the typical SNOLAB onboarding training.*	Forklift Training Lifting and Rigging may become applicable

Hazard Identification and Risk Assessment

Instructions: (A) Break the job/task down into activities/steps. (B) For each step, identify the hazards. (C) For each hazard identify the specific consequences. (D) For each hazard, identify controls that SNOLAB already has in place. (E) Conduct a baseline risk assessment using SNOLAB's Risk Assessment Matrix. Select the Severity and Probability from the drop down lists in each cell. (F) Identify additional control measures required. For JHAs additional control measures will be the requirement of a THA. (G) Assign a party responsible for implementing the controls. (H) Conduct a final Risk Assessment to determine the residual risk. If the risk is not low, it may require additional controls (this section is not completed for JHAs).

Step #	Description of Activity/Step (A)	Hazards (B)	Consequences *People, Environment, Assets, Reputation* (C)	Existing Controls (D)	Baseline Risk Assessment *With existing controls* (E)			Additional Control Measures / Actions (F)	Responsible Party (Action By) (G)	Residual Risk (H)		
					Severity	Probability	Risk			Severity	Probability	Risk
1	Moving SCDMS Detector Tower Crate from SNOLAB Warehouse to VALE #9 Shaft Cage	• High Mobile Equipment and Pedestrian Traffic Area • Uneven Ground - Crate contents and or crate may shift • Poor lighting and visibility	• Potential Cargo Damage (Bents/Punctures, etc.). • Damage & Static Shock (Sensitive Equipment) - Would effect SNOLAB's Reputation as well as Delay the Project (irreplacable Item) • Crushing Injuries / Pinch Point • Fatalities	• Forklift Pre-operation inspection for model used • Suitable PPE Protection • Experience Forklift operator • Maintain Constant communication between forklift operator and signaler • Restrict Access to Working Area for authorized personnel only (involved in this task) • Communicate will all parties (VALE and SNOLAB personnel and Equipment within Travel Area) • Good housekeeping practices will be maintained to avoid uneven ground	Catastrophic	Occasional	High	• Thoroughly determine when forklift forks are fully engaged underneath Detector Tower Crate. • Determine proper transportation travel path (Walkthrough* WALK the LINE*) prior to starting transporting task. • second worker verification of securement methods for Detector tower crate(verify rachet straps are secure) • Re-using methods and pathways used in dilution fridge shipment reduces risk to items as loads/vibration were acceptable in this shipment	• Forklift Operator & One (1) Signaller • Logistics Supervisor • Project co-ordinator • optional experimental staff(to provide subject matter expertise)	Catastrophic	Remote	Medium
					5	2	10			5	1	5

SNOLAB

JOB/TASK HAZARD ASSESSMENT (JHA/THA)

Hazard Identification and Risk Assessment Continued

Step #	Description of Task Step (A)	Hazards (B)	Consequences *People, Environment, Assets, Reputation* (C)	Controls (D)	Baseline Risk Assessment *With existing controls* (E)			Additional Control Measures/Actions (F)	Responsible Party (Action By) (G)	Residual Risk (H)		
					Severity	Probability	Risk			Severity	Probability	Risk
2	Detector Tower Crate Transportation from UG #9 Shaft Station to SNOLAB Site	• As per 1. B • Narrow Drift Opening • 15 kV Electrical Lines hanging from Ceiling • Original Windy Tunnel Transportation Path blocked, Alternate travel path (IM Shop) selected	• As per 1. C Narrow Drift and large crates reduces Forklift operator visibility when transporting crate • Crates could be damage and or stuck Drift Opening Walls and Ceiling / Back • Electrocution • Crushing Injuries • Fatality	• Forklift Pre-operation inspection for model used • Additional UG PPE equipment Required (including Radio caplamps, whistles for signalling) • PC and forklift operator to walk the line prior to start of task (from UG #9 Shaft Station to SNOLAB Site • Transport Crates at a slower then normal pace (Lowest speed as possible) • Maintain constant communication between PC and forklift operator when transporting crates from #9 shaft to SNOLAB Site.	Catastrophic	Occasional	High	• PC to walk area and signal Forklift Operator via whistle • PC to Signal All Pedestrian as well as incoming and/or outgoing Mobile Equipment during crate transportation (VALE and or SNOLAB) • second worker verification of securement methods for Detector tower crate(verify rachet straps are secure) • Re-using methods and pathways used in dilution fridge shipment reduces risk to items as loads/vibration were acceptable in this shipment	• Forklift Operator & One (1) Signaller • Logistics Supervisor • Project co-ordinator • optional experimental staff(to provide subject matter expertise)	Catastrophic	Remote	Medium
					5	2	10			5	1	5

SNOLAB

JOB/TASK HAZARD ASSESSMENT (JHA/THA)

Hazard Identification and Risk Assessment Continued

Step #	Description of Task Step (A)	Hazards (B)	Consequences *People, Environment, Assets, Reputation* (C)	Controls (D)	Baseline Risk Assessment *With existing controls* (E)			Additional Control Measures/Actions (F)	Responsible Party (Action By) (G)	Residual Risk (H)		
					Severity	Probability	Risk			Severity	Probability	Risk
3	Detector Tower Crate Transportation Inside SNOLAB	• As per 2. B • Crates Contents shifted potential during transportation • Crates Disassembly within Dirty Carwash (Including top lid and side walls) • Transfer Detector Tower from crate to SNOLAB clean pallet	• As per 2. C • Narrow Working area within Dirty Carwash • Nails and or broken/sharp wood splinters (Nail and Wood Impalement) • Damaged Detector Tower - Item may Shift within crate during transportation • Crushing Injuries	• Forklift Pre-operation inspection for model used • Suitable UG PPE Equipment • Housekeeping (disposal of each crate segment the moment it's removed from the crate) • Maintain constant communication between PC and forklift operator when transporting crates inside SNOLAB carwash.	Catastrophic	Remote	Medium	• Remove all potential slips, trips and fall hazards from Dirty Carwash area • Predetermined methods and procedures for cleaning and transportation developed with FermiLab • FermiLab experts on-hand to provide additional information and safety guidance should unexpected events occur.	• Cleaner/Maintainer(1 or more) • Forklift Operator & One (1) Signaller • Project co-ordinator • optional experimental staff(to provide subject matter expertise)	Critical	Remote	Low
					5	1	5			3	1	3