GENERAL RISK ASSESSMENT TEMPLATE

Work area / operation	CB11.10.403	**Assessor's name**	Eliza Tam
Other persons consulted	Sarah Abadir, Leon Salvaggio	**Date of safety assessment**	7/10/2023
Subject Coordinator's Name	Gavin Paul	Lab Supervisor's Name	Michael Lee

ACTIVITY - Describe hazardous activities related to the work area or operation.	**ASSOCIATED HAZARDS**	**INHERENT RISK** - Harm that could occur from these hazards if controls fail or are not in place.	**EXISTING CONTROL MEASURES**	**PROPOSED CONTROL MEASURES** - Proposed action to minimise risk to an acceptable level.	**TARGET DATE** - To implement proposed controls	**RESIDUAL RISK LEVEL** (H,M,L)
Electrical cables mishandled	Trip hazard, cluttered workspace	Injury to persons, electrical shock, robot malfunction	Cable covers/protectors	Ensure cables are properly organised and kept within the cabinet the robot sits on/fed under the table. Continue to use cable covers if they must cross open areas	16/10/23	L
Leaving the robot arm unattended	Unaccounted movement/collision	Damage to equipment and surrounding objects	Ensure that the robot is off if you're leaving the room	Always have at least one individual supervising the robot	16/10/23	L
Using inappropriate load on the robot	Unaccounted movement/behaviour	Injury to persons, damage to robot	Train users of the robot arm on proper operation and ensure they understand its requirements and limitations	Make sure users know the weight of the load/s of the objects the arm will interact with before operation	16/10/23	L
Robot arm moves incorrectly	Collision with surroundings	Damage to equipment and persons	Train users of the robot arm on proper operation. The Omron TM5 has preset safety parameters as well. Test through simulation first	Wear PPE such as enclosed shoes or steel-capped boots. Reduce the movement speed of the robot during testing.	16/10/23	L
Incorrect manual handling	Injury to self, lifting heavy objects	Injury to back, damage to robot	Transport robot using a trolley/moving cart	Work in pairs to move the robot around	16/10/23	L
Operating robot when tired or distracted	Incorrect operation/handling, slowed reaction speed	Injury to persons	Work in pairs/groups	Have another member of the group operate the robot or ensure that you achieve enough sleep the night before you know you have to use the robot	16/10/23	L
Mishandling or dropping glassware such as cups	Sharps	Lacerations and cuts	Test through simulation first. Make sure glassware is not left close to table edges	Use plastic alternatives during testing phase. Wear enclosed shoes	16/10/23	L

Spilling liquids during robot movement	Slip hazard	Injury to persons, damage to electrical equipment such as cables	Test without any liquid inside the cups first	Put barriers in place, place wet floor signage if spills do occur and clean up immediately when safe to do so	16/10/23	L

Approval of assessment	I am satisfied that the residual risk with existing controls is acceptable ☐ Yes ☐No OR I am satisfied that that the proposed controls will reduce risk to an acceptable level. ☐Yes ☐No	Signature	Eliza	Date	7/10/23

Guidance notes for documenting General Risk Assessments

ACTIVITY

Briefly describe this hazardous work activity - E.g. Operating, Handling, Using … (Include names) of hazardous equipment, substances or materials used, and any quantities and concentrations of substance(s) or reaction products.

ASSOCIATED HAZARDS

Plant & Equipment – noise, vibration, moving parts (crushing, friction, stab, cut, shear), pressure vessels, lifts/hoists/cranes, sharps
Manual Handling – repetitive movements, lifting awkwardly, lifting heavy objects
Work Environment – moving objects, extremes in temperature, isolation, work at height, allergies to animal bedding, dander and fluids, risk of fire/explosion, slippery surfaces/trip hazards
People – potentially violent or volatile clients/interviewees
Communicable Diseases – exposure to bodily fluids/infectious materials, animal bites and scratches,
Environmental – emissions to atmosphere, discharge to soil and water bodies (including stormwater run-off), nuisance noise & odour, poor ventilation/air quality
Radiation (non-ionizing) – including lasers, microwaves or UV light
Electrical – plug-in equipment used in 'hostile' work environment, exposed conductors, high voltage equipment
Pathogens – dealings with pathogenic microorganisms such as bacteria, parasites, fungi or viruses
GMOs – dealings with genetically modified organisms
Cytotoxins – carcinogens, mutagens or teratogens
Radiation (ionizing) – Ionizing radiation source such as radioactive substance or radionuclide, or irradiating apparatus
Chemical – hazardous substances, dangerous goods, fumes, dust, compressed gas, hazardous waste

INHERENT RISK

Provide details of the harm that could be caused to people or the environment if something goes wrong.
For example: inhalation of fumes, laceration, injury to back, infection, burns to skin or eyes.
Think about what could happen if controls fail or are not in place.

CONTROL MEASURES

Note the existing and proposed actions to reduce risk to an acceptable level. Apply the "Hierarchy of Controls", listed below, when deciding the best control measure to apply. Control types closer the top of the list are preferable.

1. ELIMINATE THE HAZARD. For example: use a different less dangerous piece of equipment, fix faulty machinery, use safer materials or chemicals
2. ISOLATE THE HAZARD FROM THE PEOPLE. Separate people from the danger. For example: use shielding, use lifting equipment or trolleys, remove dust or fumes with exhaust system, lock-out machinery.
3. CHANGE THE WAY THE JOB IS DONE. For example: change work practices, provide training, information and signs, develop work procedures.
4. USE PERSONAL PROTECTIVE EQUIPMENT (PPE), noting specific PPE is required for each job. For example: respirator, hearing protection, gloves. Training and information is required for the use of PPE.

RESIDUAL RISK LEVEL (H, M, L)

Estimate risk taking into account the way the activity is run and control measures put in place. The level of risk can be determined by combining consequence and likelihood using the risk matrix from below. Residual risk should be reduced to a level acceptable by management.

CONSEQUENCE OF HARM - This is how bad it will be if something does go wrong e.g. the number of people that could be harmed, the severity of injury.

LIKELIHOOD OF HARM - Chance of harm occurring is affected by the duration of the activity and its frequency; the number of people doing the activity and the level of exposure to the hazard.

		CONSEQUENCE				
		Insignificant	Minor	Moderate	Major	Catastrophic
	Injury/illness consequence	Non-injury incident	Injury/ill health requiring first aid	Injury/ill health medical attention	Injury/ill health requiring hospital admission	Fatality or permanent disabling injury
	Environmental consequence	Minor effects on biological or physical environment	Moderate short term effects but not effecting ecosystem functions	Serious medium-term environmental effects	Very serious long term impairment of ecosystem functions	
LIKELIHOOD: Almost Certain	The event will occur on an annual basis	Moderate	High	High	Critical	Critical
Likely	The event has occurred several times or more in your career	Moderate	Moderate	High	High	Critical
Possible	The event might occur once in your career	Low	Moderate	Moderate	High	High
Unlikely	The event does occur somewhere from time to time	Low	Low	Moderate	Moderate	High
Rare	Heard of something like this occurring somewhere	Low	Low	Low	Moderate	Moderate