



Pressure/Stored Energy

ID 8408	Alert Number CRITICAL RISK	Next Review 01/03/2024
GPS Longitude	GPS Latitude	Location
Category Activity/Task	Reported By Karen Bonney	Significant Risks Yes
Site	Date 11/06/2021	Status Completed
Description Risk of injury/fatality due to burns/explosion Building and equipment damage		

Hazard Identified

Hazard Classifications	Hazard Category	Hazard	Risk
Physical	Thermal extremes	Burns	Thermal burn
Physical	Equipment	Pressurised vessels	Risk of Injury
Physical	Work practices	Lack of training	Potential for injury
Emergency	Physical	Potential injury or death	Potential injury or death

Risks Identified

Risk	Risk/Score
Personal Injury	- High

Residual Risk Rating 6.00

Type	Control	Control Name	Status	Description
New	Administrative Controls	Qualifications and Training	Completed	Training and competency assessments for the safe operation of pressurized equipment (e.g. autoclaves). Qualified boiler workers/engineers for boiler/steam (maintenance, installation, certification and monitoring)
New	Personal Protective Equipment	Permit to work policy	Completed	Permit to work policy and manual requirements for confined space work.
New	Administrative Controls	Audit/Monitoring	Completed	Annual certification requirements for all pressure vessels/equipment.
New	Personal Protective Equipment	PPE	Completed	Use of correct personal protective equipment and clothing as assessed
New	Administrative Controls	SOP	Completed	Risk assessments and SOP's for the operation of pressurized vessels and equipment
Modified	Administrative Controls	Code of Practice	Completed	See attached URL for Worksafe COP both boilers and non boilers

Reviews

Date	Person	Findings	Actions	Status
01/03/2023	Andrea McMillan	Controls updated		Completed

Plant and equipment

ID 8432	Alert Number CRITICAL RISK	Next Review 06/03/2024
GPS Longitude	GPS Latitude	Location
Category Activity/Task	Reported By Karen Bonney	Significant Risks Yes
Site	Date 14/06/2021	Status Completed
Description	Lack of operator competency/training resulting in injury/harm. Risk of electric shock (refer to electrical equipment) Unassessed plant and equipment for Health and Safety risks. Lack of appropriate guarding resulting in injury. Unrestricted access allowing operation of machinery without supervision resulting in harm. Poorly maintained plant resulting in harm/injury, exposure to fumes. Noise generated in excess of 85 decibels averaged over 8 hours or peak noise levels exceeding 140 decibels. Potential for generation of dust and air contaminants for operators. Adverse impact on the environment-hazardous substance spills, inappropriate disposal of waste. Lack of procedure for safe decommissioning and removal of plant at end of useful life (refer to "ionising Radiation" and "Non-ionising radiation" categories for specific information.	

Hazard Identified

Hazard Classifications	Hazard Category	Hazard	Risk
Physical	Equipment	Contact with hot/cold surfaces	Risk of illness
Physical	Equipment	Guarding inadequate	Risk of Injury
Physical	Equipment	entanglement	Risk of Injury
Physical	Equipment	Moving parts	Risk of Injury
Physical	Equipment	Noise	Risk of illness
Physical	Equipment	Plant/equipment not maintained	Risk of Injury
Physical	Equipment	Potential for projectiles	Risk of Injury
Physical	Equipment	Sharp blades/parts	Risk of Injury
Physical	Equipment	Dust generation	Risk of illness
Physical	Electrical	Use in wet environment	Electrocution
Physical	Electrical	Faulty equipment	Electrocution
Physical	Electrical	Overloading	Fire

Risks Identified

Risk	Risk/Score
Personal Injury - (multiple types of plant and equipment with a range of hazards. Unsupervised or unskilled use has a high potential for injury.)	- Very High

Residual Risk Rating 6.00

Type	Control	Control Name	Status	Description
New	Engineering Controls	External accreditation or certification	Completed	Plant and equipment must be fit for purpose, maintained, repaired and certified as required. External certification may be required.
New	Administrative Controls	Inspection and audits	Completed	Auditing and inspection of plant and equipment to ensure safe for operation
New	Administrative Controls	Training	Completed	Procedure guidelines in use, and competency training. restrict use to authorized users who have demonstrated competency.
New	Engineering Controls	Guarding	Completed	Ensure appropriate guarding is in place and used.
New	Administrative Controls	Standard Operating Procedures available	Completed	SOP documented and used for training, and available for all users.
New	Administrative Controls	Internal Policy and/or Guidelines	Completed	Pre-purchase health and safety risk assessment of plant for noise, guarding, hazardous substances. Training and maintenance provision by vendor as a part of purchasing arrangements.
New	Personal Protective Equipment	Personal Protective Equipment	Completed	Wearing appropriate personal protective clothing and equipment as defined in the SOP.
New	Engineering Controls	Noise levels managed below 85DBA or 140 DBA peak	Completed	Noise levels maintained below hearing loss levels at 85 DBA per 8 hour average or peak of 140 DBA.

New	Administrative Controls	Personal or environmental monitoring	Completed	hearing monitoring by Occupational Health team as identified by Noise levels. Occupational health monitoring procedure
New	Administrative Controls	AS/NZS Standard 3003 Electrical installations	Completed	Body protected areas are used where necessary, and certified to the standard AS/NZS 3003 Electrical installations - Patient areas. Electrical installations in high risk areas, such as laboratories, as per AS/NZS 3003.
New	Administrative Controls	Internal Policy and/or Guidelines	Completed	Electrical Testing of portable electrical equipment policy and guidelines - outlines required testing of equipment

Hazardous Substances

ID 8440	Alert Number CRITICAL RISK	Next Review 27/02/2024
GPS Longitude	GPS Latitude	Location
Category Substance	Reported By Andrea McMillan	Significant Risks Yes
Site	Date 11/06/2021	Status Underway
Description range of hazardous substances in use at various campus locations HSNO Classes 1 - 9		

Hazard Identified

Hazard Classifications	Hazard Category	Hazard	Risk
Chemical	Hazardous Chemicals	Body contact/exposure	Injury (e.g. burns)
Chemical	Hazardous Chemicals	Fire or Explosion	Injury (e.g. burns)
Chemical	Hazardous Chemicals	Spill or Release	Damage to facilities/equipment
Physical	Storage	Inappropriate storage	Potential for injury
Physical	Transport	Loss of control	Environmental
Physical	Transport	Loss of control	Potential for injury or fatality
Emergency	Physical	Potential injury or death	Potential injury or death
Physical	Housekeeping	Spills on surface	Potential for illness/injury
Physical	Work practices	Inexperienced workers	Potential for injury
Physical	Work processes	Inadequate operating procedures	Potential for injury
Chemical	Hazardous Chemicals	Body contact/exposure	Potential illness
Physical	Work layout / area	Layout not suitable for purpose	Potential for injury

Risks Identified

Risk	Risk/Score
Personal Injury - (potential for injury, burns, explosion, poisoning and environmental contamination by hazardous substances stored on site if not managed appropriately)	- Very High

Residual Risk Rating 5.00

Type	Control	Control Name	Status	Description
New	Administrative Controls	Internal Policy and/or Guidelines	Completed	HSNO Approved COP for laboratories.
New	Engineering Controls	Internal Policy and/or Guidelines	Completed	Statutory budget, lab design and refurbishment safety in design to eliminate hazardous substances exposure (e.g. compliant storage cabinets, ventilation, shelving restraints)
New	Administrative Controls	Training	Completed	lab access and inductions required by all staff and contractors. Students - supervised until deemed competent.
New	Administrative Controls	External accreditation or certification	Completed	Hazardous Substances storage locations identified and certified under HSNO. Annual certification process. Specific emergency response training for each store/location in place

New	Personal Protective Equipment	Personal Protective Equipment	Completed	Supply and use of personal protective clothing and equipment in laboratories in clinical areas. Examples include safety glasses/goggles, gloves, respiratory protection, lab coats.
New	Administrative Controls	restricted substances management	Completed	Restricted or controlled substances (psychoactive substances, Class A & B drugs, 1080, etc.) have permits issued for the use and transportation of substances, authorised by the certifying body (ministry of health, Environmental Protection Agency).
New	Administrative Controls	Safety Data Sheets	Completed	Ensure access to SDS for any hazardous chemical/ substance being used/stored on site to ensure correct storage, PPE, disposal, first aid measures and compatibility with other substances.
New	Administrative Controls	External accreditation or certification	Underway	WorkSafe NZ approved Code of Practice under review to meet requirements of HASAW (Hazardous Substances) regulations 2017 - current draft is not practicable for University laboratories.
New	Administrative Controls	Hazardous substances inventory management	Underway	Exel spreadsheet inventories only - no IT inventory support system for hazardous substances inventory and controls. part of supply chain project.

Reviews

Date	Person	Findings	Actions	Status
27/02/2023	Karen Bonney	Added control		Completed

Electrical work/high voltage

ID 8447	Alert Number CRITICAL RISK	Next Review 31/01/2024
GPS Longitude	GPS Latitude	Location
Category Construction	Reported By Karen Bonney	Significant Risks Yes
Site	Date 11/06/2021	Status Completed
Description - Electrocutation, burns, fatality. - Explosion fire - Equipment/ Plant damage		

Risks Identified

Risk	Risk/Score
Personal Injury - (Risk of electrocution/death)	- Very High

Residual Risk Rating 6.00

Type	Control	Control Name	Status	Description
New	Administrative Controls	Training	Completed	Trained electricians only to conduct electrical work
New	Elimination	lock out/tag out	Completed	Lock out/Tag out equipment for electrical repairs
Modified	Administrative Controls	Qualifications	Completed	High voltage installations by external experts with certification and auditing as defined by the installation
Modified	Engineering Controls	Standards	Completed	Required regulations/Std's for building/maintenance complied with via PSD and Campus Development

Reviews

Date	Person	Findings	Actions	Status
31/01/2023	Karen Bonney	Added NZ standards and legislation URL's		Completed

Compressed gases

ID 8448	Alert Number CRITICAL RISK	Next Review 01/03/2024
GPS Longitude	GPS Latitude	Location
Category Activity/Task	Reported By Andrea McMillan	Significant Risks Yes
Site	Date 11/06/2021	Status Completed
Description Compressed gas hazards - risk of explosion of cylinder, risk of fire, risk of discharge of contents, risk of manual handling injury, risk of spill/burn or similar		

Hazard Identified

Hazard Classifications	Hazard Category	Hazard	Risk
Chemical	Compressed Gases	Cylinder damaged or leaking	Asphyxiation/Poisoning
Chemical	Compressed Gases	Cylinder damaged or leaking	Fire or Explosion
Chemical	Compressed Gases	Unrestrained cylinder	Injury
Physical	Manual handling	Heavy loads	Potential for injuries
Physical	Equipment	Contact with hot/cold surfaces	Burns
Physical	Storage	Inappropriate storage	Potential for injury
Chemical	Hazardous Chemicals	Body contact/exposure	Potential illness
Chemical	Hazardous Chemicals	Fire or Explosion	Injury (e.g. burns)

Risks Identified

Risk	Risk/Score
Personal Injury - (Compressed gas can be toxic, flammable, oxidizing, corrosive or inert. In the event of a leak, inert gases can quickly displace air and create an oxygen deficient atmosphere, toxic gases can poison and flammable or reactive gases can explode or burn. The pressure from the gas and weight of the cylinders can cause injury, falling cylinders can cause injury as well as substance release.)	- Very High

Residual Risk Rating 6.00

Type	Control	Control Name	Status	Description
New	Administrative Controls	Training	Completed	Education and training on the safe handling, use and storage of cylinders. Delivery by authorized persons only. repairs by authorised persons only.
Modified	Administrative Controls	Internal Policy and/or Guidelines	Completed	HSNO COP and lab safety manual outline requirements for cylinder management. Stat budget and building/lab design and refurbishment requires double chaining of cylinders valve cap to be in place when not in use. colour coding and labelling of cylinders store cylinders in appropriate place with adequate ventilation, away from heat, flame and the sun. high risk gases must have SOP
New	Engineering Controls	Equipment	Completed	use of trolleys/hand trucks or similar for the moving of large cylinders use of value protection caps mark or tag EMPTY cylinders

Reviews

Date	Person	Findings	Actions	Status
01/03/2023	Andrea McMillan	NFA		Completed

Permit to Work

ID 8453	Alert Number CRITICAL RISK	Next Review 01/03/2024
GPS Longitude	GPS Latitude	Location
Category Activity/Task	Reported By Karen Bonney	Significant Risks Yes
Site	Date 11/06/2021	Status Completed
Description Injury from confined space or atmospheres created by plant and equipment		

Hazard Identified

Hazard Classifications	Hazard Category	Hazard	Risk
Physical	Confined Space Entry	Difficulty with removal in the event of an emergen	fatality
Physical	Confined Space Entry	lack of oxygen	Loss of Consciousness
Physical	Confined Space Entry	Limited space/restricted access	risk of injury
Physical	Hot work outside workshop/alb	Risk of Fire	Injury
Emergency	Business interruption	Building unavailability	Unable to continue teaching/research

Risks Identified

Risk	Risk/Score
Financial	- Very High

Residual Risk Rating 7.00

Type	Control	Control Name	Status	Description
Modified	Administrative Controls	Permit to work policy	Completed	Permit to work is issued for all permitted work as defined by the policy and manual
Modified	Administrative Controls	Monitoring	Completed	Monitoring of all permits
New	Administrative Controls	Contractor Management	Completed	Management of contractors and review of their permit systems
New	Administrative Controls	Training	Completed	Permit issuer/receiver training

Reviews

Date	Person	Findings	Actions	Status
01/03/2023	Andrea McMillan	Updated controls		Completed

Lone Worker

ID 8455	Alert Number CRITICAL RISK	Next Review 01/03/2024
GPS Longitude	GPS Latitude	Location
Category Activity/Task	Reported By Karen Bonney	Significant Risks Yes

Type	Control	Control Name	Status	Description
New	Administrative Controls	Training and/or Supervision	Completed	Users must be trained in the safe use and disposal of sharps.
New	Personal Protective Equipment	Use of PPE	Completed	Appropriate use of gloves when handling possibly sharp items e.g. splinters metal shards

Reviews

Date	Person	Findings	Actions	Status
22/01/2016	Bonney, Karen June			Completed
15/06/2021	Karen Bonney	Updated description and controls		Completed
01/03/2023	Karen Bonney	Updated Controls		Completed

Alarm

ID 8490	Alert Number CRITICAL RISK	Next Review 01/03/2024
GPS Longitude	GPS Latitude	Location
Category Plant	Reported By Karen Bonney	Significant Risks Yes
Site	Date 22/09/2021	Status Completed
Description Alarms to notify of unsafe conditions or faults		

Hazard Identified

Hazard Classifications	Hazard Category	Hazard	Risk
Emergency	Physical	Potential injury or death	Potential injury or death
Physical	Work processes	Inadequate operating procedures	Potential for injury
Environment	Internal	Non-authorized persons	potential for injury

Risks Identified

Risk	Risk/Score
Personal Injury	- High

Residual Risk Rating 6.00

Type	Control	Control Name	Status	Description
New	Administrative Controls	Protocols in place	Completed	Ensure emergency responders are aware of alarm meaning and responses. Responders trained appropriately
New	Engineering Controls	Alarms installed	Completed	Appropriate alarms installed according to the risk e.g. Fire, O2 depletion. Alarms maintained and tested a required.
New	Administrative Controls	Training	Completed	Ensure people working in the area are aware of what alarms mean. Flip charts and procedures on site

Guarding and Maintenance

ID 8515	Alert Number Critical Risk	Next Review 01/03/2024
GPS Longitude	GPS Latitude	Location
Category Plant	Reported By Andrea McMillan	Significant Risks Yes

Hazard Identified

Hazard Classifications	Hazard Category	Hazard	Risk
Physical	Equipment	Guarding inadequate	Risk of Injury
Physical	Equipment	entanglement	Risk of Injury
Physical	Equipment	Moving parts	Risk of Injury
Physical	Equipment	Plant not certified	Risk of Injury
Physical	Equipment	Plant/equipment not fit for purpose	Risk of Injury
Physical	Equipment	Plant/equipment not maintained	Risk of Injury

Risks Identified

Risk	Risk/Score
Personal Injury	- Very High

Residual Risk Rating 7.00

Type	Control	Control Name	Status	Description
New	Engineering Controls	Manufacturers specifications	Completed	Ensure manufacturers specifications are adhered to
New	Elimination	Risk assessment prior to purchase	Completed	Assessment to ensure safest (buy safe) equipment is purchased
Modified	Administrative Controls	Training and/or Supervision	Completed	All users of equipment have been trained in the safe use and SOP Untrained staff to be excluded from area
New	Engineering Controls	Guarding of moving parts	Completed	Ensure moving parts are adequately guarded and maintained. Risk assessment of machinery.
New	Personal Protective Equipment	PPE	Completed	Ensure correct PPE is supplied and worn when working with machinery