**Hazard / Risk Assessment Control Guidelines**

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# AIRBORNE CONTAMINANTS

Example – Dust, asbestos, silica, fumes

Potential Harm – Respiratory illnesses, cancer, asthma.

|  |  |  |
| --- | --- | --- |
| **What are the hazards?** | **What could go wrong?** | **Controls** |
| * dust
* asbestos
* silica
* fumes
* mould
 | * respiratory illness
* death
* asthma
* cancer
 | * hazard reporting
* fume cupboards
* dust extraction
* emergency procedures
* respiratory masks
* disposable gloves
* asbestos management plans
 |

# BIOLOGICAL

Example – Bacterial infections, contaminated items, insect bites.

Potential Harm – Illness, death, food poisoning.

|  |  |  |
| --- | --- | --- |
| **What are the hazards?** | **What could go wrong?** | **Controls** |
| * micro-organisms
* disease outbreak – flu, gastroenteritis, measles, mumps, chicken pox, rubella.
* pandemics – covid19
* contaminated sharps
* animal / pest
* bacteria
* blood / bodily fluids
* insect bites / snake bite
* poor water supply
 | * illness
* death
* hepatitis
* legionnaires’ disease
* Q fever
* HIV / aids
* allergies
* needle stick injuries
* dermatitis
* food poisoning
 | * hazard reporting
* hand sanitisers
* social distancing
* immunisations
* not feeling well stay at home
* following Government restrictions (SA Health)
* spill kits
* emergency procedures
* sharps disposal containers
* disposable gloves
 |

# ELECTRICITY

Example – Exposure to live electrical wires

Potential harm – Shock, burns, damage to organs and nerves leading to permanent injuries or death

|  |  |  |
| --- | --- | --- |
| **What are the hazards?** | **What could go wrong?** | **Controls** |
| * frayed/loose cords
* rattling plugs
* faulty appliances
* water on electrical equipment
* overheating equipment
* unlicensed or not qualified electrician
* overloading power sockets
* damaged power boards
* extension cord chains
* fastening cables with staples or nails
* pulling out equipment from plug
* cutting cords
* sticking items in power point
* drilling/digging into electrical conduits
* electrical short
 | * burns
* fire
* explosion
* muscle spasms
* palpitations
* damage to internal organs
* contact with exposed wires
* poor electrical installation
* electrical cords across walkways – slips, trips and falls
* collapse
* unconsciousness
* electric shock
* electrocution
* death
 | * hazard reporting
* education / instruction / training
* induction
* visual inspections
* cord covers
* weather proof fittings
* residual current device (RCD) push button tested according to legislative requirements
* RCD time tested according to legislative requirements
* appropriate documentation maintained
* ensure only appropriately licensed or registered electricians carry out electrical work
* switch off electricity where possible before working on equipment
* ensure electrical equipment is in good working order (testing and tagging)
* use battery operated tools rather than mains power tools where possible
* remove damaged, unsafe electrical equipment or cords from the workplace
* ensure tag out and isolation procedures are in place and used
* use RCDs (or safety switches) with portable equipment (as per the WHS regulations)
* don't overload power sockets use of power boards not double adaptors
* meet electrical safety standards
 |

# EXCURSIONS

Example – Traffic accidents, bites, exposure to elements, slip trip falls, water, loss of communication

Potential Harm – death, lost students/ clients, sprains, strains, fractures, allergic reactions

|  |  |  |
| --- | --- | --- |
| **What are the hazards?** | **What could go wrong?** | **Controls** |
| * to and from venue:
* fitness to travel – illness / unfit prior to departure
* bus/coach transport to excursion venue
* traffic accident
* mechanical breakdown
* behaviour management
* general:
* slips, trips and falls
* bites and stings
* exposure to sun (UV), wind, rain
* extreme heat
* change in weather conditions
* inadequate supervision
* bush fires
* loss of communication
* specific:
* interactions with flora / fauna
* swimming pools / water
* food poisoning through incorrect storage of food; anaphylaxis
* access to amenities
* waste / rubbish
* volunteers
 | * medical condition worsens
* death
* vehicle accident resulting in serious injuries
* tripping whilst boarding / disembarking the bus / coach.
* travel sickness
* lost students / clients
* unruly students / clients
* anxiety
* sprains, strains
* broken limbs
* allergies, illness to stings / bites
* sunburn, heat strain, heat stroke
* dehydration
* getting lost separated from the group
* bites, stings
* attack by animals
* allergic reactions to fauna / flora
* serious injuries
* illness
* vomiting, diarrhoea
* Impact on the environment
* child protection issues
 | * hazard reporting
* consent forms
* mobile phones / two way radio
* first aid kit
* medical plans
* risk assessments
* appropriate clothing for event
* travel plans
* personal protective equipment
* checking weather conditions
* certified bus companies
* correct supervision ratios
* suitable provisions
 |

# EXTREME TEMPERATURES

Example – Heat, Cold

Potential Harm – Burns, Heatstroke, Fatigue, Hypothermia, Hyperthermia, Frost bite.

|  |  |  |
| --- | --- | --- |
| **What are the hazards?** | **What could go wrong?** | **Controls** |
| * extreme heat
* extreme cold
* severe storms – lightning / thunder
* floods
 | * burns
* heatstroke
* fatigue
* dehydration
* hypothermia
* hyperthermia
* frost bite
* fires
* struck by lightning
* death
 | * hazard reporting
* provide appropriate thermal systems (heating / air conditioning)
* provide appropriate personnel protective equipment
* provide adequate water, shade, cooling systems
* program tasks for cooler times of the day
* emergency plans in place
* secure loose objects / equipment in the event of severe storms
 |

# GRAVITY

Example – Falling objects, falls, slips, trips

Potential Harm – Fractures, bruises, lacerations, dislocations, concussion, death.

|  |  |  |
| --- | --- | --- |
| **What are the hazards?** | **What could go wrong?** | **Controls** |
| * uneven pavers
* exposed tree roots
* inappropriate footwear
* slippery surfaces
* wet floors
* uneven ground
* falling off ladder
* steps, stairs
* frayed carpet
* cords / cables
* chair legs
 | * collapse of a structure
* collapse of a scaffold
* collapse of playground equipment
* working at heights
* slip, trip or fall
* strain, sprain, contusions, lacerations
* fractures
* impalement
* concussion
* death
 | * hazard reporting
* induction
* repair uneven surfaces
* “wet floor” signs available
* remove or cover exposed tree roots
* apply anti-slip coating to slippery surfaces
* appropriate footwear
* holes filled in
* workplace inspections completed
* spill kits available
 |

# HAZARDOUS CHEMICALS

Example – Acids, hydrocarbons, heavy metal, pesticides.

Potential Harm – Respiratory illnesses, cancers, dermatitis.

|  |  |  |
| --- | --- | --- |
| **What are the hazards?** | **What could go wrong?** | **Controls** |
| * escape of fumes
* welding fumes
* escape of gases
* incorrect storage/segregation
* incorrect labelling
* asbestos
* acids
* hydrocarbons
* heavy metal exposure
* pesticides
* lead
* spill potential
* smoking
* lead
* combustibles
 | * inhalation
* skin absorption
* ingestion
* burns
* fire
* dermatitis
* asthma
* explosions
* chemicals reaction
* flammable liquids
* exposure to dust
* exposure to toxic chemicals
* exposure to carcinogens
* exposure to compressed gasses
* respiratory illness
* cancer
* incorrect storage
* incorrect handling
* incorrect disposal
 | * hazard reporting
* ensuring correct [labelling](https://www.safeworkaustralia.gov.au/labelling) of containers and pipework, using warning placards and displaying safety signs
* maintaining a [register and manifest](https://www.safeworkaustralia.gov.au/registers-manifests-and-placards) (where required) of hazardous chemicals and notifying the regulator if you store manifest quantities
* identifying any risk of physical or chemical reaction of hazardous chemicals and ensuring their stability
* ensuring [workplace exposure standards](https://www.safeworkaustralia.gov.au/exposure-standards) for hazardous chemicals are not exceeded
* providing [health monitoring](https://www.safeworkaustralia.gov.au/doc/hazardous-chemicals-requiring-health-monitoring) to workers (if relevant)
* providing information, training, instruction and supervision to workers
* providing a spill containment system for hazardous chemicals if necessary
* obtaining the current Safety Data Sheets (SDS) from supplier.
* controlling ignition sources and accumulation of flammable and combustible substances
* providing fire protection equipment, firefighting equipment and emergency and safety equipment;
* providing a copy of your emergency plan to the primary local emergency services organisation if the quantity of a class of hazardous chemical at your workplace exceeds its manifest quantity
* ensuring the stability and support of containers for bulk hazardous chemicals, including pipework and attachments
* ensuring hazardous chemical storage and handling systems are decommissioned correctly
* notifying the regulator as soon as practicable of abandoned tanks in certain circumstances
 |

# HAZARDOUS MANUAL TASKS

Example – Sustained or awkward postures, high or sudden force, repetitive movements or vibration.

Potential Harm – Musculoskeletal disorders such as damage to joints, ligaments and muscles.

|  |  |  |
| --- | --- | --- |
| **What are the hazards?** | **What could go wrong?** | **Controls** |
| * incorrect storage of equipment
* inappropriate seating
* workstations incorrectly set-up
* inadequate lighting
* sustained or awkward postures
* mental stress / tension
* high or sudden force
* vibrating equipment
* poor work area design
* limited work space available
* design of workstation
* unsuitable furniture and equipment
* repetitive movement
* fatigue
* high speed movement
* impact / crushing
* stacking / storage
* duration / frequency
 | * incorrect lifting, pushing, pulling, holding and restraining
* repetitive or sustained forces
* fatigue
* muscular skeletal injuries
* damage to joints, ligaments and muscles
* sprains, strain, contusions
* overuse syndrome (RSI)
* equipment not maintained
 | * hazard reporting
* induction
* hazardous manual task training
* adequate lighting
* appropriate storage for the size and weight of the item
* rotation of tasks
* trolley’s available
* sack truck’s available
* lifter’s/wheelchairs available
* purchase supplies in smaller quantities
* ergonomic assessments
* correct workstation design and set-up
 |

# NOISE

Example – Exposure to loud noise.

Potential Harm – Permanent hearing damage.

|  |  |  |
| --- | --- | --- |
| **What are the hazards?** | **What could go wrong?** | **Controls** |
| * noisy machinery
* old machinery
* prolonged exposure to noise
* no hearing protection
* inadequate hearing protection
* musical instruments (drums)
 | * hearing loss
* damage to internal organs
* tinnitus
* deafness
* burst eardrum
* high blood pressure
* cardiovascular disease
* fatigue
 | * hazard reporting
* hearing protection
* pre-purchase checklist – selecting equipment with low noise emissions
* relocate noisy plant to an alternative location
* acoustic padding (e.g. acoustic foam, egg cartons)
* PPE – ear muffs, ear plugs
* rotation of jobs
* hearing tests (legal requirement on employment and then every two (2) years)
 |

# MACHINERY & EQUIPMENT

Example – Being hit by moving vehicles, or being caught in moving parts of machinery.

Potential Harm – Fractures, bruises, lacerations, dislocations, permanent injuries or death.

|  |  |  |
| --- | --- | --- |
| **What are the hazards?** | **What could go wrong?** | **Controls** |
| * unguarded machinery
* parts being ejected / disintegrating
* rotating shafts, pullies, chains, sprockets and gears of machine
* sharp edges
* scissor, shearing actions
* lack of maintenance
* poor lighting
* noisy equipment
* cracked hydraulic hoses
* high pressure fluid
* electricity
* uncontrolled or release of compressed air / steam
* entry into a confined space
* failure to select plant that is suitable for the intended use
* property damage
* lack of operator competency
* ergonomic or manual handling
* metal fatigue
* hazardous chemicals
* being hit by moving vehicles
* caught in moving parts
* high temperatures of parts
 | * hit by moving parts
* plant collapsing
* contact with hot or cold parts
* burns
* dislocations
* crushing, pinching, trapping, entanglement
* lacerations / amputations
* hearing loss
* striking
* explosion
* abrasion
* blindness
* fractures
* friction
* vibration
* pressure
* fire
* gas leak
* slip, trip or fall
* foreign bodies in eyes
 | * hazard reporting
* induction
* information/instruction/training
* guarding in place
* manufacturer’s instructions
* safe operating procedure
* preventative maintenance schedule
* “wet floor” signs available
* rotation of tasks
* less exposure time on equipment
* personnel protective equipment
* fall restraint systems in place
* ladder brackets
* ladders Australian standard approved
* ladders weight rated
* 3 point contact with ladder at all times
* ladder placed on an even surface
* fire extinguishers available
* fire blankets
* smoke detectors / alarm systems in place
 |

# PSYCHOLOGICAL

Example – Excessive time pressure, bullying, violence and work-related fatigue.

Potential Harm – Psychological or physical injury or illness.

|  |  |  |
| --- | --- | --- |
| **What are the hazards?** | **What could go wrong?** | **Controls** |
| * excessive time pressure
* bullying
* violence
* work related fatigue
* drugs
* alcohol
* security
* unbalanced workload
 | * being bullied
* being harassed
* aggression
* fatigue
* relationship breakdowns
* job insecurity
* death of a family member
* death of a work colleague
* excluding people
* unrealistic expectations
* ostracising people
* sleep deprivation
* stress
* weight loss
* fear
* anxiety
* absenteeism
* attempted suicide
* opinion not valued
* isolation / separation
* death
 | * hazard reporting
* administrative controls – procedures
* employee assistance program (EAP)
* team meetings
* tool box meetings
* appraisals
* mental health first aiders onsite
* contact officers
 |

# RADIATION

Example – Ultra violet, welding arc flashes, micro waves and lasers.

Potential Harm – Burns, cancer or blindness.

|  |  |  |
| --- | --- | --- |
| **What are the hazards?** | **What could go wrong?** | **Controls** |
| * sun
* x-ray machines
* no shade provided
* reflective surfaces
* welding arc flashes
* microwaves
* lasers
 | * skin burns
* infertility
* fire
* radiation sickness
* cancer
* cardiovascular disease
* welders flash
* blindness
 | * hazard reporting
* broad brimmed hat (at least 8cm)
* long sleeve, close weave shirt (see AS / NZS 4399: 2017 sun protective clothing - evaluation and classification). this now requires clothing to be UPF 50
* SPF30+ sunscreen (try to avoid sunscreen with nanoparticles)
* sunglasses (AS / NZS 1067: 2003 sunglasses and fashion spectacles)
* jobs / tasks (including breaks), which in which workers are exposed to UV radiation
* time of day tasks are carried out and how often the tasks are performed
 |