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| **SECTION 1: GENERAL INFORMATION** | | | | | | | | | |
| ***For the purposes of this document, the term Plant applies to both plant and equipment, both fixed and mobile plant and may include other categories – such as some laboratory instruments – if it meets the definition of Plant in the OHS Regulations Vic.***  ***Complete this Risk Assessment for all new or newly acquired Plant (prior to commissioning and first use), when Plant has been modified, or when Plant has been involved in an incident or near miss.***  ***Refer to HSW-PR37 – Plant & Equipment Safety process for further information.*** | | | | | | | | | |
| **Risk Assessment No:** |  | **Date:** |  | **Version No:** |  | **New Plant** | Newly Acquired Plant | Modified Plant | Existing Plant |

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| **Plant name:** | **Model number** | **Serial number** | **RMIT Asset number** | **Manufacturer / Supplier details:** |
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| **Campus:** | **Off campus Location:** | **Building / Level / Room No.** | **Portable** | | **College / Portfolio:** | **School / Dept:** |
|  |  |  | Yes | No |  |  |

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| **Does the Plant meet applicable Standards?**  **(*Australian, International or local*)** | | | | | | | | | | | | **Does the Plant need to be modified to meet applicable Standards?**  **(*Australian, International or local*)** | | | | | | | | | | | | | |
| Yes | | | | | | No | | | | | | No | | Yes | | | Details: | | | | | | | | |
| **Does the Plant contain hazardous materials e.g. asbestos?** | | | | | | | | | | | | | | | **Does the Plant contain or use Dangerous Goods e.g. fuel?** | | | | | | | | | | |
| No | Yes | | Details: | | | | | | | | | | | | No | | | Yes | | Details: | | | | | |
| **Is a Manufacturer’s Manual (in English) available?** | | | | | | | | | **Is an existing SWI or SOP available?** | | | | | | | | | | **Has a technical review / consultation been completed?** | | | | | | |
| Yes | | | | No | | | | | Yes | | | | | No | | | | | No | | Yes | | | Details: | |
| **Will the Plant require controlled access for use?** | | | | | | | | | | | | | | | | **Are there licensing / registration of Plant requirements with Regulators?** | | | | | | | | | |
| No | | Yes | | | Details: | | | | | | | | | | | No | | | Yes | | | Details: | | | |
| **Do operators / users require a license, registered competency or specialised inductions and training to operate / use the Plant?** | | | | | | | | | | | | | | | | | | | | | | | | | |
| License | | | | | | | | No | | | Yes | | Details: | | | | | | | | | | | | |
| Registered competency | | | | | | | | No | | | Yes | | Details: | | | | | | | | | | | | |
| Specialised induction | | | | | | | | No | | | Yes | | Details: | | | | | | | | | | | | |
| **Risk assessments should be completed by more than one person. Persons completing RA:** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Name** | | | | | | | **E/S number** | | | **Name** | | | | | | | | | **E/S number** | | | | **Name** | | **E/S number** |
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| **SECTION 2: INSTRUCTIONS TO PERFORM THE RISK ASSESSMENT** |
| **What you should do for each stage of the risk assessment:** |
| * In **Section 3**, for each hazard category, in conjunction with the Manufacturer’s Manual for the plant/equipment, determine whether the hazard exists in the plant / equipment. If the hazard exists, detail where and when in the operation of the plant / equipment. * Detail any **Existing Risk Controls** associated with the plant/equipment * Determine the current risk rating (i.e. the risk with existing controls in place) in **Section 3** by referencing the Risk Matrix in **Section 4**. * Detail any **Additional Risk Controls** for each hazard in **Section 3.**   Risks must be controlled to as low as reasonably practicable. A combination of control measures may be used to reduce risk.  ***Note****: Apply the* ***Hierarchy of Controls*** *(****Section 5****) to reduce the level of risk. Select the* ***most effective*** *controls in preference to* ***least effective*** *ones as much as reasonably practicable.*   * Once controls have been selected, determine the residual risk rating by again referencing the Risk Matrix in **Section 4.** * Sign off on **Sections 6** (Consultation / Technical Review) and **Section** **7** (Approval)   ***Note****: Any Residual Risk scores equal or greater than Medium* ***must*** *be escalated to the Senior Leader for discussion and sign-off before the activity can be undertaken.*  ***Note****: Sign-off requirements may change based on level of risk.* |

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| **SECTION 3: HAZARD IDENTIFICATION AND RISK ASSESSMENT** | | | | | | | | | | | | | |
| **Hazard Category** | | | **Where and when the hazard is present?**  *List the hazards and risks that could cause injury when the plant/equipment is in use* | **Existing Risk Controls**  *Detail the controls currently in place that will reduce the risk. If none exist, please note this* | **Current Risk Rating**  ***(with existing controls)*** | | | **Additional Risk Control Measure**  *List the control measures required to eliminate or minimize the risk of injury or damage arising* | **Residual Risk Rating**  ***(with additional controls)*** | | | **Responsibility**  *Name the person responsible to implement the control measure identified* |
| **Consequence** | **Likelihood** | **Risk Rating** | **Consequence** | **Likelihood** | **Risk Rating** |
| **Entanglement** | **Yes** | **No** |  | | | | | | | | | |
| Can a person’s hair, clothing, gloves, necktie, jewelry, cleaning brush or rag become entangled with moving parts of the plant? |  |  |  |  |  |  |  |  |  |  |  |  |
| **Crushing** | **Yes** | **No** |  | | | | | | | | | |
| Can anyone be crushed due to:   * material falling off the plant? * uncontrolled or unexpected movement of the plant? * lack of capacity for the plant to be slowed, stopped or immobilised? * the plant tipping or rolling over? * parts of the plant collapsing? * coming into contact with moving parts of the plant during testing, inspection, operation, maintenance, cleaning or repair? * being thrown off or under plant? * being trapped between the plant and materials or fixed structures? * Inappropriate guarding or shielding around exposed or moving parts? * other factors not mentioned? |  |  |  |  |  |  |  |  |  |  |  |  |
| **Cutting, Stabbing or Puncturing** | **Yes** | **No** |  | | | | | | | | | |
| Can anyone be stabbed or punctured due to:   * coming in contact with sharp or flying objects? * coming in contact with moving parts during testing, inspection, operation, maintenance, cleaning or repair? * the plant, parts of the plant or work pieces disintegrating? * work pieces being ejected? * the mobility of the plant? * uncontrolled or unexpected movement of the plant? * other factors not mentioned? |  |  |  |  |  |  |  |  |  |  |  |  |
| **Shearing** | **Yes** | **No** |  | | | | | | | | | |
| Can anyone’s body parts be sheared between two parts of the plant, or between a part of the plant and a work piece or structure? |  |  |  |  |  |  |  |  |  |  |  |  |
| **Striking** | **Yes** | **No** |  | | | | | | | | | |
| Can anyone be struck by moving objects due to:   * uncontrolled or unexpected movement of the plant or material handled by the plant? * the plant, parts of the plant or work pieces disintegrating? * work pieces being ejected? * mobility of the plant? * other factors not mentioned? |  |  |  |  |  |  |  |  |  |  |  |  |
| **High Pressure Fluid** | **Yes** | **No** |  | | | | | | | | | |
| Can anyone come into contact with fluids under high pressure, due to plant failure or misuse of the plant? |  |  |  |  |  |  |  |  |  |  |  |  |
| **Electrical** | **Yes** | **No** |  | | | | | | | | | |
| Can anyone be injured by electrical shock or burnt due to:   * the plant contacting live electrical conductors? * the plant working in close proximity to electrical conductors? * overload of electrical circuits? * damaged or poorly maintained electrical leads and cables? * damaged electrical switches? * water near electrical equipment? * lack of isolation/lock-out points? * other factors not mentioned? |  |  |  |  |  |  |  |  |  |  |  |  |
| **Lock out / Tag out** | **Yes** | **No** |  | | | | | | | | | |
| Can the plant be locked out from energy sources when required?  Can the plant be locked out associated services when required? |  |  |  |  |  |  |  |  |  |  |  |  |
| **Explosion** | **Yes** | **No** |  | | | | | | | | | |
| Can anyone be injured by explosion of gases, vapours, liquids, dusts or other substances, triggered by the operation of the plant or by material handled by the plant? |  |  |  |  |  |  |  |  |  |  |  |  |
| **Slipping, Tripping and Falling** | **Yes** | **No** |  | | | | | | | | | |
| Can anyone using the plant, or in the vicinity of the plant, slip, trip or fall due to:   * uneven or slippery work surfaces? * poor housekeeping, for example offcuts, cables, hoses obstructing walkways, spills not cleaned up? * obstacles being placed in the vicinity of the plant? * other factors not mentioned? |  |  |  |  |  |  |  |  |  |  |  |  |
| Can anyone fall from a height due to:   * lack of a proper work platform? * lack of proper stairs or ladders? * lack of guardrails or other suitable edge protection? * unprotected holes, penetrations or gaps? * poor floor or walking surfaces, for example the lack of a slip-resistant surface? * steep walking surfaces? * collapse of the supporting structure? * other factors not mentioned? |  |  |  |  |  |  |  |  |  |  |  |  |
| **Ergonomic** | **Yes** | **No** |  | | | | | | | | | |
| Can anyone be injured due to:   * poorly designed seating? * poorly designed operator controls? * high forces? * repetitive movements? * awkward body posture or the need for excessive effort? * vibration? * other factors not mentioned? |  |  |  |  |  |  |  |  |  |  |  |  |
| **Hazard Combination** | **Yes** | **No** |  | | | | | | | | | |
| Can anyone be injured due to unexpected start-up, unexpected over-run/over-speed or similar malfunction from:   * failure/disorder of the control system, for example a hydraulic system? * restoring energy supply after an interruption? * external influences on electrical equipment? * other environmental factors, for example gravity and wind? * errors in the software? * errors made by the operator? |  |  |  |  |  |  |  |  |  |  |  |  |
| **Other Hazards** | **Yes** | **No** |  | | | | | | | | | |
| Can anyone be injured due to:   * noise? * dust/mist/vapor generated? * inadequate or poorly placed lighting? * entry into any confined spaces of the plant? * failure to select plant suitable for its intended use? * contact with hot or cold parts of plant? * exposure to hazardous chemicals, radiation or other emissions released by the plant? * lack of operator competency? * other factors not mentioned? |  |  |  |  |  |  |  |  |  |  |  |  |

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| **SECTION 4: RISK MATRIX** |

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| **SECTION 5: CONTROLLING THE HAZARDS – THE HIERARCHY OF CONTROLS** | |
| * Specify the risk **control type** and **control description** for each hazard in **Section 3.**   The ways of controlling risks are ranked from the highest level of protection and reliability to the lowest. This ranking is known as the hierarchy of controls.  The hierarchy of controls can be applied in relation to any risk.  You must always aim to eliminate the risk, which is the most effective control. If this is not reasonably practicable, you must minimise the risk by working through the other alternatives in the hierarchy.  The lower levels in the hierarchy are less effective because controls that change the hazard or minimise exposure to the hazard can only minimise the risk. You cannot eliminate the risk without eliminating the hazard.  Administrative controls and personal protective equipment (PPE) are the least effective at minimising risk because they do not control the hazard at the source and rely on human behaviour and supervision. These control measures should only be used:   * to supplement higher level control measures (as a back-up) * as a short-term interim measure until a more effective way of controlling the risk can be used, or * when there are no other practical control measures available (as a last resort).   **Elimination**  The most effective control measure involves eliminating the hazard and associated risk. The best way to do this is by, firstly, not introducing the hazard into the workplace.  You can eliminate risks by removing an existing hazard, for example, you may design items of a size, shape and weight so they can be delivered, handled or assembled at the location where they will be used without the need for a crane or forklift.  It may not be reasonably practicable to eliminate a hazard if doing so means that you cannot create the end product or deliver the service. If you cannot eliminate the hazard, then you must minimise as many of the risks associated with the hazard as reasonably practicable.  **Substitution, isolation and engineering controls**  If it is not reasonably practicable to eliminate the hazards and associated risks, you must minimise the risks using one or more of the following approaches.  ***Substitute*** the hazard with something safer  For instance, installing a conveyor system to replace forklifts will eliminate the risks associated with moving plant but will introduce other risks associated with conveyors.  ***Isolate*** the hazard from people  This involves physically separating the source of harm from people by distance or using barriers. For instance, use concrete barriers to separate mobile plant from people.  Use ***engineering*** controls  An engineering control is a control measure that is physical in nature, including a mechanical device or process. For instance, interlocked guards on machinery  If risk remains, it must be minimised by implementing **administrative controls**, so far as is reasonably practicable. For example, a tag-out system could be used to ensure the plant is isolated from its power source and is not operated while maintenance or cleaning work is being done.  Any remaining risk must be minimised with suitable **personal protective equipment (PPE)**. For example, providing those using the plant or equipment with breathing protection, hard hats, gloves, aprons and protective eyewear.  Administrative control measures and PPE do not control the hazard at the source. They rely on human behaviour and supervision and used on their own tend to be the least effective in minimising risks.  The control measures you apply may change the way work is carried out. In these situations, you must consult your staff and students and develop safe work procedures and provide those using the plant or equipment with training, instruction, information and supervision on the changes.  In most cases, a combination of the control measures will provide the best solution to minimise the risk to the lowest level reasonably practicable. | **Hierarchy of Controls** |
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| **SECTION 6: Consultation** | | | |
| Consult with Health and Safety Representative (HSR) (or Deputy HSR) and technical staff or equivalent in the local area to ensure all HAZARDS AND RISKS have been identified and appropriate controls are in place (signature not required). | | | |
| **Position** | **Name** | **Comment (optional)** | |
| **HSR** (or DHSR) |  |  | |
| **Technical Officer**: (or equivalent) |  |  | |
| **SECTION 7: Approval** | | | |
| **Position** | **Name** | **Signature** *(If soft copy, please type name)* | **Date** |
| **Operational Leader:** |  |  |  |
| **Senior Leader**: *(is required to sign off, where the residual risk rating is rated as Medium or greater for any risk / hazard)* |  |  |  |
| **SECTION 8: Review** | | | |
| Risk assessment must be reviewed if any changes to the plant/equipment are made or otherwise **as detailed in *HSW-PR09 – HSW Risk Management*** (new version number required). | | | |
| **Position** | **Name** | **Signature** *(If soft copy, please type name)* | **Date** |
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| **Comments:** | | | |
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