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| **SteamRanger****SAFE OPERATING PROCEDURE****Herbicide Preparation and Spraying** |
| **SOP No: SHR001/21** | **Version No: 1.0** | **Review date: 30 Nov 2024** |
| * **DO NOT use these chemicals or equipment unless you have been instructed in its safe use and operation, and you have SteamRanger written authority**
* **This SOP does not necessarily cover all possible hazards associated with the activity and should be used in conjunction with other references, including chemical safety data sheets and risk assessments. This SOP is designed to be used as an adjunct to specific safety procedures and to act as a reminder to users prior to chemical use.**
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| **POTENTIAL HAZARDS:** | * Contamination of operators, public or animals with chemicals or potentially toxic fumes
 | * Spray drift / soil contamination
 | * Collision with vehicles, trains, pedestrians or animals
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| * Slips Trips and Falls
 | * Manual Handling
 | * Stings or bites
 | * Severe Weather
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| **PERSONAL PROTECTIVE EQUIPMENT – Refer to Safety Data Sheet for specific requirements:** |
|  | Eye protection  |  | Safety footwear  |  | Protective gloves  |
|  | Respiratory protection – use correct filters when using half or full face masks |  | Protective clothing must be worn. Disposible coveralls may be specified |  | Face shield may be required in addition to basic eye protection |
|  | Ear protection is required in noisy environments – Engines, small motors etc. |  | Maintain personal hygiene throughout work processes |  | Use machinery guards must be fitted to protect from moving or hot parts |
|  | Switch power off after use |  | Store in a secure location/ keep locked up | Graphical user interface, application  Description automatically generated | Ensure that a first aid kit is provided on the spray vehicle |
| **PRE-OPERATIONAL SAFETY CHECKS/ SPECIAL HANDLING AND STORAGE REQUIREMENTS:** |
| * Use the SHR Annual Weed Management Schedule to ensure the time is appropriate for spraying the target species
* Conduct a site assessment of the area to be sprayed to identify hazards and any other issues that may influence the safety and conduct of the spraying operations. Use the SteamRanger **Job Safety Analysis Worksheet** – SHRI-005-WHSF-ST02
* Determine the appropriate herbicide and other chemicals for the vegetation type
* Read herbicide application manual and Safety Data Sheet before commencing operations
* All operators must be licensed for the handling and use of herbicides or under the direct supervision of a licensed operator
* Conduct ‘Daily Start-up’ check on vehicles and motors
* Check the herbicide holding tank, plumbing, pumps, valves and hoses for wear and leaks
* Check all filters and clean if required
* Check nozzles and hand spray guns are appropriate for the spraying application and are calibrated as appropriate
* Set the spray pressure to minimise herbicide drift
* Check that all PPE required for herbicide mixing and spraying are available. All operators must use the PPE.
* Assess how much herbicide will be required for the task.
* Ensure that a water compatible (hydrophilic) spill clean-up kit is immediately available
* Clean-up spills in accordance with the Safety Data Sheet(s)
* Operators must be provided with contact phone numbers of emergency services and their Team Leader
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| **OPERATIONAL SAFETY CHECKS:** |
| **Ensure ALL hazards are controlled at all times, through good work practice** |
| * Assess the wind and weather conditions are right for spraying. Continue to monitor these conditions throughout the task and cease spraying if conditions are no longer optimal
* Mix the herbicide and other chemicals in a well ventilated area this is appropriate for containing spills
* Prepare the herbicide and other chemicals as specified on the herbicide label
* Fill the herbicide holding tank after adding the chemical(s) and wash measuring containers into the holding tank.
* Ensure the herbicide delivery pressure is set to 35psi or per the equipment operator’s manual / instructions
* Maintain the spray vehicle speed as appropriate for the spray operations
* Ensure only target vegetation is sprayed
* Under no circumstances must herbicide be applied on or near any streams or water courses
* Plan the task so that spraying is conducted methodically so that areas are not missed
* Display appropriate safety signage to prevent unauthorised access to the area, as appropriate.
* Cease spraying operations if pedestrians or animals are likely to enter the spray area
* Before making any adjustments, bring the plant to a complete standstill and shut off the spray nozzle / hand spray gun
* Operators must not eat, drink or smoke during spraying operations unless they first wash their hands
* Clean-up spills in accordance with the Safety Data Sheet(s)
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| **COMPLETION OF SPRAYING OPERATIONS:** |
| * Add any herbicide waste to the spray tank for use on the next task or dispose of in accordance with the Safety Data Sheet(s)
* Store all herbicides and chemicals in their original contains in a dedicated locked and well ventilated storage area
* Ensure all operators wash their hands after spraying and before eating, drinking or smoking.
* If clothing is contaminated it should be removed before leaving the workplace.
* Complete herbicide spray records (Date herbicide and chemical types, quantities and ratios used, names of all operators, any irregular occurrences etc.)
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| **WASTE DISPOSAL:**  |
| Refer to the Safety Data Sheet(s) for appropriate disposal methods.**DO NOT** dispose of waste herbicide or chemicals to soil or storm water drains |
| **EMERGENCY RESPONSE - First aid and herbicide / chemical spills:**  |
| Refer to the herbicide and chemical Safety Data Sheet(s) | **Emergency safety equipment**: Graphical user interface, application, table, Excel  Description automatically generated Graphical user interface, application  Description automatically generated Logo  Description automatically generated Graphical user interface, application  Description automatically generated |
| **OCCURRENCE REPORTING:**  |
| It is mandatory that all incidents, near miss occurrences, injuries and identified hazards are reported immediately using:* **Interim Incident Report and Checklist** – ARHS-SMSF-003
* **Injury Report** - SHRI-005-WHFS
* **Hazard Report** – SHRI-005-WHFS-03

**All such incidents must also be reported to the responsible Manager or Team Leader in person or by phone** |
| **FIRE CONTROL:** |
| Refer to SteamRanger Fire Response procedures |
| **DOCUMENT OWNER:**  | **DATE:**  |
| **SteamRanger WHS Specialist** | **30 November 2021** |