



CSIRO Business and Infrastructure Services - General

Risk Management Plan

Section 1

Scope of Work/Activity, Area and Staff Details

Business Unit	Business and Infrastructure Services	Site	Woomera
Program/Group/Team	B&IS – SA	Date of Plan	28 th of October, 2018
Group Leader	Kaylene Edson	HSE BU Partner	Barry Henderson

List all work areas (including non CSIRO locations):

Hangar 5 Annex Woomera, SA

Summarise the work tasks and activities:

Site visit to the Woomera site that includes, but is not limited to, the following activities:

- Site management,
- Minor Repairs and Maintenance,
- Contract Management,
- Audit inspections
- R&D activities to establish activity levels and composition of waste materials

Staff Acknowledgement
I am aware of the health, safety and environmental hazards and risk control strategies in my work areas.

Name (and organisation if not CSIRO)	Signature	Date
Jeffrey Sheridan		
Erin McColl		
Jen Baxter		
Mathew Guenette (ANSTO)		

Line Manager (Program, Group or Team Leader)
The HSE hazards have been identified in consultation with staff in these work areas and the control measures indicated have been approved, initiated and/or implemented.

Name: Kaylene Edson	Signature:	Date:
Business Unit HSE Partner		
Name: Barry Henderson	Signature:	Date:
Specialist Safety Officer (Radiation) who was in support		
Name: Jeffrey Sheridan	Signature:	Date:
Senior Manager		
Name: Dave Agnew	Signature:	Date:



H&S Hazard Identification Guide Section 2a

Identify all hazards associated with my work areas, system of work, or the equipment and substances I use. The list of hazards below is not exhaustive and other hazards which I may encounter must also be documented.

Hazards and examples	Yes/No	Hazards and examples	Yes/No
Poor ergonomics, Hazardous manual handling Body stressing, fixed posture, overuse, slips/trips/falls	Yes	Electrical Electric shock, static shock, burns, falls following shock	Yes
Moving vehicles Collision/roll over, fatigue, on site vehicle traffic'	Yes	Biological Exposure to genotoxins, zoonoses, animals, human samples	No
Operating Plant and Equipment Motion, compression, noise, vibration, crushing, cutting	Yes	Travel (Domestic and Overseas) Personal health issues, jet lag, DVT, security and safety overseas, communications, type of work and work conditions	Yes
Hazardous Substances Exposure to asbestos, carcinogenics, corrosives, irritants, solvents, vapours, temperature, fire & explosion	No	Confined Spaces Atmospheric contaminants, oxygen levels, cave-ins, explosion risk, entrapment, equipment activation	No
Hazardous Gases Exposure to asphyxiants, toxics, cryogenics, vapours, temperature, fire & explosion	No	Falls Slips, trips, rock/tree/equipment falls	Yes
Radiation Exposure, storage, containment	Yes	Firearms Bullet injuries	No
Fieldwork Fatigue, weather conditions (heat/cold), isolation, risks associated with field activities and equipment	Yes	Nanotechnology Health issues, accidental release to atmosphere, exposure	No
Working on Water / Diving Drowning, boating hazards, diving hazards, weather conditions (heat/cold), location	No	Other HSE Issues Psychological wellbeing, working from home, working alone	Yes



Environmental Identification Guide Section 2b

Identify all hazards which may arise from my work that may impact the environment. It may be associated with the work areas, system of work, equipment and substances that I use. The list below is not exhaustive and other hazards not listed here which I may cause are also documented.

Hazards and examples	Yes/No	Hazards and examples	Yes/No
Energy Use (excluding vehicle/vessel fuels) (project requires use of energy-intensive plant/machinery e.g. industrial processing machinery, radio antenna's, etc) Electricity, natural gas, LPG, diesel, solid fuels (e.g. coal, briquettes)	Yes	Liquid Discharges Hazardous chemical wastes, biological wastes, non-hazardous wastes, Radiation/GMO/AQIS-related liquid wastes	No
Vehicle or boat fuels Petrol, diesel, LPG, 2 stroke, bunker fuel	Yes	Solid Discharges/wastes Construction/demolition wastes, metals, asbestos, plastics, organic material, paper/cardboard waste, green/soil waste, radiation/GMO/AQIS-related wastes, electronic waste, batteries	Yes
Water Use (project requires significant water use e.g. irrigation, process cooling water, glasshouses, animal watering) Mains water, river water, bore water, rainwater, stormwater	No	Site Impacts Heritage/sacred/cultural impacts, biodiversity, hazardous materials storage, aesthetics, noise, surface run-off, soil contamination	Yes
Air Emissions Greenhouse gas emissions, organic vapours, particulates, refrigerants, heavy metal vapours, emissions from air travel (domestic/international)	Yes	Materials Use Chemicals, plastics, metals, radiation sources, biological agents, animals, plant material, paper use	No



HSE Risk Assessment Section 4

(Use for both H&S and Environment hazards and controls)

No	Specific Hazard	Description of task/activity	Inherent Risk			Controls - existing and proposed	Residual Risk		
			C	L	IR		C	L	RR
1	Poor manual handling technique	<ul style="list-style-type: none"> - Inspecting warehouse material - Opening the large hanger doors 	Mod	Poss	Sig	<ul style="list-style-type: none"> - Be alert to trip and fall hazards and comply with all relevant building and site signage - Keep work area free of trip and other hazards 	Mod	U	Med
2	Moving vehicles	<ul style="list-style-type: none"> - Travelling between Adelaide and Woomera on the public highway or on site. - Contact with other vehicles whilst walking around site - Working in forklift operating areas. 	Catastrophic	Likely	High	<p>In vehicles</p> <ul style="list-style-type: none"> - Never operate or ride in a vehicle or forklift that has not been maintained or is overdue for maintenance. - Never drive in remote locations alone. - No travelling in a vehicle for longer than a 12 hour duration - Rest from driving for 20 minutes after every 2 hours or rotate drivers. - Check there is a stocked first aid kit and drinkable water in vehicle before travel. - Satellite phone or SPOT locator where no mobile phone reception is foreseeable <p>From vehicles</p> <ul style="list-style-type: none"> - Use walkways where marked. - Use pedestrian crossings, refuges etc when crossing roads on site - Never walk where forklifts are operating 	Major	U	Sig
3	Operating Plant and Equipment	Operating robotic equipment on site as required.	Low	Possible	Low	<ul style="list-style-type: none"> - Maintain a safe distance from the waste holding while robots are moving to avoid contact with drums in case of accidental toppling/fall 	Low	U	Low

3	Aviation	- Flying to and from WTR site exposed to various Aviation hazards in light aircraft.	Mod	U	Med	- Confirm appropriate risk management plan with the aviation provider	Mod	R	Med
4	Various hazards on site (Hazardous Substances, Radiation, Fatigue)	Entering work areas such as hangars for inspections, assessments and reviews.	Mod	U	High	<ul style="list-style-type: none"> - Pre entry Tool box meeting held on site highlighting the following to all personnel: - Comply with WTR instruction while in WTR work areas - Ventilation of area prior to entry (5-10minutes) to remove hazardous gases resulting from radioactive decay - Comprehensive dose assessment to be undertaken prior to entry - Bump hat (low beams in hanger) when taking measurements around the drums. - Keep a safe distance away from the edge of the stack. - Regularly communicate movements with others and pair up where possible on stack if controlled access required - Wear a dosimeter (TLD badge or continual radiation dose monitor) when working within the storage area. - Take regular rest breaks and re-hydrate to prevent fatigue. - Communicate regularly with vehicle drivers and keep clear of operating equipment - Inform personnel of communications system available - No access to top of stack - Seek and obtain permission from (WTR operations centre) prior to entering site and then comply with their instruction while in their work areas. - Comply with all signage on sites. - Keep hangar doors open when inside. - Never touch or move samples or material without permission. (Contact WTR if ordinance found). 	Mod	R	High

						<ul style="list-style-type: none"> - Closed in boots/shoes are to be worn at all times while on site. - Wear a disposable respirator if engaging in activity that will generate dust. - Complete the WTR induction prior to the visit - Do not enter hangar before undertaking an onsite tool box induction <p>Field visits</p> <ul style="list-style-type: none"> - Read and comply with the Fieldwork Procedure before undertaking any field visit. This includes a field trip plan and nominated CSIRO base contact and call-in schedule. - As per Woomera emergency arrangements in induction process. 			
5	Hazards to my psychological health or physical wellbeing.	Work demands with tight deadlines or with resource constraints.	Major	Poss	High	<ul style="list-style-type: none"> - Seek assistance of colleagues or via the Employee Assistance program if you feel mental or psychological stress 	Mod	P	Sig
7	Excessive discharge of wastes to landfill sites	Packaging wastes, paper, cardboard, plastics, toner cartridges.	Minor	Poss	Med	<ul style="list-style-type: none"> - All waste/packaging is to be removed from site and taken back to CSIRO Adelaide -- Actively participate in CSIRO's waste reduction and recycling program 	Minor	U	Low
8	Wildlife accessing area	Exposure of native animals or vermin	Minor	Poss	Med	<ul style="list-style-type: none"> - Contractors inspect and arrange repairs for any breach of the 2mtr perimeter chain wire mesh fence and shed fabric. - Always wear closed shoes or boots and avoid areas where snakes may be present (bushes, long grasses etc.). 	Minor	U	Low

C = Consequences, L = Likelihood, IR = Inherent Risk, RR = Residual Risk



HSE Risk Management Plan – Action Sheet

Section 6

This page is to be given to those responsible for, or involved in implementing the corrective actions within the HSE Group. List the HSE hazards that have been identified for which controls have not been implemented.

Hazards	Residual Risk	Controls to be implemented	Responsible Person	Action by: (date)	Control Strategy implemented (Date and comment)