

INTERIM VERSION

# Field safety and procedures manual

RESOURCES and  
ENERGY GROUP

MINERAL  
RESOURCES  
DIVISION

Compiled by  
Lyn Broadbridge

September 2011  
Version 5



Government of South Australia

Department for Manufacturing,  
Innovation, Trade, Resources and Energy

---

# Field safety and procedures manual

**MINERAL  
RESOURCES  
DIVISION**

Compiled by  
Lyn Broadbridge

Report Book 2011/00007

September 2011



**Government of South Australia**

Department for Manufacturing,  
Innovation, Trade, Resources and Energy

---

Resources and Energy Group  
Department of Manufacturing, Innovation, Trade, Resources and Energy  
7th floor, 101 Grenfell Street, Adelaide  
GPO Box 1671, Adelaide SA 5001

Phone   **National**               **(08) 8463 3204**  
          International       +61 8 8463 3204  
Fax       National           (08) 8463 3229  
          International       +61 8 8463 3229

Email    pirsa.minerals@saugov.sa.gov.au

Website  www.minerals.pir.sa.gov.au

At the time of printing this manual the Department of Manufacturing, Innovation, Trade, Resources and Energy (DMITRE) was formed.  
Resources and Energy Group is currently transitioning to DMITRE.  
All policies and procedures referenced to PIRSA and PIRSAFE remain current unless otherwise advised.

© **Primary Industries and Regions South Australia, 2011**

This work is copyright. Apart from any use as permitted under the Copyright Act 1968 (Cwlth), no part may be reproduced by any process without prior written permission from Primary Industries and Regions South Australia. Requests and inquiries concerning reproduction and rights should be addressed to  
The Editor, Publishing Services, PIRSA, GPO Box 1671, Adelaide SA 5001.

**Disclaimer**

The Department has tried to make the information in this publication as accurate as possible, however, it is intended as a guide only. The agency will not accept any liability in any way arising from information or advice that is contained in this publication.

**Acknowledgement**

Executive management would like to thank all staff in Resources and Energy Group for their contribution and other government departments and private enterprise who have allowed us to use information from their websites.

Compiled by L.M. Broadbridge  
Edited and designed by PIRSA Publishing Services  
September 2011

---

## ABBREVIATIONS

### General

4WD	four-wheel drive
AFAC	Australian Fire Authorities Council
AH	after hours
APY	Anangu Pitjantjatjara Yankunytjatjara Lands (Aboriginal lands)
CFS	Country Fire Service
CPR	cardio-pulmonary resuscitation
DENR	Department of Environment and Natural Resources
DRABCD	danger, response, airway, breathing, circulation, defibrillation
EFI	electronic fuel injection
EPIRB	electronic position-indicating radio beacon
GPS	global positioning system
HF	high frequency
HO	head office
LPG	liquefied petroleum gas
MRD	Mineral Resources Division
OHSW	occupational health, safety and welfare
PA	personal assistant
PLB	Personal locator beacon
REG	Resources and Energy Group
RFDS	Royal Flying Doctor Service
SOP	standard operating procedures
SPF	sun protection factor
UV	ultraviolet
UVB	ultraviolet B
UVR	ultraviolet radiation

### Measurement

Most units of measurement used in this volume are those of the International System of Units (SI) as well as units outside the SI which have been authorised for use within Australia's metric system and are not included in this glossary.

cm	centimetre (length; $10^{-2}\text{m}$ )
kHz	kilohertz (frequency; $10^3\text{S}^{-1}$ )
km	kilometre (length; $10^3\text{m}$ )
mL	millilitre (volume; $10^{-2}\text{m}^3$ )
mm	millimetre (length; $10^{-3}\text{m}$ )

---

## CONTENTS

<b>1</b>	<b>INTRODUCTION .....</b>	<b>7</b>
<b>2</b>	<b>OCCUPATIONAL HEALTH, SAFETY AND WELFARE AND INJURY MANAGEMENT CHARTER.....</b>	<b>8</b>
<b>3</b>	<b>HAZARD REGISTER AND RISK ASSESSMENT .....</b>	<b>9</b>
<b>4</b>	<b>FIELD TRIP PLANNING.....</b>	<b>12</b>
<b>5</b>	<b>DAILY LOG-IN PROCEDURES .....</b>	<b>13</b>
	Definitions .....	13
	General information .....	13
	Greater Metropolitan area map .....	14
	Field trips and travel – when is a log in call and itinerary required .....	15
	Day trips – when is a log in call and itinerary required .....	15
	Before departure.....	16
	Daily log-in schedule.....	16
	Role of the Field Safety Officer.....	17
	Failure to log in .....	17
	Responsibilities .....	18
	MRD Safety log in form .....	19
	MRD Field Itinerary form .....	20
<b>6</b>	<b>SAFETY LOG-IN TELEPHONE NUMBERS.....</b>	<b>21</b>
	Safety Log-in telephone failure .....	21
	Opal Fields Regional Offices contact numbers .....	21
<b>7</b>	<b>MEDICAL CONDITIONS FORM.....</b>	<b>22</b>
<b>8</b>	<b>REMOTE AND ISOLATED AREAS FIELDWORK.....</b>	<b>23</b>
	Definition.....	23
	Requirements.....	23
<b>9</b>	<b>COMMUNICATIONS EQUIPMENT.....</b>	<b>24</b>
	Satellite and mobile telephones .....	24
	UHF radios .....	25
	Personal locator beacons (PLB) .....	26
	HF radio operations .....	27
	Operating instructions for the NGT HF radio network.....	27
<b>10</b>	<b>SERIOUS MEDICAL EMERGENCY PROCEDURES.....</b>	<b>30</b>
<b>11</b>	<b>MEDICAL CALLS TO RFDS BY TELEPHONE.....</b>	<b>31</b>
<b>12</b>	<b>ACCIDENT AND INCIDENT REPORTING.....</b>	<b>31</b>
	Injuries and Incidents .....	31
	Vehicle accidents .....	31
<b>13</b>	<b>DRIVING VEHICLES.....</b>	<b>32</b>
	Driver requirements.....	32
	Training .....	32
	Driving .....	32
	General safety issues to consider prior to departure.....	33
	Vehicles before departure.....	33
	Packing .....	33
	Knots – Securing your load.....	33
	Towing tips .....	35
	Tips for safe travelling .....	35



<b>14 OFF ROAD DRIVING .....</b>	<b>36</b>
Unsealed roads and station tracks .....	36
Four wheel driving off road.....	36
Retrieving bogged vehicles .....	37
Winches .....	37
4WD Recovery straps.....	37
Sand driving tips.....	38
Mud driving tips .....	38
<b>15 FIELD EQUIPMENT FOR VEHICLES .....</b>	<b>39</b>
Vehicle safety equipment .....	39
Vehicle equipment checklist .....	39
<b>16 VEHICLE REPAIRS AND MAINTENANCE .....</b>	<b>41</b>
Reporting vehicle faults .....	41
Breakdown procedures; where assistance is available .....	41
Breakdown procedures; remote or pastoral lease areas.....	41
Vehicle maintenance checks whilst in the field .....	41
Vehicle trouble shooting.....	42
Battery problems .....	42
Jumpstarting from another vehicle .....	43
<b>17 TYRE MAINTENANCE AND REPAIRS.....</b>	<b>44</b>
Repairing punctured tyres .....	44
How to repair a split rim tyre.....	44
How to repair a tubeless tyre.....	45
Tyre repair SOP .....	46
<b>18 QUAD BIKES AND MOTORBIKES.....</b>	<b>47</b>
Four wheel bike safety SOP .....	48
<b>19 CAMP MANAGEMENT .....</b>	<b>50</b>
Camp location .....	50
Waste disposal .....	50
Health and hygiene.....	50
Campfire safety .....	51
Liquefied petroleum gas.....	51
Generators .....	52
<b>20 BUSH CAMPING EQUIPMENT LIST .....</b>	<b>53</b>
<b>21 PERSONAL SAFETY .....</b>	<b>54</b>
Suggested day pack contents .....	54
Fieldwork.....	54
Working alone in the field .....	55
<b>22 BUSHFIRE SAFETY .....</b>	<b>55</b>
Bushfire safety when working in the field .....	55
Fire Danger Ratings (CFS).....	57
Bushfire Watch & Act and Emergency messages (CFS) .....	58
Sentinel Bushfire (hotspot) monitoring system (Geoscience Australia).....	59
<b>23 WEATHER RELATED SAFETY ISSUES .....</b>	<b>60</b>
Extreme heat.....	60
Sun protection during outdoors work SOP MRD 004.....	60
Safety during thunderstorms .....	62
Flooding creeks and rivers.....	62

<b>24 EMERGENCY SIGNALLING DEVICES AND PROCEDURES.....</b>	<b>63</b>
PLB Personal Locator Beacon.....	63
V Sheets.....	63
Heliograph signalling mirrors.....	63
Signal fires.....	63
Search and rescue symbols.....	63
Other signalling options.....	63
<b>25 BUSH SENSE AND SURVIVAL TECHNIQUES.....</b>	<b>64</b>
General survival notes.....	64
Water collection.....	64
Fire lighting techniques.....	64
Avoiding snakes.....	65
<b>26 MANUAL HANDLING.....</b>	<b>67</b>
<b>27 DRILLSITES AND DRILLING.....</b>	<b>67</b>
PPE requirements at drillsites.....	67
Safe sampling procedures.....	67
Drilling operations.....	68
<b>28 RADIATION SAFETY – NITON PORTABLE XRF.....</b>	<b>69</b>
<b>29 HELICOPTER SURVEYS.....</b>	<b>72</b>
<b>30 LAND ACCESS INFORMATION.....</b>	<b>74</b>
Aboriginal land and heritage sites.....	74
Native title land.....	74
National parks and regional reserves.....	74
Prohibited and restricted access areas.....	74
Pastoral lease stations.....	75
Freehold land.....	75
Mine sites and other development sites.....	75
Fossil reserves and geological monuments.....	75
South Australian land access map.....	76
<b>31 FIRST AID.....</b>	<b>77</b>
D.R.A.B.C.D and C.P.R.....	77
Recovery position.....	77
Heat stress.....	77
Diabetic emergency.....	77
Fractures.....	77
Strains and sprains.....	77
Eye injuries.....	78
Transporting an injured person.....	78
Allergic reactions.....	78
Bites or stings.....	78
Minor injuries.....	78
Snake bite.....	78
<b>32 INFORMATION HOTLINES AND WEBSITES.....</b>	<b>80</b>
<b>33 COUNTRY LOCALITIES AND ACCOMMODATION.....</b>	<b>81</b>
<b>34 COUNTRY HOSPITAL LOCATIONS.....</b>	<b>82</b>
<b>35 COUNTRY POLICE STATIONS.....</b>	<b>85</b>
<b>36 APY and MT LANDS TELEPHONE NUMBERS.....</b>	<b>88</b>
<b>37 STATION LEASE HOLDERS CONTACT LIST.....</b>	<b>90</b>
<b>38 DEPARTMENTAL TELEPHONE NUMBERS.....</b>	<b>106</b>
<b>39 REFERENCES.....</b>	<b>109</b>
<b>Appendix 1 Log-in areas for Jamestown Area Office.....</b>	<b>110</b>

---

# 1 INTRODUCTION

Version 5 of the Resources and Energy Group Field Safety and Procedures Manual September 2011.

At the time of printing this manual the Department of Manufacturing, Innovation, Trade, Resources and Energy (DMITRE) was formed.

Resources and Energy Group is currently transitioning to DMITRE.

All policies and procedures referenced to PIRSA and PIRSAFE remain current unless otherwise advised.

This booklet aims to provide the user with a comprehensive range of tools, how to guides and information to assist with planning and undertaking field activities in a safe and environmentally sensitive manner.

The range of field activities undertaken by branches of the Mineral Resources Group is vast and may present a variety of potentially hazardous situations. Accidents and incidents can be minimised by using the safety procedures provided in this manual. Assessing risks by using the Risk Assessment process, undertaking training, and using the relevant Standard Operation Procedures (SOP) will reduce risks.

Topics covered include the daily safety log in and emergency procedures, the use of communications equipment, checklists and pre-trip planning suggestions. Practical advice relating to various aspects of fieldwork including off road driving, vehicle safety and maintenance checks, various SOPs, emergency contact numbers, land access and environmental information are also provided.

References to various useful internal and external websites and departmental information are provided throughout the text.

PIRSA policies and procedures can be found on the intranet in PIRSAFE.

The following policies and procedures are addressed in this manual;

Bushfire Safety

Driving

Drug and Alcohol

Fatigue management

Fieldwork

First aid

Incident Reporting and Investigation

Inclement weather

Manual Handling



## 2 OCCUPATIONAL HEALTH, SAFETY AND WELFARE AND INJURY MANAGEMENT CHARTER

### PIRSA Occupational Health, Safety & Welfare and Injury Management Charter

#### Chief Executive commitment statement

**As the Chief Executive I am committed to the Premier's Safety in the Public Sector 2007 – 2010 Strategy of a Zero Harm and 100% Return to Work Vision for all PIRSA people.**

I will ensure the integration of the Ministerial Safety Checklist into the: People in PIRSA Strategic Plan 2008 – 2011; the Strategic Occupational, Health, Safety & Welfare and Injury Management Plan 2008 - 2010 and Divisional OHS&W and IM Operating Plans. These promote continuous improvement and allow us to work towards achieving a resilient safety culture in harmony with the WorkCover Performance Standards for Self Insurers.

**This will be achieved through four guiding principles:**

<b>Sustainable Commitment</b>	Allows every employee to feel safe at work	KRA 1 KRA 3 KRA 6	Link to People in PIRSA Strategic Plan (KRA's)
<b>Financial Accountability</b>	Safety performance promotes our competitive advantage	KRA 2 KRA 3 KRA 6	
<b>Integrated Risk Management</b>	Improves and embeds our safety culture	KRA 1 KRA 3 KRA 6	Link to PIRSA Corporate Strategic OHS&W and IM Plan
<b>Rigorous Evaluation</b>	Assures our safety performance supports the objectives of South Australia's Strategic Plan	KRA 2 KRA 3 KRA 6	



**Chief Executive Officer**  
7 Feb 2009

#### Occupational health, safety & welfare and injury management policy statement

The Chief Executive of PIRSA is committed to achieving a high standard of Occupational Health, Safety & Welfare and Injury Management by the provision of a safe and healthy work environment for all PIRSA employees, labour hire people, contractors, subcontractors, volunteers and other visitors and believes that all work related injuries and illnesses are preventable.

**Mission** To meet the major challenges facing PIRSA through the human resource strategies outlined in The People in PIRSA Strategic Plan 2008–2011 and to support the achievement of PIRSA's key targets in the South Australian Strategic Plan.

**Vision** All people working together for the safety and wellbeing of themselves and others.

**Scope** This policy applies to all PIRSA employees and to contractors, consultants, volunteers and any others who act on behalf of PIRSA.

#### Our objectives

- » Providing safe and healthy work environments and safe systems of work in the pursuit of zero harm
- » Meeting and / or exceeding legislative compliance
- » Meeting our duty of care to all people on PIRSA sites including labour hire, contractors, subcontractors, volunteers and other visitors
- » Promoting health and wellbeing including work/life balance
- » Ensuring effective consultation and communication strategies are implemented
- » Implementing systems that lead to sustained / continuous improvement in OHS&W & IM performance
- » Using appropriate internal and/or external expertise when required
- » Developing and maintaining relevant policies and procedures
- » Applying a risk management approach to products, services, plant/equipment and substances at the time of purchase, hire, and/or lease
- » Ensuring injured employees are treated with dignity and respect.
- » Providing effective and equitable claims management and rehabilitation
- » Reducing both the direct and indirect impact/costs of workplace injuries and / or illnesses to employees.

#### Our system

**PIRSA is a hazard management system which aims to:**

- » Identify the responsibilities and accountabilities of all employees, as described in the PIRSA OHS&W and IM policies and supporting procedures
- » See and identify hazards in the workplace
- » Assess the risks associated with these hazards
- » Fix and/or control the risks identified
- » Evaluate the risk controls for their effectiveness
- » Employees have the right to refuse to perform unsafe work until acceptable control measure(s) are in place



**Responsible Officer**  
8 Feb 2009



Government of South Australia  
Primary Industries and Resources SA

---

### 3 HAZARD REGISTER AND RISK ASSESSMENT

A risk assessment should be undertaken for activities that present a risk to safety. Consult the PIRSAFE intranet site for risk assessment information and current worksheets. The PIRSAFE Risk Assessment calculator below is a useful tool for assessing the risk.

[http://intranet.pirsa.sa.gov.au/business\\_groups/minerals\\_and\\_energy\\_resources/OHSW/registers\\_2/mer\\_hazard\\_registers](http://intranet.pirsa.sa.gov.au/business_groups/minerals_and_energy_resources/OHSW/registers_2/mer_hazard_registers)

#### MRD HAZARD REGISTER

Hazard	Probability	Exposure	Consequence	Risk rating	ALARP
Suffering a psychological Injury and illness	2	2	2	Low	Yes
Suffering an injury through a vehicle / pedestrian accident	3	5	5	Sub	Yes
Aviation accident/incident	2	4	5	Mod	Yes
Travelling overseas suffering an injury or illness	3	4	2	Low	Yes
Getting lost/stranded in remote and or isolated areas	4	2	2	Low	Yes
Exposure to natural disasters	2	1	4	Low	Yes
Exposure to extreme temperatures	5	5	2	Mod	Yes
Bites and Stings	3	2	4	Mod	Yes
Getting burnt	3	4	2	Low	Yes
Falls trips and slips of a person	4	5	4	Sub	Yes
Being hit by moving or falling objects	2	2	4	Low	Yes
Being injured by field equipment	2	4	2	Low	Yes
Being Electrocuted	2	1	4	Low	Yes
Becoming ill through poor hygiene practices	2	2	2	Low	Yes
Injuries resulting from an explosion	2	1	4	Low	Yes
Being injured in remote and isolated work environments	3	4	3	Mod	Yes
Exposure to hazardous substances and or materials	4	3	3	Mod	Yes
Fatigue	4	4	4	Sub	Yes
Drowning	2	1	5	Low	Yes
Sprains and strains musculoskeletal injuries	5	5	2	Sub	No

## PIRSAFE RISK ASSESSMENT MATRIX

	PROBABILITY																	
	Almost Certain (6)			Quite Possible (5)			Unusual (but possible) (4)			Remotely Possible (3)			Conceivable (but very unlikely) (2)			Practically Impossible (1)		
CONSEQUENCE																		
Numerous Fatalities (6)												4		5	4	6	5	4
					2	1	3	2	1	3	2	1	3	2	1	3	2	1
Multiple Fatalities (5)									4	6	5	4	6	5	4	6	5	4
		2	1	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
Fatality (4)					5	4	6	5	4	6	5	4	6	5	4	6	5	4
	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
Serious Injury (3)		5	4	6	5	4	6	5	4	6	5	4	6	5	4	6	5	4
	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
Casualty Treatment (2)	6	5	4	6	5	4	6	5	4	6	5	4	6	5	4	6	5	4
	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
First Aid Treatment (1)	6	5	4	6	5	4	6	5	4	6	5	4	6	5	4	6	5	4
	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1

PROBABILITY		
6	Almost Certain	The event is expected to occur on almost every exposure to the hazard. For example 1 in 5 exposures to the hazard will result in an incident.
5	Quite possible	The event will possibly occur when exposed to the hazard. For example 1 in 50 exposures to the hazard will result in an incident.
4	Unusual (but possible)	The event could occur sometime when exposed to the hazard. For example 1 in 500 exposures to the hazard will result in an incident.
3	Remotely Possible	The event may occur sometime when exposed to the hazard. For example 1 in 5,000 exposures to the hazard will result in an incident.
2	Conceivable (but very unlikely)	The event is unlikely to occur when exposed to the hazard. For example 1 in 50,000 exposures to the hazard will result in an incident.
1	Practically Impossible	The event is highly unlikely to occur when exposed to the hazard. For example 1 in 500,000 exposures to the hazard will result in an incident.

CONSEQUENCE		
6	Numerous Fatalities	Numerous Deaths as a result of natural disasters or catastrophic events (bushfire, earthquake, aircraft crash, terrorism).
5	Multiple Fatalities	Multiple deaths resulting from an incident (car crash, aquatic operation).
4	Fatality	Injury leading to a single death.
3	Serious Injury	Injuries that involve lost time from work and become permanent such as paraplegia, amputation, permanent reduced muscular function, permanent vision or hearing loss, etc.
2	Causality Treatment	Injuries that are generally serious, require medical treatment and result in lost time from work but are not permanent such as sprains, strains, broken bones, concussions, etc.
1	First Aid Treatment	Injuries that require first aid treatment only and are not regarded as serious.

EXPOSURE								
6	Continuous	Constant exposure to the hazard throughout the entirety of the work activity eg.  8 hours exposure to an 8 hour work activity.	5	Frequent	Regular exposure to the hazard during the work activity eg.  Up to 8 hours exposure over 1 week period.	4	Occasional	Occasional exposure to the hazard of a work activity eg.  Up to 8 hour exposure over 1 month period.
3	Infrequent	Seldom exposure to the hazard of a work activity eg.  Up to 8 hour exposure over a 6 monthly period.	2	Rare	Rare exposure to the hazard of a work activity eg.  Up to 8 hour exposure over a 12 month period.	1	Very Rare	Very rare exposure to the hazard of a work activity eg.  Up to 8 hour exposure over 12+ month period.

RISK LEVEL				
Very High Risk	High Risk	Substantial Risk	Moderate Risk	Low Risk
The situation is critical. Stop work immediately or consider cessation of work process! Implement effective controls immediately if continuing work	The situation must be controlled as a matter of priority. Implement immediate short-term control solutions and action plan longer-term, more permanent risk control solutions	The situation is important and effective short/long term controls must be implemented via an action plan (including action dates – control within 1 month)	The situation is important and effective short/long term controls must be implemented via an action plan (including action dates – control within 3 months)	The situation may be managed using routine procedures. Be sure that this level does not have the potential to escalate to a higher level

---

## 4 FIELD TRIP PLANNING

1. **Vehicles** - Book vehicles well in advance of planned trip departure date – contact Thebarton Depot via email [John.Stephenson@sa.gov.au](mailto:John.Stephenson@sa.gov.au).
2. **Land access** - Check if the proposed fieldwork area requires special entry permissions. Do this well in advance of planned trip departure dates as some permissions and permits may take quite some time to be processed – See the land access contacts list and Restricted Land map in this manual. If in doubt, contact the Land Access Branch for further information. Station lease holders and land owners should be given prior notice of entry.
3. **Definition of the Greater Metropolitan area** – For the purpose of the log-in schedule the greater metropolitan area includes a wider area than the Gazetted metropolitan area. The map below can be used to determine if travel is outside of this area and if a log in call is required.
4. **Risk assessments** Complete one if necessary before commencing fieldwork, use PIRSAFE [PIRSA Intranet - Field Work](#) and [PIRSA Intranet - Hazard Management](#) Refer to fieldwork hazard risk register [http://intranet.pirsa.sa.gov.au/\\_data/assets/pdf\\_file/0003/63363/MER\\_field\\_hazard\\_and\\_risk\\_register\\_september\\_2010.pdf](http://intranet.pirsa.sa.gov.au/_data/assets/pdf_file/0003/63363/MER_field_hazard_and_risk_register_september_2010.pdf)
5. **Travel Itinerary Forms** – Can be found on the MER intranet. Enter all details required on the Travel Itinerary form and have the completed form signed by your Branch Manager. Lodge the completed and signed form with the Field Safety Officer prior to departure. See details in this manual.  
[http://intranet.pirsa.sa.gov.au/business\\_groups/minerals\\_and\\_energy\\_resources](http://intranet.pirsa.sa.gov.au/business_groups/minerals_and_energy_resources)
6. **PLBs - (personal locator beacons)** -can be collected from the Field Safety Officer, one PLB per vehicle unless the occupants are working separately then one per person. If working alone use a PLB with built in GPS.
7. **Communications equipment - Iridium satellite phones and mobile phones** (in addition to vehicle mounted units) are available from the Field Safety Officer.
8. **Non Departmental drivers** – See the PIRSA intranet, forms, Non-Public Sector Driver Vehicle use agreement. “In accordance with PSM Act Determination 8 -Travel, a SA government owned or leased vehicle (‘a Fleet SA Vehicle’) MAY NOT be driven by any person who is not a SA public sector employees, UNLESS that person signs this Agreement and agrees to be bound by its terms AND such use is authorised in advance by the chief executive or their delegates.”  
[http://intranet.pirsa.sa.gov.au/forms\\_and\\_templates/travel](http://intranet.pirsa.sa.gov.au/forms_and_templates/travel)
9. **Fuel payment options** – Check the glove box of the vehicle for fuel cards available. Various fuel cards are now used by State Fleet including Shell and Caltex but not all cards are available in every vehicle. Please note that Mobil cards are no longer used. The Fleet SA intranet has links to fuel provider locations in South Australia. <http://intra.fleetsa.sa.gov.au/maintenance/fuel.asp>
10. **Cab Charge** – Forms can be collected from the designated officer in your branch. Credit cards may also be used for taxi fares if required.
11. **Travel Advances** - If a travel advance is required lodge the appropriate form at least one week prior to travel. See the PIRSA intranet for details.  
[http://intranet.pirsa.sa.gov.au/forms\\_and\\_templates/finance\\_6/accounts\\_payable/shared\\_services\\_sa\\_forms](http://intranet.pirsa.sa.gov.au/forms_and_templates/finance_6/accounts_payable/shared_services_sa_forms)
12. **Collecting vehicles and equipment from the Thebarton Depot** - Please note that the **Thebarton Depot** is open for business between **7:30 am and 4:00 pm Monday to Friday**. For security and safety reasons, staff requiring after hours access must make prior arrangements with Thebarton staff. All vehicles and equipment taken must be recorded and signed for on the form provided at the depot. Vehicle sign out requires sign off from both user and a member of the Thebarton Logistical Support Team to ensure both parties are satisfied with the vehicle’s readiness for the field.

---

## 5 MINERAL RESOURCES DIVISION DAILY LOG-IN PROCEDURES

### DEFINITIONS

**Country Driving** – Any driving on country roads outside of the greater metropolitan area as defined in this manual.

**Greater Metropolitan area** – For the purpose of this manual and the log-in schedule the “greater metropolitan area” includes a wider area than the Gazetted metropolitan area. The map below can be used to determine if travel is outside of this area and if a log in call is required.

The area includes the Gazetted Adelaide Metropolitan area and the council areas of Alexandrina to Lake Alexandrina, Victor Harbor and Yankalilla to the South. North to Light Regional as far as Kapunda, all of Mallala, Wakefield to the North as far as Port Wakefield and Balaklava. Barossa Council and Mt. Barker Council to Mt. Pleasant, Springton and Angaston in the East. Murray Bridge Council as far as Murray Bridge. See map below.

**Fieldwork** - Work undertaken outdoors where the employee is absent from home, depot or office.

**Field trip** – Where an employee is undertaking fieldwork and is absent from the workplace for more than one day or travel includes country driving outside of the greater Metropolitan area.

**Day trip** – Where an employee is undertaking work that requires travel away from the usual place of work for one day.

**Remote and Isolated area** - An area where response to an emergency will be hampered by distance, location, season or other factor. This can include areas within the Greater Metropolitan area that are away from habitation or major roads, or are inaccessible by vehicle or areas where communications equipment is unreliable.

**Major sealed roads** – Roads anywhere in the state that are sealed and are major arterial routes.

**Large group** – 6 or more people.

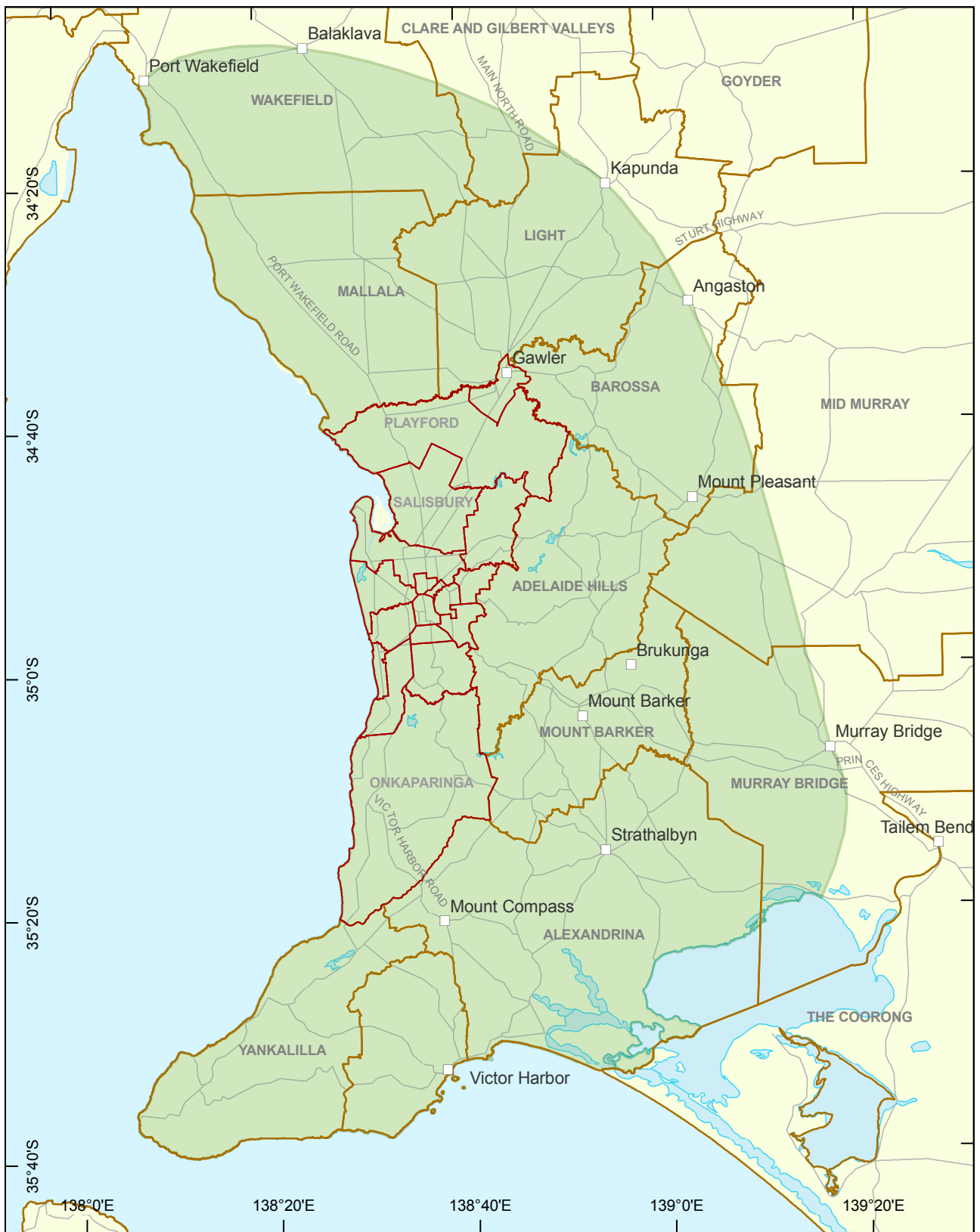
### GENERAL INFORMATION

**This directive applies to ALL Mineral Resources Division personnel. Adherence to this directive is mandatory.**

- **All employees** travelling into the field, including the greater Metropolitan area (as defined for the purpose of this manual) will be equipped with appropriate communication systems and **must lodge a travel itinerary with the Field Safety Officer if required to do so** in this directive, see details below.
- **Field Safety Officers** are appointed in the Geological Survey of South Australia and Opal Fields Area Office. They are contactable at any time if required in an emergency.
- **All vehicles used for fieldwork** should be equipped with two types of communication equipment - a satellite telephone and Selcall radio if available or mobile telephone if working within mobile range, a PLB and UHF radio. If possible the telephone and/or Selcall radio should be left on during the working day to allow communication from the office to the field. Telephones should be checked regularly for messages and missed calls.
- **If undertaking fieldwork alone** a satellite telephone or mobile telephone if appropriate and PLB must be carried at all times. In circumstances where satellite telephones will not operate due to poor coverage, working alone is not permitted unless an alternative form of communication is available.



## GREATER METROPOLITAN AREA MAP (for the purpose of this manual)



MER 204074\_001

- Metropolitan Local Government Areas
- Rural Local Government Areas
- Greater Metropolitan Area

0 10 20 30 Kilometres

GDA94: Zone 54

---

## FIELD TRIPS AND TRAVEL: - When is a log-in call and itinerary required

- Two daily log-in calls to the Field Safety Officer are required for all field trips of more than one day unless special conditions apply (see points 1 to 4 below).
  1. When an employee travels with members of another Organisation operating its own safety procedures, provided such procedures are acceptable to PIRSA, the daily log-in will not be required. The itinerary still remains a requirement.
  2. When an employee is working solely in a capital city or major regional centre or office (eg; Conference in Broken Hill, Moonta Core Library, Coober Pedy Depot) no log in is required unless fieldwork or travel away from the centre by road is undertaken. The itinerary is not required unless requested by your Branch Manager or delegate.
  3. Opal fields area staff are required to use the log-in procedures run by, and specific to, the Opal Fields Area Office.
  4. If using another internal log-in procedure providing that procedure complies with the PIRSAFE Field-work Procedure.
- Log-in must be made **every morning by 9am** and **every afternoon by 4pm** including weekends, **and if working alone, again upon arrival at the evening campsite or accommodation**. Failure to log-in within the prescribed times will trigger search and rescue operations (see below).
- **Changing the log-in schedule times.** Special circumstances requiring changes to the log in schedule times must be organised with the Field Safety Officer in advance.
- **Where a large base camp is established** by a field party daily log-in calls may be made by one person on behalf of the entire party, providing that person has established daily contact with all party members including fly camps. All fly camps will be equipped with a PLB, satellite telephone or mobile telephone if working within mobile range, and a UHF radio for establishing daily contact with base camp.
- **Where two or more persons travel as a party**, whether in one vehicle or more than one vehicle, one person will be designated the party leader and will be responsible for the daily log-in.
- **Country driving.** If driving long distances outside of the greater Metropolitan area an itinerary and Log-in is required unless other arrangements are agreed to by your branch manager or delegate.

## DAY TRIPS :- When is a log-in call and itinerary required

- **Outside of the Greater Metropolitan area** An itinerary and afternoon log-in by no later than 4pm is required for all day trips where personnel will be working outside of the greater metropolitan area as defined in this manual unless other arrangements are made with your Branch Manager or delegate.
- **If special conditions** such as late night travel are necessary assess the risk. Discuss whether another log-in is required with the Field Safety Officer at the 4pm log in.
- **Within the Greater Metropolitan area** as defined in this manual. An itinerary and log in is required if any of the following 3 points occur;
  1. The work area is isolated or hazardous. (eg back roads that are not often used or driving over rough terrain).
  2. If travelling extensively on unsealed roads.
  3. If fieldwork will be undertaken (eg you leave the vehicle and walk to a site).
- **Large groups** of 6 or more people are not required to log in when on a day trip.
- **Jamestown Area Office** staff travelling from the office to a worksite are required to log in if travelling North of the Eyre Hwy or North of the Wilmington Ucolta Rd or East of the Barrier Hwy (see map appendix 1).

---

## BEFORE DEPARTURE

Lodge a **Field Itinerary form with your Branch Manager** or delegate to be signed and forwarded to the Field Safety Officer before your departure.

**For staff NOT based at Head Office (eg. Core Library, Jamestown etc.)** the Itinerary may be lodged electronically via email providing the following 2 steps are taken.

1. **Email completed copies** of the Itinerary to **BOTH** the **Field Safety Officer and to your Branch Manager or delegate** for signing before departure, this signed copy must still be forwarded to the Field Safety Officer.
2. **Confirm** with the Field Safety Officer that the Itinerary has been received **before departure**. The Field Safety Officer will ensure a copy of the signed itinerary is received from the Branch Manager.

Provide the following details on your Field Itinerary:

- The names of all travellers in the party.
- Family contacts for all travellers.
- The duration and dates of the trip.
- Vehicle identification.
- Vehicle Selcall number (if applicable).
- Mobile phone/satellite phone numbers.
- PBL identification number (if applicable).
- A detailed day-by-day itinerary.
- A list of local contacts for work area (eg: Station name and telephone number, motel name).
- Identify all travellers and all vehicles in a large party.
- Other sections of the form must be filled out as required (eg; TOIL days to be taken, permits required etc).
- If possible include an A4 map of the proposed trip, with the proposed fieldwork and overnight locations highlighted.
- If working alone, a risk assessment should be completed.

## DAILY LOG-IN SCHEDULE

- **On the day of departure an evening log-in is required. This log-in should be made by 4.00pm**, For practical reasons the field party and Field Safety Officer may agree on a different time for the evening log-in if required.
- **Morning log-in must be made by 9.00 am** every day for the duration of the trip, giving the following:
  - Present location, include geographic coordinates if possible.
  - Proposed working area or route of travel for the day, **provided in geographic coordinates or well known landmarks**.
  - Maximum distance intended to be away from the vehicle.
  - Intended overnight location.
- **Afternoon log-in must be made by 4.00 pm** on every afternoon of the trip unless other arrangements are made with the Field Safety Officer. Advise present status, present location, and any changes made to the itinerary or plans advised at the morning log-in (eg change of overnight location).
- **If working alone** and the afternoon (4pm) log-in is made prior to reaching the overnight destination **a third log-in is required** once at that destination. The third log-in time frame should be determined on the day with the Field Safety Officer.
- **On completion of fieldwork** a morning log-in is still required when the party is travelling from the fieldwork area to home. The afternoon log-in should be made by 4pm or once the greater Metropolitan area or home is reached if that occurs before 4pm. A third log-in upon arrival at home can be negotiated with the Field Safety Officer at the 4pm log-in if necessary.

**Failure to contact the Field Safety Officer at the designated times will trigger a Level 1 emergency response. (See below)**

---

## ROLE OF THE FIELD SAFETY OFFICER

The Field Safety Officer will:

- Maintain a list of emergency contact names and numbers for employees who undertake fieldwork.
- Maintain a list of other safety and training items as required by the branch manager.
- Ensure that the Field Itinerary /Safety Log-in form is completed and placed in the Field Communications book, and that proposed communications are appropriate to the planned trip.
- Keep the field travel whiteboard or other system up-to-date.
- Monitor log-in calls so as to be aware that all required calls are being made.
- Record on the Field Itinerary form the details provided by the caller, and any changes to the intended itinerary.
- Accept and pass on messages to and from the field parties, and take action to expedite requests from the field.
- Notify field staff when a catastrophic or extreme fire danger day is forecast for their work area.
- Inform managers when required if significant night driving is necessary.
- Be competent in operating the online SIMS - HIRM (Self Insurers Management System - Hazard and Incident Reporting Module).
- Record minor incidents on the Field Itinerary form and lodge an incident report to the Branch manager on behalf of an employee if requested to do so.
- Advise any other interested parties that the log-in call has been made.
- Where a party is in the field over a weekend, provide to the Line Manager and Group Director copies of all pertinent information.
- Initiate and coordinate Level 1 search and rescue responses when required.

## FAILURE TO LOG IN

**If no morning log-in by 9.00am, or no afternoon log-in by 4.00 pm:**

**Level 1 Response (Initiated by the Field Safety Officer.)**

- Make continuous attempts to contact the party by all available communication devices, for the next one hour.
- Contact any other field parties in the area.
- Advise the Branch Manager or Line Manager of the missed log-in.
- Contact local landowners to ascertain if the party has been seen in the area.
- Contact SA Police to ascertain if a vehicle accident or other incident has been reported (Police Communications, 8207 4490).
- Maintain a written log of calls and actions.
- In the case of a day field trip, consider visiting the site where the work is occurring if it is in reasonable or close proximity to ascertain the safety of the fieldwork personnel.

**Level 1A Response (Managers and Field Safety Officer)**

- Branch Manager or Line Manager to advise Group Director before next deadline.
- Prior to a level 2 response being initiated, family members of the individual/s should be contacted to identify whether they have had any contact.
- If contact has not been made by 10 am for mornings or 5pm for afternoons, the Field Safety Officer will confer with the Branch Manager or delegate and the Group Director to determine whether to proceed to a Level 2 response.
- The missed call should not exceed the scheduled log in time by more than four hours for morning log-in calls or approximately one hour for afternoon log-in calls (due to lack of daylight hours) before proceeding to level 2.

---

## **Level 2 Response (Managed by SA Police)**

The Group Director / Senior Manager or other senior delegate will;

- Advise the Executive Director and the Chief Executive of the situation.
- Contact SA Police through 000, with the request that a coordinated search be undertaken.
- Provide the police with all information pertinent to the field party, with as much precise detail as possible regarding planned location and movements.
- Arrange to notify all relevant family contacts of each person in the field party that a police search is in progress.
- Arrange to keep family members informed and arrange support where appropriate.
- Make available appropriate PIRSA resources to the police unit coordinating the search.
- Engage the PIRSA Employee Assistance Program (EAP) as necessary.
- Advise the PIRSA Public Relations Unit.
- Advise the PIRSA Senior OHSW Consultant.

## **RESPONSIBILITIES**

**Executive Directors are responsible for:**

- Supporting and giving commitment to the implementation of this procedure.

**Senior Managers and Managers are responsible for:**

- The implementation of this procedure in their area of responsibility.
- Consulting with employees, volunteers and/or contractors undertaking field work in relation to the nominated hazard and incident prevention strategy.
- Ensuring a Field Safety and Procedures Manual is developed in consultation with employees and is provided to employees prior to undertaking fieldwork.
- Ensuring a Safety Log-in Officer is available at appropriate times to receive communications calls from employees travelling in the field.
- Providing adequate communication systems for employees involved in fieldwork.
- Ensuring all field parties are equipped with appropriate communication and emergency devices such as PLB device for use in life threatening emergencies.
- Ensuring employees are adequately trained or experienced in fieldwork.
- Ensuring a Field Itinerary exists and that all information required is recorded. (This information is vital if a Level 2 Response is ever generated).

**Employees are responsible for:**

- Not placing themselves or others at undue risk of injury.
- Conforming to the requirements of this procedure.
- Consulting with Managers and other employees in relation to hazard analysis associated with fieldwork and the travel associated with it.
- Lodging a Field Itinerary/Safety Log-in form with the Field Safety Officer.
- If necessary, lodging a Known Medical Conditions form with their Manager prior to departure.
- Ensuring all relevant detail is provided on the Field itinerary.
- Ensuring scheduled contact is maintained with the Field Safety Officer at the predetermined times.

## MRD SAFETY LOG-IN FORM

TO: FIELD SAFETY OFFICER: 0401 122 019

PERIOD COVERED BY THIS LOG IN SCHEDULE: FROM : / / TO: / /	
PROVIDE DETAILS IF USING OTHER AUTHORISED CONTACT FOR LOG IN SCHEDULE (eg. mining company)	
Contact:	Telephone:
DESTINATION and REASON FOR TRAVEL (eg: province, mapping )	
WORKING AREA LOCAL CONTACTS (eg; station, motel)	TELEPHONE

Please provide a daily itinerary and map of working area with this form

VEHICLE AND OCCUPANT DETAILS			
OCCUPANT NAME (please use corresponding box no. through out this form)	MOBILE PHONE AND SAT. PHONE NO., PLB no.(EPIRB) (selcall no.if applicable)	VEHICLE REG.	VEHICLE DESCRIPTION
1.			
2.			
3.			
4.			
FAMILY CONTACTS FOR OCCUPANT		TELEPHONE WK HOURS	TELEPHONE AFTER HOURS
1.			
2.			
3.			
4.			

ADMINISTRATION INFORMATION (yes / no / NA and supply dates for toil where applicable)						
Occupant (please write initials in box)	Valid drivers licence held (yes, no)	Working alone (entire trip)	Medical condition (Voluntary lodgement of form with branch manager)	Entering land that requires permit	Valid permit held	TOIL days to be worked; day and date (note; only Sundays in hard living allowance areas)
1.						
2.						
3.						
4.						
NAME			SIGNATURE		DATE	
1.						
2.						
3.						
4.						
Program Leader						
Branch Manager Authorisation to work in the field and to commence or cease duties from home.						



## MRD FIELD ITINERARY FORM

<b>MONDAY</b> /     / 1 Message from .....Time..... 2 Message from.....Time..... 3 Message from.....Time..... working alone ?	Planned Actual working area today  Overnight location Working area tomorrow
<b>TUESDAY</b> /     / 1 Message from .....Time..... 2 Message from.....Time..... 3 Message from.....Time..... working alone ?	Planned Actual working area today  Overnight location Working area tomorrow
<b>WEDNESDAY</b> /     / 1 Message from .....Time..... 2 Message from.....Time..... 3 Message from.....Time..... working alone ?	Planned Actual working area today  Overnight location Working area tomorrow
<b>THURSDAY</b> /     / 1 Message from .....Time..... 2 Message from.....Time..... 3 Message from.....Time..... working alone ?	Planned Actual working area today  Overnight location Working area tomorrow
<b>FRIDAY</b> /     / 1 Message from .....Time..... 2 Message from.....Time..... 3 Message from.....Time..... working alone ?	Planned Actual working area today  Overnight location Working area tomorrow
<b>SATURDAY</b> /     / 1 Message from .....Time..... 2 Message from.....Time..... 3 Message from.....Time..... working alone ?	Planned Actual working area today  Overnight location Working area tomorrow
<b>SUNDAY</b> /     / 1 Message from .....Time..... 2 Message from.....Time..... 3 Message from.....Time..... working alone ?	Planned Actual working area today  Overnight location Working area tomorrow

---

## 6 SAFETY LOG-IN TELEPHONE NUMBERS

### SAFETY LOG- IN CALLS TO HEAD OFFICE; ALL HOURS 0401 122 019

The Safety Log-in mobile is available for use by all REG branches when required. Operating hours are 24 hours per day 7 days per week for log-in calls and emergency calls. Managed by the Geological Survey of S.A Field Safety Officer.

#### Safety Log-in telephone failure.

- In the event of a malfunction in the operation of the telephone dedicated to receiving log-in calls contact the Geological Survey of South Australia Field Safety Officer on 8463 3282 during office hours.
- If safety log-in mobile telephone failure occurs out of business hours contact your Supervisor, Team Leader or Branch Manager to report the fault.
- If in an emergency situation contact emergency services as per normal emergency procedures.

**NB:** A comprehensive departmental telephone number directory is available at the rear of this booklet.

### OPAL FIELDS REGIONAL OFFICES CONTACT NUMBERS

#### Radio and telephone contacts

Any Adelaide based staff working in locations that can access the Opal Fields radios are welcome to do so. These may be used as a back up if having trouble logging in to Adelaide or require assistance near any of these offices.

Refer to the Communications Equipment section of this manual for instructions on radio use.

- **Coober Pedy Office** has a base selcall radio in the office that scans all frequencies the number is **9040** this radio is on Monday to Friday and monitored from 8.00am to 5.00pm daily. **Telephone** (8) 8672 5800
- **Marla office** has a base radio that scans all frequencies the number is **9060** this radio is on and monitored from 10.00 am Tuesdays to 2.00 pm Thursdays. **Telephone** 8670 7005
- **Andamooka office** has a base radio that scans all frequencies the number is **9070** this radio is on and monitored from 8.00 am to 11.00 am Tuesdays and Thursdays. **Telephone** 8672 7017

## 7 MEDICAL CONDITIONS FORM – Voluntary lodgement

Field party members travelling to areas that are remote or isolated are encouraged to provide information relating to known serious health conditions and medications taken for those conditions to their Branch Manager. The information will be kept in the employee's Personal File and is confidential. For example you may wish to let your manager know if you take medication that may cause complications if antivenene for such things as snakebite is used.

Minor conditions that would not adversely affect your chances of survival in an accident or other emergency don't need to be mentioned.

The form below can be found on the intranet in PIRSAFE



Government of South Australia  
Primary Industries and Resources SA

HR OHS&W F 033



**Confidential**

### KNOWN MEDICAL CONDITIONS

**Use this form to advise your Manager of any new medical conditions, or if any significant change in your medical status occurs** (eg new disease, new treatment, etc).

**The health and wellbeing of all PIRSA staff is of utmost importance. Our aim is to minimise risks to ensure the health and safety of PIRSA employees.**

Many chronic medical conditions can produce acute emergencies or interact adversely with injuries. As the patient in these situations is often unable to tell his or her attendants of these conditions (due to unconsciousness, etc), it is useful for PIRSA to maintain an up to date record of the medical status of employees.

Completion of this form is voluntary. However, we do encourage employees to disclose any information where their medical condition could impact on their work or their work colleagues.

Please complete the following information and return it to your Manager.

This information remains strictly confidential and is retained in your Personal File.

Employee details			
Surname:		Given name:	
Workgroup:		Date: ____/____/____	
Practitioner details			
Your doctor:		Telephone no:	
Medical status			
Medical condition	Are you taking medication for the condition?	Medication name	Special requirements
<input type="checkbox"/> I will provide this information to the PIRSA First Aid Officer.			
<input type="checkbox"/> I do not want this information disclosed to the PIRSA First Aid Officer.			
<input type="checkbox"/> I authorise my Manager to disclose this information to the PIRSA First Aid Officer.			
<input type="checkbox"/> In the event of an emergency I authorise the PIRSA First Aid Officer or Manager in my workplace to disclose this information to ambulance officers or other medical practitioner/s who may assist in the emergency.			
Employee's signature			Date ____/____/____

**This form is to be filed in the employee's Personal File**

---

## 8 REMOTE AND ISOLATED AREAS FIELDWORK

### DEFINITIONS

**Remote areas** - An area where response to an emergency will be hampered by distance, location, season or other factor. Particularly consider locations that require RFDS attendance in an emergency and are significant distances or travel time from habitation.

**Isolated areas** - can include areas within the Greater Metropolitan area that are away from habitation or major roads, or are inaccessible by vehicle or areas where communications equipment is unreliable.

For further information refer to PIRSAFE, Policies and Procedures, Fieldwork

### REQUIREMENTS

**Perform a risk assessment for the proposed fieldwork area to ascertain whether the area needs to be deemed remote and /or isolated.**

- **If the work area is deemed to be remote and isolated** - two fully equipped vehicles should be taken. Some areas may require up to two days driving before reaching a major road or settlement.
- **In special circumstances** only one vehicle may be taken if approved by your Manager or delegate. In this instance a field assistant should be taken. (eg: This is likely to apply if travelling through a remote area to reach another destination, if staying on tracks and not travelling off road, if working on the margin of a remote area near habitation or other circumstances agreed to by your manager.)
- **Personnel working in remote areas must be trained or experienced in the following** - first aid, off road driving techniques, navigation, communications equipment operation and have adequate bush survival skills or field experience.

**Ensure the following items are addressed prior to entering a remote area.**

- Vehicles are mechanically sound and suitable for the terrain.
- Ensure an adequate supply of water and fuel are taken.
- Check the availability of fuel in the area as some remote towns may not have fuel supplies.
- Each vehicle must have a PLB emergency signalling device.
- An iridium satellite telephone must be taken on all trips to remote areas and must be carried at all times when working away from the vehicle.
- A GPS should be carried.
- In addition to food provisions for the planned trip, one weeks supply of emergency food rations should be carried.
- Check communications equipment, engine oil, brake fluid, radiator coolant, air filter and batteries daily when in remote areas, see vehicle repairs and maintenance section of this manual.

**Additional information for personnel working in remote aboriginal communities**

- Although referred to as “remote communities” some emergency services may be available in some communities, these may include clinic facilities, airstrip, nurses and police. If working in close proximity to communities and travelling on well used tracks only one vehicle is required.
- Communications equipment (car mounted Globalstar / Qualcomm Pivotal satellite telephones) reliability in more remote areas is variable and often unreliable. It is advisable to carry an iridium satellite telephone or HF radio.
- Carry bottled drinking water, water tanks or water jerries at all times, local water supplies (particularly from rainwater tanks) may not be suitable for consumption. Vaccinations for tetanus and hepatitis are recommended prior to departure.
- If possible, provide assistance to motorists who have broken down in hot conditions; offer the use of your satellite telephone or radio if unable to assist with repairs. Consider taking extra puncture repair equipment and drinking water when travelling between remote communities
- Some communities have a general store with some food supplies available for purchase. Check trading hours as the stores may be open for short periods of time. Credit card facilities may not be available.

- 
- Fuel is available in the larger communities. Credit card facilities may not be available.
  - Reduce speed (to walking pace) when driving in communities.
  - Avoid touching dogs and other animals that appear ill.

## 9 COMMUNICATIONS EQUIPMENT

### SATELLITE AND MOBILE TELEPHONES

Portable satellite telephones and mobile phones are available from the Geological Survey of SA and Regulation and Rehabilitation Branch. Vehicles may be fitted with satellite telephones in car kits.

#### Mobile phones.

- Check the coverage area available to your telephone network.
- Telstra Next G provides the largest coverage area, a map of this area can be found on the Telstra website. <http://www.telstra.com.au/mobile/networks/coverage/state.html>
- If coverage is intermittent and normal calling is difficult try using a text message.
- Mobile phone car kits with a direct connecting external aerial fitted will greatly increase the coverage area of your phone.
- 112 can be used in emergencies if your phone is out of your normal providers area of coverage area but still within another providers area.

#### Iridium satellite telephones (GSSA Branch)

- Should be taken on all remote areas work even if another form of communication is available.
- Use where mobile phone coverage is unavailable. (These are more reliable than the Qualcomm Globalstar/ Pivotal vehicle mounted satellite telephones).
- Keep calls brief.
- Do not leave switched on unless the appropriate charging equipment is available.
- Keep the phone in the shock proof case when not in use.
- During calls some delays and voice distortion will occur, this is due to the route the call takes via America.
- As with all satellite equipment, line of sight is required for the iridium phone.
- Ensure the antenna is in a vertical position.
- Use the area code when dialling a number.
- If not with Telstra you will need to use the international dial code when making a call. PIRSA phones should be with Telstra.
- Sun spot activity can cause all satellite and HF radio communications to fail.

#### Vehicle mounted Qualcomm.Globalstar/ Pivotal satellite telephones (GSSA Branch)

- **WARNING** – Pivotal satellite coverage with the Qualcomm vehicle mounted satellite telephones is often unreliable. Periods of time with no coverage are common. Always have an alternative form of communication with you at all times, eg Iridium satellite phone, HF radio or mobile phone if coverage is available in your work area.
- Phones should stay in the vehicle mounted cradle at all times to prevent damage to pins and plugs. A second portable satellite telephone should be taken for use when working away from the vehicle.
- Qualcomm vehicle mounted telephones operate when the vehicle is running or on accessories but do not operate when the vehicle is switched off. When the vehicle is off, incoming calls are received by the message bank.
- Ensure the message bank is checked regularly for missed calls, dial 121 to retrieve messages.
- In case of emergency or portable satellite telephone failure, the vehicle mounted phone can be removed from the cradle for use. Take care when placing the phone back into the cradle, ensure the phone is clipped back in gently.

- 
- When four wheel driving through difficult terrain, ensure the satellite telephone antenna does not get damaged, choose your route carefully.
  - A manual for the telephone can be found in the glovebox of all GSSA Branch vehicles.

### **Portable satellite telephones**

- Operate best outdoors and away from any obstructions.
- Be aware that battery life is limited and recharging daily or more often is required.
- Check phone regularly for text messages.
- The antenna should be aligned as close to vertical as possible for best satellite signals.
- Ensure an appropriate charger for the satellite telephone is taken, vehicle cigarette lighter plug type, 240v, and permanent vehicle cradle chargers are available. Check they are in working order before departing.
- Leaving satellite phones on the dash may result in sun damage.

### **As with the normal phone service the EMERGENCY number is 000 for Mobile and Satellite services.**

Only use 112 as an alternative to 000 if using a mobile phone outside of your normal provider's network coverage area.

## **UHF RADIOS**

- Hand held and car mounted UHF radios are available.
- Remember to charge hand held radios every night.
- Be aware that transmitting range is limited and depends on the terrain you are in, the quality of your aerial and the distance to the nearest repeater station.
- Generally the best aerial is a 4.5dB.
- UHF radios are useful tools for close proximity communications (up to 50km when repeater stations are used).
- For vehicle to vehicle communication. Decide which channel to use prior to travelling in parties with more than one vehicle. Channels 9 to 21 and 21 to 30 are simplex channels and should be used for close communications.
- Channels 1 to 8 and 31 to 38 are duplex channels and will connect up with the repeater stations use for longer range communications.
- To check if a repeater is nearby listen for morse code identification, repeater trail (beeping noises) or press the transmit button (that you normally press to speak) on your handset and a crackling noise will be heard, use repeater station maps.
- Do not use Channels 22 and 23 these are reserved to telemetry (remote operation of bores etc).
- Channels 5 and 35 are used for emergencies.
- Channel 40 to communicate with truck drivers.
- Hand held units are useful when walking away from the vehicle and for communication between mappers walking some distance apart. Ensure they are fully charged prior to use.
- Communicate with station owners and staff. Station owners may provide details of the channel they usually use.



---

## PERSONAL LOCATOR BEACONS - PLB

### When to use the PLB.

- **The PLB is only for use in serious emergencies** where radio or telephone contact can not be made and you consider you are in serious danger. Use as a last resort. This is not a departmental search and rescue.

### What type of PLB

- A PLB with an inbuilt GPS locator is best. This will provide rescuers with GPS coordinates for where you are.
- Rescue time is reduced by several hours when using GPS locator.
- Highly recommended for remote areas work and people who work alone.
- If the PLB you are using has an inbuilt GPS locator this should be indicated on the unit.

### Who should have a PLB.

- Each field party is issued with a PLB to be kept in the centre consol for easy access or taken with you if leaving the vehicle.
- If working alone carry your PLB at all times when away from the vehicle.
- Consider taking 2 PLBs if working alone. Keep one in you pack and one in the consol at all times.

### Testing the PLB

- PLBs should be tested every field season and according to manufacturer's instructions.
- Ensure the expiry date for the battery has not been exceeded.
- Check the safety seal is intact before leaving for a remote areas field trip. If the seal is broken this may indicate the unit has been used. If the beacon has been switched on for any length of time, the batteries will no longer have the capacity to operate for the minimum 48 hour period and must be replaced.

### Disposal of obsolete PLBs, EPIRBs and batteries

- Disposal of obsolete PLBs, EPIRBs (121MHz units) and batteries should be via Battery World or SA Police.
- Extract from the AMSA website "Lithium batteries are inherently dangerous. A beacon that has reached its battery replacement date will still have charge in the batteries but may not be enough to power the beacon for the required minimum time. Batteries should be handled carefully and not subjected to flame or cutting tools. Be careful not to short circuit the battery terminals as rapid discharge of Lithium batteries can result in overheating of the battery, rupture and even explosion."

**Two types of PLB are available from the GSSA Field Safety Officer. The FASTFIND MAX PLB** .This particular unit is recommended for vehicle use or where several people are travelling together.. The **GPS fitted FAST FIND 211 is recommended if working alone or away from your vehicle.** Always read the safety notes provided with the unit.

**If not using a FASTFIND PLB** refer to instructions and user manuals specific to the make and model being used. Many of the features will be similar.

### About the FASTFIND MAX PLB

- **The FASTFIND MAX PLB transmits a unique identification signal and current position** via the international search and rescue satellite system operated by COSPAS SARSAT on 406MHz. The signal is then passed on to local search and rescue authorities. In the event of PLB activation and providing the PLB registration is current, the Field Safety Officer will be notified that the beacon has been activated.
- The time taken for the alert to be processed is dependant upon the extent of satellite system coverage at that time and any overhead obstruction that could impair the signal path to the satellite.
- The FASTFIND MAX PLB does not have an inbuilt GPS so positioning is not as accurate as PLBs with a GPS locator. Approximate location range is between 2 and 5 km and between 45 minutes and 2 hours average response time. This PLB also has a secondary 121.5 MHz homing transmitter which rescue services can "home in" on using direction finding techniques once they are close to the PLB.
- If your position is in a deep gully or other similar place the signal may not be transmitted unless the satellite is passing over. The best position for the PLB in this type of situation is in the centre of the gully, as far away from the edges as possible.

- 
- Accidental PLB activation. In the event of an accidental PLB activation switch the PLB off immediately and notify RCC-Australia as soon as possible by calling 1800 641 792 to ensure a search and rescue operation is not initiated. There is no penalty for inadvertent activations.

#### About the FAST FIND 211 PLB

- **The FAST FIND 211 PLB is fitted with a GPS** providing more accurate location details when activated resulting in a quicker rescue time. This unit is recommended when working away from the vehicle or working alone.

See the AMSA website and McMurdo Ltd website for further information.

[www.amsa.gov.au](http://www.amsa.gov.au)

[www.fastfindplb.com](http://www.fastfindplb.com)

## HF RADIO OPERATIONS

Most GSSA field parties are equipped with satellite telephones and mobile telephones, this has reduced the need for Selcall radio use. A small number of Codan 5828 radios are still fitted to vehicles in the GSSA, instructions for their use can be found in the vehicle glove box. NB these are different to the instructions below.

Basic instructions on radio use are still given below as they may be useful for emergency situations where you may need to use somebody else's radio and when the satphones are not operational. Coober Pedy staff currently use the NGT 3033 HF radio system as their primary communication system. Instructions on how to make a call to and from a radio using this system are given below.

Other branches can also access this system if required. Contact the Coober Pedy office for further information.

- **Coober Pedy Office** has a base selcall radio in the office that scans all frequencies the number is **9040** this radio is on Monday to Friday and monitored from 8.00am to 5.00pm daily. **Telephone** (8) 8672 5800
- **Marla office** has a base radio that scans all frequencies the number is **9060** this radio is on and monitored from 10.00 am Tuesdays to 2.00 pm Thursdays. **Telephone** 8670 7005
- **Andamooka office** has a base radio that scans all frequencies the number is **9070** this radio is on and monitored from 8.00 am to 11.00 am Tuesdays and Thursdays. **Telephone** 8672 7017

## OPERATING INSTRUCTIONS FOR THE NGT HF RADIO NETWORK

**The following instructions are for making calls to and from vehicles using the Codan 3033 HF radios currently used by Coober Pedy staff.**

**NB; GSSA VEHICLES FITTED WITH THE OLDER 5828 HF RADIOS HAVE INSTRUCTION BOOKLETS PROVIDED IN THE VEHICLE GLOVEBOX.**

**Making a call on Selcall**

**On the radio handset:**

#### **A: Set up the call**

1. Start with the radio in scan mode. The display shows 'Scanning'.
2. Press the CALL button.
3. If the number you want to call is not on the display then use the number buttons to enter the radio number you want to call.
4. Press the CALL button.
5. 'PIRSA SEL' should be highlighted in the display. If it is not then use the UP/DOWN button to highlight it.
6. Press the CALL button.

---

## **B: Channel-Test to find the best one**

7. If necessary, use the UP/DOWN button to make the channel number '01' appear at the left of the display.
8. **Press and hold** the CALL button.  
The radio will tune the aerial if it needs to.  
Then it will start sending a channel-test call. The display should show an icon of a radio handset with a question mark. After the call has been sent, the message 'Channel test...Listen' will show briefly on the display
9. If the other radio responds to your call you might hear a tone while the other radio is tuning its aerial. Then you should hear four reverberate beeps. The loudness of the beeps gives an indication of how good that channel is for communication. The louder the beeps, the better.  
When the fourth beep is finished, proceed with the next step.  
If no beeps are heard you should wait for ten seconds after you see the 'Channel test...Listen' message before proceeding with the next step.
10. Use the UP/DOWN button to change the display so the channel number at the left of the display goes up by one. For example: '01' changes to '02'.
11. Repeat steps 8, 9 and 10 to make a Channel-Test call on that channel, and change to the next channel up, until you have done a Channel-Test call on channels 01, 02, 03, 04, 05 and 06.

The channel that gave the loudest reverberate beeps is the one you should choose for making the call.

## **C: Make the call**

12. If necessary, use the UP/DOWN button to change to the channel you have chosen.
13. **Press (but don't hold)** the CALL button.  
The radio will tune the aerial if it needs to.  
Then it will start sending the sel-call. The display will show an icon of a radio handset.  
If the other radio responds to the call you might hear a tone while it tunes its aerial, then you should hear four short beeps indicating that it is 'ringing'.
14. Listen for the other person answering your call.  
Press the PTT button (on the side of the handset) when you're talking.  
Release the PTT button when you are listening.  
When they press or release their PTT button you hear a short beep.  
They will also hear a beep when you press or release your PTT button.
15. When you have finished your call, press the SCAN button.

### **If the call is not successful:**

Their radio will stay tuned to that channel for thirty seconds before going back to scan.  
If you are going to try calling again, you must wait that long before trying again.  
When their radio goes back to scan it will keep a message on its display letting them know that you called.  
If you are finished with the radio, press the SCAN button.

### **Note:**

If you already know roughly which channel will be the best there is no need to channel test every channel. For example, if you think that channel 3 will be the best you might do a channel test for channels 2, 3 and 4 to make sure.

If you already know that a particular channel works well, there is no need to do any channel tests. You can skip section B completely.

---

## Instructions for using the Codan 3033 Telephone Interconnect Unit

### Calling a vehicle from a Telephone

Call the phone number for the relevant base:-

08 8379 4135 for Adelaide  
08 8762 3173 for Naracoorte  
08 8672 3078 for Coober Pedy

**The Telephone Interconnect unit will answer the phone with a recorded message; “Welcome to Codan 3033 Telephone Interconnect”**

The actions of the Telephone Interconnect are all prompted by a voice menu.

Main Menu

**Selcall Menu** Press **1**

Send a **Selcall** Press **1**

Enter Station **Address (radio number)** then **#** key eg. 9124#

Select the **channel** then **#** key eg. 02#

Refer to the channel list for more detail

**Send** the call, press **#**

Options available once a connection is established, press **\***

Change channels, press **1**

Disable VOX, press **2** to disable, **#** to toggle PTT

To **hang up** a call, press **9**

Perform a **Channel Test** (Beacon Call) Press **2**

Enter Station **Address** then **#** key eg. 9124#

Select the **channel** then **#** key eg. 02#

Refer to the channel list for more detail

**Send** the call, press **#**

If the call is successful, to proceed with a Selcall, press **#**

If the call is un-successful to try another channel return to the Selcall menu, press **\***

Return to Selcall Menu, press **\***

Call a Telephone (leave a **call back number**) Press **3**

Enter Station **Address** then **#** key eg. 9124#

Enter the call back **telephone number** then **#** key

Select the **channel** then **#** key eg. 02#

**Send** the call, press **#**

Return to Selcall Menu, press **\***

**When finished hang up the telephone.**

**Notes:**

**Menu selections can be made without waiting for the voice prompt to finish the current options.**

**Menu options will be repeated after a short time if no buttons are pressed.**

### Channel List

<b>01</b>	<b>2140 kHz</b>
<b>02</b>	<b>3716 kHz</b>
<b>03</b>	<b>5377 kHz</b>
<b>04</b>	<b>7365 kHz</b>
<b>05</b>	<b>9266 kHz</b>
<b>06</b>	<b>11087 kHz</b>

### **RF RADIATION SAFETY DURING RADIO OPERATIONS (extract from DFW HF Radio Network Radio Users Guide Feb 2011)**

When operating the HF radio in any vehicle it is important to consider the risk of RF Radiation exposure from the antenna to people in the vicinity of the vehicle.

Radiation from the HF antenna can extend up to 2 metres from the antenna but does not enter the vehicle through the windows of a vehicle due to the long wavelength of HF waves.

Before operating the HF Radio check to see that no one is with-in 2 metres of the antenna outside the vehicle.

---

## 10 SERIOUS MEDICAL EMERGENCY PROCEDURES

- Don't panic.
- Do not endanger your own life.
- Use your first aid skills as best you can.

**Dial Emergency 000 anywhere.**

**If in a remote area you can Contact the RFDS, direct Telephone: 08 8648 9555**

Mobile phones (Only use 112 as an alternative to 000 if you have a mobile phone and are outside of your normal provider's network coverage area but inside another providers coverage area).

- Remember to give the operator a good description of your location including the state name and if possible, have a brief assessment of medical aspects of the incident ready before calling.
- Give a GPS location.
- If possible keep your telephone switched on during the emergency for communications. This may not be possible if battery power is limited. In this case organise call back times and numbers with the emergency service assisting.
- Write down any instructions.
- RFDS or SA ambulance will give you instructions for first aid.
- Contact near by field parties or station and request assistance if able to do so.
- If in a difficult to find location, unable to drive out but able to leave the patient for a few minutes, do so and erect some signalling devices so you can be located more easily. See Emergency signalling devices section in this manual.
- If unable to achieve contact with any of the emergency services activate your PLB – see instructions on the PLB.
- Contact your Field Safety Officer when practical to do so.

---

## 11 MEDICAL CALLS TO RFDS BY TELEPHONE

### EMERGENCY CALLS TO THE ROYAL FLYING DOCTOR (RFDS) CENTRAL OPERATION SA AND NT BY TELEPHONE

Telephone; 08 8648 9555 any time

NON URGENT medical consultations are also taken on this number.

### EMERGENCY CALLS TO THE ROYAL FLYING DOCTOR (RFDS) PORT AUGUSTA USING 8528 HF RADIO

Tune the radio to **frequency**                      **4010 (24 hours)**  
   **2020 (For after hours urgent medical calls only)**  
   **6890 or 8165 (7am to 7pm)**

Press the red **EMERGENCY CALL BUTTON** on the radio set for **3- 4 seconds until a beep is heard**. From this point you can remove your finger from the button as it will continue by itself for a further 15-20 seconds. If you wish to terminate the tone at any time during this period, press the microphone button.

Your call will be **answered by RFDS ( Port Augusta)** base. If no response from the base after a minute or so, try an alternative frequency.

**Speak clearly. Use the radio call sign VL50N and your Selcall number. Give location details and explain the nature of the emergency.**

RFDS will tell you what action to take.

#### **Alternative RFDS networks:**

Alice Springs: call sign VJD and frequencies 2020, 5410 and 6950 khz.

Broken Hill: call sign VJC and frequencies 2020, 4055 and 6920 khz.

**The 2 Mhz frequencies are primarily for night use.**

## 12 ACCIDENT AND INCIDENT REPORTING SYSTEMS

All accidents, hazards and incidents must be reported according to the procedures provided in PIRSAFE Visit the PIRSAFE intranet site, (HIRS) Incident Reporting System and the PIRSA OHS&W and Injury Management Incident Reporting Flowchart for additional information. The PIRSA employee assistance program is also available providing counselling if required.

### INJURIES AND INCIDENTS

- If an accident or incident occurs it is the workers responsibility to notify their supervisor as soon as possible.
- The Supervisor will notify the Principal Consultant, IM and OHS&W within 24 hrs of all injuries resulting in a claim for compensation and ensure that the incident is reported via HIRM and contact the OHS&W consultant within 3 working days of the injury.
- Minor scrapes and minor incidents that appear not to require an incident form lodgement can be reported to your Field Safety Officer.
- If what appears to be a minor incident becomes an issue an incident form can be progressed by the Field Safety Officer if required.
- If unable to lodge an electronic incident report form due to your location, inform your Field Safety Officer. The Field Safety Officer will record and forward details of the incident to your Team Leader or Manager who will progress the lodgement of an incident report on your behalf.

### VEHICLE ACCIDENTS

**Further information can be found on the PIRSAFE intranet site, Safe Driving Procedure and at [Fleetsa.sa.gov.au](http://Fleetsa.sa.gov.au)**

- It is the **responsibility of the driver** of the vehicle involved in a crash or where personal injury has been sustained to report the accident as soon as possible:
- **Report accident** to SA Police.



- 
- Report within 90 minutes where a person is injured.
  - Report as soon as possible within 24 hours where the estimated damage total exceeds the prescribed amount (\$1000).
  - Report all theft or burglary to the Police immediately within 24 hours.
  - Report the accident to your manager.
  - Complete relevant incident / accident report form on HIRS, a medical check up may be required.
  - **Notify Fleet SA** Accident Management by telephoning 8226 8044.
  - **Complete the Fleet SA accident / incident claim form** within 24 hours and **fax the signed copy to Accident Management on 8226 8030.**
  - Forms are located in the Fleet SA folder in the vehicle glove box. or alternatively, if you have access to the State Government network (StateNet) you can complete an online form at <http://intra.fleetsa.sa.gov.au>.
  - **Arrange repairs** to the vehicle by an accredited crash repairer.

## 13 DRIVING VEHICLES

### DRIVER REQUIREMENTS

Refer to the PIRSAFE intranet site, Driving Policy for further information:

[http://intranet.pirsa.sa.gov.au/people/pirsafe/ohs\\_and\\_w\\_a-z/driving](http://intranet.pirsa.sa.gov.au/people/pirsafe/ohs_and_w_a-z/driving)

#### Training

- Drivers must have adequate training and experience in general driving, off road driving and collision avoidance.
- Driver training courses should be undertaken every 3 years.
- Drivers must have a current drivers licence applicable to the vehicle they are driving. Drivers licences must be sighted by the Field Safety Officer.
- First aid training is required for employees who undertake extensive driving.

#### Driving

- Excessive speeds greatly increase both the chance of **serious accidents** and of **damage** to vehicles and tyres.
- All vehicles must be driven within the **legal speed limits**. If drivers are caught speeding they are personally liable for the fines and other penalties. In addition, particularly on unsealed roads, speeds must be kept to a **reasonable and safe level dependant on the conditions** – usually well below the legal limit.
- **Seat belts** must be worn at all times.
- Drive according to road **traffic rules** and conditions.
- Staff should not drive vehicles greater than 12 hours in any 24 hour period, even if driving is shared.
- **Fatigue is fatal.** Have **regular driver changes** or breaks when driving long distances.
- When travelling long distances avoid travelling alone unless absolutely necessary. Assess the risks prior to departure. Take regular breaks (two hourly).
- **Do not drive when tired or drowsy.** Where travel and work may exceed 12 hours in any 24 hour period, stay overnight.
- **Driving at night or dusk should be avoided if possible.** Assess the risks prior to commencing.
- Drivers should **not operate mobile telephones or satellite phones while driving** unless they are “hands free” telephones.
- When driving **do not use other electronic devices which may interfere with driver concentration** and that are not part of the vehicle .
- **Extract from the DRUG AND ALCOHOL POLICY;** “PIRSA endorses the State Fleet Policy that employees must not drive a vehicle while under the influence of any drug or with a blood alcohol level in excess of the

current legal limit of 0.05%.” The complete Drug and Alcohol Policy is available on the intranet.  
[http://intranet.pirsa.sa.gov.au/people/pirsafe/ohs\\_and\\_w\\_a-z/drug\\_alcohol\\_policy](http://intranet.pirsa.sa.gov.au/people/pirsafe/ohs_and_w_a-z/drug_alcohol_policy)

- Staff are not to drive vehicles when adversely affected by alcohol and where the taking of medication or drugs may induce drowsiness.
- **NON DEPARTMENTAL PASSENGERS AND DRIVERS;** Permission must be sought prior to embarking on field trips where non departmental passengers will be travelling in departmental vehicles.

## GENERAL SAFETY ISSUES – PRIOR TO DEPARTURE

### Vehicles before departure

- **Collecting vehicles and equipment from the Thebarton Depot** - Please note that the **Thebarton Depot** is open for business between **7:30 am and 4:00pm Monday to Friday**. For security and safety reasons, staff requiring after hours access must make prior arrangements with Thebarton staff.
- All vehicles and equipment taken must be recorded and signed for on the form provided at the depot. Vehicle sign out requires sign off from both user and a member of the Technical Services Team to ensure both parties are satisfied with the vehicle’s readiness for the field.
- When travelling to remote and pastoral lease areas ensure your vehicle is equipped with standard safety and camping equipment. Use the checklist and suggestions in the “Field Equipment for Vehicles” section of this manual.
- Take the appropriate vehicle for the terrain you are intending to travel over.
- Always check the vehicle for problems before departing. Report any vehicle problems that occur while you are using the vehicle and ensure they are repaired before the vehicle is used by another field party. Report vehicle faults to the Technical Services Team ph. 8463 3119.
- If using a hired vehicle, ensure all appropriate safety and communications equipment is collected from the depot prior to departure.

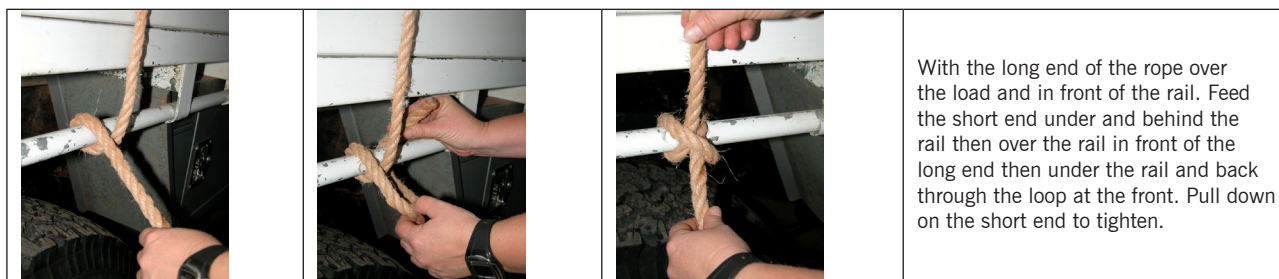
### Packing

- Items carried outside the vehicle eg. roof rack, tray of ute etc. must be secured.
- Ensure knots and tie down straps are secure.
- Do not overload the roof rack with heavy items.
- Load and pack with care, place loose and dangerous objects behind the cargo barrier.
- Ensure tarpaulins used to secure loads are not covering brake lights or indicators.
- Ensure the fire extinguisher and first aid kit are easily accessible and in good working order.
- Pack frequently used and heavier items in easily accessible areas of the vehicle to avoid excessive lifting of equipment.











### Knots for securing your load

The knots described below are useful when securing a load on your vehicle. A good knot holds but is easy to un-tie if necessary, there are different knots for different purposes and all knots are not good for all purposes. Check knots are secure when you stop the vehicle for a break.

**Clove Hitch** Is quick and easy to tie and can be tied one handed. Useful when securing the load on a tray top vehicle. Some things to watch with the clove hitch are; It can slip in wet conditions or when using slippery rope.



**Trucker's Hitch** Is best for tying down loads, do *not* use for any other purpose such as supporting people or equipment at height. It is only secure when under constant strain and comes undone as soon as the strain is released. It can cause rope to deteriorate if the knot is used repeatedly in the same place on the rope.

	<b>Step 1.</b>  Start the "Truckers Hitch" by securing one end of the rope to the railing on the side of the vehicle with a clove hitch.		<b>Step 2.</b>  Throw the rope over the load where it needs securing and feed it under the rail on the opposite side of the vehicle.
	<b>Step 3.</b>  Lift the loose end of the rope upwards and drag the top part of the rope under it to form a loop. Allow the loose end to hang over the loop as illustrated.		<b>Step 4.</b>  The loop can then be pulled upwards.
	<b>Step 5.</b>  While holding the loop made from the loose end of the rope, form another loop in the rope that is lying on top of the load by twisting once.		<b>Step 6.</b>  Feed the bottom loop through the top loop.
	<b>Step 7.</b>  Pull down on the loose end of the rope, let go of both loops. The knot will tighten and work like a pulley.		<b>Step 8.</b>  The top section of the knot should look like this. The rope in the bottom left corner shows the pulley action through the loop.
	<b>Step 9.</b>  Pull down on the loose end to tighten. When tight enough tie the loose end to the railing with a clove hitch.		<b>Step 10.</b>  The finished Truckers Hitch.

---

## Towing Tips

- Trailers and caravans must not exceed towing capacity of tow bar and vehicle.
- Ensure brake lights and indicators on trailers and caravans are fully operational and visible.
- Ensure the trailer or caravan is hitched correctly and is in good condition.
- Do not overload trailers or vehicles.

The following is an extract from State Fleet safe towing advice.

- **If you have not towed** a caravan, campervan or trailer before, make sure you get some practice before leaving home. Waiting until you are on the road to perfect your safe towing techniques may result in you annoying other drivers, or attracting bemused spectators.
- **Avoid trailer sway**  
Crosswinds can be a problem when towing. The combination of high speed and crosswinds can cause trailer sway, which dangerously destabilises both the vehicle and what is being towed. You can limit trailer sway by slowing down – ease back on your speed or braking gently and smoothly.
- **Leave adequate stopping distance**  
Always leave adequate stopping distance between yourself and the vehicle in front. This is particularly important in wet or slippery conditions.
- **Engage lower gear when travelling downhill**  
This will minimise overheating the brakes on both the tow vehicle and the caravan/trailer, reducing the risk of brake failure.
- **Distance when overtaking**  
Allow adequate distance when overtaking. Remember you will not have the acceleration you are used to.
- **Prevention from being showered by rocks**  
When travelling on narrow or single lane bitumen roads, it is safer to completely pull off to the side of the road when you see a large truck or vehicle approaching. Allowing the larger vehicle to occupy the single lane roadway will prevent you from being showered with the rocks as the vehicle passes by.

## Tips for safe travelling

The following is an extract from the FleetSA website <http://intra.fleetsa.sa.gov.au>.

**Aim high when steering** – Look long down the road, not short in front of you. For example:

- If you are travelling down a suburban street at 50kph, you should be looking 170 metres ahead.
- If travelling on a major road at 60kph, you should be looking down the road 200 metres ahead.
- If you are travelling down a highway at 100kph, you should be looking down the road 340 metres ahead.
- When travelling down a long stretch of road at 110kph, you should be looking down the road at 370 metres ahead.

This will allow you to see a problem early and act upon it, not react to it when you get there.

- **Check your mirrors constantly**, about 4 times a minute; what is behind you is almost as important as what is in front of you. What is behind you can dictate how you deal with what is in front of you.
- **Constantly scan at least 45 degrees either side of you.** A change or hazard can come from anywhere and be anything. Be prepared.
- **Don't ASSUME you have the right of way.** Be ALERT- drive safer and live longer.
- When travelling long distances **don't eat a large meal before or during travel**, they can make you drowsy. Snacking lightly and often is better.

---

## 14 OFF ROAD DRIVING

### UNSEALED ROADS AND STATION TRACKS

- All field personnel must be trained or have adequate experience driving in off road conditions before undertaking fieldwork.
- State road rules apply to public unsealed roads, drivers must have a current drivers licence and follow the road rules, traffic infringement fines must be paid by the person driving the vehicle at the time of the infringement.
- If experiencing bad weather, check road conditions before driving on unsealed roads. Roads may be closed, vehicles travelling on closed roads can be fined for causing damage to the road surface, these fines can be very expensive.
- To check if the roads are closed telephone the **far Northern road conditions report line 1300 361 033**. or check the website at [http://www.transport.sa.gov.au/quicklinks/northern\\_roads/northern.asp](http://www.transport.sa.gov.au/quicklinks/northern_roads/northern.asp)
- Station owners do not appreciate persons driving on wet station tracks and damaging the surface, consult with station owners if experiencing wet weather.
- Lock in 4WD hubs when travelling on unsealed roads in case 4WD is required.
- Unlock 4WD hubs when travelling on the sealed roads.
- Inspect tyres for damage after travelling off road and on unsealed roads.
- Reduce speed when travelling on unsealed roads and tracks. Be aware of potential sudden changes in the road surface. Gravel or bulldust patches entered at high speed can cause vehicle roll overs.
- Do not attempt to pass a vehicle in a cloud of dust. Drive with headlights on in dusty or rainy conditions to make your vehicle more visible.
- Try to avoid travel at night and dusk on unsealed roads. If travel is necessary, reduce speed and be aware of animals crossing the road, assume they will cross in front of you. Slow down and avoid swerving suddenly.
- Wet roads may be slippery and cause loss of vehicle control. Drive on wet roads only if safe to do so and travel at a reduced speed. Exercise caution at creek crossings particularly after rain as the road may be damaged. Transport SA sometimes place red flags at washed away creek crossings to warn motorists of the hazard.
- When travelling on station tracks or private roads extreme care should be taken.
- Always leave gates as you found them. Slow down when approaching dwellings to reduce dust.
- Slow down when stock are present near tracks.
- If you become bogged on a station track and have to dig the vehicle out, repair damage to the road as much as possible before departing.
- When driving near fences watch for pieces of wire that may become caught under the vehicle. Always stop immediately and check the vehicle if you suspect a piece of wire may be caught.
- Reduce speed at grids and gates.
- Blowouts: Do not brake suddenly or swerve; slow down carefully and keep to the middle of the road.

### FOUR WHEEL DRIVING OFF ROAD

- Ensure your vehicle is suitable for the terrain you intend to drive in. Ensure you have all the necessary safety equipment for this type of driving including spare tyres and puncture repair kit.
- Use tracks if appropriate in preference to travelling across country. Avoid damaging vegetation as much as possible.
- Fire hazards: avoid driving and parking in long dry grass and watch out for vegetation caught underneath the vehicle, particularly near the exhaust, differential and drive shaft.
- Take your time when driving off road and choose the safest route, avoid unnecessarily risky situations particularly if there is only one vehicle present.
- When fixing tyres ensure the jack is safe, properly set up and stable. Do not get under the vehicle.



- 
- Check tyres daily for cuts, stakes or abnormal wear.
  - Rabbit warrens, wombat holes etc. may collapse if driven over and could cause damage to the vehicle; take extra care if in an area where these are present.
  - In some areas extra care may need to be taken to avoid punctures, particularly where there are small bushes (eg. saltbush), stakes and sharp rocks (eg. slate) protruding from the ground.
  - If uncertain about the vehicle being capable of getting through a particular obstacle, get out of the vehicle, have a look and walk over the proposed route first to decide if access is possible.
  - Descending steep slopes, use low range, low gear and a square-on approach. Avoid changing gears, allow the vehicle to descend on engine compression, don't use the clutch. If brakes are used, ease them on and off gently. If loss of traction occurs keep the vehicle pointing downhill, do not turn the vehicle.
  - Ascending, use low range, first gear and square-on approach, keep an even steady pace.
  - Watch out for boggy areas and sharp gutters that can trap vehicles.
  - Avoid salt pans which are usually underlain by mud.

## **RETRIEVING BOGGED VEHICLES**

- Always ensure all party members assisting in the retrieval are aware of the drivers intentions before attempting to drive out of a bog situation.
- Caution should be exercised when attempting to push bogged vehicles. Driving wheels may cause rock fragments to fly out unexpectedly. The bogged vehicle may regain traction suddenly and lurch forward.
- Under no circumstances should anyone place themselves between a bogged vehicle under power and a trailer or caravan being towed eg. To push the vehicle or stand on the drawbar.
- Extra precautions must be taken when jacking bogged vehicles. Ensure the jack is stable in soft, uneven or slippery terrain, use jacking boards to create a firm level surface.
- Take care when shovelling mud and sand from under the vehicle, use a long handled shovel to avoid getting under the vehicle.
- Take care with all aspects of manual handling whilst retrieving your bogged vehicle.

## **WINCHES**

- Stand clear of cables when winching.
- Always use gloves when handling steel tow cables or winch cables to avoid steel splinters.
- Check the cable is in good condition before use.
- Attach winches and tow cables to recovery points, not to tow ball or bull bar.
- Hang a hessian bag or similar over the cable whilst winching. This will slow the cable down if it breaks during operation.
- Winch should be pulling on the drum part of the winch not the cable, unwind all but approximately 6 cable wraps.
- To assist the winch, have the bogged vehicle in low range first gear.
- Electrical winches will overheat and burn out if used for extended periods. When using a power winch use for short periods then allow the winch to cool down.
- Always have the engine running when the winch is in operation to prevent flattening the vehicle battery.
- When winching is completed, clean the cable and wind back onto drum evenly.

## **4WD RECOVERY STRAPS**

- Refer to instructions supplied by the manufacturer of the strap.
- Check the strap is in good condition before use and is rated for the weight you intent pulling.
- Stand clear of straps when in use.
- Attach straps to recovery points, not to tow ball or bull bar as they may break.
- Use shackles that are rated and do not over tighten. Finger tight then release  $\frac{1}{4}$  turn.

- 
- Ensure the strap has no kinks or twists once laid out between the vehicles.
  - Leave some slack in the strap.
  - Ensure all parties are aware of your intentions to start the recovery pull before commencing.
  - Pull the vehicle out with a light tug, don't go too quickly or the strap may break or stretch too much.
  - Maintain steady revs with both vehicles.

## **SAND DRIVING TIPS**

- Use low range in sandy conditions, keep revs constant and if necessary, deflate tyres slightly to improve traction. Reinflate tyres once out of the sandy area.
- Keep revs up when changing down through the gears in low range, this will help stop the jerking and loss of traction.
- If becoming bogged in sand deflate tyres and try again. If still bogging reverse out slowly before the vehicle digs in too far then attempt to move forward again.
- Avoid turning the vehicle sharply whilst driving in sand. Turning can make the vehicle dig in, try to keep the wheels as straight as possible while there is still momentum.
- If already bogged, try turning the wheels hard to the left or right then in low range attempt to drive out. The vehicle may regain traction. Alternatively try using a slight left-right turning of the steering wheel whilst gently accelerating, the vehicle may begin to regain some traction and slowly move forward.
- Increase speed when traction is good, use momentum to keep the vehicle from sinking into sand, do not attempt to drive too fast.
- If driving over sand dunes use a square on approach. If you do not have enough momentum to make it to the top don't allow the vehicle to slide sideways back down the sand dune, put the vehicle in reverse and drive it down.
- Take care not to go too fast when approaching the crest as visibility will be limited at the top. The other side may have a steep or sharp face, or another vehicle could be approaching from the opposite direction.
- Use a warning flag on the front of your vehicle when driving in large dunes.

## **MUD DRIVING TIPS**

- Reduce speed on muddy roads to avoid sliding.
- Keep the vehicle moving, using momentum but not excessive power.
- Stop and inspect muddy areas with obstacles before crossing, once committed to the crossing keep the vehicle moving.
- Use low range second or third gear, changing gears may cause loss of traction.
- In some instances muddy patches can be negotiated by driving slowly forward then back compacting the muddy surface to create a more solid base.
- Avoid "grassy" or "swampy" patches, "crab holes" and white, salty patches as these may be wet beneath the surface and the vehicle may become bogged.
- If becoming bogged, reduce acceleration to avoid digging in, look out side window to check if vehicle is still moving forward or not before you decide to try reversing out.



---

## 15 FIELD EQUIPMENT FOR VEHICLES

All vehicles being used for travel in remote areas should be fitted with or carry the safety and field equipment listed below. Ensure all equipment is in good order before departing. A camping equipment list can be found in the Bush Camping Equipment section below.

Field equipment is stored at the Thebarton Depot, it is your responsibility to ensure all field equipment collected from the depot is in good working condition before departing on a field trip. A list of equipment borrowed and your contact details must be left at the depot.

When returning field equipment to the Depot, ensure it is clean and in good condition. Replace any broken or damaged items.

NB: A trained forklift operator is required to remove equipment from storage racks.

### VEHICLE SAFETY EQUIPMENT

**All departmental field vehicles used for travelling in remote and pastoral lease areas have the following fixed equipment installed;**

- Cargo barrier.
- Dual batteries.
- Long range fuel tank. (Capacity may vary, check the specifications before travelling to remote areas.)
- Check equipment and specifications if using hired vehicles.

### VEHICLE EQUIPMENT CHECKLIST

#### STANDARD SAFETY EQUIPMENT THAT SHOULD BE IN THE VEHICLE WHEN YOU PICK IT UP

(Note; Never assume items are in the vehicle, always check before departing.)

Satellite telephone NB. Qualcomm Satphones are no longer mounted in all vehicles. Their reliability is variable. If going to a remote area or travelling alone take an Iridium phone.	Check operation. A spare satphone may be needed for working away from the vehicle. Ensure a cigarette lighter charger and 240v charger are taken for the spare phone.
Fuel cards and State Fleet vehicle repair slips	Usually in the vehicle glove compartment in a StateFleet folder. Check which cards are available before departure
Vehicle manual	In the glove box
Cargo barrier	
UHF Radio and aerial (some vehicles)	Test operation before departing
Two spare tyres	Check that rims are the same as the ones on the vehicle and require the same number of fasteners.  Depending on the area you are travelling to a puncture repair kit, bead breaker, tyre levers and spare tubes may be required.  Check the tyre repair kit is suitable for the tyres (tubes,tubeless)  Check condition of tyres
Tyre pressure gauge	Usually in the side door pocket or glove box
Compressor and hose	Usually fitted under the bonnet or in the side cupboard of traytops. Ensure hose is in the vehicle and compressor is working.
Puncture repair kit, tyre levers and mallet	Ensure the correct type for tyres of vehicle, tubeless or tubes and that all components of the kit are there.
Jack, handle and wheel brace	A spare jack may also be of use. Hydraulic Jacks must be stored in a vertical position
Tool kit	This is an additional tool kit, not the standard vehicle kit. Check contents are suitable and in good condition.

First Aid Kit	Check contents are intact and the use-by dates have not expired
Fire extinguisher	Check extinguisher is full
Field Safety and Procedures manual	Usually in the side pocket of door
Winch	Most vehicles have a permanent winch fitted, ensure the winch control unit is in the vehicle

#### **EQUIPMENT TO COLLECT FROM THE DEPOT, HEAD OFFICE or PURCHASE BEFORE DEPARTURE**

Communications equipment, PLB, mobile phone and Iridium telephone	Collect from the Field Safety Officer
Engel fridge	Test operation, check cables. 240v cable
Jacking boards or plate	Available at the Depot on request
Tyre pump	Most vehicles have compressors fitted. (If using a hire vehicle check if it has a compressor if not take a hand pump.)
4WD recovery strap	Most vehicles have a winch. If not, a 4WD recovery strap may be required.
Jumper leads	Available at the depot on request
Shovel	Long handle shovels are best when bogged to avoid reaching under the vehicle.
Water	More than one jerry can in case of leaks or spills.. Traytop vehicles may be fitted with a water tank, ensure the tank is full. Purchase boxes of drinking water
Fuel jerry cans	Most vehicles have long range fuel tanks so jerry cans are generally not required Check fuel availability prior to travelling to a remote area.
Oil and brake fluid	May need to purchase, ensure correct type.
Matches or lighters	Water proof matches, several packets should be taken
GPS	Spare batteries
Torch	Spare batteries
Relevant maps and aerial photographs	
Cash or Government credit card	For unexpected expenses, NB: credit cards may not be accepted in some locations.
Camping equipment suitable for the field work being undertaken.	See suggestions in the "Bush camping Equipment" section of this manual.
Spare food for emergency use	At least one weeks supply of food with a long shelf life, eg; Rice, pasta, canned food not requiring water to prepare, dried fruit, nuts, barley sugar etc.

---

## 16 VEHICLE MAINTENANCE AND REPAIRS

### REPORTING VEHICLE FAULTS

After returning from a field trip **always report any vehicle problems encountered**. Fill out log books as required, including debit codes and any vehicle faults and report faults to the person responsible for the vehicle and to the Technical Services Team, ph. 8463 3119 or mob 0401 122 011. **Ensure this is done before the vehicle is assigned to another field party.**

Vehicles may require;

- Servicing.
- Replacement or repair of damaged tyres, including tyres that have been repaired in the field.
- Mechanical repairs.
- Cleaning.
- Communications equipment repairs.

### BREAKDOWN PROCEDURES; WHERE ASSISTANCE IS AVAILABLE

- A 24 hour State Fleet road assistance telephone number is 1800 818 048 Toll Free 24 hours a day (RAA).
- When repairs are required, including crash repairs, use the State Fleet vehicle repair forms in the glove compartment.
- Information relating to your Fleet SA vehicle can be found on the SA Government Intranet at:  
[www.fleetsa.sa.gov.au](http://www.fleetsa.sa.gov.au)

### BREAKDOWN PROCEDURES; REMOTE AND PASTORAL LEASE AREAS

- Do not leave your vehicle unless safe to do so.
- If your communications equipment is operational phone immediately for assistance. Contact the Field Safety Officer and give details of your location, (include GPS coordinates if possible) and make arrangements for assistance.
- If working near a station, contact the station via radio or satellite phone and request assistance.
- If no radio or satellite telephone your Field Safety Officer will initiate a search when you have failed to log in.

### VEHICLE MAINTENANCE CHECKS WHILST IN THE FIELD

The following should be checked during the field trip, particularly extended trips into remote areas;

#### Wheels and Tyres

- Visually inspect all tyres (including all spares) for bulges, splits or embedded objects that may lead to failure.
- Check and adjust pressures for optimum performance based on expected road conditions and vehicle loading.
- Check tightness of wheel nuts.
- Inspect rims for cracks or distortion.
- Repair or replace tyres/wheels if required.

#### Under bonnet checks

- Engine oil level.
- Auto transmission oil (where fitted).
- Brake and clutch hydraulic fluid levels.
- Power steering oil level.
- Radiator hoses – check for leaks and tightness of clamps.
- Battery fluid level, cleanliness and tightness of terminal fittings, integrity of battery holders, – also check attachment of earth cables to body and engine.
- Radiator – check for blockage of core fins, check integrity of radiator cap and seal, check coolant level.

- 
- Belts – check radiator, power steering, air conditioner belts for integrity and correct tension.
  - Air filter – check for build up of dust – clean as required.
  - Check washer reservoir level.
  - Visually check other equipment eg electrical accessories (connectors/fuses), air intakes. ***Look for problems before they stop the vehicle.***

#### **Under vehicle checks**

- Check ground under vehicle for evidence of leaks – investigate as required.
- Check suspension springs and shock absorbers for damage, distortion and integrity of mounts and fittings (especially in rough corrugated road conditions).
- Ensure there is no build up of vegetation under the vehicle that may ignite or affect other equipment.
- Check towbar/bullbar mounts (especially in rough corrugated road conditions).
- Visually check brake lines/cables for damage.

#### **General vehicle checks**

- Operation of all lights.
- Check free wheeling hubs if fitted – ensure in correct position as required.
- All accessories – eg radio, sat phone, compressor, fridge.
- Check for damage to body panels, lenses.
- Check aerial mounts and connectors (especially in rough corrugated road conditions).
- Check water tanks if fitted.
- Check vehicle winches or cranes if fitted.

**With all of the above – if you are not sure – ask for help.**

## **VEHICLE TROUBLE SHOOTING**

Refer to the vehicle manual for details. All vehicles are provided with a user manual in the glove box. Topics such as changing fuses, bleeding the fuel system after running out of fuel, checking radiator coolant levels etc. are covered in vehicle manuals.

## **BATTERY PROBLEMS**

### **Dual Battery systems**

- Most vehicles are fitted with dual batteries, this will reduce the likelihood of a flat main battery occurring. Jumper leads should be taken in case the main battery is flattened by leaving lights on or by faults with the auxiliary battery.
- The second battery (auxiliary) provides power for the fridge, satellite phone and radio if fitted. There are usually 2 plugs available in the rear of the field vehicles.
- Identify the batteries prior to departure, the second battery may not be a sealed battery. Ask for assistance if unsure.
- If using the fridge, inverter or other appliances without using the vehicle regularly the second battery will eventually become flat. Start the vehicle, go for a drive, or leave running to recharge the second battery.
- Extra care should be taken when operating any equipment from the cigarette lighter that is wired to the main battery. avoid using the main battery for this purpose where possible use the second battery cigarette lighter plugs in the rear of the vehicle.
- When not using the vehicle, the battery can become flat quite quickly particularly if using an inverter. Start the vehicle engine and leave running for at least 1 to 2 hours each day.
- It is possible to jumpstart the vehicle using the second battery.
- See the SOP's below for instructions on jumpstarting.

## JUMPSTARTING FROM ANOTHER VEHICLE

PIRSA Mineral Resources Division	SOP No. MRD 0001 Date of Issue: August 1996 Last Revision: May 2011 Revision By: Lyn Broadbridge and Chris Brock		
Stages What to do in the right order	Hazards/ Risks of each step	Key Points How to do it	Protective Equipment (see below)
Position Vehicles	<ul style="list-style-type: none"> <li>Vehicle/s Rolling</li> <li>Risk of Being Crushed</li> </ul>	<ul style="list-style-type: none"> <li>Bring both vehicles nose to nose, a safe operating distance apart. Ensure vehicles are not touching.</li> <li>Secure both vehicles with the handbrake on.</li> <li>Chock wheels if on uneven ground or incline.</li> </ul>	
Preparation before starting	<ul style="list-style-type: none"> <li>Battery Explosion</li> <li>Electrical sparks</li> <li>Burns</li> <li>Splashing of battery acid to person's body</li> </ul>	<ul style="list-style-type: none"> <li><b>Ensure both engine ignition switches are in the switched off position.</b></li> <li>Manual to be in neutral, automatic to be in park or neutral.</li> <li>Ensure radios and communication equipment is switched off in both vehicles.</li> <li>Secure bonnet in open position on both vehicles.</li> <li>Check terminals for corrosion.</li> <li>Inspect jumper leads for damage and amperage rating before use.</li> </ul>	
Jump Starting	<ul style="list-style-type: none"> <li>Battery Explosion</li> <li>Electrical sparks</li> <li>Burns</li> <li>Splashing of battery acid to person's body</li> </ul>	<ul style="list-style-type: none"> <li>Connect the red coloured jumper lead to the (+) positive terminal of the booster battery and the other end of the red jumper lead to the (+) positive terminal of the flat battery.</li> <li>Connect the black jumper lead to the (-) negative terminal of the booster battery and the other end of the black jumper lead to a good earth point on the disabled vehicle. eg engine block or metal part of the body of the disabled vehicle</li> <li>Start the engine of the vehicle being used to jumpstart the disabled vehicle, accelerate to 2000rpm to increase battery amperage to full capacity</li> <li>Start the engine of the vehicle with the flat battery.</li> </ul>	
Vehicle with flat battery started	<ul style="list-style-type: none"> <li>Electrical sparks</li> <li>Burns</li> <li>Being hit by incorrectly stowed equipment</li> </ul>	<p>Leave vehicle running and disconnect the jumper leads in the reverse order of connection.</p> <ul style="list-style-type: none"> <li>Secure bonnet, check electronic equipment is functioning correctly.</li> <li>Remove wheel chocks if applicable.</li> <li>Pack and correctly stow all equipment safely</li> </ul>	
<b>SPECIAL NOTE</b>		<b>ASSUME ALL DEPT PETROL VEHICLES ARE FITTED WITH EFI</b>	

---

## 17 TYRE MAINTENANCE AND REPAIRS

### REPAIRING PUNCTURED TYRES

Some safety hazards may be encountered when repairing tyres;

- Before travelling to an area where no assistance for tyre repairs is available, ensure adequate training in tyre repairs is undertaken.
- When removing and replacing tyres follow the procedure in the “Tyre Repair SOP” below. Extra care may need to be taken to ensure the vehicle is stable on the jack when punctures occur on uneven ground or rough terrain.
- Keep one spare tyre repaired and useable at all times.
- Take care when lifting tyres and operating tyre repair equipment.
- Repairing punctures is potentially hazardous when working with split rims, particularly when reinflating the repaired tyre. Always place the tyre with the split rim facing the vehicle or under the vehicle or stand well away from the tyre with the vehicle between people and the tyre, the split rim may come off once under pressure if not refitted properly.
- Ensure tyres are inflated to the correct pressure, check with tyre pressure gauge. Consider load weight and terrain.
- When repairing a tyre (split rim type) work on a tarpaulin to avoid; losing valves and other small pieces of equipment, kneeling on rough ground, getting dirt inside the tyre.

### HOW TO REPAIR A SPLIT RIM TYRE

**Equipment required;** Tyre levers, ground sheet, rubber mallet, compressor, bead breaker and puncture repair kit. Ensure the puncture repair kit contains patches of varying sizes, glue, chalk, valve tool, rasp and stitcher. Spare valves and a spare tube should also be taken.

- Remove flat tyre from vehicle and lay tyre face up on the ground sheet.
- Release all air from tyre by removing the valve core with the valve tool, put valve core in a safe place where it won't get lost.
- Break the bead using a bead breaker. If no bead breaker the bead can be broken by carefully driving over the edge of the tyre.
- Mark the position of the split in the ring and the position of the valve on the tyre with chalk.
- Stand on the tyre and insert the tyre lever into the join in the ring and push down.
- Insert the other tyre lever into the manufacturers notch on the inside of the ring.
- Pull up on the lever and lever the ring out, working around the rim as necessary.
- Remove the rim, having something under the rim (such as a rock sample) makes this task easier, the tyre can then be pushed downward and comes off easily.
- Remove the tube and rim liner.
- Locate the puncture in the tube and remove any items that may have caused the puncture from both the tube and inside of the tyre.
- Mark out the puncture with chalk.
- Ensure area to be patched is dry then roughen with rasp and clean with a cloth.
- Apply vulcanising cement and allow to dry for a few minutes.
- Peel backing off patch and apply patch over the hole and vulcanising cement.
- Roll the stitcher repeatedly over the patch from the centre outward until the patch is firmly adhered
- Test for leaks.
- Place the tube back inside the tyre and partially inflate.
- Place the rim liner in the tyre over the tube.
- Place the tyre over the rim, with the rim facing upward.

- 
- Locate the valve and insert through the rim.
  - Align the valve with the chalk marks on the tyre.
  - Replace the split ring in the original position align with chalk marks made earlier.
  - Hammer or push on the ring, working around the ring until completely seated in position.
  - Extreme care must be taken when reinflating a split rim tyre. With the tyre under the vehicle or leaning against vehicle, split rim facing into vehicle or ground under the vehicle inflate the tyre.

## HOW TO REPAIR A TUBELESS TYRE

**Equipment required;** puncture repair kit (plugging string type), includes tyre pliers, rasp/probe tool, insertion tool, strings and glue, compressor.

- If the puncture is on the outside wall of the tyre it may be fixed whilst still on the vehicle, if on tread or inside wall of tyre, the tyre will have to be taken off of the vehicle.
- Remove the foreign object from the tyre with pliers.
- Clean out the hole using the rasp/probe tool.
- Apply cement to the hole.
- Centre the “hole plugging string” in the middle of the eye of the insertion tool and coat with cement.
- Firmly push the insertion tool with hole plugging string into the puncture.
- Twist tool to release string and remove tool from hole.
- Cut off any excess string.
- Reinflate tyre and test for leaks with soapy water.



## TYRE REPAIR SOP

<b>PIRSA</b> <b>Mineral Resources Division</b>		<b>SOP No. MRD 0002</b> <b>Date of Issue: August 1996</b> <b>Last Revision: May 2011</b> <b>Revision By: Lyn Broadbridge, Chris Brock</b>	
Stages What to do in the right order	Hazards/ Risks of each step	Key Points How to do it	Protective Equipment (see below)
Position Vehicle	Being hit by another vehicle	<ul style="list-style-type: none"> <li>▪ Park vehicle in a safe location – away from traffic.</li> <li>▪ If necessary drive with flat tyre for a short distance in order to get to a safe position to allow enough room to change tyre.</li> <li>▪ Secure vehicle handbrake, select a low gear for a manual, neutral or park for an automatic.</li> <li>▪ Chock wheels <b>front and back</b>.</li> <li>▪ <b>Operate hazard warning lights.</b></li> <li>▪ Wear high visibility safety vest</li> </ul>	<ul style="list-style-type: none"> <li>▪ High Visibility Safety Vest</li> </ul>
Locate Equipment	Strains and sprains from Bending, lifting and twisting	<ul style="list-style-type: none"> <li>▪ Locate jack and tools in vehicle.</li> <li>▪ Refer to vehicle handbook for location of jacking points and operation of jack.</li> <li>▪ Vehicle handbook should be kept with vehicle at all times.</li> </ul>	<ul style="list-style-type: none"> <li>▪ High Visibility Safety Vest</li> </ul>
Preparation for Tyre Removal		<ul style="list-style-type: none"> <li>▪ Ensure the ground is firm where you are to position the jack</li> <li>▪ Use jacking plate if appropriate.</li> <li>▪ Position jack in the appropriate jacking point., refer to the vehicle manual for jacking point locations</li> <li>▪ Remove spare tyre from its position on the vehicle ready for use.</li> <li>▪ <i>Please note; (the spare tyre can be used under the vehicle to prevent crushing injury if vehicle falls off jack)</i></li> <li>▪ Remove hubcaps, where applicable.</li> <li>▪ Loosen wheel nuts with wheel brace.</li> </ul>	<ul style="list-style-type: none"> <li>▪ High Visibility Safety Vest</li> </ul>
Tyre Removal and Replacement	Crushing injury  Sprains and strains through Bending, lifting and twisting.	<ul style="list-style-type: none"> <li>▪ Jack up vehicle to a suitable height off the ground to enable fitting of inflated spare tyre.</li> <li>▪ Complete removal of wheel nuts.</li> <li>▪ Remove unserviceable tyre, install new tyre and replace wheel nuts, hand tighten.</li> <li>▪ Lower jack, tighten wheel nuts with wheel brace when vehicle resting on the ground.</li> <li>▪ Ensure all wheel nuts are securely fastened and replace hubcaps.</li> <li>▪ Check - tyre pressure on replaced wheel to match other tyres on vehicle</li> </ul>	<ul style="list-style-type: none"> <li>▪ High Visibility Safety Vest</li> </ul>
Pack up Site	Sprains and strains through Bending  Lifting and twisting  Being hit by incorrectly stowed equipment	<ul style="list-style-type: none"> <li>▪ Secure jack and tools in appropriate place in vehicle.</li> <li>▪ Lift and secure unserviceable tyre in appropriate designated location (bent knees and straight back).</li> <li>▪ Remove chocks from front and back.</li> <li>▪ Pack and correctly stow all equipment safely</li> </ul>	<ul style="list-style-type: none"> <li>▪ High Visibility Safety Vest</li> </ul>
<b>SPECIAL NOTES</b>	Risk of Being Crushed	<b>ENSURE VEHICLE IS ON JACK FOR SHORTEST TIME POSSIBLE.</b> <b>NEVER PLACE ANY PART OF THE BODY UNDER THE VEHICLE.</b> <b>WHERE MULTIPLE JACK CHOICES ARE AVAILABLE – ENSURE THE MOST SUITABLE FOR THE CONDITIONS IS USED.</b> <b>BE AWARE OF JACK OPERATION BEFORE USING.</b>	<ul style="list-style-type: none"> <li>▪ High Visibility Safety Vest</li> </ul>

---

## 18 QUAD BIKES AND MOTORBIKES

The Mineral Resources Division motorcycles and quads are intended for Government use only. Used where conventional 4WD vehicles would cause unnecessary damage to the environment and for accessibility reasons.

Bookings should be made as per the vehicle booking procedure via Thebarton Depot.

### Essential requirements

- For motorcycles and quads, the rider must have a current driver's licence or learner's permit and must have completed and passed a training course by a recognised and qualified instructor.
- Motorcycle riding requires an appropriate endorsement from Transport SA.
- Regular training courses are required for riders to maintain their bike skills.

### The motorcycles and quads:

Are not intended for use on public roads. Their use on public roads will be for the following reasons only:

- Emergencies.
- Logistical necessity (Field camp to work area).
- As part of training whilst supervised by a recognised and qualified instructor.

### Riders will:

- Demonstrate due environmental care whilst riding off road.
- Wear appropriate protective clothing (helmet, gloves, eye protection, long pants, long sleeved shirt or top, footwear that protects ankles).
- Travel at a speed and in a manner that is appropriate and safe for their ability and the conditions in which they are riding (road rules apply at all times).
- For safety reasons, ride with one or more other riders. Only for reason of an emergency or for mechanical failure should a rider ride alone, and then additional caution must be taken.
- Communication devices, PLB, basic tools, first aid kits and water should be carried. Refer to the Bush Sense section of this manual.

### During fire danger season:

- Quad bikes should if possible carry fire extinguishing apparatus, preferably water or foam type.
- Operators should check for and clear vegetation from the underside of the quad regularly, preferably every 20 minutes or less.
- Quad bike refueling sites should also be equipped with fire extinguishers - in this case, dry powder or other type capable of extinguishing fuel fires.

After using motorcycles and quads, riders must clean the bikes and report any repairs or mechanical problems to Tech Services, Thebarton Depot.

## FOUR WHEEL BIKE SAFETY

PIRSA Mineral Resources Division	SOP No.MRD 0003 Date of Issue: August 1996 Last Revision: May 2011 Revision By: Lyn Broadbridge, Ian Hopton, Neil Gray
-------------------------------------	---

Stages What to do in the right order	Hazards/ Risks of each step	Key Points How to do it	Protective Equipment (see below)
<b>GENERAL SAFETY NOTES</b>	Roll Over Severe Injury or Death	<ul style="list-style-type: none"> <li>▪ <b>No-one is to operate an ATV without being properly accredited</b> and has undergone proper instruction and supervision in the safe use of an ATV</li> <li>▪ Prior to operating the vehicle, the Operator's Manual must be read and <b>fully understood</b>.</li> <li>▪ The Operator's Manual should be kept with the vehicle <b>at all times</b>.</li> <li>▪ <b>Read ALL warning labels on vehicle.</b></li> <li>▪ The vehicle is designed for off road use ONLY - it is NOT intended for use on public streets, roads or highways.</li> <li>▪ <b>NEVER consume alcohol or drugs before OR while operating the vehicle.</b></li> <li>▪ Installation of accessory items may affect vehicle handling - refer to Operator's Manual for information.</li> <li>▪ <b>Operator MUST ALWAYS wear an approved motorcycle helmet, eye protection and protective clothing and footwear.</b></li> </ul>	Eye Protection Protective Clothing Safety Boots Approved Motorcycle Helmet
Fuelling Vehicle	Explosion Fire Burns Inhaling Fumes Splashes into eyes	<ul style="list-style-type: none"> <li>▪ Never refuel vehicle with the engine running.</li> <li>▪ When refuelling ATV, ensure area is free from any source of flame or sparks.</li> <li>▪ Ensure there is adequate ventilation.</li> <li>▪ Wear eye protection when refuelling from containers to avoid eye splash</li> </ul>	Protective Clothing Safety Boots Gloves Eye protection
Storing and Transporting Vehicle	Fire Burns Muscle Strain Slipping	<ul style="list-style-type: none"> <li>▪ Incorrect storage or transportation of the ATV may cause fuel to leak from the fuel tank, causing a fire hazard.</li> <li>▪ Always select a long base utility or trailer to transport an ATV.</li> <li>▪ Always use the appropriate loading ramps - either portable or solid structure.</li> <li>▪ Push or idle the ATV onto the trailer of the vehicle.</li> <li>▪ Position ATV as far forward as possible.</li> <li>▪ Turn ATV motor off, ensure it is in gear, with handbrake on and all loose objects safely stowed.</li> <li>▪ Secure ATV with appropriate tie down straps at both back and front.</li> </ul>	Protective Clothing Safety Boots Gloves
Checking Tyre Pressure	Roll Over Severe Injury or Death	<ul style="list-style-type: none"> <li>▪ Check tyre pressure and condition of tyres <b>DAILY</b>.</li> <li>▪ Tyre pressure should be checked when tyres are cold, <b>before vehicle is operated/ridden</b>.</li> <li>▪ Tyre pressure gauge <b>MUST</b> be kept with the vehicle <b>at all times</b>.</li> <li>▪ <b>Improper tyre pressure can cause loss of control.</b></li> </ul> <p><b>LOSS OF CONTROL CAN RESULT IN SEVERE INJURY OR DEATH.</b></p>	Eye Protection Protective Clothing Safety Boots Approved Motorcycle Helmet
Carrying Cargo on Vehicle	Roll Over Severe Injury or Death	<ul style="list-style-type: none"> <li>▪ Overloading the vehicle or carrying cargo improperly can change <b>handling, stability and braking performance</b> and can lead to an accident.</li> <li>▪ <b>NEVER exceed the MAXIMUM rear cargo limit/combined weight on the rear rack and in the storage area.</b></li> <li>▪ <b>NEVER exceed the MAXIMUM front cargo limit.</b></li> <li>▪ Any cargo should be centrally placed and properly secured on racks.</li> <li>▪ If carrying cargo at front of ATV, ensure it does not impede the view of the operator whilst vehicle is moving.</li> <li>▪ <b>ALWAYS refer to warning labels and Operator's Manual for maximum allowable weight loads for BOTH front and rear of vehicle.</b></li> </ul>	Eye Protection Protective Clothing Safety Boots Approved Motorcycle Helmet

Stages What to do in the right order	Hazards/ Risks of each step	Key Points How to do it	Protective Equipment (see below)
Operating/Riding Vehicle	Roll Over Severe Injury or Death Dehydration	<p><b>OPERATORS MUST:</b></p> <ul style="list-style-type: none"> <li>Conduct a pre inspection of the ATV before each use. Check for oil leaks etc.</li> <li>Undergo approved training before using an ATV</li> <li>Always work in pairs when undertaking remote areas work</li> <li>Carry appropriate communications, navigation, first aid equipment and water</li> </ul> <p><b>NEVER CARRY A PASSENGER.</b></p> <ul style="list-style-type: none"> <li>Carrying a passenger increases the risk of losing control of vehicle.</li> <li>Survey area where ATV is to be used, taking note of any slopes, undulations or obstacles.</li> <li>If vehicle is operated at excessive speeds or speeds too fast for the terrain, visibility conditions or operator's experience, risk of losing control is increased.</li> <li>Always be aware of potential hazards, eg low tree branches, ground obstacles.</li> </ul> <p><b>THE PARKING BRAKE MUST ALWAYS BE APPLIED BEFORE THE OPERATOR GETS OFF THE ATV.</b></p>	<p>Eye Protection Protective Clothing Safety Boots Approved Motorcycle Helmet Communications equipment First aid kit</p>

---

## 19 CAMP MANAGEMENT GUIDELINES

Occupational injuries associated with camping include all those associated with cooking in domestic kitchens, (such as burns and cuts) and those caused by tripping, manual handling, poor lighting or hygiene. A poorly chosen site can lead to risks involved with flooding or bush fires.

Larger camps should appoint a camp manager to ensure safe operation of the camp. Smaller camps may not require a manager but should designate specific tasks to individuals to ensure safe conditions.

### CAMP LOCATION

- Take a GPS reading of the camp locality and report at the first available log-in schedule.
- Respect the local wildlife when setting up camp. As well as disturbing wildlife some species may not be good neighbours (such as scorpions and bull ants) - check the area before setting up.
- Swags should be left rolled up and tents zipped up when not in use to prevent insects, snakes etc., from entering.
- Creek beds are picturesque campsites but may be hazardous if flash flooding occurs; never camp in the main channel of a creek.
- Sites should be reasonably level, free of excessive obstacles, with a few shade trees if possible. In the best sites it is possible to walk about the camp without watching where you put your feet.
- Sandy to gravelly ground is preferable to clay soils that will break up with traffic and become dusty in dry weather or muddy in rain.
- Camps should not be placed beneath trees that may lose branches, eg river red gums can drop branches in calm weather without warning.
- If practical, vehicle access tracks should be downwind of the camp to keep dust from vehicles to a minimum.
- Avoid camping next to main roads and tracks.
- In some areas mosquitoes may carry Ross River virus and other mosquito borne diseases. If camping in a mosquito infested area use mosquito nets and insect repellent and wear light coloured clothing.
- Observe all fire bans and restrictions for the area. **Call CFS Bushfire Hotline 1300 362 361** or visit the website [www.cfs.sa.gov.au](http://www.cfs.sa.gov.au).
- Refer to 'Statement of environmental objectives and environmental guidelines for mineral exploration activities in South Australia', *Earth Resources Information Sheet, M33*.

### WASTE DISPOSAL

- Correct disposal of food scraps, cooking and washing water is essential. For short term camps with only a few people, food scraps can be buried or burned, and water allowed to drain away naturally. Empty cans and bottles should be placed in a garbage bag for disposal at the nearest rubbish dump or recycling depot.
- Bury all human waste away from the campsite. Avoid using water catchment areas as toilet sites.
- Install a "long-drop" toilet if a group is camping for extended periods in one location.
- Carry your own water. Soap or detergents should not be used in any natural water course or stock watering point.
- Ensure all waste disposal methods used comply with current government legislation.
- Refer to 'Statement of environmental objectives and environmental guidelines for mineral exploration activities in South Australia', *Earth Resources Information Sheet, M33*.

### HEALTH AND HYGIENE

- Camping in remote areas often means there are no facilities for personal hygiene. Ensure hands are washed before handling food.
- Fridges should be operated for a period of time each day to ensure food is kept sufficiently cold.
- Keep fridges clean, pay particular attention to meat products that may leak blood into the fridge. Meat can be vacuum packed at purchase to keep it fresh for longer periods of time.

- 
- Cooking utensils should be washed after use and returned to a clean storage area.
  - Food should be stored correctly and if possible in sealed containers. - Crows, dingoes and ants are notorious food scavengers.
  - Fresh fruit and vegetables will keep longer if kept in a separate fridge set on a low setting. This will keep them cool rather than cold and prevent items from freezing. Avoid unnecessary handling of the fruit and vegetables this may cause them to bruise and deteriorate more rapidly.
  - Keep lids secured on water jerry cans when not in use.
  - Ensure adequate lighting in the camp - use torches.
  - Wear sturdy footwear around the camp.

## **CAMPFIRE SAFETY**

Wood collecting and campfires can be hazardous. The following points may help prevent injury or accidents occurring.

- Abide by local fire ban restrictions, check the CFS Bushfire Hotline 1300 362 361 or visit the website [www.cfs.sa.gov.au](http://www.cfs.sa.gov.au)
- Use gardening or leather gloves when removing pots from the fire or collecting wood.
- Avoid unnecessary wood chopping.
- Collect sufficient wood for the evening during daylight hours.
- Position the campfire in a safe place with reasonable clearance from tents, swags, vehicles and surrounding vegetation.
- Keep campfires tidy; long pieces of wood left in campfires may be tripped over or start bush fires.
- Satellite fires used for cooking should be positioned away from main walking areas and should be extinguished after use.
- Some rocks may explode when heated sufficiently, dig a shallow hole for the fire rather than using rocks to contain it.
- Do not refuel vehicles near campfires.
- Extinguish all fires before leaving camp and cover with earth.
- Wear adequate footwear around the campfire.
- Do not leave campfires unattended.
- Keep LPG gas cylinders well away from campfires and other ignition sources.

## **LIQUIFIED PETROLEUM GAS (LPG)**

Bottled gas is heavier than air, and accumulates in confined areas where it can explode if ignited. It is a common cause of fires, explosions and injuries.

- Make sure all connections are tight, check for gas leaks with a detergent and water solution that will bubble at a leaking connection.
- Don't use the gas appliance if the burners are corroded, taps are damaged or stuck or the flexible hose is brittle, cracked or damaged.
- Store gas bottles away from naked flames and open fires.
- Do not keep gas bottles for stoves or refrigerators in confined places where gas can accumulate.
- Ensure that gas bottles have not passed their certification use by date
- If a cylinder is damaged, rusty or has passed its safety certification date return to an authorised LPG test station for safe disposal. Never dispose of gas cylinders at the dump or any via other rubbish disposal service.
- Authorised LPG testing stations can be located by checking your local business directory under gas cylinder testing or local LPG supplier or retailer.

---

### Transporting LPG cylinders safely

- Secure the cylinder in an upright position.
- Use a sealing plug so there is no chance of accidental gas leakage.
- Keep the cylinder cool.
- Don't carry it in the passenger compartment.
- Avoid keeping LPG cylinders in the car especially in the summer months. It could overheat causing the LPG cylinder to exceed the maximum service pressure resulting in the safety relief valve filling the car with LPG vapour.

## GENERATORS

Technical Services have generators available for field camps, bookings should be made via the Thebarton Depot.

Using a generator at a more permanent camp can improve safety by providing good lighting and refrigeration facilities. Safe practice when using generators includes;

- Choose the correct generator for the job. Ensure it has been well maintained.
- Appoint a person to be responsible for the generator and associated wiring and equipment.
- Never operate a generator indoors or in a confined space. where exhaust fumes can accumulate.
- Always follow the manufacturer's recommendations for earthing the generator.
- Lay out cables so that they do not pose a tripping hazard or get wet.
- Tape up plugs where extension cables join power boards etc. to prevent moisture entering and accidental unplugging.
- Refuel, inspect and service the generator daily as required.
- Do not allow the generator to run dry of fuel or oil so it can not be instantly restarted. Oil should be changed weekly.
- Store fuel in a safe place in the correct containers.
- Position a fire extinguisher and shovel near the generator.
- Clear dry grass and other flammable material from the generator site to a distance of 4 metres.
- Locate the generator so that noise levels are as low as possible.
- Locate the generator outdoors in a well vented position to avoid exhaust fumes,/ carbon monoxide.
- If wet weather is an issue construct an open canopy shelter that allows good ventilation.
- Generators can be extremely heavy, when moving ensure safe manual handling practices are employed.



---

## 20 BUSH CAMPING EQUIPMENT

Not all items are available from Thebarton Depot. Some items should be purchased or supplied by the individual.

### SUGGESTED CAMPING EQUIPMENT LIST

**Safety and vehicle related items are listed in the “Field Equipment For Vehicles” and “Personal Safety Equipment” sections of this manual.**

**Solar powered charger** (Useful for trickle charging batteries)

**Gardening gloves** (useful for wood collecting, winch operation and handling steel tow cables)

**Tarpaulin or ground sheet**

**Table**

**Chairs**

**Fridge and cables, 240v and 12v** (check operation before departing)

**Rag on a roll or paper towel**

**Toilet paper**

**Soap** (liquid / dispenser)

**Swag**

**Tent** (spare pegs, ropes)

**Sleeping bag**

**Pillow**

**Mosquito net**

**Rope**

**Hammer**

**2 Bowls** (personal hygiene and kitchen)

**Spade / shovel**

**Water Jerries**

**Sponge / scourer**

**Alfoil**

**Matches / lighter**

**Dishwashing liquid**

**Cooking equipment** (some kits are available at the Thebarton Depot, check contents prior to departure)

Gas stove and bottle (may be necessary when wood is in short supply or a fire ban applies)

BBQ plate

BBQ tongs, utensils

Camp oven

Frying pan

Assorted billies

Cutlery

Plates

Bowls

Cups

Tongs

Sharp knives

Can opener

Peeler

Plastic containers with lids

Chopping board

Wire toasting rack

Personal equipment

---

## 21 PERSONAL SAFETY

### SUGGESTED DAY PACK CONTENTS

If leaving the vehicle carry a day pack with survival equipment at all times.

The following list may be useful. Do not overload your day pack.

***Always carry plenty of water for the day.***

**Metal water bottle** (water can also be boiled in this)

**Knife**

**GPS and batteries**

**Satellite telephone** (must be carried if working alone) or **mobile telephone** (if suitable for the area you are working in)

**Personal first aid kit** (broad bandage, band-aids, etc)

**PLB** (must be carried if working alone)

**Matches** (water proof) or **lighter**

**Emergency thermal blanket** (silver – also useful as a signalling device)

**Sun screen**

**Hat**

**Food ration** (chocolate, nuts etc Tea bags, coffee, sugar sachets)

**UHF radio** (charge batteries every evening)

**Pens, pencils, paper**

**Maps, electronic mapping equipment**

**Rain jacket** (light weight)

**Heliograph signalling mirror**

**Whistle**

**Compass**

**Gaffa tape**

**String or fishing line**

**Clear plastic bags** (large – use for collecting water, keep maps dry etc.)

**Insect repellent**

**Small torch**

**Chemical light** (useful signalling device)

**Binoculars**

### FIELD WORK

- Plan your water needs for the day.
- Drink plenty of water in warm weather. In hot conditions up to 1 litre per hour may be consumed.
- Salt is important - Staminade type drinks are good for replacing salts lost through perspiration, consider adding some salt to your evening meal.
- Avoid working in very high temperatures, rest in the shade.
- Wear adequate protective clothing and boots, including hat and sunglasses to protect from sun.
- Apply sunscreen regularly to exposed skin to avoid sunburn, see SOP 118 below.
- Wear safety glasses when using geological hammer.
- Do not overload backpack.
- Ensure you are physically fit to carry out fieldwork and have adequate training.
- Plan your route at all times, record a GPS position for your vehicle before leaving it.
- Take a field assistant with you if possible.
- Ensure your field companion is able and trained to carry out fieldwork and can deal with emergency situations.

- 
- Ensure adequate provisions for emergencies and know emergency rescue and survival procedures.
  - Hard hats and safety boots must be worn at drilling sites, quarries and mines.
  - Leave vehicle in a conspicuous position.
  - Carry a fully equipped day pack when leaving the vehicle, see suggested day pack contents above.

## WORKING ALONE IN THE FIELD

- Perform a risk assessment for the tasks to be undertaken if working alone.
- Follow the guidelines for fieldwork and personal safety as listed above.
- Be adequately trained in navigation techniques, use of satellite telephone, first aid, off road driving and bush survival techniques.
- Persons travelling alone beyond the settled area or working away from their vehicle should carry a day pack containing a PLB, satellite telephone, signalling devices, water, food, GPS, maps, matches (preferably waterproof), personal first aid kit, pens and paper. See suggested day pack contents above.
- Carry your equipped day pack with you even if you only intend to walk a short distance from your vehicle.
- Log-in with Head Office twice daily (see Daily log-in requirements section in this manual) a third log-in may be required if the evening log-in is made prior to reaching your overnight destination.
- Make an additional log-in with the Field Safety Officer at any time if you are undertaking an activity you feel may involve increased risk to your safety.

## 22. BUSHFIRE SAFETY

### BUSHFIRE SAFETY WHEN WORKING IN THE FIELD

The following information is from various sources including;

The PIRSA Bushfire Danger Policy and PIRSA OHS&W [Bushfire Survival Planning Guideline](#)

The CFS website [www.cfs.sa.gov.au](http://www.cfs.sa.gov.au).

### WHERE TO ACCESS INFORMATION ABOUT BUSHFIRES AND FIRE BANS WHILST YOU ARE IN THE FIELD;

**CFS Bushfire Information Hotline: 1300 362 361**

**CFS website** [www.cfs.sa.gov.au](http://www.cfs.sa.gov.au)

**BOM website** [www.bom.gov.au](http://www.bom.gov.au)

**Sentinel Bushfire (hotspot) monitoring system (Geoscience Australia)** <http://sentinel.ga.gov.au/acres/sentinel/index.shtml>

**On local ABC radio, FIVEaa, or regional ABC radio stations and local community radio stations listed on the CFS website**

**GSSA Field Safety Officer 0401 122 019**

**Local Police and Emergency Services - see Country Police Stations page 83.**

- **IF UNABLE TO ACCESS THE INTERNET** OR OTHER INFORMATION FROM YOUR WORK AREA The Field Safety Officer can check the CFS website for you, phone anytime if you are concerned about a fire ban or bushfire issue in your work area.
- During the bushfire season ensure you are aware of any bushfire threats and fire bans in your work area.
- Abide by all restrictions and fire bans issued in your work area.
- **Extra precautions must be taken when travelling off road** during the bushfire season. Ensure no grass or twigs have become lodged under your vehicle, carry a water spray backpack in your vehicle, seek permission from landholders to enter properties.
- Do not travel into a work area threatened by a bushfire.
- When a **CATASTOPHIC OR EXTREME FIRE DANGER WARNING** is issued for an area you propose working in non-essential work related travel into or within the district should be deferred.
- Staff that may be working remotely in the district at the time the forecast is made should travel to the nearest town, if it is safe to do so.

- 
- **Leaving early is the safest option.**
  - **Inform your Field Safety Officer** if you change your itinerary.
  - **If caught in a fire situation** the following points may be useful
    - **Open areas** such as ovals, beaches, large clearings, low fuel areas are useful as last resort refuges.
    - **Fire intensity** is dependant on fuel load available to the fire, weather conditions, wind direction and topography.
    - **Vegetation**, Forest and scrub fires are more intense and generate significantly more heat than grass fires.
    - **Topography**, fires burn more quickly and with greater intensity up slopes than on flat ground or downhill.
    - **Smoke**, significantly reduces visibility, many vehicle accidents occur when people drive in thick smoke.
    - **Roads** may be blocked by fallen trees and branches, other vehicles.
    - **Radiant heat can kill**; cover up with woollen or cotton clothing, leather boots and broad brimmed hat. Do not use synthetic materials.
    - Good **solid structures** and **appropriate clothing** will provide protection from the radiant heat. Radiant heat cannot penetrate through solid objects, which means your best protection is in a well-prepared building.
  - **If in your vehicle or working in the field**
    - **If travelling in bushfire prone areas** carry woollen blankets or a canvas tarp in your vehicle. These can be used to help protect you from radiant heat if caught in a fire.
    - **Carry plenty of water** to avoid dehydration.
    - **Never travel towards a bushfire or smoke.** If you are aware of bushfires before you leave home, plan an alternative route. If you come across smoke while travelling, turn around and go back. Listen to the radio and ask locally for help to find a safe way through.
  - **If staying in accommodation**, use their bushfire action plan.
  - **During a bushfire the critical time for personal safety is during the 5-10 minutes** it takes for the fire front to pass. There will be extreme radiant heat, dense smoke and high temperatures.
  - **If you do need to use your car as a shelter from a bushfire**
    - Find a clearing away from dense bush and high ground fuel loads.
    - Position the car facing towards the oncoming fire front.
    - Park the car off the roadway to avoid collisions in poor visibility.
    - Turn headlights and hazard warning lights on.
    - Tightly close all windows and doors.
    - Stay inside your car – it offers the best protection from the radiant heat.
    - Shut all the air vents and turn the air conditioning off.
    - Turn the engine off.
    - Get down below the window level into the foot wells and shelter under woollen blankets.
    - Drink water to minimise the risks of dehydration.
  - **As the fire front passes**
    - Stay in the car until the fire front has passed.
    - Fuel tanks are very unlikely to explode.
    - Smoke gradually gets inside the car and fumes will be released from the interior of the car. Stay as close to the floor as possible to minimise inhalation and cover mouth with a moist cloth.
    - Tyres and external plastic body parts may catch alight. In more extreme cases the car interior may catch on fire.

- Once the fire front has passed and the temperature has dropped cautiously exit the car (be careful – internal parts will be extremely hot).
- Move to a safe area such as a strip of land that has already burnt.
- Stay covered in woollen blankets, continue to drink water and call or wait for assistance depending on your location.

The following fire danger ratings guide and bushfire watch & act and emergency messages fact sheet is provided by the CFS.

## FIRE DANGER RATINGS

Fire Danger Rating	Recommended Action and Potential Fire Behaviour and Impact
<b>CATASTROPHIC FDI 100+</b>	<b>ACTION: For your survival, leaving early is the best option.</b> <ul style="list-style-type: none"> <li>▪ Fires will be uncontrollable, unpredictable and fast moving. Flames will be higher than roof tops. Thousands of embers will be blown around. Spot fires will move quickly and come from many directions, up to 20 km ahead of the fire.</li> <li>▪ There is a very high likelihood that people in the path of the fire will die or be injured. Thousands of homes and businesses will be destroyed.</li> <li>▪ House construction standards do not go beyond a Fire Danger Index of 100.</li> <li>▪ Well prepared, constructed and actively defended homes may not be safe during a fire.</li> <li>▪ Do not expect a fire truck.</li> </ul>
<b>EXTREME FDI 75-99</b>	<b>ACTION: Leaving early is the safest option for your survival.</b> <ul style="list-style-type: none"> <li>▪ Fires will be uncontrollable, unpredictable and fast moving. Flames will be higher than roof tops. Thousands of embers will be blown around. Spot fires will move quickly and come from many directions, up to 6 km ahead of the fire.</li> <li>▪ There is a likelihood that people in the path of the fire will die or be injured. Hundreds of homes will be destroyed.</li> <li>▪ Only well prepared, well constructed and actively defended houses are likely to offer safety during a fire.</li> <li>▪ Do not expect a fire truck.</li> </ul>
<b>SEVERE FDI 50-74</b>	<b>ACTION: Leaving early is the safest option for your survival. Only stay if you and your home are well prepared and you can actively defend it during a fire.</b> <ul style="list-style-type: none"> <li>▪ Fires will be uncontrollable and move quickly. Flames may be higher than roof tops. Expect embers to be blown around. Spot fires may occur up to 4 km ahead of the fire.</li> <li>▪ There is a chance people may die or be injured. Some homes and businesses will be destroyed.</li> <li>▪ Well prepared and actively defended houses can offer safety during a fire.</li> <li>▪ Do not expect a fire truck.</li> </ul>
<b>VERY HIGH FDI 25-49</b>	<b>ACTION: Only stay if you and your home are well prepared and you can actively defend it.</b> <ul style="list-style-type: none"> <li>▪ Fires can be difficult to control. Flames may burn into the tree tops. Expect embers to be blown ahead of the fire. Spot fires may occur up to 2 km ahead of the fire.</li> <li>▪ There is a low chance people may die or be injured. Some homes and businesses may be damaged or destroyed.</li> <li>▪ Well prepared and actively defended houses can offer safety during a fire.</li> </ul>
<b>HIGH FDI 12-24</b>	<b>ACTION: Know where to get more information and monitor the situation for any changes.</b> <ul style="list-style-type: none"> <li>▪ Fires can be controlled. Expect embers to be blown ahead of the fire. Spot fires can occur close to the main fire.</li> <li>▪ Loss of life is highly unlikely and damage to property will be limited.</li> <li>▪ Well prepared and actively defended houses can offer safety during a fire.</li> </ul>
<b>LOW - MODERATE FDI 0-11</b>	<b>ACTION: Know where to get more information and monitor the situation for any changes.</b> <ul style="list-style-type: none"> <li>▪ Fires can be easily controlled.</li> <li>▪ Little to no risk to life and property.</li> </ul>

---

## BUSHFIRE WATCH & ACT AND EMERGENCY MESSAGES

### CFS FACT SHEET No. 29 January 2011

Fire can threaten suddenly and without warning so you should always be ready to act.

The CFS will provide as much information as possible to help you make an informed decision however you may not always receive an official warning directly.

#### Stay Informed

Look and listen for information on television, radio, internet, mobile phones and by speaking with neighbours.

Do not rely on a single source for emergency information.

Do not wait for a warning message before you act.

- CFS website [www.cfs.sa.gov.au](http://www.cfs.sa.gov.au)
- **CFS Bushfire Information Hotline:** 1300 362 361  
(TTY 133 677)
- **On local** ABC radio, FIVEaa, or one of our other Emergency Broadcast Partner radio stations  
(find the full list of radio stations on our website).

#### Bushfire 'Watch and Act' & 'Emergency Warning' Messages

There are three levels of messages that can be issued during a bushfire on radio and the CFS website.

These messages will alert you to danger so that you can take action.

**However, if you are in a bushfire prone area it is important that you remain vigilant during the summer and do not rely solely on these messages as there is no guarantee you will receive one in time.** A bushfire may impact upon you more quickly than CFS is able to respond.

The three levels of messages are:

##### ***Advice Message***

**A fire has started. There is no immediate danger.** This is general information to keep you up to date with developments.

A fire may pose no threat to life or property because:

- It is a small, controllable fire.
- It is a fuel reduction burn being conducted by fire agencies.
- It is a fire burning in a remote area away from people, homes or structures.

##### ***Watch and Act message***

**A fire is approaching, and conditions are changing. Your life may come under threat.**

You need to start taking action now to prepare for the approaching fire front and protect yourself and your family.

##### ***Emergency Warning message***

**You will be impacted by fire and you need to take action immediately.**

This message will be preceded by an emergency warning signal (a siren sound) to get your attention.

The message will also contain information about the severity of the fire, time to impact and what you should do.

You should take all of these messages seriously and consider the information carefully.

##### ***Emergency Alert telephone warning system***

In an emergency in your area, you may receive a message via your landline (to service location) or mobile (based on your billing address) advising you of the nature of the emergency and where you can go for more information.

Remember that power failures will prevent cordless phones from working, fires may damage telephone infrastructure in your area, or the fire may be travelling too fast to get a warning out.

For more information on Emergency Alert please visit [www.emergencyalert.gov.au](http://www.emergencyalert.gov.au)

---

## SENTINEL BUSHFIRE (HOTSPOT) MONITORING SYSTEM (GEOSCIENCE AUSTRALIA)

Please read the disclaimer and limitations information provided on the Sentinel website before using the data.  
<http://sentinel.ga.gov.au/acres/sentinel/index.shtml>

The Sentinel bushfire monitoring system (hotspot) is provided by Geoscience Australia and can be a useful tool when working in remote areas where bushfire information may not be available via the usual avenues.

This website can be used to identify approximate locations of bushfires across Australia. The Field Safety Officer can access the Sentinel site for you and provide information to you via telephone.

Use bushfire information from this site in conjunction with the BOM weather and wind direction forecasts to assist with making informed decisions regarding field work safety.

Please note that there are some limitations with the hotspot information,

The following points are extracted from the Geoscience Australia Sentinel website.

1. Under ideal conditions, the hotspots shown will have been detected 1-24 hours ago, depending on regional information received from the last satellite overpass.
2. The hotspot location on any map (no matter how detailed) is only accurate to at best 1.5 km.
3. The symbol used for the hotspot on the maps does not indicate the size of the fire.
4. Not all hotspots are detected by the satellites. Some heat sources may be too small, not hot enough, or obscured by thick smoke or cloud.
5. The satellites detect any heat source that is hotter than normal. As well as fires these may include industrial operations such as furnaces.



## 23 WEATHER RELATED SAFETY ISSUES

**FOR WEATHER INFORMATION** whilst in the field listen to local radio stations, visit the Bureau of Meteorology website at [www.bom.gov.au](http://www.bom.gov.au) or contact the GSSA Field Safety Officer 0401 122 019 who can access websites for you if you are unable to do so in your work area.

For road conditions contact the FAR NORTHERN ROAD CONDITIONS 1300 361 033

Where weather is extreme local radio stations, police and emergency services may also provide information.

### EXTREME HEAT

- **If intending on working away from your vehicle** assess the weather conditions before heading out for the day. Decide if the weather conditions may be a safety risk. If you change your itinerary inform your Field Safety Officer.
- **In extremely hot conditions** if safe to do so, work from your vehicle where you can access cold water and cool down with frequent breaks in the air conditioning.
- **Avoid HEAT STRESS AND SUN BURN.** Always wear sun protection when working outdoors. See SOP MRG 0003 below.
- **Avoid strenuous physical work** on extremely hot days choose a lighter task.
- **Cease work** during the hottest part of the day and rest in the shade or air conditioning.
- **Drink plenty of water** and keep cold water in your vehicle refrigerator on extremely hot days.
- **Replace salts** lost through perspiration.

### SUN PROTECTION DURING OUTDOORS WORK

<b>PIRSA</b> <b>Mineral Resources Division</b>		<b>SOP No. MRD 0004</b> <b>Date of Issue: August 1996</b> <b>Date reviewed: May 2011</b> <b>Reviewed by: Lyn Broadbridge , Chris Brock</b>	
Stages What to do in the right order	Hazards/ Risks of each step	Key Points How to do it	Protective Equipment (see below)
Prior to commencing work outdoors		<ul style="list-style-type: none"> <li>▪ Assess the weather conditions, UV ratings.</li> <li>▪ Determine appropriate PPE to be used for the day's activities.</li> <li>▪ In extreme weather conditions assess and modify the work routine to early morning and evening where possible when the UV rays are less intense.</li> <li>▪ Ensure plenty of drinking water is available.</li> </ul>	
Sun protection whilst working outdoors  Using Shades and shelters	Sunburn Skin Cancer UVR burns Radiant heat Heat stress Sun stroke Dehydration	<ul style="list-style-type: none"> <li>▪ Where possible, work indoors or in the shade.</li> <li>▪ A temporary shelter can be erected or trees and buildings used for protection from ultraviolet rays.</li> <li>▪ A shady spot should be available for lunch and tea breaks</li> <li>▪ Organise jobs so that tasks requiring work outdoors get done early in the morning, when the ultraviolet rays are less intense.</li> <li>▪ Minimise exposure to the sun between 10 am and 3 pm when ultraviolet is strongest</li> </ul>	Sun shade
Wearing Protective Clothing		<ul style="list-style-type: none"> <li>▪ Broad brim hat.</li> <li>▪ Sunglasses that comply with The Australian Sunglasses Standard, AS/NZS 1067:2003,</li> <li>▪ Long sleeved shirts and long trousers or skirts provide the best protection.</li> <li>▪ Skin covered by clothes will not need any other protection.</li> <li>▪ Clothes that you can see light through should not be worn. If light is getting through, ultraviolet is getting through as well.</li> <li>▪ If shorts are worn, a pair that comes down towards the knee will offer more protection.</li> <li>▪ Loose clothes are more comfortable as they do not restrict movement and they allow ventilation.</li> <li>▪ Light coloured clothes are cooler in summer as they reflect the heat.</li> </ul>	Hat Sunglasses Protective clothing

Stages What to do in the right order	Hazards/ Risks of each step	Key Points How to do it	Protective Equipment (see below)
Wearing Protective Clothing (cont.)		<ul style="list-style-type: none"> <li>Natural fibres such as cotton often allow perspiration to evaporate better than artificial fibres.</li> <li>A collar on a garment is a good idea as it will protect the skin on the back of the neck.</li> </ul>	Hat Sunglasses Protective clothing
Wearing Sunglasses	Sunburn Skin Cancer Inflammation- Cornea Cataracts Conjunctiva Pterygiul (Growth) Blindness	<ul style="list-style-type: none"> <li>The simplest way of protecting the eyes from Ultra Violet Radiation (UVR) is to limit the exposure.</li> <li>A good pair of sunglasses will reduce the amount of UV reaching the eyes and cut out the amount of glare.</li> <li><b>Sunglasses must comply with the UVR requirements of the Australian Standard 1067 (revised 2003).</b></li> <li>This means they block at least 99% of UVB radiation and allows less than 1% to go through to the eye.</li> <li>Wrap-around sunglasses provide extra protection against UVR and glare.</li> <li><b>Where outdoor workers need protection from flying particles, dust, splashing materials and harmful gases, sunglasses must comply with the Australian Standard 1337 and as well as Australian Standard 1067.</b></li> </ul>	Eye Protection
Wearing Sunscreen and Lip Cream	Sunburn Skin Cancer	<ul style="list-style-type: none"> <li>Sunscreens do not provide complete protection against UV rays and should be used as an adjunct to natural protection, <b>not as a substitute.</b></li> <li>Where the job requires working with water, a water resistant sunscreen should be used.</li> <li><b>For maximum protection, outdoor workers should wear an SPF 30+ broad spectrum water resistant sunscreen.</b></li> <li>Sunscreen can be bought as a cream, lotion or gel - all work equally well, but a preference for one or the other may depend on things like stickiness or skin type.</li> <li>Sunscreen should be applied to all exposed areas of skin not covered by clothing.</li> <li>The sunscreen should be put on at least 20 minutes before going out in the sun.</li> <li>Always put sunscreen on dry skin.</li> <li>Make sure the face, neck, ears, arms and the back of hands are covered.</li> <li>Reapply sunscreen as directed by the manufacturer.</li> <li>If perspiring freely, reapply more often.</li> </ul>	Appropriate Sunscreen
Wearing a Hat	Sunburn Skin Cancer	<ul style="list-style-type: none"> <li>A hat will keep the sun off the face, neck and ears and will also protect any bald spots.</li> <li>The skin on your head is one of the places where you can easily get skin cancer.</li> <li>Broad-brimmed hats made of stiffened material are best and should have an 8 to 10 cm brim (about 3 to 4").</li> <li>The material must be a close weave that does not allow the penetration of sunlight.</li> <li>Tasks which are performed in windy conditions or involve constant movement will require a hat which stays firmly on the head.</li> <li>A tie and toggle on a hat can be used on windy days.</li> <li>For tasks which require a lot of bending, have a flap on the back of the hat (like the French Foreign Legion) to keep the sun off the back of the neck.</li> <li>The legionnaire style hat must have the following features: <ul style="list-style-type: none"> <li>Front peak with a minimum of 8-10 cm to shade the face and nose.</li> <li>A one-piece back flap to protect the back of the neck.</li> <li>The side of the flap should extend to cover the ears and neck.</li> </ul> </li> <li>A hard hat can have a flap or extra brim fitted to it.</li> </ul>	Head Protection
<u>Other associated hazards of sunburn</u>		<ul style="list-style-type: none"> <li><b>Windburn is actually sunburn.</b></li> <li>Even when there is cloud cover - skin can easily burn.</li> <li>The ultraviolet rays are scattered in all directions by the cloud.</li> <li>Ultraviolet radiation bounces off water, sand, concrete, light-coloured surfaces and snow.</li> <li>The radiation is more intense the higher you go above sea level.</li> <li><b>It doesn't have to be hot for ultraviolet radiation to reach and burn your skin.</b></li> </ul>	

---

## SAFETY DURING THUNDER STORMS

Extract from BOM website 2008

- Seek shelter in a 'hard-top' (metal-bodied) vehicle or solid building but **avoid** small open structures or fabric tents.
- **Never** shelter under small groups of (or single) trees.
- If far from shelter, crouch (alone, feet together), preferably in a hollow. Remove metal objects from head/body. **Don't** lie down flat but **avoid** being the highest object in the vicinity.
- If your hair stands on end or you hear 'buzzing' from nearby rocks, fences, etc, move **immediately**. At night, a blue glow may show if an object is about to be struck (St Elmo's fire).
- **Stay away** from metal poles, fences, clothes lines etc. that may act as lightening rods.
- If driving, slow down or park away from trees, power lines etc. Stay inside metal-bodied (hard top) vehicles or caravans but **don't** touch any metal sections.
- When struck, people do **not** glow or 'fry to a crisp' but the heart and breathing **are** often affected.
- Only about 30% of people struck actually die, and the incidence of long-term disability is low, particularly when appropriate first aid is applied **promptly**.
- If your clothes are wet, you are less likely to be seriously injured if struck, as most of the charge will conduct through the wet clothes rather than your body.
- **Avoid** touching brick or concrete, or standing bare-footed on concrete or tiled floors.
- **Avoid** the use of fixed telephones. In emergencies, make calls brief.

## FLOODING CREEKS AND RIVERS

- Flood watch warnings can be found on the BOM website.
- Never camp in creek beds even if no rain is expected.
- Check water levels and conditions before attempting to cross creeks in you vehicle.
- Never attempt to cross a fast flowing creek.
- If working near creeks in wet weather, stay alert and watch for signs of flooding and heavy rainfall in the catchment area. Be prepared to shift to higher ground.
- Take extra care crossing creeks that have recently had significant flows, watch for washaways and submerged debris that could damage your vehicle or cause your vehicle to become bogged or trapped.

### Riverbank collapse along the River Murray.

If working along the River Murray be aware of potential areas effected by riverbank collapse. Look for signs such as riverbank cracking, leaning trees along the riverbank or bubbles in the water near the riverbank. Avoid entering areas that have warning signs erected or are fenced off .

---

## 24 EMERGENCY SIGNALLING DEVICES AND PROCEDURES

### PLB EMERGENCY SIGNALLING DEVICE

- Each field party is issued with a PLB to be kept in the consol compartment or taken with you if leaving the vehicle. If working alone carry your PLB at all times.
- The PLB signalling device is a personal radio beacon. The operating instructions are printed on the PLB. Also see information about PLB operations in the communications section of this manual.
- The PLB is only for use in **serious emergencies** where radio or telephone contact can not be made and you consider you are in serious danger.
- **PLB requires a direct line of sight to satellites or aircraft to transmit.** If your position is in a deep gully or other similar place the signal may not be transmitted. The best position for the PLB in this type of situation is in the centre of the gully, as far away from the edges as possible.

### V SHEETS

- Use a V Sheet when waiting for help from and aerial search eg RFDS or PLB activated search.
- Lay the sheet out on the ground near your vehicle so you can be identified as the vehicle needing assistance.

### HELIOGRAPH SIGNALLING MIRRORS

- Heliographs can be used to attract the attention of ground search parties and can easily be seen from planes.
- Use the sight in the centre of the heliograph to locate the signal target.
- Any mirror or reflective object can be used for signalling purposes.
- As for all signalling, use only in emergencies.

### SIGNAL FIRES

Emergency signalling can be achieved through signal fires

- Position signal fires in a clearing for maximum visibility.
- Use a smoky fire during the day and a bright fire at night.
- Keep the fires burning at all times whilst waiting to be rescued.
- Quickly increase the intensity of the fire if you hear an aircraft approaching.
- Keep plenty of wood ready to add to the fire.

### SEARCH AND RESCUE SYMBOLS

The SOS sign is a recognised rescue symbol. If using SOS ensure the letters are large, in a clearing and use straight lines to form the letters, this makes them easier to spot from the air.

### OTHER SIGNALLING OPTIONS

- Emergency thermal blankets make good signalling devices, hang them over trees or bushes to attract attention.
- Items such as brightly coloured sleeping bags and clothes can also be used.
- A chemical light tied to a piece of string can be used like a bull roarer to create a large circular light.
- Audio devices such as a whistle, car horn, banging rocks together can be useful for attracting the attention of ground search parties.

---

## 25 BUSH SENSE AND SURVIVAL TECHNIQUES

### GENERAL SURVIVAL NOTES

Most bush fatalities are due to persons leaving their vehicles and not drinking enough water. Casualties are often found with water still in their water bottles. Once a serious level of dehydration is reached the person will become confused and forget to drink the water or try to save it for later when they become more thirsty.

Prior planning is the key to survival. Ensure you follow your itinerary so if you become sick, injured, lost or have a vehicle problem you will be found. Always take adequate equipment as stated in this manual. Your Field Safety Officer will initiate a search if you do not log in.

Only leave your vehicle if you are absolutely certain you can walk to the nearest settlement and it is not far away ie: less than 5kms and you know exactly how to get there and can carry enough water to undertake the walk without becoming dehydrated. Always leave a message at your vehicle stating your name, destination, direction of travel, time and date. Do not walk in hot weather conditions, stay with your vehicle.

If you are working alone and have adequate water and food to last until you are rescued, do not walk away from your vehicle.

- Always drink the water you have before you become disorientated and confused. Dehydration can cause you to make mistakes.
- Try to remain as calm as possible and think clearly.
- Conserve energy and minimise perspiration by resting in the shade.
- Remember to drink enough fluids, unless you have lost your vehicle you should have plenty of water available.
- Stay with or near your vehicle.
- Keep out of the hot sun.
- Set up signal fires and devices and make yourself as visible as possible from both air and ground.
- Keep busy, survival is 80% will power, your mental state will improve if you are busy.
- Avoid alcohol.
- Avoid bush tucker unless you are certain of what the food is. You will be rescued before you starve.

### WATER COLLECTION

- Transpiration bags and desert stills can be used to collect drinking water.
- Salty bore water could be distilled, improvise using water bottle, billies and hoses from vehicle etc.
- Metal water bottles are useful for boiling water as well as carrying it.
- Grain feeding birds fly fast to water and slow from water.
- Thoroughly boil water collected from creeks etc. before consuming.
- Water purification tablets can be useful.

### FIRE LIGHTING TECHNIQUES

Build a fire to keep warm and for signalling for help. Lighters and matches should always be kept in the vehicle and in your day pack if working away from the vehicle. Use dry kindling or grass and small dry sticks to start the fire then gradually add larger wood. A tepee shaped fire is easy to light and will burn well even if the wood is damp. Wet wood may need to be dried or use fire lighters or a candle that will burn slowly in the one spot to get the fire started.

Some alternative ways to light a fire may include:

- A magnifying glass, binocular lense, camera lense etc. Use the lens to concentrate the sun's rays on dry grass add kindling once ignition is achieved. Use this technique on bright sunny days.
- A Battery can be used by attaching wires to both terminals then touching the exposed ends of the wires together jumping sparks onto a small pile of dry grass, blow gently on the dry grass when it begins to smoke to cause ignition add fine kindling to get the fire to take hold.

- 
- Flint and steel, by creating sparks by hitting the flint with a piece of carbon steel.
  - Friction by rubbing wood together, use a hardwood shaft against a softwood base and a small amount of sand to generate friction.. The base should have a v shaped channel to funnel hot embers into a small pile of dry grass. Blow gently on the dry grass when it begins to smoke to cause it to ignite, add fine kindling to get the fire to take hold. This method is hard work.

## AVOIDING SNAKES

Snakes are one of the few wildlife hazards that may be encountered during fieldwork. They are most active in spring and summer. A snake will usually sense your presence and disappear before you even see it. They are generally timid and secretive but sometimes defensive if startled, cornered or provoked.

- Protective clothing recommended for fieldwork where snakes may be present is heavy leather boots at least 2.7mm thick, jeans, long socks and gaiters.
- Be especially careful on windy overcast days as snakes may not feel your presence therefore won't get out of your way.
- Snakes will see you better if there is contrast. Wear dark clothes on bright days and light clothes on dark days so a snake can see you moving and can get out of your way.
- Avoid walking in long grass, if possible walk where you can see where you place your feet.
- Make noise as you walk by stomping the ground and talking.
- Snakes will often hide in and under items, always take care when picking up things such as cardboard, tin, rocks etc. from the ground.
- Avoid putting hands into hollow logs, rabbit warrens, or under rocks etc.
- Keep swags rolled up and tents zipped shut when not in use.
- Wear leather gloves when collecting wood for campfires.
- Wear long trousers, even when in camp.
- Snakes may be active on warm nights.
- If close to a snake, stand still, wait and monitor its actions.
- Don't yell at it or hit or throw anything at it.
- Try not to panic, the snake may just want to get past or escape.
- Some of the behaviours displayed by snakes when approached are concealment, intimidation, feigning and counter attacking
- **Never attempt to kill a snake, this is a dangerous practice.**

Visit [www.workingwithwildlife.com.au](http://www.workingwithwildlife.com.au) for further information.

## Extract from RFDS website

Snake bites often are not painful and you might not realise you have been bitten. Take note if experiencing any of the following symptoms:

- Continued bleeding from bite site.
- Tender or painful regional lymph nodes.
- Headache, nausea, vomiting, abdominal pain.
- Sudden and perhaps transient hypotension (abnormally low blood pressure) which may cause partial loss of consciousness.
- Blurred or double vision.
- Facial paralysis.
- Muscle weakness and the diaphragm may be paralysed progressively.

See the RFDS website for further information [www.flyingdoctor.org.au/Communications/Safe-Outback-Travel](http://www.flyingdoctor.org.au/Communications/Safe-Outback-Travel)

---

## Snake bite first aid

- Check for danger
- Reassure patient, get them to lie down and stay still.
- **The patient must be kept completely still. This is critical to slow the spread of the venom, particularly important when in remote areas.**
- Monitor airway, breathing and circulation.
- Do not clean or interfere with the bite site.
- Remove jewellery from limb to be bandaged.
- Immediately bandage the limb firmly with a thick crepe bandage from the fingers or toes over the bite and up the entire limb to the armpit or groin. Use the same pressure as if bandaging a sprain.
- If bite site is on the neck, head or torso apply pressure with padding and bandage if possible.
- Mark the bite site and time on the bandage.
- Do not remove the bandage once it's on.
- Splint the limb, secure splint with another bandage.
- **Call 000 or RFDS Central Operations SA & NT (24 Hour Medical & Emergency calls) Port Augusta Base 08 8648 9555**
- **Take advice from the medical professionals. Provide an accurate as possible location to be picked up from.**
- Bring transport to the patient if possible.
- Keep the patient as still as possible.
- No food or drink, only small sips of water on victim's request.

Toxinologist: Assoc. Professor Dr. Julian White 041 982 5029



---

## 26 MANUAL HANDLING

Many injuries occur whilst people are engaged in manually handling equipment of some kind. Injuries may range from minor cuts and bruises to serious back injuries. A variety of manual handling tasks undertaken during field activities, use the risk assessment process to help reduce risk. The points below provide a general guide to minimise risk of injury.

- Training in manual handling procedures should be undertaken by all field staff.
- Avoid lifting heavy objects when possible.
- Use correct position and posture when lifting. Bend knees and keep back straight, keep the load as close to the body as possible. Do not twist or stoop.
- Do not attempt to lift items that are too heavy for you, each person will have different lifting ability.
- Where possible mechanical lifting devices should be used, these include; hoists, cranes, levers, carrying frames, trolleys, hand trucks and forklifts.
- Team lifting is recommended for core trays, rock boxes etc.
- Arrange work areas and campsites to reduce risk from manual handling. Consider workplace layout and general environment, including underfoot conditions. Size, surface characteristics, shape, stability and weight of objects. Vertical and horizontal movements involved. Work postures and space requirements.
- Reduce pushing, pulling, carrying and holding tasks.
- Avoid the need for bending, twisting and reaching movements.
- Minimise the lifting and lowering forces exerted.

## 27 DRILL SITES AND DRILLING

Drilling rigs are potentially hazardous to personnel unfamiliar with the activity. New employees must be carefully instructed in all relevant safety issues concerning drill rigs and drill sites, and that they are working with experienced peers until management and the employee are confident of their ability to work around drill rigs and interact with drilling crews safely.

### IMPORTANT POINTS RELATING TO DRILL SITES

**Participate in the drilling rig operators safety induction before commencing work at the drillsite.**

### PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS

- Always wear a safety helmet in proximity to drill rigs and be aware of the potential hazards posed by materials either dropped or thrown from rotating machinery and drill masts.
- Always wear hearing protection in the proximity to drill rigs as they generate more than sufficient noise to cause permanent hearing damage.
- Wear approved respiratory protection in dusty conditions.
- Wear appropriate eye protection.
- Wear appropriate safety footwear.
- Use gloves when sampling cuttings.

### SAFE SAMPLING PROCEDURES

- Plan your work areas so they do not interfere with drilling operations.
- Always remain aware of what the drilling crew are doing, stay out of their way, and ensure that they are made aware of what you are doing at all times. Good communications are vital.
- Carefully determine where core or cuttings are going to be placed in consideration of dust and noise.
- Ensure that adequate drainage is established so that personnel are not working in unnecessarily muddy conditions.
- Perform long term work such as core logging as far as practicable from the drill rig and preferably in a shaded area.

- 
- Do not attempt to lift heavy loads by yourself. Core trays, depending on their size can weigh up to 50kg, which is too heavy for a single person to lift.
  - Care should be taken when lifting buckets and sampling, see the manual handling section of this manual.
  - Watch for trip hazards posed by hoses and other equipment in use.
  - Instruct drillers and other workers to cease work in the vicinity of a drilling rig during thunder storms.
  - Discuss any other safety issues that may arise with project geologist in charge.

## DRILLING OPERATIONS

Geologists supervising any drilling operations must be satisfied that the drilling contractor is compliant with current safety and environmental recommendations. Final decisions are the responsibility of the supervising geologist. The following points should be considered;

- Refer to the PIRSA Minerals website the following Earth Resources Information Sheet; Statement of Environmental Objectives and Guidelines for Mineral Exploration Activities in South Australia. *Earth Resources Information Sheet M33 June 2004.*

### Safe Drill Rig Operation

- Ensure that a safety check is carried out by the driller before drilling commences.
- Work practices and equipment in use is adequate for the task.
- The drill rig is set up properly with consideration to stability and proximity to trees or power lines.
- Drilling crew are correctly attired and supplied with appropriate and properly use personal protective equipment.
- Offsiders are adequately supervised and instructed by driller.
- An effective tagging (isolation) system is available to drillers and is used correctly.
- All drilling personnel are receiving an adequate level of instruction and supervision.
- Pre-start checks are done thoroughly and regularly.
- Plant maintenance is to the necessary standards.
- All moving equipment is guarded and guards are maintained and effective.
- Properly designed and constructed work platforms with appropriate fall protection devices are fitted.
- The rig decking and mast area is kept clean and oil free, and leaks are promptly repaired.
- Sufficient fire extinguishers are present and have been serviced.
- Internal combustion engines are free of oil and fuel leaks. A quick acting stop button or switch is fitted to the rig near the engine, in addition to the one at the drillers control panel, that it is clearly marked and that all personnel are aware of its location.
- All hoses are in good condition, connections are secure and suitable restraining devices are fitted to prevent them thrashing around should the coupling fail.
- All steel cables are in good order, not frayed and properly secured.
- All ancillary equipment and supplies (eg; drill rods, fuels and lubricants) are safely stored and disposed of to an appropriate environmental standard.
- The tools are being maintained and stored properly.
- Tools are being used safely.
- Power tools are disconnected and properly stored when not in use.
- Equipment not to be operated by anyone under the influence of drugs or alcohol.

## 28 RADIATION SAFETY - NITON PORTABLE XRF

Standard Operating Procedure – Niton XL3T Portable  
X-Ray Fluorescence Analyser

Group Name: Resources and Energy  
Division Name: Mineral Resources  
Brief task description: Operation of Portable X-Ray  
Fluorescence Analyser – Niton XL3T  
Approved By:

SOP No: MRD 0005  
Date of last Revision: 25 March 2011  
Date for Review: 24 March 2012  
Review By (Authors): G W Jenkins / L M Broadbridge



Item No	STEPS <i>List the steps required to perform the task in the order they are carried out.</i>	HAZARDS / RISKS <i>Against each step list the hazards / risks that could cause injury or damage to equipment or the environment.</i>	SOLUTION <i>List the remedies required to either eliminate or control the risk/s for each step.</i>	PROTECTIVE EQUIPMENT (see below)  Please specify
1	SPECIAL NOTES		<ul style="list-style-type: none"> <li>Pursuant to the Radiation Protection and Control Act 1982 and Regulations, all operators of the instrument must hold an appropriate and current Licence to Operate Ionising Radiation Apparatus. Licences are administered by the Environmental Protection Authority. Refer <a href="http://www.epa.sa.gov.au/permits.html#accredited">http://www.epa.sa.gov.au/permits.html#accredited</a></li> <li>Licences must be sighted by the Program Leader Geoscientific Information Management and the Branch Manager Geological Survey before staff are permitted to use the instrument. Copies of licences will be placed on file.</li> <li>Operators are required to undergo PIRSA in-house training before using the instrument.</li> <li>Each operator is required to wear a Personal Dosimeter while using the instrument. For the XRF instrument, these are currently administered by Geoscientific Information Management – contact the Program Leader for information. Dosimeters will be collected by the Radiation Safety Officer every three months for analysis, and results provided to each user.</li> <li>Vendor course notes and ARPANSA publications can be found in Geological Survey Branch's shared drive: H:\Niton XL3t 500 series portable XRF\</li> </ul>	
2	GENERAL NOTES – SAFE OPERATION		<ul style="list-style-type: none"> <li>Take reasonable steps to minimize exposure (even if you are below regulatory limits).</li> <li>Consider time, distance and shielding. Use the instrument's portable stand, which includes a lead-lined sample chamber, whenever practicable.</li> <li>It is an offence to operate, or allow to be operated, a radiation-producing device which has been damaged and/or is malfunctioning.</li> </ul>	
3	GENERAL NOTES – RADIATION DOSAGE		<ul style="list-style-type: none"> <li>Statutory radiation dose limits are maximum only. It is not permissible to allow personnel to accumulate any dosage which can be reasonably avoided. The ALARA principle (As Low As Reasonably Achievable) always takes precedence.</li> <li>Background dosage in Australia is at least 2000 <math>\mu</math>Sv per year.</li> <li>Additional whole body limit (Public) &lt;1000 <math>\mu</math>Sv above background.</li> <li>Additional whole body limit (Radiation Worker) &lt; 20,000 <math>\mu</math>Sv above background.</li> <li>For occupational exposure during pregnancy, limits are the same as for a member of the public.</li> <li>Niton XL3T has 0.9 <math>\mu</math>Sv per hour exposure during safe use, measured at the hand or at 5cm on stainless steel.</li> <li>If an operator was using the instrument all day every day 0.9 <math>\mu</math>Sv x 40hr x 48 wk = 1728 <math>\mu</math>Sv/yr.</li> <li>Average use of 2 hr per day exposure = 432 <math>\mu</math>Sv/yr.</li> <li>Extremity (at hand) upper limit = 50,000 <math>\mu</math>Sv/yr for a member of the public.</li> </ul>	

Item No	STEPS <i>List the steps required to perform the task in the order they are carried out.</i>	HAZARDS / RISKS <i>Against each step list the hazards / risks that could cause injury or damage to equipment or the environment.</i>	SOLUTION <i>List the remedies required to either eliminate or control the risk/s for each step.</i>	PROTECTIVE EQUIPMENT (see below)  Please specify
3	GENERAL NOTES – RADIATION DOSAGE (continued)		<ul style="list-style-type: none"> <li>Always bear in mind three factors for reducing dosage: time, distance and shielding.</li> <li>The longer a person is exposed to a source of radiation the more radiation strikes the body and the greater the dose received. Dosage increases in direct proportion to length of exposure.</li> <li>Increasing distance from a radiation source decreases exposure in proportion to the square of the change in distance.</li> <li>Shielding reduces exposure depending on nature and thickness of the shielding material.</li> </ul>	
4	Transport the instrument and accessories to and from its place of use	<p>Inadvertent energisation causing X-rays to be emitted unknown to personnel (Burns, increased risk of certain types of cancer)</p> <p>Injury when moving stand which incorporates a lead-lined sample chamber; the stand is heavy. (Spinal injury)</p> <p>Injury to hands caused by sample chamber stand folding/unfolding while moving (Crush, shear injury)</p>	<ul style="list-style-type: none"> <li>Always transport the instrument in its shockproof Pelican case.</li> <li>If transporting long distances and/or on rough roads, pack the Pelican case in a sturdy box surrounded by additional shockproof packaging.</li> <li>Check that all necessary accessories and paperwork are in the case prior to transport. Required documentation is Current Leak Test Certificate &amp; special Form Certificate, UN2911 Compliance Statement, and copies of the instrument's licence and operator licence(s).</li> <li>Check that battery is removed from instrument before storing the instrument in its Pelican case prior to transport.</li> <li>Ensure case is locked to prevent tampering. Combination lock is provided – do not misplace it.</li> <li>When handling the instrument's sample chamber stand, always use approved lifting procedures – lift with your legs, not your back. Get assistance from a second person if necessary.</li> <li>Use a wheeled device such as a sack truck if moving the stand more than a few steps.</li> <li>When carrying, ensure that the stand is gripped in a manner that does not allow the legs to move.</li> </ul>	
5	Setting up the instrument	<p>Inadvertent energisation causing X-rays to be emitted unknown to personnel (Burns, increased risk of certain types of cancer)</p> <p>Injury to hands while setting up the sample chamber stand (Crush, shear injury)</p>	<ul style="list-style-type: none"> <li>Ensure that the XRF instrument is not energised before attaching to or removing from the stand or soil probe handle. Leave the battery out until ready to switch on and take measurements.</li> <li>Lie the sample chamber stand on its side to fold/unfold the legs. Ensure that the legs are locked in position before moving the stand.</li> </ul>	
6	Operating the instrument in a static working area (such as the Core Library)	<p>Direct exposure to primary X-ray beam (Burns, increased risk of certain types of cancer)</p> <p>Exposure to backscattered X-rays (Burns, increased risk of certain types of cancer)</p> <p>Operation of instrument by untrained and/or unauthorised person(s) resulting in exposure to X-rays (Burns, increased risk of certain types of cancer)</p>	<ul style="list-style-type: none"> <li>Always be aware of the direction of the X-Ray beam.</li> <li>Never leave the instrument unattended.</li> <li>Log out of the system when not using the instrument.</li> <li>Reduce exposure by operating the instrument attached to its lead-lined sample chamber whenever possible</li> <li>Never hold a sample in front of the instrument with your hand.</li> <li>Never point the instrument toward yourself or any other person.</li> <li>Never use the instrument at a table with your legs directly beneath where the instrument is being used.</li> </ul>	

Item No	STEPS <i>List the steps required to perform the task in the order they are carried out.</i>	HAZARDS / RISKS <i>Against each step list the hazards / risks that could cause injury or damage to equipment or the environment.</i>	SOLUTION <i>List the remedies required to either eliminate or control the risk/s for each step.</i>	PROTECTIVE EQUIPMENT (see below)  Please specify
6	Operating the instrument in a static working area (such as the Core Library) (continued)	<p>Inability to switch off X-rays due to system fault (Burns, increased risk of certain types of cancer)</p> <p>Inability to switch off X-rays due to physical damage to the instrument, for example if the instrument is crushed or run over (Burns, increased risk of certain types of cancer)</p> <p>X-ray safety cutout failure due to system fault (Burns, increased risk of certain types of cancer)</p> <p>X-ray safety cutout failure due to physical damage to the instrument (Burns, increased risk of certain types of cancer)</p>	<ul style="list-style-type: none"> <li>▪ In the event of inability to switch off X-rays, or any other malfunction, assess the situation and inform relevant co-workers. If safe to do so, remove the battery. If unsafe or unable to remove the battery, cordon off the area for a distance of at least ten metres and do not approach the instrument until the battery has run flat (at least 12 hours). Take all reasonable steps to prevent anyone from approaching the instrument in that time. Contact the vendor's Radiation Safety Officer as soon as possible (details behind foam in lid of Pelican case). When the instrument is finally de-energised, clearly mark it as unserviceable, secure it, and return it to the vendor/manufacturer in its Pelican case surrounded by shockproof packaging for repair. File a PIRSAFE Incident Report.</li> </ul>	
7	Operating the instrument in the field	<p>Direct exposure to primary X-ray beam (Burns, increased risk of certain types of cancer)</p> <p>Exposure to backscattered X-rays (Burns, increased risk of certain types of cancer)</p> <p>Operation of instrument by untrained and/or unauthorised person(s) resulting in exposure to X-rays (Burns, increased risk of certain types of cancer)</p> <p>Inability to switch off X-rays due to system fault (Burns, increased risk of certain types of cancer)</p> <p>Inability to switch off X-rays due to physical damage to the instrument, for example if the instrument is crushed or run over (Burns, increased risk of certain types of cancer)</p> <p>X-ray safety cutout failure due to system fault (Burns, increased risk of certain types of cancer)</p>	<ul style="list-style-type: none"> <li>▪ Always be aware of the direction of the X-Ray beam.</li> <li>▪ Never leave the instrument unattended.</li> <li>▪ Log out of the system when not using the instrument.</li> <li>▪ Never hold a sample in front of the instrument with your hand.</li> <li>▪ Never point the instrument toward yourself or any other person.</li> <li>▪ <b>Return to the main menu of the instrument so that it is not able to be energised before</b> placing it in the holster for carrying short distances between sample points, when driving short distances between close proximity sample points or before carrying it in the soil probe handle. If carrying in the vehicle for short distances between sample points, do not carry/hold the instrument on your person – stow it in the vehicle away from people, but such that it will not be damaged.</li> <li>▪ Do not carry the instrument while in Test mode or Data Entry mode, as X-rays will be emitted if the trigger is pressed.</li> <li>▪ When carrying in the holster, ensure that the safety strap is used to prevent the instrument slipping out.</li> <li>▪ Never use the instrument at a table with your legs directly beneath where the instrument is being used.</li> <li>▪ In the event of inability to switch off X-rays, or any other malfunction, assess the situation and inform relevant co-workers. If safe to do so, remove the battery. If unsafe or unable to remove the battery, cordon off the area for a distance of at least ten metres and do not approach the instrument until the battery has run flat (at least 12 hours). Take all reasonable steps to prevent anyone from approaching the instrument in that time. Contact the vendor's Radiation Safety Officer as soon as possible (details behind foam in lid of Pelican case). When the instrument is finally de-energised, clearly mark it as unserviceable, secure it, and return it to the vendor/manufacturer in its Pelican case surrounded by shockproof packaging for repair. File a PIRSAFE Incident Report.</li> </ul>	

Item No	STEPS <i>List the steps required to perform the task in the order they are carried out.</i>	HAZARDS / RISKS <i>Against each step list the hazards / risks that could cause injury or damage to equipment or the environment.</i>	SOLUTION <i>List the remedies required to either eliminate or control the risk/s for each step.</i>	PROTECTIVE EQUIPMENT (see below)  Please specify
7	Operating the instrument in the field (continued)	X-ray safety cutout failure due to physical damage to the instrument (Burns, increased risk of certain types of cancer)  Damage to XRF instrument by dropping when using the waist strap and holster in the field		
8	Putting away and storing the instrument	Inadvertent energisation causing X-rays to be emitted unknown to personnel (Burns, increased risk of certain types of cancer)  Damage to the instrument	<ul style="list-style-type: none"> <li>Always remove the battery from the instrument before locking the instrument in its Pelican case.</li> <li>Store the instrument in its locked case in a steel cabinet.</li> </ul>	
9	Transporting the instrument by commercial carrier	Inadvertent energisation causing X-rays to be emitted unknown to personnel (Burns, increased risk of certain types of cancer)  Damage to the instrument  Quarantine/confiscation of the instrument through incorrect transport procedures	<ul style="list-style-type: none"> <li>Always transport the instrument in its shockproof Pelican case, in a sturdy cardboard box with additional shockproof packaging.</li> <li>Check that all necessary accessories and paperwork are in the case prior to transport.</li> <li>Check that battery is removed from instrument before storing the instrument in its Pelican case prior to transport.</li> <li>Ensure case is locked to prevent tampering. Combination lock is provided – do not misplace it.</li> <li>Do not ship by Australia Post.</li> <li>Always use Courier (TNT) - No Dangerous Goods declaration form is required (Excepted package - UN2911).</li> <li>&lt;0.005 mSv/hr on case surface– no need for exterior radiation label.</li> </ul>	

## 29 HELICOPTER SURVEYS

Team leaders in charge of any helicopter survey work will ensure that all staff participating in the program are aware that safety procedures in and around the helicopter are managed by the helicopter pilot. This may include radio log-in calls in relation to ETA for a flight etc. to their own communications centre.

Normal field procedures also apply for all other aspects including field itinerary forms and daily log-in procedures.

Any instructions given by the pilot must be strictly followed.

**An induction prior to departure will be given by the pilot, this should cover the following points;**

### 1. APPROACHING THE HELICOPTER

- No fires or smoking in or near the helicopter, landing areas or refuelling locations.
- Be aware of the rotors above you.
- Never approach the helicopter unless the pilot has signalled you may do so.
- Always approach a helicopter from the front and from the down hill side. Remove your hat and carry any long items horizontally and below the waist.

---

## 2. INSIDE THE HELICOPTER

- Instructions given by the pilot during the flight must be strictly followed.
- Seat belts must be worn.
- All passengers should be in radio communication with the pilot.
- All doors should be locked shut before take-off, and should not be opened unless advised by the pilot.
- All luggage should be placed as instructed by the pilot.
- Weight restrictions apply. Consult the pilot regarding weight of samples and equipment.
- Consult the pilot if intending to carry any dangerous goods or equipment. Follow normal safety procedures for the goods or equipment.

## 3. SURVIVAL EQUIPMENT

- A survival kit for general use is kept in the helicopter, including an EPIRB, water, food, fire extinguisher, matches and first aid kit.
- **Personal survival kit** – Take your own survival kit in addition to the kit provided in the helicopter. The helicopter may be delayed or not return to collect you at the proposed pick up time. (Some reasons may be inclement weather, damage in an accident, fuel issues etc).

Include the following items in your personal survival kit;

- Heliograph signalling mirror
  - PLB
  - Water proof matches
  - Emergency blanket
  - Water
  - Satellite telephone
  - Food ration
  - GPS
  - First aid kit
- Wear bright coloured, highly visible clothing, sturdy boots, hat, long sleeved shirt and long trousers.
  - If being dropped in an area to work, always carry a heliograph signal mirror to attract the pilot's attention when being picked up.
  - Follow all other guidelines for working in remote areas in this manual.

## 4. SURVIVAL TRAINING – FOR OPERATIONS OVER WATER

- Where helicopter flights are over extended bodies of water, particularly seas and oceans, all passengers must have a current Helicopter Underwater Escape Training (HUET) certificate and have training in appropriate sea safety and survival techniques at recognised training facilities.



---

## 30 LAND ACCESS

Before commencing fieldwork ensure all necessary steps are taken to secure relevant permits and permission. Any questions regarding land access issues can be directed to the MRD Land Access Branch.

### **AUTHORITY TO ENTER CARD**

The Authority to enter card should be carried by all employees working in the field. Your Branch Manager will advise regarding the level of authority required for your position.

### **ABORIGINAL LAND AND HERITAGE SITES**

- Always seek advice and obtain relevant permits or permission for fieldwork on Aboriginal land. Site clearances may be required in some areas eg APY Lands and MT Lands.
- Never disturb any aboriginal sites you may discover during field work (whether on aboriginal land or not).
- Do not collect any artefacts from a site.
- Do not visit identified sacred sites without the permission of traditional owners or relevant body.
- If you find bones that may be human, report to police and do not further disturb the site.
- If you find a site during ground disturbing works, you must stop work immediately at that site and contact your manager who will contact the Aboriginal Heritage Branch of DPC.
- Sites and objects are protected whether or not they are on the Government Register of Sites.
- Consult Earth Resources Information Sheet M29 and the Aboriginal Heritage Act 1988 for further information.

### **NATIVE TITLE LAND**

- Where land may be “native title land” (eg pastoral lease or unalotted crown land) ensure the appropriate notices are provided. For further information contact the Indigenous and Heritage Group within the Land Access Branch.

### **NATIONAL PARKS AND REGIONAL RESERVES**

- Permits may be required for fieldwork in National Parks and Regional Reserves particularly if you intend to collect samples. Permits can be obtained by contacting The Department for Environment and Natural Resources (DENR) For further information visit [www.environment.sa.gov.au](http://www.environment.sa.gov.au)
- It is important to liaise with National Parks staff when working in a national park.
- Contact the relevant office in the area on entry and exit, let them know your proposed work area (in case of fire or emergency they can contact you).
- Maintain a good working relationship with national parks staff.
- Check for any special conditions such as regional fire bans or closed tracks within the park.

### **PROHIBITED AND OTHER RESTRICTED ACCESS AREAS**

Permits are required for entry into restricted areas such as:

- The Maralinga nuclear test site is a total no access area. Contact the Land Access Branch or further information.
- Woomera Prohibited area; Contact The Land Accesss Branch for current entry information.
- Military Reserves; Contact Keswick Army Barracks 8305 6000.
- Water Reserves; Contact SA Water 1300 650 950.
- State Forest Reserves; Contact Forestry SA, Mt Gambier 08 8724 2888.

---

## **PASTORAL LEASE STATIONS**

- Station owners may play a vital role in assisting you if an accident occurs or you require help for any reason, although they are not obliged to do this. It is in your best interest to maintain a good relationship with pastoral lease holders. Refer to the PIRSA Minerals website:  
[http://www.pir.sa.gov.au/minerals/publications\\_and\\_information/information\\_sheets](http://www.pir.sa.gov.au/minerals/publications_and_information/information_sheets)
- legislation, guidelines and procedures to obtain Earth Resources Information Sheet for Liaison Guidelines for landholders and mineral explorers in SA.
- Contact Station owners by telephone prior to departure and inform them of your intentions to work on their property and your planned itinerary. Telephone numbers are listed in this manual.
- If practical call in at the homestead when you arrive and again when you depart.
- Avoid disturbing stock, damaging tracks, vegetation etc.
- Drive slowly when approaching a homestead to reduce dust.
- Leave all gates as you found them.

## **FREEHOLD LAND**

- Contact land owners prior to entering their property.
- Considerable time can be saved by contacting land owners before leaving Head Office.
- Be aware of farmers concerns with driving in crops, orchards, transfer of weed seeds and plant diseases on vehicles and shoes, lambing season, stock diseases and other stock issues.
- Be careful of fire risks when driving vehicles in dry crops and grass.
- Leave gates as you found them.
- Respect tracks and other farm property.

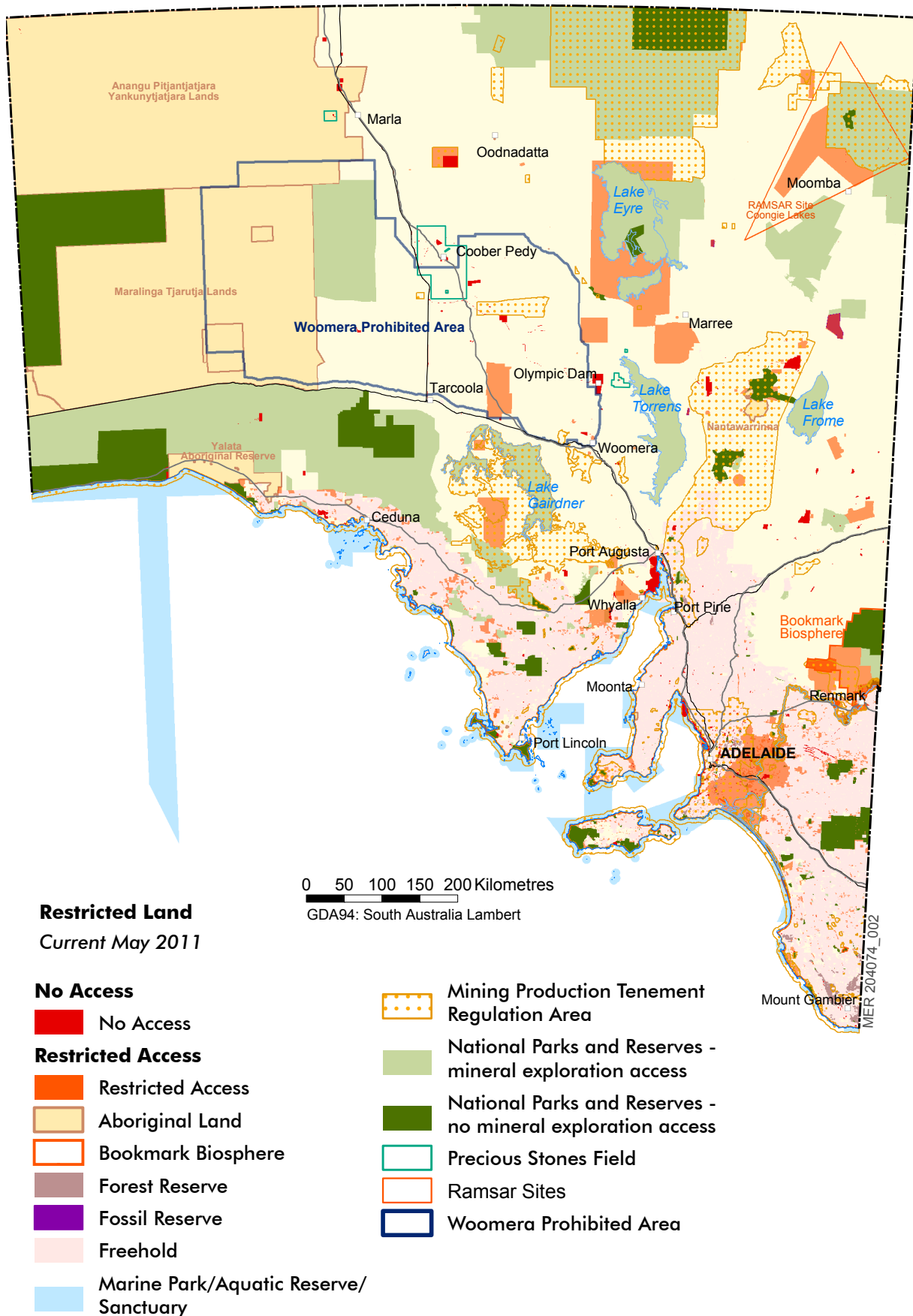
## **MINE SITES AND OTHER DEVELOPMENT SITES**

- Contact the company involved in the mine site or development site before entering.
- Ensure you abide by their site regulations eg; appropriate safety equipment is used.
- Respect tracks and other property.

## **FOSSIL RESERVES AND GEOLOGICAL MONUMENTS**

- Geological monuments; Contact Wayne Cowley, Geological Survey of South Australia; phone 8463 3076.
- Fossil reserves that are not geological monuments; Contact the SA Museum; phone 8207 7500 or Department for Environment and Natural Resources; phone 8204 1910.

## SOUTH AUSTRALIA – LAND ACCESS



---

## 31 FIRST AID

Adequate first aid training and equipment are essential for reducing the impact of any injury or sudden illness. In remote locations first aid may be required for several hours before professional medical aid arrives. The following points should be considered before embarking on a field trip;

- Personal first aid kits are provided for work away from your vehicle. See the first Aid Officer if you do not have one.
- First aid kits are provided in all field vehicles. Always check the contents of the first aid kit prior to departure to ensure all items are present and in good condition. A first aid manual should also be carried in the vehicle.
- All field personnel must be trained in first aid and undertake a refresher course as required.
- Ensure the level of staff first aid training is appropriate for the work environment.
- Know how to contact the Royal Flying Doctor in an emergency.
- Provide details of any known illness or injury or any medication requirements to your Branch Manager and field staff you are travelling with so the correct steps can be taken in an emergency. See form provided in this manual.
- **RFDS urgent and not urgent calls to Central Operations SA & NT (24hr Medical and Emergency calls)**  
**Port Pirie Base 08 8648 9555**

### D.R.A.B.C.D AND C.P.R

**'Danger, Response, Airway, Breathing, Circulation, Defibrillation' and 'Cardio-pulmonary resuscitation'.**

**Call 000 immediately.**

Check for danger, response, clear airway, check breathing, no breathing, tilt head, lift jaw, block nose, 2 breaths, check pulse, no pulse, locate heart, 30 compressions, 2 breaths, repeat cycle, check pulse after one minute. Stop compressions if casualty shows signs of life. If no signs of life continue.

### RECOVERY POSITION

Check for danger. Check if patient is conscious, shake and shout. If breathing but not conscious place into recovery position by lifting near leg at knee so it is fully bent upwards, place nearer arm across chest, place farther arm at right angle to body, while supporting their neck, roll casualty away from you onto side, keep leg at right angles to stop casualty rolling onto face, check breathing. Call 000 or RFDS.

### HEAT STRESS

Lie patient down, cool patient down with wet sponge, keep in shade, loosen tight clothing, give sips of water, contact 000 or RFDS.

### DIABETIC EMERGENCY

If casualty is unconscious follow DRABC, seek medical aid immediately. If unsure whether the attack is caused by high or low blood sugar, give a sweet drink.

**LOW BLOOD SUGAR;** pale, hungry, sweating, weak, confused, aggressive – give sweet drink or food every 15 minutes. Seek medical aid.

**HIGH BLOOD SUGAR;** Thirsty, needs to urinate, hot dry skin, smell of acetone on breath. – Allow casualty to self-administer insulin. Give sugar free fluids. Seek medical aid.

### FRACTURES

Carefully bandage and immobilise fractures. Use the correct width bandages for the task, use padding and make the patient comfortable. Reassure the patient. Check circulation of fractured limb. Seek medical aid.

### STRAINS AND SPRAINS

Rest, ice, compression, elevation. Ice on for 20min, off for 20 min.

---

## EYE INJURIES

If serious cover eye and seek advice from RFDS. Reassure patient. Transport to hospital. An eye module is provided in the remote areas first aid kit for flushing dust etc. from the eye.

## TRANSPORTING AN INJURED PERSON

If you are required to transport an injured person to a hospital you may need to remove field equipment from the rear of the vehicle so the person can lay comfortably for the journey. Keep essential safety equipment in the vehicle such as water, shovel etc. Ensure equipment is secured and can not fall on the patient. Make the person as comfortable as possible and use splints and extra bandages to support any breaks. Reassure the person and drive as carefully as possible.

## ALLERGIC REACTIONS

Severe reactions – seek medical aid immediately. Symptoms may include swelling, redness, rashes, swelling of throat, wheezing, coughing, rapid irregular pulse, nausea, vomiting, dizziness or unconsciousness. Follow DRABC, record pulse, administer medication, sit patient in position that makes breathing easier. Seek medical aid.

## BITES or STINGS, centipede, ant, redback, scorpion, wasp, bee.

If allergic reaction occurs see above. If no allergic reaction; apply cold compress. Bee sting; remove sting before applying cold compress. Redback spider; DRABC apply ice pack, seek medical aid.

## MINOR INJURIES

Use the first aid equipment provided to treat minor injuries. Small cuts and splinters may become infected easily, treat all cuts with Betadine or similar disinfectant to avoid infection and cover the injury with an appropriate dressing. These are provided in the first aid kit.

## SNAKE BITE

See next page: *First Aid for Australian Snake Bite*



# **First Aid for Australian Snake Bite**

## **Immobilisation/Pressure Bandage Technique**

### **Principle**

Injected venom is mainly distributed by the body's lymphatic system, which is heavily influenced by patient movement. **Decreased patient movement = decreased venom distribution.**

Recent medical research shows that the speed of effective immobilisation and application of pressure bandage & splinting influences patient outcome and survivability.

1. Ensure that patient (& other people) are no longer at risk
2. Reassure patient. Ensure they lie down & keep still
  - a. It is **critical** that bitten part & patient do not move
3. Monitor airway, breathing & circulation & support as necessary
4. First aid **MUST** be started *immediately*
  - a. **Do not ignore a trivial bite, especially if suspected to be from a species of Brown Snake**
  - b. Don't interfere with the bite in any way
  - c. Don't remove any clothing
  - d. Remove all jewellery from bitten limb
5. Apply heavy weight crepe bandage(s) with even pressure
  - a. Use same pressure as to bandage a sprained wrist or ankle
  - b. Start at extremity & work up arm or leg
  - c. Include fingers or toes to minimise movement
  - d. Bandage over clothing or cut up seam to allow access to skin
  - e. Be careful not to apply bandage too loosely
  - f. Mark location of bite on bandage (for venom detection in hospital)
  - g. Mark time of bite AND/OR time first aid applied on bandage (if known)
6. Immobilise limb with splint or improvise as necessary
  - a. Ensure that joints (of arm or leg) are effectively immobilised
  - b. Use second bandage to keep splint in place
7. Contact Ambulance emergency number – 000 or 112 from mobiles (RFDS in remote areas)
  - a. Follow professional advice regarding transport of patient
8. Patient **must** remain still. Bring transport to patient if possible
9. No food or drink except sips of water (only on victim's request)
10. Patient must be transported *quickly & passively* to hospital (preferably by ambulance)
11. Where possible, let paramedics be in total charge of extrication planning. Better to stay quiet & let them arrange transport

(Based upon information from Clinical Toxinology Short Course 2010, Toxinology Resources website, [www.toxinology.com](http://www.toxinology.com), and advice from Chris Cotton, Intensive Care Paramedic, South Australian Ambulance Service, 2010)

**For clinical advice on snakebite management, please ask the treating doctor to contact Clinical Toxinologist, Assoc. Professor Dr. Julian White on 0419825029**

## 32 INFORMATION HOTLINES, WEBSITES and USEFUL NUMBERS

NAME	WEBSITE ADDRESS	TELEPHONE
ARPANSA radiation information	<a href="http://www.arpansa.gov.au">www.arpansa.gov.au</a>	
CFS Bushfire Hotline	<a href="http://www.cfs.org.au">www.cfs.org.au</a>	1300 362 361
Directory assistance		1223
Dog Fence Board		(08) 8303 9517
DFW Glenside Technical Services		8379 9573
Emergency, Police, Fire, Ambulance		000
Far Northern road conditions report line	<a href="http://www.transport.sa.gov.au">www.transport.sa.gov.au</a>	1300 361 033
FleetSA accident claims	<a href="http://www.fleetsa.sa.gov.au">www.fleetsa.sa.gov.au</a>	8226 8044 / fax: 8226 8030
FleetSA windscreen replacement, Windscreen O'brien		1800 657 128 Toll Free 24 hours a day
Globalstar / Pivotal Customer care		1300 882 448
REG CORE LIBRARY Adelaide		8379 9574
REG CORE LIBRARY Thebarton		8354 0366
REG CORE LIBRARY Moonta		8825 3315
REG CORE LIBRARY Whyalla		8645 2734
REG REGIONAL Office Coober Pedy		(08) 8672 5800
REG REGIONAL Office Jamestown		(08) 8664 1408
REG REGIONAL Office Marla		(08) 8670 7005
PLB information	<a href="http://www.amsa.gov.au">www.amsa.gov.au</a>	
Police attendance, non urgent		131 444
RAA		13 11 11
Radiation Officer, DFW, David Catley		8379 9573 0419 030 026
Riverbank Collapse Hotline River Murray		1800 751 970
RFDS	<a href="http://www.flyingdoctor.net">www.flyingdoctor.net</a>	(08) 8648 9555
Reverse charges phone call (1800reverse)		1800 738 3773
Sentinel Bushfire (Hotspot) Monitoring System (Geoscience Australia)	<a href="http://sentinel.ga.gov.au/acres/sentinel/index.shtml">http://sentinel.ga.gov.au/acres/sentinel/index.shtml</a>	
State Emergency Services (SES)	<a href="http://www.ses.sa.gov.au">www.ses.sa.gov.au</a>	
Statefleet	<a href="http://www.fleetsa.sa.gov.au">www.fleetsa.sa.gov.au</a>	8226 7800
UHF radio Repeater stations	<a href="http://www.exploroz.com/Interact/UHFRepeatersIndex.asp?xc=1">www.exploroz.com/Interact/UHFRepeatersIndex.asp?xc=1</a>	
Weather and flood warnings	<a href="http://www.bom.gov.au">www.bom.gov.au</a>	1300 659 215
Working with Wildlife Clinical oxiologist, Dr Julian White	<a href="http://www.workingwithwildlife.com.au">www.workingwithwildlife.com.au</a>	0419 825 029



### 33 COUNTRY LOCALITIES AND ACCOMMODATION

Roadhouses and Hotels / Motels (listed by place name)		
Alice Springs	Oasis Motel	(08) 89521444
	Diplomat Motel	(08) 8952 8977
Birdsville	Birdsville Hotel/Motel	(07) 4656 3244
Blinman	Blinman Hotel	(08) 8648 4867
Bordertown	Dukes Motor Inn	(08) 8752 1177
Broken Hill	Oasis Motor Inn	(08) 8088 2255
	Silver Spade Hotel	(08) 8087 7021
Burra	Burra Motor Inn	(08) 8892 2777
Ceduna	Ceduna Community Hotel Reservations free call	(08) 8625 2008 1800 655 300
Coober Pedy	Mud Hut Motel	(08) 8672 3003
	Opal inn	(08) 8672 5054 Free call reservations 1800 088 523
	The Underground Motel	(08) 8672 5324
Cockburn	Cockburn Hotel	(08) 8091 1634
Glendambo	Glendambo Motel	(08) 8672 1030
Hawker	Hawker Hotel Motel	(08) 8648 4102
Innamincka	Innamincka Hotel	(08) 8675 9901
Kingoonya	Kingoonya Waterhole Hotel	(08) 8672 1002
Kulgera	Kulgera Roadhouse (NT)	(08) 8956 0973
Leigh Creek	Leigh Creek Hotel, Copley	(08) 8675 2281
Lyndhurst	Lyndhurst Hotel	(08) 8675 7781
Manna Hill	Manna Hill Hotel	(08) 8650 5904
Marla	Marla Hotel/Motel	(08) 8670 7001
Marree	Marree Roadhouse	(08) 8675 8360
	Marree Hotel	(08) 8675 8344
Nullarbor	Nullarbor Hotel Motel	(08) 8625 6271
Nundroo	Nundroo Hotel Motel CVP	(08) 8625 6120
Olary	Olary Hotel	(08) 8091 1533
Oodnadatta	Oodnadatta Hotel	(08) 8670 7804
Oodla Wirra	Oodla Wirra Halfway Hotel	(08) 8650 5927
Parachilna	Prairie Hotel	(08) 8648 4895
Peterborough	Peterborough Railway Hotel	(08) 8651 2427
Pimba	Spuds Roadhouse	(08) 8673 7473
Port Augusta	Port Augusta Comfort Inn	(08) 8642 2755
	Port Augusta Standpipe Inn	(08) 8642 4033
Roxby Downs	Roxby Downs Myall Grove CVP	(08) 8671 1991
William Creek	William Creek Hotel	(08) 8670 7880
Whyalla	Westland Hotel/Motel	(08) 8645 0066
Wudinna	Wudinna Hotel Motel	(08) 8680 2019
Wirrulla	Wirrulla Hotel	(08) 8626 8019
Yunta	Yunta Hotel	(08) 8650 5002

## 34 COUNTRY HOSPITAL LOCATIONS (Feb 2011)

**For emergencies call 000 or RFDS 08 8648 9555 if in a remote area.**

ALWAYS PHONE AHEAD IF INTENDING TO DRIVE YOURSELF TO THE HOSPITAL, STAFFING HOURS MAY VARY.

The hospitals listed below have some form of accident and emergency service available. In a medical emergency, Call 000, SA Ambulance Service emergency medical dispatch support officers can provide advanced first-aid advice over the phone while an ambulance is on its way to you.

NB: Some of the hospitals charge a fee.

SOUTH AUSTRALIAN COUNTRY HOSPITALS	Emergency service	TELEPHONE
<b>Angaston</b> Hospital. 29 North Street, ANGASTON SA 5353	24 hr	(08) 8563 8500
<b>Balaklava</b> Hospital 16 War Memorial Drive, BALAKLAVA SA 5461	24 hr	(08) 8862 1400
<b>Barmera</b> Hospital 24 Hawdon Street, Barmera SA 5345	9am – 6pm Mon – Fri only	(08) 8588 0400
<b>Berri</b> Hospital Madden St. Berri SA 5343	24 hr	(08) 8580 2400
<b>Booleroo</b> Centre Hospital 74 Stephens Street, BOOLEROO CENTRE SA 5482	24 hr	(08) 8667 2211
<b>Bordertown</b> Memorial Hospital 23 South Terrace, BORDERTOWN SA 5268	24 hr	(08) 8752 9000
<b>Broken Hill</b> , Far West Health Service, Thomas St BROKEN HILL 2880		(08) 8080 1333 emergency (08) 8080 1364
<b>Burra</b> Hospital 46 Commercial Street, BURRA SA 5417	24 hr	(08) 8892 2300
<b>Ceduna</b> Hospital Inc 3 Eyre Highway, CEDUNA SA 5690	24 hr	(08) 8626 2110
<b>Clare</b> Hospital 47 Farrell Flat Road, CLARE SA 5453	24 hr	(08) 8842 6500
<b>Cleve</b> Hospital North Terrace, CLEVE SA 5640	24 hr	(08) 8628 2399
<b>Cooper Pedy</b> Hospital Hospital Rd, COOPER PEDY SA 5723	24 hr	(08) 8672 5009
<b>Cowell</b> (Eastern Eyre Health) 17 South Terrace, COWELL SA 5602	24 hr	(08) 8629 2001
<b>Crystal Brook</b> Hospital Edmund Terrace, CRYSTAL BROOK SA 5523	24 hr	(08) 8636 1100
<b>Cummins</b> Hospital Tumby Bay Road, CUMMINS SA 5631	24 hr	(08) 8676 2163
<b>Elliston</b> Hospital Memorial Drive , Elliston SA	24 hr	(08) 8687 9110
<b>Eudunda</b> Hospital 40 Ward St. Eudunda SA	24 hr	(08) 8581 1404
<b>Gawler</b> Hospital 21 Hutchinson Road, GAWLER SA 5118	24 hr	(08) 8521 2000
<b>Gumeracha</b> Hospital 2 Albert St. Gumeracha SA	24 hr	(08) 8209 9200

<b>SOUTH AUSTRALIAN COUNTRY HOSPITALS</b>	<b>Emergency service</b>	<b>TELEPHONE</b>
<b>Hawker</b> Memorial Hospital Cradock Rd. Hawker SA	available	(08) 8648 4007
<b>Jamestown</b> Hospital South Terrace, JAMESTOWN SA 5491	Casualty dept available	(08) 8664 1406
<b>Kangaroo Island</b> Health Service (Hospital) Esplande, KINGSCOTE SA 5223	24 hr	(08) 8553 4200
<b>Kapunda</b> Hospital Nash Street, KAPUNDA SA 5373	24 hr	(08) 8566 2007
<b>Karoonda &amp; District</b> Soldiers Memorial Hospital Inc 13 Stokes Road, KAROONDA SA 5307	available	(08) 8579 1111
<b>Kimba</b> Hospital (Eastern Eyre Health) 13 – 15 Martin Terrace, KIMBA SA 5641	24 hr	(08) 8627 2400
<b>Kingston</b> Soldiers Memorial Hospital Inc Young Street, KINGSTON SA 5275	24 hr	(08) 8767 0222
<b>Lameroo</b> District Health Service 1A Vardon Terrace, LAMEROO SA 5302	Casualty dept available	(08) 8576 4600
<b>Laura &amp; Districts</b> Hospital (Southern Health Services) Mill Street, LAURA SA 5480	24 hr	0427 975 604
<b>Loxton</b> Hospital Complex Drabsch Street, LOXTON SA 5333	24 hr	(08) 8584 8555
<b>Maitland</b> Hospital and Health Services 65 Robert Street MAITLAND SA 5573	24 hr	8832 0100
<b>Mannum</b> District Hospital Parker Street, MANNUM SA 5238	24 hr	(08) 8569 0200
<b>Meningie</b> District Hospital 2 South Terrace, MENINGIE SA 5264	24 hr	(08) 8575 2777
<b>Millicent</b> District Hospital & Health Service Mt Gambier Road, MILLICENT SA 5280	24 hr	(08) 8733 0100
Moonta Hospital 7-12 Majors Rd, MOONTA SA 5558	24hr Mon-Fri only	(08) 8825 0000
<b>Mount Gambier &amp; Districts</b> Health Service & Hospital Wehl Street North, MOUNT GAMBIER SA 5290	24 hr	(08) 8721 1200 public (08) 8721 1412 private
<b>Mount Pleasant</b> District Hospital Hospital Road, MOUNT PLEASANT SA 5235	24 hr	(08) 8568 0000
<b>Murray Bridge</b> Soldiers Memorial Hospital Swanport Road, MURRAY BRIDGE SA 5253	Available	(08) 8535 6777
<b>Naracoorte</b> Hospital Inc 101 Jenkins Terrace, NARACOORTE SA 5271	24 hr	(08) 8762 8100
<b>Oodnadatta</b> Health Services Ikaturka Tce. OODNADATTA SA 5734	AH nurse, emergency only	(08) 8670 7803
<b>Orroroo</b> Hospital Perkina Road, ORROROO SA 5431	24 hr	(08) 8658 1200
<b>Penola</b> War Memorial Hospital Church Street, PENOLA SA 5277	24 hr	(08) 8737 2311
<b>Peterborough</b> Soldiers Memorial Hospital & Health Service 23 Hurlstone Street, PETERBOROUGH SA 5422	24 hr	(08) 8651 0400
<b>Port Augusta</b> Hospital & Regional Health Services Inc Hospital Road, PORT AUGUSTA SA 5700	24 hr	(08) 8648 5500

<b>SOUTH AUSTRALIAN COUNTRY HOSPITALS</b>	<b>Emergency service</b>	<b>TELEPHONE</b>
<b>Port Broughton</b> Hospital and Health Service Bay Street, PORT BROUGHTON SA 5522	24 hr	(08) 8635 2200
<b>Port Lincoln</b> Hospital and Health Service Oxford Terrace, PORT LINCOLN SA 5606	24 hr	(08) 8683 2200
<b>Port Pirie</b> Hospital and Regional Health Service PORT PIRIE SA 5540	24 hr	(08) 8638 4500
<b>Quorn</b> & District Memorial Hospital and Health Service Hospital Road, QUORN SA 5433	24 hr	(08) 8648 7888
<b>Renmark &amp; Paringa</b> District Hospital Inc Ral Ral Avenue, RENMARK SA 5341	8am to 6pm Mon to Fri only	(08) 8580 4100
<b>Riverton</b> District Hospital and Health Service 23 Moorhouse Terrace, RIVERTON SA 5412	24 hr	(08) 8847 2300
<b>Roxby Downs</b> Health Service 16–28 Burgoyne Street ROXBY DOWNS SA 5725	24 hr	(08) 8671 9020
<b>Snowtown</b> Hospital and Health Service South Terrace, SNOWTOWN SA 5520	24hr	(08) 8865 0100
<b>Strathalbyn</b> & District Health Service 14 Alfred Place, STRATHALBYN SA 5255	24 hr	(08) 8536 2333
<b>Streak Bay</b> Hospital and Mid West Health 1 Flinders Drive STREAKY BAY 5680	24 hr	(08) 8626 1009
<b>Tailem Bend</b> District Hospital 74 Princess Hwy TALEM BEND SA 5260	24 hr	(08) 8572 5800
<b>Tanunda</b> War Memorial Hospital Mill Street, TANUNDA SA 5352	24 hr	(08) 8563 2398
<b>Tumby Bay</b> Hospital and Lower Eyre Health Service Esplanade, TUMBY BAY SA 5605	24 hr	(08) 8688 2107
<b>Victor Harbor</b> South Coast District Hospital Bay Road VICTOR HARBOR 5211	24 hr	(08) 8552 0500
<b>Waikerie</b> Health Services Lawrie Terrace, WAIKERIE SA 5330	24 hr	(08) 8541 0555
<b>Wallaroo</b> Hospital and Health Service Ernest Tce WALLAROO SA 5556	24 hr	(08) 8823 0200
<b>Whyalla</b> Hospital and Health Service Wood Terrace, WHYALLA SA 5600	24 hr	(08) 8648 8300
<b>Woomera</b> Community Hospital Dewrang Avenue, WOOMERA SA 5720	24 hr	(08) 8673 7788
<b>Wudinna</b> Hospital Richards Avenue WUDINNA SOUTH SA 5652	24 hr	(08) 8680 2101
<b>Yorketown</b> Hospital and Health Service 19 Waterloo Bay Road YORKETOWN SA 5576	24 HR	(08) 8852 1200

## 35 COUNTRY POLICE STATIONS (Feb 2011)

For emergencies call 000 or RFDS 08 8648 9555

Andamooka	Andamooka	(08) 8672 7072
Ardrossan	6 Fourth Street, Ardrossan	(08) 8837 3017
Amata		(08) 8956 2928
Balaklava	6 Edith Street, Balaklava	(08) 8862 1144
Barmera	5 Scott Avenue, Barmera	(08) 8588 2122
Beachport	Railway Terrace, Beachport	(08) 8735 8009
Berri	Ahern Street, Berri	(08) 8595 2020
Blanchetown	Egerton Street, Blanchetown	(08) 8540 5013
Booleroo Centre	Arthur Street, Booleroo Centre	(08) 8667 2004
Bordertown	79 North Terrace, Bordertown	(08) 8752 1355
Brinkworth	Main Street, Brinkworth	(08) 8846 2050
Burra	Chapel Street, Burra	(08) 8892 2500
Ceduna	Cnr East & South Terrace, Ceduna	(08) 8626 2020
Clare	320 Main North Road, Clare	(08) 8842 2711
Cleve	2 Main Street, Cleve	(08) 8628 2017
Cockburn	Cockburn	(08) 8091 1633
Cooper Pedy	Malliotis Bvd, Cooper Pedy	(08) 8672 5056
Coonalpyn	Southern Road, Coonalpyn	(08) 8671 1092
Cowell	13 Third Street, Cowell	(08) 8629 2029
Crystal Brook	29 Brandis Street, Crystal Brook	(08) 8636 2200
Cummins	Railway Terrace, Cummins	(08) 8676 2001
Edithburgh	Edith Street, Edithburgh	(08) 8852 6024
Elliston	Beach Terrace, Elliston	(08) 8687 9006
Ernabella	Ernabella	(08) 8956 2952
Fregon	Fregon	(08) 8956 7084
Gawler	23 Cowan Street, Gawler	(08) 8522 0400
Gladstone	21 High Street, Gladstone	(08) 8662 2001
Goolwa	Cadell Street, Goolwa	(08) 8555 2018
Hallett	Alfred Street, Hallett	(08) 8894 2042
Hamley Bridge	6 Railway Terrace, Hamley Bridge	(08) 8528 2169
Hawker	Eighth Street, Hawker	(08) 8648 4028
Indulkana	Indulkana	(08) 8956 7084
Jamestown	96 Ayr Street, Jamestown	(08) 8664 1037
Kadina	58 Graves Street, Kadina	(08) 8828 1100
Kalangadoo	John Street, Kalangadoo	(08) 8739 3094
Kangaroo Island	Dauncey Street, Kingscote	(08) 8553 2018
Kapunda	101 Main Street, Kapunda	(08) 8566 2266
Karoonda	61 Peake Road, Karoonda	(08) 8578 1011
Keith	McBain Street, Keith	(08) 8755 1211
Kimba	19 Railway Terrace, Kimba	(08) 8627 2013
Kingston SE	Hanson Street, Kingston	(08) 8767 2009
Lameroo	34 Railway Terrace, Lameroo	(08) 8576 3010
Leigh Creek	25 Black Oak Drive, Leigh Creek	(08) 8675 2004
Lock	North Terrace, Lock	(08) 8689 1010
Loxton	Bookpurnong Terrace, Loxton	(08) 8584 7283

Lucindale	Musgrave Avenue, Lucindale	(08) 8766 2200
Maitland	26 Elizabeth Street, Maitland	(08) 8832 2621
Mallala	10 Balaklava Road, Mallala	(08) 8527 2065
Mannahill	Railway Terrace, Mannahill	(08) 8650 5903
Mannum	Adelaide Road, Mannum	(08) 8569 2211
Marla	Marla	(08) 8670 7020
Marree	First Street, Marree	(08) 8675 8346
Meningie	Princes Highway, Meningie	(08) 8575 1202
Millicent	48 George Street, Millicent	(08) 8733 3622
Mimili		(08) 8954 7006
Minlaton	20 Main Street, Minlaton	(08) 8853 2100
Minnipa	James Street, Minnipa	(08) 8680 5100
Moonta	16 Ryan Street, Moonta	(08) 8825 2200
Morgan	4 Third Street, Morgan	(08) 8540 2105
Mount Gambier	Bay Road, Mount Gambier	(08) 8735 1020
Mount Pleasant	Melrose Street, Mount Pleasant	(08) 8568 2023
Murray Bridge	9 Bridge Street, Murray Bridge	(08) 8535 6020
Murpitja		(08) 8956 7853
Naracoorte	66 Smith Street, Naracoorte	(08) 8762 0466
Narrung	Main Street, Narrung	(08) 8574 0031
Normanville	Mary Street, Normanville	(08) 8558 2014
Nuriootpa	61 Murray Street, Nuriootpa	(08) 8568 6620
Oodnadatta	Oribee Avenue, Oodnadatta	(08) 8670 7805
Orroroo	Second Street, Orroroo	(08) 8658 1300
Penola	24 Church Street, Penola	(08) 8737 2315
Penong	Main Street, Penong	(08) 8625 1006
Peterborough	70 Jervois St, Peterborough	(08) 8651 2100
Pinnaroo	1 Railway Terrace, Pinnaroo	(08) 8577 8077
Pipalyatjara	Pipalyatjara	(08) 8956 7509
Poochera	Barnes Street, Poochera	(08) 8626 3054
Port Augusta	106 Commercial Road, Port Augusta	(08) 8648 5020
Port Broughton	25 Harvey Street, Port Broughton	(08) 8635 2255
Port Germein	Esplanade, Port Germein	(08) 8634 5219
Port Lincoln	1 Liverpool Street, Port Lincoln	(08) 8688 3020
Port MacDonnell	8 Charles Street, Port MacDonnell	(08) 8738 2216
Port Pirie	18 Main Road, Port Pirie	(08) 8638 4000
Port Victoria	Lawhill Street, Port Victoria	(08) 8834 2039
Port Wakefield	North Street, Port Wakefield	(08) 8867 1030
Quorn	24 Railway Terrace, Quorn	(08) 8648 6060
Renmark	Ral Ral Avenue, Renmark	(08) 8586 6606
Riverton	30 Torrens Road, Riverton	(08) 8847 2200
Robe	Lord Street, Robe	(08) 8768 2118
Roxby Downs	Richardson Place, Robe	(08) 8671 4200
Snowtown	40 Railway Terrace, Snowtown	(08) 8865 2100
Spalding	Eileen Street, Spalding	(08) 8845 2100
Stansbury	4 Weaver Street, Stansbury	(08) 8852 4205
Strathalbyn	13 Commercial Street, Strathalbyn	(08) 8536 2044
Streaky Bay	3 Linklater Street, Streaky Bay	(08) 8626 1003

---

Swan Reach	Nildottie Road, Swan Reach	(08) 8570 2011
Tailem Bend	24 Railway Terrace, Tailem Bend	(08) 8572 4210
Tumby Bay	5 Tumby Terrace, Tumby Bay	(08) 8688 2188
Two Wells	Port Wakefield Road, Two Wells	(08) 8520 2309
Victor Harbor	17 George Main Road, Victor Harbor	(08) 8552 2088
Waikerie	1 Civic Avenue, Waikerie	(08) 8541 2888
Whyalla	3 Whitehead Street, Whyalla	(08) 8648 8020
Williamstown	Queen Street, Williamstown	(08) 8524 6288
Wirrabara	Fifth Street, Wirrabara	(08) 8668 4060
Wirrulla	82 Hay Street, Wirrulla	(08) 8626 8011
Woomera	Woomera	(08) 8673 7244
Wudinna	Medley Terrace, Wudinna	(08) 8680 2231
Yalata		(08) 8625 6093
Yorke town	22 Minlaton Road, Yorke town	(08) 8852 1100
Yunta	Railway Terrace, Yunta	(08) 8650 5004



## 36 APY and MT LANDS TELEPHONE NUMBERS

COMMUNITY NAME	FACILITY ADDRESS AND FAX NO.	TELEPHONE
Amata	<b>Amata Community Office</b> Fax: 8954 9020 Post: PMB Amata, via Alice Springs NT 0871	8954 9019
	<b>Police</b>	8956 2928 Marla(08) 8670 7020
	<b>Clinic:</b> Fax: 8956 7825	8956 2910
	<b>Store</b> Fax: 8956 7898	8956 2819
Ernabella	<b>Ernabella (Pukatja) Community Office</b> Fax: 8956 2945 Post: PMB Ernabella, via Alice Springs NT 0871	8956 2966
	<b>Ernabella Pukatja Police</b>	8956 2952 Marla(08) 8670 7020
	<b>Ernabella (Pukatja) Clinic</b> Fax: 8956 7528	8956 2946
	<b>Store</b> Fax: 89567580	8956 2919
Fregon	<b>Fregon Community</b> PhoneFax: 8956 7548 Post: PMB Fregon, via Alice Springs NT 0871	8956 2944
	<b>Police</b>	8956 2948 Marla(08) 8670 7020
	<b>Clinic</b> Fax: 8956 7816	8956 2918
	<b>Store</b> Fax: 89567557	8956 2925
Indulkana	<b>Indulkana Community</b> Fax: 8670 7986 Post: PMB Indulkana, via Alice Springs NT 0871	8670 7982
	<b>Police</b>	8670 7985 Marla(08) 8670 7020
	<b>Indulkana (Iwantja) Clinic</b> Fax: 8670 7967	8670 7986
	<b>Store</b> Fax: 86707957	8670 7912
Kalka	<b>Kalka Office</b> Fax: 89567593 Post: Via ASP NT 0872, Via NG Air	8956 7525
	<b>Kalka Clinic</b> Fax: 8956 7836	8956 7503
	<b>Ninuku Art Centre</b>	8954 8054
Kanpi	<b>Kanpi Community</b> Fax: 8956 7612 Post: PMB Kanpi, via Alice Springs NT 0871	8956 7523
MT Administration Office	43 McKenzie St, Ceduna SA 5690 Fax: 8625 2946 Email: maratjar@maralinga.com.au	8625 2946
Mimili	<b>Mimili Community</b> Fax: 8956 7601 Post: PMB Mimili, via Alice Springs NT 0871	8956 7935
	<b>Police</b>	8956 7522 Marla(08) 8670 7020
	<b>Mimili Clinic</b> Fax: 8956 7801	8956 2974 or 7251
	<b>Mimili Store</b> Fax: 8955 8155	8955 8144
	<b>Store</b>	8956 7085
Murputja	<b>Murputja Police</b>	8956 7853 Marla(08) 8670 7020

COMMUNITY NAME	FACILITY ADDRESS AND FAX NO.	TELEPHONE
Nyapari	<b>Nyapari Office</b> Fax: 8956 7518 Post: PMB Nyapari, via Alice Springs NT 0871	8956 7519
	<b>Nyapari Clinic</b> Fax: 8956 7441	8956 7441
	<b>Tjungu Palya Art Centre</b>	8956 7111
Oak Valley	<b>Oak Valley Office</b>	8670 4214
	<b>Oak Valley Store</b>	8670 4221
	<b>Oak Valley Health Services</b>	8670 4207
Pipalyatjara	<b>Pipalyatjara Office</b> Fax: 8956 7508 Post: PMB Pipalyatjara, via Alice Springs NT 0871	8956 7500
	<b>Police</b>	89567509 Marla(08) 8670 7020
	<b>Clinic</b> Fax: 8956 7836	8956 7503
	<b>Store</b> Fax: 89567507 or 7800	89567928 or 7505
Umuwa	<b>Umuwa Community</b> Fax: 8950 1510 Post: PMB Umuwa, via Alice Springs NT 0871 Umuwa After Hours Emergency	8950 1511 89548130
	<b>AP Land Management</b> Fax: 8954 8170 Email: <a href="mailto:lmapy@bigpond.com">lmapy@bigpond.com</a> Post: PMB Umuwa, via Alice Springs NT 0872	8954 8171
	<b>AP Permits Officer</b> Fax: 89548110	89548104
	<b>AP Reception Umuwa</b> Fax: 89548110	89548111
	<b>AP Services</b> Fax: 89548150 Post: PMB Umuwa, via Alice Springs NT 0872	8954 8135
	<b>General Enquires</b> Fax: (08) 8956-7321 Email: <a href="mailto:tech@waru.org">tech@waru.org</a> Post: PMB Umuwa, via Alice Springs NT 0872	8956-7054
	<b>Housing-Repairs and Maintenance</b> Fax: 89548160	89548138
	<b>Land Management Office</b> Fax: 8954 8170 Post: PMB Umuwa, via Alice Springs NT 0872	8954 8172
	<b>NPY Women's Council Umuwa Office</b> Fax: 8956 7739	89567271
	<b>PY Education Committee</b> Fax: 8954 8110 Post: PMB Umuwa, via Alice Springs NT 0872	8954 8104
	<b>PY Media Umuwa Office</b> Fax: 8954 8163 Email: <a href="mailto:will@waru.org">will@waru.org</a> Post: PMB Umuwa, via Alice Springs NT 0872	8954 8175
	<b>Radio 5NPY</b> Fax: 8954 8163 Email: <a href="mailto:pymedia@waru.org">pymedia@waru.org</a> Post: PMB Umuwa, via Alice Springs NT 0872	8954 8175
	<b>Umuwa Visitors Centre</b>	088 9507509/ 89
Watarru	<b>Watarru Community</b> Fax: 89567835 Post: PMB Watarru, via Alice Springs NT 0871	89567626
	<b>Watarru Clinic</b> Fax: 8956 7835	8956 2852 or 7721
Yalata	<b>Yalata Office</b>	8625 6040
	<b>Yalata Store</b>	8625 6989

## 37 PASTORAL PROGRAM PASTORAL LEASE CONTACT LIST (Feb 2011)

**Note: not all Telephone numbers are a direct connection to the pastoral property, some are for Offices in Adelaide. If calling the station direct, ring in the evening rather than office hours.**

Lessee	Lease No.	Lease Name	Telephone
PR Morgan PO Box 433 UNLEY SA 5061	2273	<b>Abminga</b>	(08) 8217 8217 (08) 8212 1488
Lyndavale Pty Ltd De Rose Hill Station PMB 209 ALICE SPRINGS NT 0872	2133 2138A 2190A	<b>Agnes Creek</b> Paxton's Bluff North Paxton's Bluff South	(08) 8956 2907
AT Clarke PO Box 322 TINTINARA SA 5266	2408 2475 2455	<b>Allandale</b> Toondinna Toondinna East	(08) 8670 7806
Alpana Pty Ltd Alpana Station C/o Blinman PO BLINMAN SA 5730	2241 2316A	<b>Alpana</b> ABC Range	(08) 8648 4864
M.V.E.W Gaffrey & D Brook 24 Wood Street ASCOT PARK SA 5043	2390 2413	<b>Alton Downs</b> Andrewilla	(07) 4656 3252
BHP Billiton Land Management Unit PO Box 150 ROXBY DOWNS SA 5725	2333	<b>Andamooka</b>	(08) 8671 8664
Anthony & Lesley Nicholls 5 Marlock Place LEIGH CREEK SA 5731	2259	<b>Angepena</b>	(08) 8675 2100
Oratunga Pastoral Co Pty Ltd Oratunga Stn BLINMAN SA 5730	2316 2275	<b>Angorigina</b> Artimore	(08) 8648 4881
S Kidman & Co Ltd PO Box 346 NORTH ADELAIDE SA 5006	2433 2432	<b>Anna Creek</b> The Peake	(08) 8670 7801
Mr Tony Williams Mt Barry Station PO Box 302 COOBER PEDY SA 5723	2418 2476	<b>Arckaringa</b> Coorikiana	(08) 8670 7961
Handbury Asset Management PO Box 1154 GEELONG VIC 3220	2347	<b>Arcoona</b>	(08) 8673 7402
The Manager, GA Sprigg Arkaroola Via PORT AUGUSTA SA 5700	2240	<b>Arkaroola</b>	(08) 8648 4848
C.B. Morton Victory Downs Station Via ALICE SPRINGS NT 0870	2491	<b>Ayres Range South</b> (Mt Cavanagh)	(08) 8956 0975

Lessee	Lease No.	Lease Name	Telephone
Mannawarra Pty Ltd Paul Reynolds Upalinna Station PMB 17 HAWKER SA 5434	2267	<b>Baldoora</b>	(08) 8648 0010 (08) 8648 0038
Balah Nominees Pty Ltd Balah Station Via BURRA SA 5417	2285	<b>Balah</b>	(08) 8540 2061
AW & DE Martin PO Box 6 JAMESTOWN SA 5491	2269	<b>Baratta</b>	(08) 8665 4085
Mr Graham A Ragless Beltana Station BELTANA SA 5730	2304	<b>Beltana</b>	(08) 8675 2255
AH & JI Smith Belton Via CARRIETON SA 5432	2262	<b>Bibliando</b>	(08) 8658 9054
Greenfield Pastoral Co Pty Ltd Billa Kalina Station PMB 8 WOOMERA SA 5720	2415	<b>Billa Kalina</b>	(08) 8672 8936
Mid North District NPWSA District Ranger PO Box 26 BURRA SA 5417	2247	<b>Bimbowrie</b>	(08) 8091 1518
M J & S Parker Bindarra Station Via OLARY SA 5440	2200	<b>Bindarra</b>	(08) 8091 1676
Mr HC Webb "Vespers" HAWKER SA 5434	2318	<b>Black Hill</b>	(08) 8648 4140
Mr GR Rieck Bollards Lagoon Station TIBOOBURRA NSW 2880	2185	<b>Bollards Lagoon</b>	(08) 8091 3873
Australian Bush Heritage Fund PO Box 329 Flinders Lane MELBOURNE VIC 8009	2239	<b>Bon Bon</b>	(03) 8610 9125
Australian Bush Heritage Fund PO Box 329 Flinders Lane MELBOURNE VIC 8009	2216	<b>Boolcoomatta</b>	(03) 8610 9125
Mr DM Greenfield Bosworth Station PO Box 268 ROXBY DOWNS SA 5725	2211 2333A	<b>Bosworth Andamooka Island</b>	(08) 8672 7085
Harnox Pty Ltd 16 East Terrace CLEVE SA 5640	2286 2305	<b>Buckleboo Pt Thurlga</b>	(08) 8627 4067

Lessee	Lease No.	Lease Name	Telephone
Commonwealth Hill Proprietors Ltd 9 French Street ADELAIDE SA 5000	2331	<b>Bulgunnia</b>	(08) 8672 1907
Bulloo Creek Station Oratana Pty PO Box 423 BROKEN HILL NSW 2880	2363	<b>Bulloo Creek</b>	(08) 8091 1522
DEH Agreements Private Land Con GPO Box 1047 ADELAIDE SA 5001	2168	<b>Bungeroo</b>	(08) 8370 7482
J T Lindner & Ors PO Box 3 MORGAN SA 5320	2284	<b>Bunyung</b>	(08) 8540 2281
TJ, RL & GP Mengersen Depot Springs Station Via COPLEY SA 5732	2229	<b>Burr Well</b>	(08) 8675 2553
Mr GC Morphett Callanna Station Via MARREE SA 5733	2302	<b>Callanna</b>	(08) 8675 8342
Australian Landscape Trust PO Box 955 RENMARK SA 5341	2457 2459 2292A	<b>Calperum</b> Pt Calperum Pt Yubalia	(08) 8610 9125
From Nature Pastoral Co Pty Ltd PO Box 1163 NORTH ADELAIDE SA 5006	2292	<b>Canegrass</b>	(08) 8361 8338
Buckleboo Nominees Pty Ltd Carrierwerloo Station Via PORT AUGUSTA SA 5710	2423 2496	<b>Carrierwerloo</b> Cooraberra	(08) 8643 8985
Kym Clifford Gillett Bramfield PO box 11 Via ELLISTON SA 5670	2344	<b>Chickerloo</b>	(08) 8687 9055
PA Price (EM Price) C/- Post Office PENONG SA 5690	2163	<b>Chundaria</b>	(08) 8396 4961
CK & SM Oldfield Clayton Station MARREE SA 5733	2397 2516	<b>Clayton</b> Saltaparuna	(08) 8675 8311
Kartoo Pty Ltd & Ors 283 Wakefield Street ADELAIDE SA 5000	2387 2385 2386 2421	<b>Clifton Hills</b> Goyders Lagoon Kanowana Pt. Clifton Hills	(08) 8675 8302
Commonwealth Hill Pty Ltd Jumbuck House 9 French Street ADELAIDE SA 5000	2424 2169 2159 2176 2175 2178 2442 2469	<b>Commonwealth Hill</b> Pt Commonwealth Hill Pt McDouall Peak Pt Mulgathing Pt Woorong Downs Pt Woorong Downs Mobella Mount Christie	(08) 8672 1907

Lessee	Lease No.	Lease Name	Telephone
R.G & J Mould Coondambo Station PMB 103 Via PORT AUGUSTA SA 5710	2349	<b>Coondambo</b>	(08) 8672 1031
M & J Anderson Cooyerdoo Station Box 30 IRON KNOB SA 5601	2456	<b>Cooyerdoo</b>	(08) 8646 2097
Brooklands Pastoral Co Pty Ltd Cordillo Downs BIRDSVILLE QLD 4482	2524	<b>Cordillo Downs</b>	(07) 4655 4383
Mr GE French Corunna Station PO Box 2 IRON KNOB SA 5601	2215	<b>Corunna</b>	(08) 8646 2011
Courtabie Pastoral Co Pty Ltd c/- Post Office PORT KENNY SA 5671	2510	<b>Courtabie</b>	(08) 8687 0410
Ms AS Oldfield 24 Argyll Walk BELLEVUE HEIGHTS SA 5050	2389 2414	<b>Cowarie Koodnanie</b>	(08) 8675 8304
Pandle Pty Ltd PO box 2556 ALICE SPRINGS NT 0870	2495A	<b>Crown Point (New Crown)</b>	(08) 8952 2966
Curnamona Pastoral Co Pty Ltd C/- GPO Box 446 ADELAIDE SA 5001	2326	<b>Curnamona</b>	(08) 8648 4850
Mr MK Francis Oulnina Station MANNAHILL SA 5440	2538 2233	<b>D'Lorah Downs Benda</b>	(08) 8650 5901
J A Smith Devonborough Downs Station Via OLARY SA 5440	2223 2222	<b>Devonborough Downs Canewood</b>	(08) 8091 1521
Taliso Pty Ltd Dulkaninna Station Via PORT AUGUSTA SA 5710	2135 2517	<b>Dulkaninna Cooryanna</b>	(08) 8675 8307
Antequam P/L PO Box 7 CARRIETON SA 5432	2460	<b>Eringa (Hamilton)</b>	(08) 8670 7960
Pasmore Pty Ltd & Billeroo Pty Ltd Erudina Station Via YUNTA SA 5440	2299 2300	<b>Erudina Billeroo West</b>	(08) 8648 4827
BHP Billiton Land Management Unit PO Box 150 ROXBY DOWNS SA 5725	2437 2143 2438 2188	<b>Etadunna Peachawarrina Kirrikirrinna Cannatalkaninna</b>	(08) 8671 8664
J L Knight 100 Kingston Terrace NORTH ADELAIDE SA 5006	2533	<b>Evelyn Downs</b>	(08) 8361 8280 Homestead

Lessee	Lease No.	Lease Name	Telephone
Braernar Pastoral Co Pty Ltd GPO Box 649 ADELAIDE SA 5000	2243	<b>Faraway Hill</b>	(08) 8272 1612
KW & AMG Dawes Farina Station Via LYNDHURST SA 5732	2509	<b>Farina</b>	(08) 8675 7790
GK & LA Riggs Florina Station Manahill Via PETERBOROUGH SA 5422	2535	<b>Florina</b>	(08) 8894 2103
Frome Downs Pty Ltd Frome Downs Station Via YUNTA SA 5440	2391 2394	<b>Frome Downs</b> Lakeside	(08) 8648 4823
Doce Pty Ltd Attn: Mr Trevor Whitelaw PO Box 2455 ADELAIDE SA 5001	2425	<b>Gidgealpa</b>	(08) 8675 9590
Westover Holdings Pty Ltd 1 Hawkers Road MEDINDIE SA 5081	2388	<b>Gilles Downs</b>	(08) 8646 2016
Mr JM Lunn PO Box 555 WAIKERIE SA 5330	2497	<b>Glenlock</b>	(08) 8543 2264
Gluepot Reserve C/-W. Mackintosh PO Box 13 GLOSSOP SA 5344	2487	<b>Gluepot</b>	(08) 8541 3240
WR & J McIntosh Gum Creek Station BLINMAN SA 5730	2270 2382	<b>Gum Creek</b> Werta	(08) 8648 4883
APVAM & Rocca Nominees Pty Ltd 1155 Port Wakefield Road WATERLOO CNR SA 5110	2506 2249	<b>Hawks Nest</b> Teonga	(08) 8588 3275
Warwick Bros Pty Ltd Holowiliena South Station PMB 16 Via CARRIETON SA 5432	2260	<b>Holowiliena</b>	(08) 8648 4876
Warwick Bros Pty Ltd Holowiliena South Station PMB 16 Via CARRIETON SA 5432	2260A	<b>Holowiliena South</b>	(08) 8648 4876
PG & WJ Agars Nominees Pty Ltd PMB 87 PORT LINCOLN SA 5606	2419	<b>Hornes Lookout</b>	(08) 8687 8755
Buckleboo Nominees Pty Ltd Carriererloo Station Via PORT AUGUSTA SA 5700	2274	<b>Illeroo</b>	(08) 8361 8338
DJ Maynard PO Box 205 CLARE SA 5453	2339 2153 2527	<b>Ingomar</b> Lake Wirrida Moutn Penrhyn	(08) 8672 1919

Lessee	Lease No.	Lease Name	Telephone
OneSteel Manufacturing Pty Ltd Attn: Yolande PO Box 21 WHYALLA SA 5600	2218	<b>Iron Baron</b> (Sub-leased)	(08) 8646 8035
Middleback Investments Pty Ltd Attn: Mr Andrew Nicholson PO Box 330 WHYALLA SA 5600	2283	<b>Katunga</b>	(08) 8646 2022
R C Nitschke PO Box 1192 NORTH ADELAIDE SA 5006	2357 2365	<b>Kalabity</b> Telechie	(08) 8091 1515
Australian Wildlife Conservancy PO Box 8070 SUBIACO EAST WA 6008	2412 2534	<b>Kalamurina</b> Kallakoopah West	(08) 9380 9633
Uranium One Aust Pty Ltd Level 9/11-19 Grenfell St ADELAIDE SA 5000	2278	<b>Kalkaroo</b>	(08) 8112 2888
DW & MJ Henderson PMB 10 Via WOOMERA SA 5720	2355	<b>Kokatha</b>	(08) 8672 1913
L P Lord Kolendo Station PMB 27 PORT AUGUSTA SA 5710	2323 2330	<b>Kolendo</b> Unalla	(08) 8648 1828
J.F.J Baker Nominees Pty Ltd PO Box 81 CLEVE SA 5640	2313	<b>Kondoolka</b>	(08) 8683 3040
Boolapuckee Nominees Pty Ltd 13 James Street KINGSTON SA 5275	2309	<b>Koonamore</b>	(08) 8658 1273
Sword Nominees Pty Ltd Attn: Mr JLG Wilkinson Kootaberra Station PO Box 595 PORT AUGUSTA SA 5700	2373 2374	<b>Kootaberra</b> Hesso	(08) 8643 8958
Lake Everard Pty Ltd PO Box 332 CLARE SA 5453	2393 2301 2294 2253	<b>Lake Everard</b> Hiltaba Pt Hiltaba Yarna	(08) 8648 1884
John Rowe Attn: Mr JB Rowe PO Box 109 HAWKER SA 5434	2202	<b>Lake Torrens</b>	(08) 8648 4228 (08) 8648 4718
AW & KA Fennell Lambina Station Via MARLA SA 5724	2446	<b>Lambina</b>	(08) 8670 7930
R Coulthard Leigh Creek Station Via COPLEY SA 5732	2244	<b>Leigh Creek</b>	(08) 8675 2283



Lessee	Lease No.	Lease Name	Telephone
Pine Valley Pastoral Co Pty Ltd Box 32 POOCHERA SA 5655	2530	<b>Lockes Claypan</b>	(08) 8626 3092
Tjaliri Aboriginal Corp. C/- Inglis & Rowe PO Box 2247 PORT AUGUSTA SA 5700	2527A	<b>Mabel Creek</b>	(08) 8672 5204 (08) 8642 3966
S. Kidman & Co Ltd PO Box 346 NORTH ADELAIDE SA 5006	2528	<b>Macumba</b>	(08) 8670 7801
M & J Anderson Cooyerdoo Station Box 30 IRON KNOB SA 5601	2351	<b>Mahanewo</b>	(08) 8646 2097
Mannawarra Pty Ltd Paul Reynolds Upalinna Station PMB 17 HAWKER SA 5434	2231 2287A	<b>Mannawarra</b> Pt Saltia	(08) 8648 0010 (08) 8648 0038
Mr EJ Nicholls Maynards Well Station PO Box 14 LEIGH CREEK SA 5732	2264	<b>Manners Well</b>	(08) 8675 2584
The Mutooroo Pastoral Co Pty Ltd PO Box 433 UNLEY SA 5061	2217	<b>Manunda</b>	(08) 8091 1514 (08)8212 1488
C/- Stephen Kenny Trustee Dieri Land Trust Level 1, 345 King William Street ADELAIDE SA 5000	2266 2256	<b>Marree Station</b> St Stephens Pond	(08) 8008 6772
DW & WP Fargher Martins Well Station Via YUNTA SA 5440	2245	<b>Martins Well</b>	(08) 8648 4830
McDouall Peak Pty Ltd Attn: W R Rankin The Twins Station, PMB 3 PORT AUGUSTA SA 5710	2341 2147	<b>McDouall Peak</b> Balta Baltana South	(08) 8672 8931
Boolapuckee Nominees Pty Ltd 13 James Street KINGSTON SA 5275	2203	<b>Melton</b>	(08) 8658 1273
Doce Pty Ltd Attn: Trevor Whitelaw PO Box 2455 ADELAIDE SA 5001	2422	<b>Merty Merty</b> (Sub leased)	(08) 8675 9590
CB & JJ Greenfield Billa Kalina Station Via WOOMERA SA 5720	2315	<b>Millers Creek</b>	(08) 8672 8936
Boolapuckee Nominees Pty Ltd 13 James Street KINGSTON SA 5275	2207	<b>Minburra</b>	(08) 8658 1273

Lessee	Lease No.	Lease Name	Telephone
SD, BVR & AD Chilton RSD 41 CEDUNA SA 5690	2114	<b>Mitchidy Moola</b>	(08) 8625 6050
Moolawatana Props. PMB 1 LEIGH CREEK SA 5731	2271 2395	<b>Moolawatana</b> Woolatchi	(08) 8648 4815
R B Treloar Mooleulooloo Station Via COCKBURN SA 5440	2478 2380 2232 2379	<b>Mooleulooloo</b> Peters Strathearn Lignum	(08) 8091 1527
Moolooloo Proprietors Pty Ltd PMB 80 PORT AUGUSTA SA 5710	2209	<b>Moolooloo</b>	(08) 8648 4861
The Manager Moonaree Moonaree Past. Co. Via PORT AUGUSTA SA 5710	2329	<b>Moonaree</b>	(08) 8648 1813
Moolooloo Proprietors Pty Ltd PMB 80 PORT AUGUSTA SA 5710	2199	<b>Moorillah</b>	(08) 8648 1813
DC, DP, SK & BM Fels PMB 135 Via PORT AUGUSTA SA 5710	2319	<b>Motpena</b>	(08) 8648 4717
Sword Nominees Level 6, 211 Victoria Square ADELAIDE SA 5000	2257	<b>Mount Arden</b>	(08) 8271 1703
Ronwill Pty Ltd PO Box 7 CARRIETON SA 5432	2411	<b>Mount Barry</b>	(08) 8670 7961
Minyungu Palyari Inc Attn: Complete Business Accounting Services PO Box 1935 PORT LINCOLN SA 5606	2508	<b>Mount Clarence</b>	(08) 8683 1222
Rosslyn Nischke Mount Eba Station PMB 3 WOOMERA SA 5720	2340	<b>Mount Eba</b>	(08) 8672 8930
Mr RJ Reschke Mount Falkland Station CMB PARACHILNA SA 5370	2500	<b>Mount Falkland</b>	(08) 8648 4859
GJB Nominees Pty Ltd C/- 466 Morphet Road WARRADALE SA 5046	2271A	<b>Mount Freeling</b>	(08) 8296 7910
Clive McLaughlan Mt Havelock Reserve Pty Ltd 34 Ormonde Ave WARRADALE SA 5046	2482	<b>Mount Havelock</b>	(08) 8658 9054

Lessee	Lease No.	Lease Name	Telephone
Mount Ive Station Pty Ltd 4 Tasman Tce PORT LINCOLN SA 5606	2289	<b>Mount Ive</b>	(08) 8648 1817
Wynclie Pty Ltd Andrew Cleland Level /191 Flinders St ADELAIDE SA 5000	2310	<b>Mount Lyndhurst</b>	(08) 8407 1300
Mookara Vale Pastoral Co Pty Ltd PO Box 7 CARRIETON SA 5432	2428 2440	<b>Mount Sarah</b> Stevenson	(08) 8670 7951
Yadlhauda Aboriginal Corp Attn: Charles Jackson Mount Serle Station Via COPLEY SA 5732	2290	<b>Mount Serle</b>	(08) 8648 3715
HGM Pastoral Pty Ltd 9 French Street ADELAIDE SA 5000	2205 2212 2376	<b>Mount Victor</b> Glenorchy Pt Tin Hut	(08) 8650 5984
DW & MJ Henderson PMB 10 Via WOOMERA SA 5720	2288	<b>Mount Vivian</b>	(08) 8672 1913
Tjirilya Aboriginal Corporation Mt Willoughby Station PMB 9 COOBER PEDY SA 5723	2515	<b>Mount Willoughby</b>	(08) 8670 7993
WB & JA Reschke Mulga View Station Via COPLEY SA 5732	2499 2378B	<b>Mulga View</b> Mulga View South	(08) 8648 4859
BHP Land Management PO Box 150 ROXBY DOWNS SA 5725	2308 2431A	<b>Mulgaria</b> Pt mulgaria	(08) 8671 8664
Mulgathing Limited 9 French Street ADELAIDE SA 5000	2158 2246 2154	<b>Mulgathing</b> Malbooma Muckanippie	(08) 8672 1920
Doce Pty Ltd Attn: Trevor Whitelaw PO Box 2455 ADELAIDE SA 5001	2399 2447	<b>Mulka</b> Lake Hope	(08) 8675 9590
TW & CG Mitchell Family Trust (Muloorina Stn) PO Box 21 MARREE SA 5733	2400 2402 2401	<b>Muloorina</b> Lake Letty Lake Harry	(08) 8675 8341
Mutooroo Pastoral Co Pty Ltd PO Box 433 UNLEY SA 5061	2360 2359 2361	<b>Mulyungarie</b> Benagerie Lake Dismal	(08) 8091 1614 (08) 8212 1488
TF & MA Blore PO Box 343 BROKEN HILL NSW 2880	2303	<b>Mundi Mundi</b>	(08) 8091 1628

Lessee	Lease No.	Lease Name	Telephone
Munwil Pty Ltd Mundowdna Station Via MARREE SA 5733	2298 2210	<b>Mundowdna</b> Wilpoorina	(08) 8675 8347
Shilligan Pty Ltd 685 South Road BLACK FORREST SA 5035	2407 2449	<b>Mungeranie</b> Waukatanna	(08) 8675 8315
Broschul Pty Ltd Murnpeowie Station BIRDSVILLE QLD 4482	2519	<b>Murnpeowie</b>	(08) 8648 4824
Mutooroo Pastoral Co Pty Ltd PO Box 433 UNLEY SA 5000	2362	<b>Mutooroo</b> Lilydale (Not a lease)	(08) 8091 1614 (08) 8212 1488
Mr GD Mills PO Box 181 WHYALLA SA 5600	2281	<b>Myola</b> Iron Baron (Sub lease)	(08) 8646 8035
Vinya Aboriginal Corporation Attn: Inglis & Rowe PO Box 2247 PORT AUGUSTA SA 5700	2306A	<b>Myrtle Springs</b>	(08) 8675 2392
HGM Pastoral Pty Ltd 9 French Street ADELAIDE SA 5000	2504	<b>Morialpa</b>	(08) 8650 5984
Nanbona Pastoral Co Pty Ltd PMB 20 CEDUNA SA 5690	2183	<b>Nanbona</b>	(08) 8625 6274
JL & MC Ireland 33 Kyle Street GLENSIDE SA 5065	2467	<b>Narrina</b>	(08) 8648 4866
G & I Tiver Netley Gap Station Via YUNTA SA 5440	2409	<b>Netley Gap</b>	(08) 8650 5938
Nilpena Pastoral Co Pty Ltd PO Box 219 LEIGH CREEK SA 5731	2297	<b>Nilpena</b>	(08) 8648 4894
Moockra Vale Pastoral Co Pty Ltd PO Box 7 CARRIETON SA 5432	2420	<b>Nilpinna</b>	(08) 8670 7951
Nonning Holdings Pty Ltd Nonning Station PMB 18 PORT AUGUSTA SA 5710	2328 2170 2177	<b>Nonning</b> Beacon Hill Mahanewo South	(08) 8648 1814
WN & J Luckraft Bendleby Via ORROROO SA 5431	2358	<b>North Hills</b>	(08) 8658 9064
Ian C Ferguson Nominees Pty Ltd North Moolooloo Station COPLEY SA 5732	2463	<b>North Moolooloo</b>	(08) 8675 2284

Lessee	Lease No.	Lease Name	Telephone
Nutt Bros Nominees Pty Ltd PMB 15 PORT AUGUSTA SA 5710	2377	<b>Oakden Hills</b>	(08) 8643 8960
CM & PM Glynn Oakvale Station Via BURRA SA 5417	2268	<b>Oakvale</b>	(08) 8892 9661
Mr MJ Schuppan 9 Railway PDE ROBERTSTOWN SA 5381	2248	<b>Oakview</b>	(08) 8581 7106
BW Thomas Nominees Pty Ltd PO Box 37 MANOORA SA 5417	2325	<b>Old Koomooloo</b>	(08) 8848 4241
Ms Virginia A Lee PO Box 4329 ST LUCIA SOUTH QLD 4067	2276	<b>Oratunga</b>	(08) 8353 8108
Mr MK Francis Oulnina Station MANNAHILL SA 5440	2213 2214 2436 2234	<b>Oulnina</b> Maldorkey Radium Hill Eringa Park	(08) 8650 8931
PL & BA Burdon Oulnina Park Station MANNAHILL SA 5440	2485	<b>Oulnina Park</b>	(08) 8650 5051
JR & AM Morgan Outalpa Station Via COCKBURN SA 5440	2238	<b>Outalpa</b>	(08) 8091 1523
Pandie Pty Ltd PO Box 2556 ALICE SPRINGS NT 0870	2406 2387A 2421A	<b>Pandie Pandie</b> Beckwith Dickinna	(08) 8952 2966
Pandurra Pty Ltd C/- LeCornu Lewis Hancock GPO Box 446 ADELAIDE SA 5001	2272 2332	<b>Pandurra</b> Myall Creek	(08) 8643 8940
Buckleboo Nominees Pty Ltd Carrierwerloo Via PORT AUGUSTA SA 5710	2197	<b>Parakyliia</b>	(08) 8643 8985
R.G. & J Mould Coondambo Station PMB 103 PORT AUGUSTA SA 5710	2197A	<b>Parakyliia South</b>	(08) 8672 1031
Mr JK Wyld PMB 62 BURRA SA 5417	2235	<b>Parcoola</b>	(08) 8588 3275
CB & JJ Greenfield Billa Kalina Stn Via WOOMERA SA 5720	2353	<b>Pernatty</b>	(08) 8643 8968
SR & BJ Coulter Croft Road LENSWOOD SA 5240	2541	<b>Pinda Springs</b>	(08) 8389 8543

Lessee	Lease No.	Lease Name	Telephone
James & Annee Bartholomaeus Pine Creek Station COCKBURN SA 5440	2367 2206	<b>Pine Creek</b> Pt Pine Creek	(08) 8091 1617
Adam V Hamersley Haseley Stud PO Box 117 TOODYAY WA 6566	2258 2370	<b>Pine Valley</b> Lords Well	(08) 9574 5573
Mrs GE Tremaine 24 Esplanade SMOKY BAY SA 5680	2196	<b>Pinjarra</b>	(08) 8625 7052
HGM Pastoral Pty Ltd 9 French Street ADELAIDE SA 5000	2250	<b>Plumbago</b>	(08) 8650 5984
AH & JI Smith Belton Via <b>CARRIETON</b> SA 5432	2540 Formally-2350	<b>Prelinna</b>	(08) 8658 9054
A.C. Heinjus Nominees Pty Ltd PO Box 57 BRINKWORTH SA 5464	2531	<b>Pt Narlaby</b>	(08) 8846 2087
BHP Billiton Land Management Unit PO Box 150 ROXBY DOWNS SA 5725	2480	<b>Purple Downs</b>	(08) 8671 8664
Mr GA Ragless Beltana Station BELTANA SA 5730	2498	<b>Puttapa</b>	(08) 8675 2255
Mutooroo Pastoral Co Pty Ltd PO Box 433 UNLEY SA 5061	2404	<b>Quinyambie</b>	(08) 8091 1614 (08) 8212 1488
P & P Verco Nominees Pty Ltd C/o GPO Box 446 ADELAIDE SA 5001	2224 2208	<b>Quondong</b> Oakbank	(08) 8267 4081
IC Greenwood & LJ Arban PO Box 738 STIRLING SA 5152	2336	<b>Rocky Moor</b>	(08) 8388 2330
Middleback Investments Pty Ltd Attn: Mr Andrew Nicholson PO Box 330 WHYALLA SA 5600	2337 2283	<b>Roopena</b>	(08) 8646 2022
BHP Billiton Land Management Unit PO Box 150 ROXBY DOWNS SA 5725	2338	<b>Roxby Downs</b>	(08) 8671 8664
Attn: Katherine Moseby Ecological Horizons PO Box 207 KIMBA SA 5641	2542	<b>Secret Rocks</b>	(08) 8648 1878
Mr NK Crossman PO Box 70 HAWKER SA 5434	2335	<b>Shaggy Ridge</b>	(08) 8648 4052

Lessee	Lease No.	Lease Name	Telephone
OneSteel Manufacturing Pty Ltd Level 40, 259 George Street SYDNEY NSW 2000	2501	<b>Shirrococoe</b>	(02) 9239 6666
Yarrah Nominees Pty Ltd (Siam Stn) PO Box 582 CEDUNA SA 5690	2254 2423A	<b>Siam</b> Siam North	(08) 8625 8054
Mr RW Greenfield South Gap Station 50 Simmons Crescent PORT AUGUSTA SA 5700	2523	<b>South Gap</b>	(08) 8643 8967
BHP Billiton Land Management Unit PO Box 150 ROXBY DOWNS SA 5725	2431 2416	<b>Stuarts Creek</b> Lake Eyre	(08) 8671 8664
Sword Nominees Level 6, 211 Victoria Square ADELAIDE SA 5000	2346 2345	<b>Sturt Vale</b> Fords Lagoon	(08) 8271 1703
PG & KL Hoffman 27 Kernick Avenue WILLUNGA SA 5172	2280	<b>Talia</b>	(08) 8556 2777
Australian Landscape Trust Attn: Grant Whiteman PO Box 955 RENMARK SA 5341	2521 2513 2514 2511 2536 2518	<b>Taylorville/1</b> Taylorville/2 Taylorville/3 Taylorville/4 Taylorville/5 Taylorville/6	(08) 8541 3240
CJ & J Abell PO Box 141 KAPUNDA SA 5373	2525	<b>Tepco</b>	(08) 8091 1677
SJ Hilder PO Box 192 HAWKER SA 5434	2324	<b>Three Creeks</b>	(08) 8648 4230
RR & DH Morris Yardea Station Via PORT AUGUSTA SA 5710	2305B	<b>Thurlga</b>	(08) 8379 8728
Tieyon Pastoral Co Pty Ltd PMB ALICE SPRINGS NT 0872	2495	<b>Tieyon</b>	(08) 8956 0993
Mr KH Treloar Wiawera Station Via COCKBURN SA 5440	2236 2198	<b>Tikalina</b> Aroona West	(08) 8091 1526
KD & RP Oglivy Lindon Station Via TIBOOBURRA SA 2880	2452 2186	<b>Tinga Tingana</b> White Catch	(08) 8091 3974
Estate of A Tiver C/- F & J Tiver PO Box 158 NORTON SUMMIT SA 5136	2228	<b>Ti Tree Well</b>	(08) 8333 0781

Lessee	Lease No.	Lease Name	Telephone
Panaramitte Pastoral Co Pty Ltd Panaramitte Station YUNTA SA 5440	2486	<b>Tiverton</b>	(08) 8650 5088
GK & ML Lillecrapp Todmorden Station PMB 55 Via ALICE SPRINGS NT 0871	2430	<b>Todmorden</b>	(08) 8670 7965
Tregalana Investments Pty Ltd PO Box 157 WHYALLA SA 5600	2337A 2366	<b>Tregalana</b> Lincoln Park	(08) 8645 8006 (08) 8642 2595
B Crabb & H Schutze 4 Telegraph Road KINGSCOTE SA 5223	2230	<b>Uمبرatana</b>	(08) 8648 4767 (Station)
Uno Pty Ltd Attn: Mr M McTaggart PMB 18 Via PORT AUGUSTA SA 5710	2314	<b>Uno</b>	(08) 8648 2012
Mannawarra Pty Ltd Paul Reynolds Upalinna Station PMB 17 HAWKER SA 5434	2227	<b>Upalinna</b>	(08) 8648 0010 (08) 8648 0038
Mannahill Pastoral Services Wadnaminga Station Via MANNAHILL SA 5440	2354 2537	<b>Wadnaminga</b> Taltabooka	(08) 8650 5906
Wallerberdina Pty Ltd 10 Northumberland St HEATHPOOL SA 5068	2220	<b>Wallerberdinna</b>	(08) 8846 2185
Wetlands & Wildlife Attn: Mr Michael Lewis GPO Box 446 ADELAIDE SA 5001	2466	<b>Warraweena</b>	(08) 8675 2773
Wartaka Pastoral Co Pty Ltd Wartaka Station Via PORT AUGUSTA SA 5710	2252 2423B	<b>Wartaka</b>	(08) 8643 8971
SD, BVR & AD Chilton RSD 41 CEDUNA SA 5690	2145	<b>Watna Shed</b>	(08) 8625 6050
Mr WM Crawford Weekeroo Station MANNAHILL SA 5440	2261 2263	<b>Weekeroo</b> Wawirra	(08) 8650 5390
DJ & CF Sampson & Sons Pty Ltd Welbourn Hill Station Via MARLA SA 5724	2532	<b>Welbourn Hill</b>	(08) 8670 7970
Mr Simon Rowe Princess Royal Station PO Box 160 Via BURRA SA 5417	2378	<b>Wertaloona</b>	(08) 8648 4821



Lessee	Lease No.	Lease Name	Telephone
John Mitolo C/o Mitolo Holdings P/L GPO Box 520 VIRGINIA SA 5120	2282	<b>Westons Flat</b>	(08) 8282 9000
Mr KH Treloar Wiawera Station Via COCKBURN SA 5440	2465	<b>Wiawera</b>	(08) 8091 1526
JH & JM Clarke PO Box 165 HAWKER SA 5434	2493	<b>Wilcowie</b>	(08) 8658 9052
AJ & PA McBride Pty Ltd GPO Box 649 ADELAIDE SA 5001	2364 2375 2526 2507 2201	<b>Wilgena</b> Carnding Well Coladding Kychering Pinding	(08) 8272 1612
Sawers Farms Pty Ltd Wilkatana Station PMB 2 PORT AUGUSTA SA 5710	2296	<b>Wilkatana</b>	(08) 8642 3642
D.P. Hilder Retep Pty Ltd Willippa Station Via CARRIETON SA 5432	2307 2307A 2287	<b>Willippa</b> Glen Warwick Saltia	(08) 8648 4878
B & C Reynolds Willow Springs Station PMB 3 Via HAWKER SA 5434	2265	<b>Willow Springs</b>	(08) 8648 0016
AJ & PA McBride Pty Ltd GPO Box 649 ADELAIDE SA 5001	2255	<b>Winnininnie</b>	(08) 8892 9656
DC, DP, SK & BM Fels PMB 135 Via PORT AUGUSTA SA 5710	2472	<b>Wintabatinyana</b>	(08) 8648 4717
Bakiss Pty Ltd Wintinna Station PMB 2 Via COOBER PEDY SA 5723	2532A	<b>Wintinna</b>	(08) 8670 7936
Inglewood Pty Ltd RSD 27 CRYSTAL BROOK SA 5523	2348 2155	<b>Wirraminna</b> Wirraminna South	(08) 8636 6230
Wirrealpa Pastoral Co Pty Ltd Wirrealpa Station BLINMAN SA 5730	2317	<b>Wirrealpa</b>	(08) 8648 4828
Nature Foundation SA Inc PO Box 448 HINDMARSH SA 5007	2311 2312 2306	<b>Witchelina</b> Ediacara Ediacara East	(08) 8675 7793
GF & JE Heaslip Witchitie Station Via CARRIETON SA 5432	2474	<b>Witchitie</b>	(08) 8658 9058

Lessee	Lease No.	Lease Name	Telephone
Wompine Pastoral PO Box 288 BURONGA NSW 2739	2398 2371	<b>Wompinie</b> Bundera	(08) 8091 1679
Heathgate Resources Pty Ltd Suite 1, Level 4 25 Grenfell Street ADELAIDE SA 5000	2293	<b>Wooltana</b>	(08) 8648 4822
LM & MM Clarke Worumba PO Box 112 HAWKER SA 5434	2291	<b>Worumba</b>	(08) 8648 4037
F S H & E M Doman C/- Doman Lawyers Level 4/41 Currie Street ADELAIDE SA 5000	2277	<b>Yadlamalka</b>	(08) 8642 4810
Nutt Bros Nominees Pty Ltd PMB 15 PORT AUGUSTA SA 5710	2251 2381	<b>Yalymboo</b> Lake Blyth	(08) 8643 8960
Operation Flinders Foundation 246 Victoria Road LARGS NORTH SA 5016	2481 2512	<b>Yankaninna</b> Balparana	(08) 8564 1021
RR & DH Morris Yardea Station Via PORT AUGUSTA SA 5710	2330A 2330B	<b>Yardea</b> Koweridda	(08) 8379 8728
Mr KH Treloar Wiawera Station COCKBURN SA 5440	2279	<b>Yarramba</b>	(08) 8091 1526
TM & TC Wake 155 Mills Terrace NORTH ADELAIDE SA 5006	2529	<b>Yeltana</b>	(08) 8361 7954
Unalla Pastoral Co Pty Ltd CMB 117 PORT AUGUSTA SA 5700	2372	<b>Yudnapinna</b>	(08) 8643 8959
Robertson Chowilla Pty Ltd Chowilla Station PMB 18 RENMARK SA 5341	Regional Reserve	<b>Chowilla</b> Pt Chowilla	(08) 8585 8048
Innamincka Regional Reserve PMB 48, Innamincka Via LEIGH CREEK SA 5731	Regional Reserve	<b>Innamincka</b>	(08) 8334 7100
Department for Environment and Natural Resources	Regional Reserve	<b>Paney</b>	(08) 8648 1883
Department for Environment and Natural Resources	Regional Reserve	<b>Pine Lodge</b>	(08) 8680 5123
Department for Environment and Natural Resources	Regional Reserve	<b>Scrubby Peak</b>	(08) 8680 5123

## 38 REG PHONE LIST (October 2011)

All 5-digit extensions that begin with a “3” have the prefix 846 ie. Ext 33345 is 8463 3345

Name	Internal	Mobile	
MIP	Aagaard, Pam	33345	
MIP	Abbot, Peta	33066	
SS	Adams, Ben	33040	
PGD	Alexander, Elinor	33211	0417 821 056
PGD	Annear, Jack	8226 2921	
PGD	Appelbee, Elaine	33284	
GSSA	Asendorf, Mark	41181	
MR&R	Bailiht, Hans	33107	0408 816 928
GSSA	Baker, Tim	8226 2992	0428 104 730
MR&R	Barbaro, Carla	41416	0467 737 083
MR&R	Barrington-Kerr, Christina	8204 1415	0447 169 587
PGD	Bendall, Betina	33243	
MR&R	Blagojevic, Dragana	33114	0401 122 026
SS	Boxall, Mardi	33020	
GSSA	Braithwaite, Kevin	8379 9574	
GSSA	Brent, Sue	34011	
LAB	Brice, Robyn	33103	
GSSA	Broadbridge, Lyn	33041	Mineral Lab 33331
L&R	Broadbridge, Daniel	33469	
SS	Brock, Chris	33153	0458 521 940
PGD	Brown, Jennette	33290	
SS	Cal, Maria	34487	
MR&R	Carbine, Dean	8664 1408 / 33311	0409 696 120
LAB	Carpentieri, Tracy	33462	
SS	Cirson, Julianne	33749	0434 072 554
PG	Cockshell, David	33233	0401 995 996
PGD	Coda, James	33716	
MR&R	Constable, Simon	33129	0437 650 317
LAB	Correll, Mark	8204 2193	0437 793 023
GSSA	Cowley, Wayne	33076	
RESIC	Czerniak, Sue	37160	0423 023 199
MR&R	Dale, John	8678 9059	0418 834 104 / SP.0147 140 861
MR&R	Dale, Marjorie	8672 5800	
SS	Darwin, Raelene	8303 2298	
PG	Davies, Jo	33220	
GSSA	Davies, Marc	33132	
GSSA	Davies, Miles	33159	0407 727 484
MIP	Davies, Tania	33012	
SS	Davis, Steven	33217	0437 713 834

GSSA	Dhu, Tania	33079	
LAB	Dix, Stacey	33294 MER 32204 ODTF	
SS	Doolan, Margaret	33111	0427 000 039
GSSA	Dutch, Rian	33042	
MR&R	Edkins, Nicole	33108	0438 201 178
	Executive Coordinator Land Access	33070	
	Executive – Teresa Fisher, Coordinator Reg & Rehab	33113	0401 121 892
PGD	Fabjancic, Steve	33232	
GSSA	Fabris, Adrian	33035	
GSSA	Fairclough, Martin	33064	
L&R	Farrelly, Shane	33216	
MR&R	Fidge, Martin	41169	0459 817 245
GSSA	Fidler, Roger	33124	
MR&R	Field, Erica	8226 2780	0488 991 376
MR&R	Fisher, Teresa	33113	
GSSA	Flintoft, Mark	33119	0401 122 011
Oper	Flowers, Tim	33815	0427 946 113
LAB	Freeman, Pru	33091	0401 122 010
MIP	French, Zoë	33495	
PGD	Frost, Bob	33219	0439 449 914
MIP	Froud, Rachel	33303	
GSSA	Fulcher, Danni	33265	
MIP	Gerrard, Christie	34012	0467 775 802
Exec	Goldstein, Barry	33200	0413 007 365
GSSA	Gordon, Georgina	33072	
GSSA	Gouthas, George	33073	
MR&R	Gray, Neil	33118	0427 101 526
GSSA	Groom, David	8379 9574	0417 858 742
GSSA	Groom, Keryn	8379 9574	
GSSA	Griffiths, Mark	33346	
MR&R	Grindley, Peter	8388 6527	0408 842 221
HR	Gurney, Kate	822 67627	
GSSA	Harvey, Gus	8226 5849	0428 112 715
Oper	Hayter, Belinda	33239	0401 122 056
GSSA	Heath, Philip	33087	
Exec	Heithersay, Paul	8303 2298	0428 895 639
MIP	Hibburt, Jacque	33067	
PGD	Hill, Tony	33225	0427 773 244
LAB	Hobbs, Brenton	34453	
PGD	Holland, Carice	33283	
GSSA	Hopton, Ian	33123	0428 814 712
GSSA	Hore, Steve	33046	
GSSA	Hou, Baohong	33038	0459 849 424
GSSA	Hough, Joanne	33124	Home:87553447
PG	Hough, Peter	33240	

MR&R	Howe, Mark	33484	
SS	Iley, Georgi	25G – 8226 60415	101G - 33207
PGD	Ivic, Dragan	33237	
MR&R	Jackson, Peter	8204 1149	0401 995 420
GSSA	Jagodzinski, Liz	33081	
PGD	Jarosz, Michael	8226 1613	
GSSA	Jenkins, Greg	33074	0434 601 353
LAB	Johnson, Deb	33034	
LAB	Kapoor, Akhil	33050	
GSSA	Katona, Laszlo	8204 2853	
SS	Kaur, Preet	34154	
GSSA	Keeling, John	33135	0401 122 015
GSSA	Keeping, Tim	8226 2376	
PGD	Kinnear, Lee	8226 5003	
LAB	Kostoff-Kosmas Sophia	33100	
GSSA	Krapf, Carmen	33128	
LAB	Lacar, Cathy	33138	
MR&R	Lane, Marilyn	8678 9057	
MR&R	Lane, Peter	8678 9062	0418807255
PGD	Langley, Rob	33242	
LAB	Larkins, Bob	33099	0419 863 855
LAB	Lavingdale, Michelle	33095	
LAB	Leek, Virginia	33056	
LAB	Lock, Chris	33102	
MR&R	Lock, Erik	33185	0427 601 955
PGD	Long, Alexandra	37022	0418 684 186
GSSA	Love, David	33177	0419 824 458
PGD	Lynch, Barry	8226 5512	0402 124 781
PGD	Malavazos, Michael	33245	0401 121 666
LAB	Marafiotte, Rosa	33356	
PGB	Marjot, Susan	822 63645	
MR&R	Marsh, David	33368	0407 929 619
MR&R	Marshall, Greg	33105	0427 971 521
PGD	Marshall, Scott	33248	0417 458 194
LA	Martin, Junesse	33097	
RESIC	Mastrangelo, Joe	8226 5059	0417 812 148
MR&R	Mattiazzo, Rino	33106	0417 820 432
GSSA	Mauger Alan	33062	
GSSA	McAvaney, Stacey	33081	
LAB	McGuire, Trish	33198	
GSSA	McKenzie, Todd	33282	
	McKenzie, Todd	Safety login Mob	0401 122 019
MR&R	McLeary, Michael	8204 1145	0427 604 169
GSSA	McSporran, Louise	8226 2110	

PGD	Menpes, Sandy	8226 1921	0408 698 974
LAB	Meynell-James, Michael	33586	
GSSA	Michael, Ursula	33389	
GSSA	Michaelsen, Bernd	8463 3134	0419 832 995
SS	Michalk, Di	33966 MER 41935 MO	0428 117 988
MR&R	Middleton, Catherine	33446	
MIP	Mignone, John	8338 6493	0401 122 059
LAB	Moore, Brian	34334	0401 121 984
GSSA	Morris, Brian	33127	
MR&R	Morton, John	33152	0401 122 023
LAB	Muller, Melissa	33096	
PGD	Newchurch, Quahli	33204	
LAB	Orr, Daniel	33186	
MR&R	Orr, Glen	8664 1408 / 33323	0407 942 529
MR&R	Paxton, Ray	33116	0417 853 240
PGD	Pepicelli, Dominic	33287	
LAB	Petruzzella, Nella	33060	
GSSA	Platt, Andrew	8379 9574	
MR&R	Potts, Frank	8226 2804	0428 541 759
MR&R	Powell, Bill	8678 9061	0147 154 831
GSSA	Preiss, Wolfgang	33077	
SS	Priest, Cathy	65560	
GSSA	Reed, Gary	33044	0401 122 021
GSSA	Reid, Anthony	33039	
LAB	Reid, Martin	33090	0411 461 281
PGD	Roa, Danae	8463 3214	
GSSA	Robertson, Stuart	33055	
GSSA	Roden, Matthew	8379 9574	
MIP	Ross, Michael	34012	
MIP	Rowett, Andrew	33037	0421 059 593
LAB	Roy, Bron	33070	0423 026 216
GSSA	Rusak, Teena	33208	
GSSA	Safta, Jim	8352 5140	0428 888 046
PGD	Sansome Alan	33221	0421 611 687
PGD	Santalucia, Yvonne	33226	
PGD	Seweryn, Witold	33235	
LAB	Shaw, Rob	33182	
GSSA	Sheard, Malcolm	8338 0073	
MR&R	Skey, David	8388 6527	0417 851 891
LAB	Smith, Michael	33082	0422 208 311
MIP	Smith, Nancy	34307	
LAB	Spikin, Meg	37992	
MIP	Stanley, Kerry	34315	0417 837 218
GSSA	Stephenson, John	8352 5140	0417 415 078

MR&R	Stevens, Ross	33083	0458 181 534
GSSA	Stoian, Liliana	33036	
MR&R	Struve, Naomi	33059	
GSSA	Sutton, Steve	33404	0429 850 171
GSSA	Talbot, Josine	33126	
MR&R	Talbot, Peter	8664 1408 / 33312	0417 824 359
MIP	Taylor, Grace	33012	0401 122 128
LAB	Thomas, Helen	33181 MER 32202 ODTF	0408 957 140
MR&R	Thompson, Linda	33426	
MR&R	Tickner, Bryce	8678 9061	
SS	Tonani, Danielle	8226 1566	
PGD	Tucker, Les	33215	
Exec	Tyne, Ted	33033	0434 074 123
PGD	Valana, Nadia	33683	
GSSA	Wade, Claire	33084	
GSSA	Wallace, Alison	33333	Earthquake Enquiries
LAB	Walton, Malcolm	33130	0467 814 460
Exec	Walker, Sam	33088	0419 808 441
MR&R	Walsh, Kate	33367	0467 733 302
LAB	Watson, Sue	33098	
PGD	Wenham, Dale	37080	
GSSA	Werner, Mario	33065	
MR&R	White, Jack	33093	0428 111 716
GSSA	White, Lana	8204 1067	
MIP	Williamson, Annemarie	33274	0458 305 372
GSSA	Willison, Michael	8379 9574	Theb: 8354 0366
LAB	Wilson, Beverley	33741	
GSSA	Wilson, Tania	33075	
MR&R	Wood, Ashley	8672 5800	0147 161 385
GSSA	Woodhouse, Ailsa	8303 4971	
SS	Xia, Silvia	33201	
PGD	Zabrowarny, Joe	33203	0434 607 973
MR&R	Zeman, Nathan	33486	0439 689 468

<b>State Fleet</b>	<b>8226 7800</b>
<b>Customer Services</b> Level 7, 101 Grenfell Street	8463 3000
<b>Additional Numbers</b>	
L3 Small Mtg Room	8226 1928
L5 Meeting Room	8463 3276
L7 Exec Mtg Room	8226 1641
<b>PIRSA Helpdesk</b>	42200
<b>Fax numbers</b>	
Geological Survey L4	8226 3200 33048, 33089
Reg & Rehab L5	33109
Mineral Tenements L5	33101
Land Access L5	8226 3399
Executive L7	34155
PACE L7	34155
Petroleum L6	8463 3229
<b>RESIC</b>	<b>8226 0060</b>

---

## 39 REFERENCES

- Broadbridge, L., 1999. Field safety and procedures manual. *South Australia. Department of Primary Industries and Resources. Report Book, 29/99.*
- Broadbridge, L., 2002. Field safety and procedures manual. *South Australia. Department of Primary Industries and Resources. Report Book, 05/02.*
- Broadbridge, L., 2005. Field safety and procedures manual. *South Australia. Department of Primary Industries and Resources. Report Book, 05/05.*
- Broadbridge, L., 2008. Field safety and procedures manual. *South Australia. Department of Primary Industries and Resources. Report Book, 08/06.*
- DFW 2011. HF Radio Network 8528 Users Guide *South Australia. Department for Water.*
- PIRSA, 2002. Aboriginal Heritage Act 1988, and Aboriginal Site Avoidance Guidelines, *South Australia, Department of Primary Industries and Resources. Earth Resources Information Sheet, M29.*
- PIRSA, 2001. Prospecting and mining for opal outside proclaimed precious stones fields. *South Australia. Department of Primary Industries and Resources. Earth Resources Information Sheet, M8.*
- PIRSA, 2001. Mineral exploration drillholes – general specifications for construction and abandonment guidelines. *South Australia. Department of Primary Industries and Resources. Earth Resources Information Sheet, M21.*
- PIRSA, 2004. Statement of environmental objectives and environmental guidelines for mineral exploration activities in South Australia. *South Australia. Department of Primary Industries and Resources. Earth Resources Information Sheet, M33.*
- PIRSA, 2001. Liaison guidelines for landholders and mineral explorers in South Australia. *South Australia. Department of Primary Industries and Resources. Earth Resources Information Sheet, M36.*
- PIRSA. 2011. *Intranet, PIRSAFE policies and procedures.* South Australia. Department of Primary Industries and Resources.
- Queensland Department of Mines and Energy, 1998. *Exploration safety guidelines.* Queensland Department of Mines and Energy.
- Smith, R., 2009 Emergency First Aid. *State training services.*
- St John Ambulance Australia, 2006. *Australian first aid.* St John Ambulance Australia.
- Taylor B., 2001. *Field radio handbook.* South Australia. Department of Primary Industries and Resources.
- Williams, G. T., 1996. *Field safety manual.* Western Australia. Department of Minerals and Energy.

Appendix 1 Log-in areas for Jamestown Area Office

