McArthur River Mining Pty Ltd

Site Short Term Induction Handbook

A GLENCORE COMPANY

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MRM SITE SHORT TERM INDUCTION

The following forms must be completed:

HSEC-OHS-FRM-6050-00019 - Medical Information Form

GEN-TRN-FRM-6080-0011- Induction Information Form

GEN-TRN-ASS-6080-0004 - MRM Site Short Term Induction Assessment

The Site General Induction must be completed if the worker is required to work past the twenty-one (21) day period.

Figure 1: Mine Site Overview

Figure 2: Village Overview

1.0 GENERAL EMERGENCY CALL PROCEDURE

FOR IMMEDIATE ASSISTANCE IN AN EMERGENCY:

CALL 222 FROM ANY COMPANY PHONE

8975 8222 FROM A MOBILE

OR

VHF RADIO CHANNEL 5

PHONE:

- Dial 222 from a MRM desk phone; or
- Dial 8975 8222 from a mobile phone; and
- Provide relevant information to the receiver of the call.

RADIO:

- Say the words "EMERGENCY, EMERGENCY" and listen for a reply from the person receiving the call.
- Repeat the emergency call until you receive an answer.
- Provide all information requested by the receiver of the call (your name, location & nature of the emergency).
- Do not leave the radio/phone or resume normal transmission until instructed to do so.

IF YOU ARE UNABLE TO FIND A PHONE OR RADIO CONTACT ANY PERSON CLOSE BY.

DO NOT PUT YOURSELF IN DANGER!

2.0 TRAVEL AND ARRIVAL

2.1 Your flight out of Darwin

Direct flights operate between Darwin and McArthur River operated by AirNorth with a flight time of approximately one hour.

- You will need to check in at AirNorth at Darwin International Airport one hour before your flight is due to depart. Check in closes 30 minutes prior to departure.
- Photo identification will be required for your flight.
- You need to advise us if you require more than one piece of checked luggage.
- Check-in and hand luggage weight limits exist on both the Embraer E170 and Brasilia E120 aircraft; check before you arrive at check-in.
- Meals are not served on the plane but will be available at MRM once you arrive.
- If you are unable to make your flight for any reason, contact your host.

2.2 Arrival at McArthur River

On arrival into McArthur River you will be met by your host, who will arrange for your drug and alcohol tests, base line blood lead level test (if appropriate) and the relevant area induction, VOC's etc.

If you arrive on a morning flight, you will travel to the village dining room where you can eat breakfast and prepare your lunch for the day.

If you arrive on an evening flight, your host will provide you with a short talk to familiarise you with the village area and issue you with your room key. Dinner is available in the dry mess.

3.0 VILLAGE GENERAL INFORMATION

If you are staying overnight, your host will guide you to the village catering office where you will be given your room key.

The Village is a designated clean area. No contaminated clothing or equipment is permitted in the Village area.

3.1 Evacuation Procedure

In your room you will find a copy of the village evacuation plan, which will give the location of your room relative to the village landmarks and the emergency evacuation muster point. Figure 2 on page 7 provides an overview of the Village showing the muster point location.

Your actions in an evacuation of the village are:

Proceed to the village evacuation muster point (adjacent to beach volley ball court).

- Knock on your neighbours door on the way
- On arrival proceed to the name checkers
- No one is permitted to leave the muster point until advised by the Village Evacuation Controller

3.2 Your room

The majority of our rooms are motel style with en-suite facilities, satellite digital television and a refrigerator. There are also some barrack style rooms, which have shared bathroom and laundry facilities. At times of high occupancy, some rooms may be hot-bedded. All accommodation is fully air-conditioned.

- Your room is equipped with linen and towels.
- You will need to bring all toiletries, including soap.
- If maintenance is required in your room, you can report it by completing a maintenance request form located in the dining room.
- You are advised to secure your valuables and lock your room when leaving it unoccupied.
- When leaving site, your room key should be returned to the accommodation office.

3.3 Mess facilities

The mess, or dining room, is open for meals at the following times:

- Breakfast – 4.15am to 7.30am.
- Dinner – 4.15pm to 8pm.

Mess facilities are also available for a short period in the mornings following the arrival of incoming flights.

- You must prepare your own lunch during breakfast or dinner times as the mess is not open for lunch.

- Well-equipped crib, or lunch rooms, are available at most work locations and include water, coffee and tea supplies as well as basic food preparation areas. Microwave ovens, toasters and refrigerators are also available.
- You must be reasonably dressed in the dining area.
- Soiled work clothing and dirty footwear must not be worn.
- Thongs are acceptable footwear. Sandals or covered footwear are advisable during wet weather.
- Singlets are not allowed in the dining room.

3.3.1 Wet Mess

Our wet mess is open from 5:00am for the sale of general shop items. Alcohol sales are from 6:30am to 8:00am and in the evening from 6pm to 8:30pm. Our wet mess operates under a Responsible Service of Alcohol policy, and the following is strictly enforced:

Day Shift:

- After 8pm 2 cans per person only.
- All Patrons to leave the wet mess area by 1200 midnight

Night Shift:

- After 8am 2 cans per person only.
- All Patrons to leave the wet mess area by 1200 midday

The wet mess includes a small shop.

- Toiletries, phone cards, stamps, snacks, drinks and other general items can also be purchased during wet mess hours and also between 5pm and 5.15pm daily.
- EFTPOS is available but there is no ATM. You are responsible for ensuring you have sufficient money for the duration of your stay at MRM.

3.4 Other facilities

Everyone staying in the village enjoys access to an excellent range of sporting, social and recreational facilities.

- A partially shaded swimming pool, tennis, basketball and volleyball courts and a cricket pitch are located near to the wet mess. Sporting equipment can be borrowed from the wet mess and you can make a booking for the tennis court there also.
- Our well-equipped gymnasium is open 24 hours a day.
- A movie theatre featuring the latest releases and classics is located in the wet mess, along with pool tables and dart boards.
- A number of social and special interest clubs are supported by staff including the Social Club, Clay Target Shooting Club, and Fishing Club.
- An Internet cafe is located in the 24-hour crib room adjacent to the wet mess.

- Laundries are located throughout the village for free use by everyone on site. Please remember you MUST NOT use village laundries for soiled or contaminated work clothing.
- Public telephones are located adjacent to the wet mess as well as the contractors' car park.
- Mobile telephone reception is only available via Telstra's Next G network.

3.5 Work Bus

A bus runs services between the village and the mine site. Bus timetables are posted throughout the site.

- **From the airport**: The bus leaves after luggage is collected from the trolley.
- **To the airport:** The bus leaves from both the mine site change house and the wet mess. The last bus leaves from both locations 40 minutes prior to the scheduled departure time of the flight.
- **Between site and the village:** On most days, the bus runs a continuous loop from 5am to 7am and again from 5pm to 7.10pm. Friday, Saturday and Sunday evenings the loop stops at 6.40pm in the evening.

The pickup and drop off points are:

- The Village bus stop (in front of the training room).
- The "rocks" (pathway adjacent to 'A' Block).
-
- Outside the mine site change house.

It is an easy 2km walk from the village to site, and many people use the opportunity to gain additional exercise.

- If you choose to walk, you must wear high visibility, reflective clothing and a high-vis vest OVER the top of any backpack.
- At night or early morning you MUST have a lit torch.
- Walk on the road in the opposite direction to oncoming traffic.
- It is also a short walk between the airport and the village on a separate pathway.

3.6 Climate and temperature

McArthur River Mine is located in a wet-dry tropical climate. The wet season, from November to April, is characterised by warm humid days and nights, tropical storms and monsoonal rain at times. The dry season, from May to October, brings cool to cold nights and generally warm days.

- Dry season mornings can be very chilly. It is advisable to pack a jumper or jacket.
- In the wet season, it is advisable to bring a raincoat or umbrella.

3.7 Wildlife

A wide variety of wildlife inhabits the village area. Do not approach or feed the animals.

In the warmer months, snakes are often seen within the village area. Make sure to walk only on the foot paths and report snake sightings to your host. We have a number of employees trained in the identification and removal of dangerous snakes.

3.8 Photography

- Photography is not permitted in any operational area without the express permission of site management.
- You must not share photographs or video taken on site through social media or any other means.
- Respect the privacy of other visitors and staff and remember that all areas on site, including the village, are private property.

3.9 Airport

McArthur River Mine Airport is controlled under the Civil Aviation Safety Authority. Please follow signs and instructions given to you by airport staff.

4.0 VILLAGE RULES

- No Smoking in rooms, hallways or breezeways.
- No burning of candles, incenses or other substances in rooms.
- No irresponsible loud behaviour or fighting. No excessive noise after 2100hrs.
- Excessive noise to the point of disturbance to other residents should be curtailed.
- Beer Garden area must be vacated by 2300hrs.
- Fire hoses and extinguishers are not to be used other than for their intended use.
- No tampering with smoke detectors, other safety equipment or electronic devices.
- No gambling, prostitution, narcotics and other illegal activities, weapons or firearms.
- No pornographic material.
- Rooms to be kept tidy at all times. All rooms are inspected and cleaned on a weekly basis.
- Rooms must be vacated on the MORNING of departure. This applies if you are on an evening flight. All belongings must be packed up. YOU ARE NOT TO GO BACK TO YOUR ROOM ON DEPARTURE DAY
- Please abide by all gymnasium rules. No equipment is to be removed from this area.
- Laundries and ablutions to be kept tidy during and after use. Dirty / contaminated work clothes are not to be washed in the camp laundries.
- Vehicles must be parked in designated parking area only.
- Keys will be issued from the Village Administration Office upon arrival to site. ALL ROOM KEYS MUST BE RETURNED PRIOR TO DEPARTURE.
- The company is not liable for any damage to personal property whilst within the accommodation village.
- Wilful damage of company property may result in the withdrawal of site accommodation.
- Speed limits in the village must be adhered to.
- Employees must be dressed in clean, unsoiled clothes when in the dining room. Singlets and dirty work boots / clothes are not permitted.
- No items of cutlery, crockery or other equipment are to be removed from the Dining Room.
- No alcohol is permitted within the Dining Room.
- Liquor shall not be served within the Wet Canteen outside of hours specified.
- No alcohol is to be brought to site.
- Liquor shall not be given, sold, supplied or delivered to any person under the age of 18. Furthermore any person under the age of 18 shall not enter the licensed area.

5.0 OUR VALUES

Entrepreneurialism

Our approach fosters the highest level of professionalism, personal ownership and entrepreneurial spirit in all our employees while never compromising on the safety and well-being of our people. This is important to our success and the superior returns we aim to achieve for all our stakeholders.

Simplicity

We aim to achieve our key deliverables as a path to industry-leading returns, while maintaining a clear focus on excellence, quality, sustainability and continuous improvement in everything we do.

Safety

Our first priority in the workplace is to protect the health and well-being of all our workers. We take a proactive approach to health and safety; our goal is continuous improvement in preventing occupational diseases and injuries.

Responsibility

We recognise that our work can have an impact on our society and the environment. We care profoundly about our performance in compliance, environmental protection, human rights and health and safety.

Openness

We value relationships and communication based on integrity, co-operation, transparency and mutual benefit, with our people, our customers, our suppliers, governments and society in general.

6.0 MRM VISION

McArthur River Mining will be the superior supplier of zinc/lead/silver in concentrate to sustain maximum returns for its investors and stakeholders. The McArthur River Mining vision will be achieved through strategic planning to optimise opportunities for growth, innovation and continuous improvement. The business will ultimately be positioned as a high quality low cost producer whilst continuing to focus on the safety of its employees, maintain high environmental standards and sustain strong community relationships.

7.0 CODE OF CONDUCT

Who does the Code apply to?

Everyone working for Glencore, regardless of location or role, must comply with the Code, which seeks to ensure that the aspirations embodied in Our Values are reflected in our daily actions and decisions and in our corporate culture.

Each of us must also take reasonable steps to ensure that other individuals or groups acting on behalf of Glencore do likewise.

Working with Integrity

We must all work with integrity and comply with the law, the Code and Glencore policies. The Code is not designed to include prescriptive rules covering every eventuality, and is not intended to replace your own good judgement. It defines the minimum requirements and gives you direction and guidance in applying Glencore's values.

You must familiarise yourself with the laws and regulations relevant to your work. If you breach the law, the Code or our policies you may face disciplinary action, including dismissal.

We may terminate (or decline to renew) the contract of any service provider or contractor who breaches the law, the Code and, to the extent applicable, Glencore policies. Should you become aware of conduct which is in breach of the law, the Code or our policies, you must report it.

Speaking Out

Glencore operates in a complex business environment. If you encounter a situation in which the Code or underlying policies appear to be breached, you should raise this promptly with your immediate supervisor or manager. Alternatively you can raise this with another appropriate manager.

If you have any concern that remains unresolved, you should refer the matter to CodeofConduct@glencore.com.

Any issue you raise must be in good faith. Abuse of this channel is not acceptable.

Breaches of the Code of Conduct

If you do not comply with the requirements of the Code and relevant MRM policies, this may lead to disciplinary action by management, including termination of your employment.

8.0 ANTI-CORRUPTION POLICY

Who does the Policy apply to?

It applies to all permanent and temporary employees, directors and officers as well as contractors

What is Bribery?

Bribery is a form of corruption. Defined simply, corruption is the misuse of entrusted power for private benefit. A bribe is any financial or other advantage which is offered, provided, authorised, requested or received as an inducement or reward for the improper performance of a person's relevant function or the receipt of which in itself would constitute improper conduct.

Alerting Glencore to Bribes and Other Corrupt Practices

If you have any concern that the making or receipt of a payment or the taking of a particular course of action might violate this policy, or if you suspect that violations of this policy may be occurring or are about to occur, you must refer that concern to your:

- Supervisor or manager (provided they are not the subject of your suspicion or query).

- The appropriate compliance contact whose details are in the compliance section of the Glencore intranet.
- By writing an e-mail to CodeofConduct@glencore.com

Breach of Anti-Corruption Laws or these Rules and Guidelines

Glencore regards any breach of this Policy and as a very serious matter. If reasonable grounds exist for demonstrating deliberate or grossly negligent conduct then dismissal may follow. Employees in breach of applicable anti-corruption laws may also be subject to civil and/or criminal prosecution. The business relationship with non-employees who violate this Policy will be terminated.

Ask your MRM host for a copy of this policy on arrival onsite.

9.0 STATATORY REGULATIONS

All employees, contractors and visitors are obliged to comply with any advised statutory requirements applicable to the MRM operations.

The obligations come under two headings:

1. Statutory duties as required under both Territory and Federal legislation.
2. Common Law duty of care.

Statutory safety requirements are found in a number of Acts and Regulations the main ones are:

- NT Mining Management Act – Environmental management.
- NT Work, Health and Safety (National Uniform Legislation) Act and Regulations.

MRM's policies and procedures, as written, are intended to supplement the legislation and detail specific requirements that apply to Mcarthur river Mining. They are not intended to alter or replace any statutory requirements.

9.1 Management Systems (Work Health regulations)

The top level of our management system is the NT Work, Health and Safety (National Uniform Legislation) Act, NT Work, Heath and Safety (National Uniform Legislation) Regulations and the Mining Management Act and Regulations.

Other information that we use as a reference to form our "Mine Management Plan" and site policies are:

- Other Acts and Regulations, both National and State e.g Electrical reform act.
- Standards and Codes of Practice.
- AS/NZ Standards.
- Glencore Values.

We strive to continually improve in all aspects of our operation.

10.0 DOCUMENT CONTROL

10.1 Definition

"A controlled document is the document that is formally approved by authorised person(s), registered in the MRM Documents Register and accessed via our intranet. The document is considered to be a controlled document only when viewed on the Intranet."

10.2 Purpose

The purpose of the Document Control Process is to ensure a consistent site-wide approach to the numbering, registration and publishing of McArthur River Mine controlled documents.

Not all personnel on site have access to computers, so if you require a policy, procedure form etc see your Supervisor who can obtain a copy for you.

Documents that have been printed may no longer be the current copy – you must always ensure that you have the current version

All MRM Controlled documents have a header and footer. To ensure you have the most recent issue or version, access the document off the intranet or view the Doc and make sure the copy you have matches the title, issue and revision number of the one on the intranet. Only then can you be assured you have the current version.

All persons in Supervisory roles will be required to learn how to use the intranet. Request training through your Supervisor.

11.0 HEALTH

11.1 First Aid Centre

The First Aid Centre is located behind the Site Training Centre and is manned by paramedics from 06:00 – 18:15 daily. Paramedics are on call after hours for medical emergencies.

All personnel with an injury, no matter how minor must report to the First Aid Centre.

11.2 Smoking

MRM is a smoke free workplace. This means smoking is allowed in designated areas only, which do not include:

- Any buildings (including all crib rooms, control rooms, offices and accommodation).
- Vehicles.
- Near fire hazards.
- Areas with no smoking signs.

While performing work at any of MRM operations, a Contractors vehicle or machine or building is included in the restricted areas listed above.

As per GEN-GEN-POL-6040-0006 Smoke Free Workplace Policy, you are permitted to smoke outside in accordance with the NT Tobacco Control Act and Regulations.

In order to ensure the safety of the workers in the Processing Areas and compliance with the requirements imposed upon the Company by the Work Health and Safety (National Uniform Legislation) Regulations smoking is not be permitted in any lead process area. The Regulations currently stipulate the following:

Section 398 -Prohibition on eating, drinking and smoking

(1) A person conducting a business or undertaking at a workplace must take all reasonable steps to ensure that a person does not eat, drink, chew gum, smoke or carry materials used for smoking in a lead process area at the workplace.

All of the Processing Plant areas at McArthur River Mine are lead process areas. Smoking implements such as lighters and cigarettes are not permitted in the processing areas.

11.3 Dehydration

Due to the environment that we work in, dehydration can be a real threat to health and safety and increases the risk of injury or illness. A test of your hydration level can be the colour of your urine, dark yellow generally means low hydration and you need to drink more water. If you wish to monitor your hydration level, a measured test only takes a few minutes and can be done at the first aid centre. Inform your supervisor or host of your intentions prior to going to the first aid centre.

11.3.1 Symptoms

Symptoms may include:

- Headache.

- Muscular cramps and aches.
- Drowsiness, lethargic and irritability.
- Reduced concentration and Co-ordination
- Increased core body temperature.

11.3.2 Prevention

Prevention strategies include but are not limited to:

- Drinking adequate fluids before work.
- Maintain fluid intake of 500ml – 1000ml of water or weak cordial every hour.
- Whilst working, limit the number of drinks that contain large amounts of sugar or caffeine.
- Drink water before sleeping. Limit consumption of alcohol and other substances that will reduce your hydration level.
- Plan strenuous jobs for cooler times if possible. Take regular breaks in the shade.
- Get shade or a fan for your job.
- Shower at crib breaks.
- Advise your supervisor or Host if you are on medication.
- Maintain a healthy lifestyle.

Heat stress can be fatal. Act on symptoms early. Do not delay treatment.

11.4 Water quality

Not all water on site is fit for drinking; only drink water from a source that is labelled "Drinking" or "Potable Water".

11.5 Hygiene

Personnel hygiene is a very important requirement as MRM is a Zinc / Lead mine.

In addition to normal personal hygiene precautions, the following points must be kept in mind:

- Wash hands before eating, drinking, smoking or rolling cigarettes.
- Only eat in crib rooms and designated areas.
- Crib rooms must be kept clean and free from dust / rubbish at all times.
- All personnel must shower and change their clothes before each crib break if there is a risk of getting Zinc / Lead contamination in their food.
- No work boots or dirty clothes are allowed in the crib room located near the ice machine or the control room at any time. Boot covers and hat hooks are provided at the control room entrance.
- A person must not eat, drink, chew gum, smoke or carry materials used for smoking in any lead process area as signposted at the MRM workplace.

- All personnel working in contact with the ore or concentrating process must shower and change clothes before leaving the mine site.

The camp is a "clean area", so contaminated clothing must not be washed in the camp washing machines. Tubs are provided in the dirty side of the change rooms where dirty clothing may be deposited for cleaning on site.

All clothes, boots and equipment must be cleaned before taking them off site.

11.6 Manual Handling

It is very important that you protect your body and lifestyle by planning the work you do with your body.

Some tips to prevent injury:

- Place objects at waist height.
- Use mechanical or other lifting devices.
- Get help.
- Good housekeeping reduces slip, trips and falls.
- Stay fit with regular exercise, and stretch before doing a lift.

Some of the correct lifting techniques are:

- Check the route for hazards.
- Get a good grip and wear gloves.
- Bend at the knees, keep the natural curve of your spine and lift smoothly with your legs.
- Keep the load close to your body and balanced.
- Keep your nose and toes in the same direction. Don't twist.

11.7 Drug and Alcohol Testing

All Employees & Contractors are subject to daily compulsory Alcohol testing and compulsory initial Drug testing (first day onsite) and random Drug testing whilst working at any of MRM operations.

11.7.1 Alcohol Testing

All staff and contractors must submit to an Alcohol breath test prior to commencing work each shift. Your supervisor will explain the process and provide instructions on timing and location for testing.

11.7.2 Random Drug Testing

All employees and contractors are subject to random drug testing whilst on site and are notified via the random Drug testing list posted at the inner doors of the dry mess (dining room), at the First aid Centre and in the change rooms.

All Contractors coming to site to work for the first time must submit to a drug test and provide a negative result before being able to commence work.

All workers are responsible for checking the random drug test list prior to commencement of their shift.

Any person who returns a positive drug or alcohol test, refuses or fails to attend for testing, will not be permitted to commence work and will be removed from site.

Any prescription or non-prescription drugs you may be taking that have restrictions on their instruction panel are to be declared to the paramedic or your supervisor before the start of your shift.

The Drug and Alcohol procedure is available from your host on request.

GEN-OHS-PRO-6040-0001 – Drug and Alcohol procedure.

11.8 Fatigue Management

This procedure is designed to promote and maintain people in a fit state to work. It sets requirements for hours of work, rosters, identification and treatment of fatigue.

Standard shift length is shift 12 hrs. This can only be extended to a maximum of 14 hours upon meeting the conditions of the Fatigue Management Procedure.

There must be a minimum of 10 hours break between shifts.

Roster lengths are not to exceed 21 days without a minimum of a 2 day break.

All short-term contractors must complete a Fitness for Work declaration form (GEN-OHS-FRM-6040-003) each time they enter the McArthur River Mining site. The declaration requires contractors to reveal their hours of work for the previous twenty-one days. Hours of work should conform to this procedure.

Where previous hours of work do not conform to this procedure a written risk assessment shall be completed and authorisation by the Departmental Manager received before any work commences.

Approach your supervisor if you notice someone or feel that you may not be in a fit state to continue the current task in a safe manner.

GEN-OHS-PRO-6040-0086 - Fatigue Management procedure.

11.9 Lead Awareness

McArthur River Mining (MRM) has programs in place to manage and minimise occupational exposure to lead and other contaminants. We also have a strict 'clean in/clean out' policy to minimise the risk of lead and other contaminants being taken into the village and community.

Lead exists in a number of our mine's work areas. Under the National Harmonised Workplace Legislation, MRM and our employees have obligations to minimise lead exposure. You can help by following the health and safety expectations specific to your work area. Together we can ensure MRM is a safe and rewarding place to work.

Lead is found in a variety of commonly used products. About 65% of all lead produced is used to make lead-acid batteries for vehicles. Lead is also used in televisions and computer screens to protect us from radiation, cable sheathing, solder, lead based paint, lead pencils and in ceramics.

Where are the lead risk areas at MRM?

The potential of lead exposure changes at each stage of our process. Equipment that is in these areas or has been in contact with these areas could be a source.

Mining Activities related to the ore body:

- Drilling & blasting in the open pit.
- Ore haulage.

Crushing activities:

- Mobile or permanent crushers.

Concentrate processing, handling & storage areas:

- Mill concentrate shed, filter shed, thickeners & stock tanks.
- Bing bong load out shed and the Aburri transfer bay.

How lead is absorbed into the body:

Lead is absorbed into the body through two main pathways:

- Inhalation: Lead may be absorbed through the lungs by breathing fine particles of dust or fumes containing lead.
- Ingestion**:** If swallowed lead may be absorbed through the stomach and intestine after it enters the digestive systems.

Smoking increases a person's absorption of lead due to:

- Smoking with dirty hands and hand to mouth activity.
- Tobacco contains minor amounts of lead. When the lead is heated it is more easily absorbed into the lungs and blood stream. Smoking on-site is restricted in some areas.

Other common causes:

- Breathing dust from ore and dried process slurry.
- Dried slurry and ore on clothes that could produce dust with movement.
- Wiping sweat from your face and mouth with dirty hands and clothes.
- Bitting dirty fingernails and licking your lips.
- Eating or smoking with dirty hands.

How can lead potentially affect your health?

If the level of lead in your body is excessive it can cause:

headaches; tiredness;

irritability; constipation;

nausea; stomach pains & digestive problems;

anaemia; decreased fertility;

loss of weight; increased level of miscarriages.

Continued uncontrolled exposure to lead has the potential to cause more serious symptoms such as kidney damage or nerve and brain damage.

Please note that these symptoms can also be the result of reasons other than lead exposure. Please consult the medical centre or your doctor if you have any concerns.

Lead in blood testing

All employees and contractors working at MRM for a period of time exceeding 2 weeks or who are required to attend a MRM site general induction shall be subject to biological monitoring. A follow up blood lead level test will be completed 4 weeks after the commencement date.

All Lead Testing is carried out at the MRM onsite Medical Clinic. Our qualified Medics take the blood sample and send it away for analysis. You will receive your results in an envelope. If you have an elevated blood lead result, the Safety Advisor/s from your department will meet with you to explain your blood lead result and the health implications. You may be placed on a Lead Management program that will identify actions to be taken to reduce potential exposure in the future. The effectiveness of this Lead Management program will be measured by periodic blood lead tests.

The lead level in your blood should be kept as low as possible. Aim to maintain a blood lead level (BLL) of less than 10µg/dL (micrograms per decilitre).

So how do we manage our exposure to lead?

- Knowing where the lead risk areas are in relation to where you work at MRM.
- Work to reduce the ways that lead rich material can become airborne, inhaled or ingested.
- If you weld or cut metals in these areas, you must ensure that you or other workers are not exposed to the fumes.
- Follow procedures and practice good hygiene. Wash hands, face & arms or shower & change clothes before eating.
- Eating and smoking is prohibited in high lead risk areas.
- If you work in a lead risk area you shall change from your work clothes and boots and take a shower before leaving a contaminated area, Dirty clothing may not leave site and shall be laundered only at the MRM mine site, not at the accommodation village.
- No one in lead risk areas may use compressed air, blowers, gases or dry sweeping to do housekeeping. (Abrasive blasting of equipment shall be controlled as per legislative requirements)
- No equipment shall leave site unless it has been cleaned and inspected and a "***Clean to Leave Site***" form ***GEN-OHS-PRO-6040-0004*** has been completed.
- Wash vehicles prior to leaving the MRM mine site & travelling to non contaminated areas.
- Maintain a healthy lifestyle, exercise, good hydration, balanced diet low in saturated fats

- Use PPE correctly and when necessary.

MRM Occupational Hygiene Monitoring Procedure GEN-OHS-PRO-6040-0074

Further Information on lead can be found at - http://www.lead.org.au/au.html

11.10 Sulphur Dioxide (SO^2)

Routes of Exposure

Inhalation

Most exposures occur by inhalation. Sulphur dioxide's odour and irritant properties generally provide adequate warning of hazardous concentrations in normal subjects; however, odour fatigue may occur. Asthmatic subjects may respond to concentrations below the odour threshold. Prolonged low-level exposure may result in odour fatigue and tolerance of its irritant effects. Sulphur dioxide is heavier than air and may cause asphyxiation in poorly ventilated, low-lying, or enclosed spaces.

Skin / Eye contact

Direct contact with liquid sulphur dioxide or gas on wet or moist skin causes severe chemical burns, leading to cell death and ulceration.

Hazard Controls

- Use the SO^2 monitors – check the levels before you expose yourself - Is it safe to do the job under the current conditions?
- Never enter areas where SO^2 is known to be present without protection.
- Gas monitoring should be carried out prior to entering these areas, so that levels are know and the appropriate controls are in place.
- Always carry you respirator when working in a SO^2 hazard area.
- Wear long sleeve shirts when working in known SO^2 hazard areas.

NB: You must receive training in SO^2 hard controls and use and maintenance of respirators before working in a SO^2 hazard area, this will be included in your Area Induction onsite.

12.0 SAFETY

Workplace safety is every person's responsibility. Safety concerns can be raised at any time with your Supervisor. Toolbox meetings are conducted daily to discuss the planned work activities and any safety concerns. Each Department has a Health and Safety Advisor and work groups also have Health and Safety Representatives to assist in addressing identified safety issues.

12.1 Workplace Health and Safety legislation

12.1.1 NT Work, Health and Safety (National Uniform Legislation) Act

Division 4, Section 28: Duties of workers:

While at work, a worker must:

(a) take reasonable care for his or her own health and safety; and

(b) take reasonable care that his or her acts or omissions do not adversely affect the health and safety of other persons; and

(c) comply, so far as the worker is reasonably able, with any reasonable instruction that is given by the person conducting the business or undertaking to allow the person to comply with this Act; and

(d) cooperate with any reasonable policy or procedure of the person conducting the business or undertaking relating to health or safety at the workplace that has been notified to workers.

Maximum penalty: Reckless conduct - Category 1 offence, $300,000 or 5 years imprisonment or both

Failure to comply with Health and Safety duty – Category 2 offence, $150,000

12.2 Life Saving Bahaviours

The Life-Saving Behaviours are a set of nine (9) behaviours that have a direct link, based on previous incidents and learning, to the behaviours broken just prior to a fatal incident occurring.

Everybody at Glencore (employees, contractors, visitors etc.) should be familiar with these Life-Saving Behaviours and abide by them at all times. They must be regarded as our normal way of work.

The foundation of the life saving behaviours is that all of us at Glencore are entitled to work in a safe work environment and to go home free of harm and uninjured.

All breaches of the Life-Saving Behaviours will be taken seriously and investigated in an impartial, fair and timely manner.

All of us must clearly understand that a wilful violation of the Life-Saving Behaviours will result in disciplinary proceedings that could lead to dismissal.

LIFE-SAVING BEHAVIOURS

1. Always come to work drug and alcohol free.

2. Always use or wear critical safety equipment.

   Critical safety equipment *are items that are designed to prevent life threatening injuries e.g. seat belts, fall arrest or restraint equipment, etc.*

3. Always wear appropriate fall protection equipment when working above two (2) metres.
4. Only operate equipment if trained and authorised.
5. Always isolate and 'test for dead' prior to working on energy sources.
6. Never modify or over-ride critical safety equipment without approval.
7. Always seek and obtain approval before entering mobile equipment operating zones.
8. Never enter Danger Zones.

   Danger Zones include: *under suspended loads, within barricaded or signposted no-go areas, or within identified pinch or crush points of machinery, confined spaces, and other zones defined by the Operation/Project based on legislation, industry norms and risk assessments*

9. Always report injuries and HPRI's.

ALL WORK STARTS WITH THE FOUNDATIONS

- Emergency response plans are in place before work starts.
- A pre-job risk assessment and safety discussion are required at the start of every job.
- All workplaces must be safe from uncontrolled hazards and focus on eliminating or mitigating the hazards.
- No supervisor will instruct anyone to violate or breach and Life-Saving Behaviours, or condone inappropriate behaviours.
- PPE will be worn when the source of the problem cannot be eliminated or engineered out.
- All persons will be trained and competent in the work they conduct.
- Everyone has an obligation to stop unsafe work.
- Everyone has a clear understanding of the consequences for wilfully violating Life-Saving Behaviours.

ACCOUNTABILITIES:

WORKFORCE (EVERYONE)

- Be aware of the Life Saving-Behaviours.
- Comply with the Life Saving-Behaviours and the SafeWork procedures and the requirements which apply to me.
- Ask questions, seek clarification as needed.
- Challenge any behaviour which does not comply with Life-Saving Behaviours.
- Take time to plan to plan to do the job safely, including risk assessment.
- If in doubt, stop the job.

- Report all unsafe situations and take action – remove, tag or tape off areas as an immediate action.

Note: *Everyone includes supervisors, managers, employees and contractors.*

SUPERVISORS (AS WELL AS 'EVERYONE' BEHAVIOURS)

- Explain to your team that compliance with the Life-Saving Behaviours is expected at all times.
- Visit the worksites regularly to check compliance with the Life-Saving Behaviours.
- Ensure your team understands the consequences of Life-Saving Behaviours infringements.
- Support and coach the members of your teams in implementing the Life-Saving Behaviours.
- Ensure your team identifies hazards and assesses the risks.
- Address all violations of Life-Saving Behaviours, before an incident occurs.
- Set the example of Life-Saving Behaviours to employees.
- Act to remove or repair safety issues and provide feedback to the team on their status.

MANAGERS (AS WELL AS 'EVERYONE' BEHAVIOURS)

- Regularly explain the purpose of the Life-Saving Behaviours, and expectations of compliance by everyone.
- Recognise good safety behaviours, and tackle non-compliance with the Life-Saving Behaviours.
- Ensure effective reporting systems exist for people to raise concerns about Life-Saving Behaviours.
- Set the example of Life-Saving Behaviours to employees.
- Act to eliminate hazards or mitigate risks.

Inform the employees of safe actions to encourage reporting and behaviour.

12.3 Risk Assessment

The purpose is to establish a process for the identification and management of risks ranging from the risks associated with daily tasks, through to the identification, analysis and management of significant risks at each level of the McArthur River Mining (MRM) Operations. When risk management activities are undertaken Sustainable Development (SD) risks must be considered.

12.3.1 S.L.A.M. Programme

At MRM, we are serious about controlling hazards in the work place.

S.L.A.M. is a site wide program that we have in place to assist us in identifying and controlling the hazards that we come across in our day to day jobs.

STOP Before entering an area or starting a task **STOP** and think about what is about to happen.

LOOK Have a good **LOOK** around and identify the hazards that may be associated with the task that you are about to perform or the area you are about to enter.

ASSESS **ASSESS** all of the hazards on the basis of risk. Remember to consider the impact on others - present and not present.

MANAGE Implement controls to **MANAGE** the hazards to prevent injury and damage. Advise others of the controls put in place.

Ask yourself: What am I about to do?

What could go wrong?

What can I do to stop it going wrong?

Who is required to do a S.L.A.M? Everyone

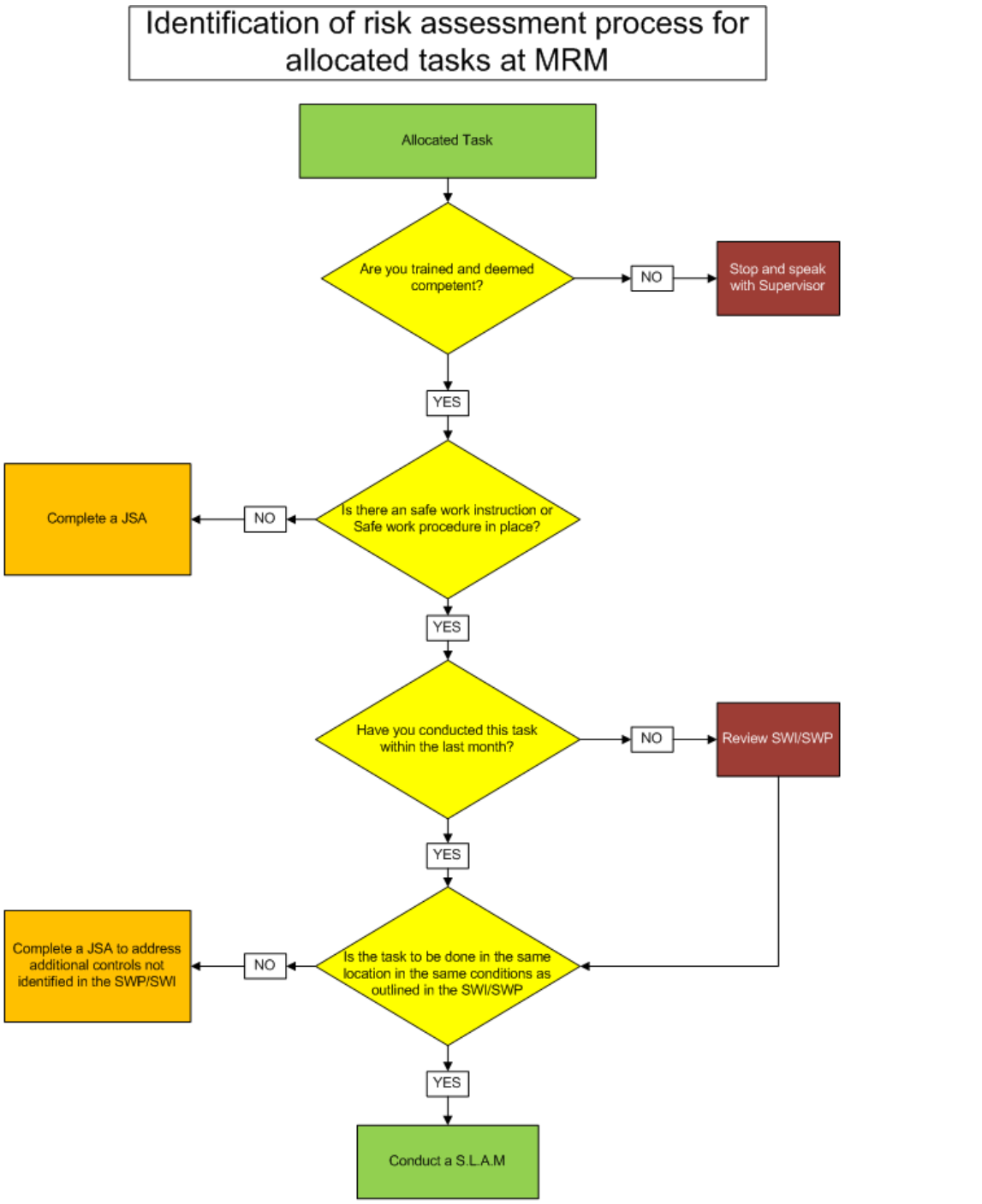
When?

- At start of shift.
- In a new area.
- Doing a new job.
- Using new / different equipment.

12.3.2 Job Safety Analysis (JSA)

A Job Safety Analysis (JSA) is to be undertaken prior to the commencement of a task to identify all hazards and risks associated with the task; this includes hazards associated with the physical environment where the task is to be undertaken. The physical environment a task can be undertaken in can change from day to day and present new hazards that were not previously present or identified.

This JSA needs to be completed and understood by each person conducting the work and needs to be reviewed by the MRM Supervisor.



Definitions

Allocated Task –	A specific task given by a supervisor
Safe Work Instruction or Safe Work Procedure	A step by step instruction describing a work process including hazards, risks & control measures
Competent	the combination of training, skills, experience and knowledge that a person has and their ability to apply them to perform a task safely

12.5 Catastrophic Hazards

Catastrophic Hazards are hazards with low likelihood but high consequence.

12.5.1 Definition at MRM

12.6 Catastrophic Hazard

A potential source of harm or a situation with a potential negative impact (PMC) Category Five and therefore could result in:

(a) Multiple fatalities or multiple cases of permanent total disability/health effects.

(b) Environmental damage with damage or effect greater than 10 years.

(c) Financial impact of >$500 million of operating profit or >$200 million property damage.

(d) Media coverage on an international level.

(e) Loss of major customers or large proportion of sales.

(f) Loss of community support.

(g) Significant negative impact on the share price.

(h) Major litigation or prosecution at Glencore Corporate level or nationalisation/loss of license to operate.

Catastrophic Hazards at MRM are identified, analysed and reviewed to ensure appropriate controls or contingency plans are in place.

Some of the HSEC Catastrophic Hazards identified are:

- Cyclone, storm surge, tsunami, earthquake.
- Structural failure - OEF wall failure, building collapse, gas pipeline failure.
- Concentrate spill at Bing Bong or on the highway.
- Mechanical failure i.e. lifting equipment failure – Cranes.
- Vehicle interaction / vehicle accident/s.
- Unplanned explosion - fuel, shot firing.
- Uncontrolled fire - Village accommodation, Departmental buildings.
- Unplanned release of hazardous substances i.e. tailings seepage.
- In pit flooding.

12.7 Fire Response

All fires must be reported immediately no matter how minor.

- Stop, stay calm.
- Look, for danger to yourself & others.
- Assess, the situation, raise the emergency call. Do not enter fumes or smoke.
- Manage, only if it is safe to do so, isolate the equipment. Try to extinguish the fire from up wind with the fire fighting equipment available to you. Make sure you have a clear exit.
- Never enter burning buildings/structures to extinguish a fire.

DO NOT PUT YOURSELF IN DANGER.

Quick action must be taken in every case of fire to lessen and control the harmful effects produced. Small fires should be put out as quickly as possible, using fire extinguishers, water, smothering or some other safe method.

12.7.1 Fire Extinguisher Types

TYPES OF FIRE EXTINGUISHERS

DRY CHEMICAL (Red with white band):

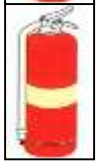
All purpose chemical powder for all types of fires.

CO_2 (Red with black band):

Predominantly for electrical fires.

FOAM (Red with a Blue Band or all Blue):

For fuel or oil fires NOT Electrical.



WET CHEMICAL (Red with oatmeal band):

Fat or cooking oil fires. Not Electrical

WATER (Red):

For wood, paper and rubbish etc., NOT Electrical.

In the electrical substations there are gas suppression systems. If the red "Gas discharged DO NOT ENTER" sign is lit, then do not enter. Report it on VHF radio ch 5.

If the amber "Extinguishing system inoperative" sign is on report it to your Supervisor or host.

12.8 Emergency Evacuation

There are several evacuation points located throughout the site, ensure you become familiar with their locations.

If it is necessary to evacuate a loud oscillating siren will be activated. On hearing the siren all personnel shall:

1. Discontinue their task in a safe & practical manner.
2. Park mobile equipment they are operating in a safe area, allowing for access of emergency vehicles.
3. Muster at the relevant evacuation point, taking the safest direct route and remain there until your host or supervisor advises you otherwise.

Do not travel through smoke or put yourself in danger.

12.9 Hazard and Incident Reporting

It is a site requirement that all accidents and incidents no matter how minor must be reported to your Supervisor, and a yellow Incident Notification Form must be completed, this also includes the reporting of environmental incidents. Hazards are reported using the Hazard Report Form.

By completing these forms we will ensure:

- Minor injuries are treated to prevent infection.
- Any hazards in the work place are officially noted and action taken to prevent it growing into an accident or incident.
- Employee's entitlements to worker's compensation are protected; and
- Records are maintained as required by various acts and legislation.

These forms are then forwarded to the area Supervisor or Superintendent.

Before going to the First Aid Centre, an Incident report form should be filled out. Emergencies are excluded

It is very important to make sure that the incident scene is secured and not disturbed before the investigation is completed. The only exception to this is if there is a risk of further danger to personnel or damage to equipment or plant.

12.10 MRM Permit System

The objective of the MRM Permit System is to ensure a safe work environment through the implementation of a structured Work Permit and isolation process that is clearly understood and adhered to by all personnel.

The MRM Permits System is applicable to all MRM Operations. It applies to all MRM personnel, including employees and contractors.

NOTE: Contractors/Contracting Companies excluding long term contractors familiar and trained in MRM procedures ***SHALL*** always work under the authority of a MRM Supervisor.

12.10.1 Permit System

MRM Permits System is comprised of the following major permits:

- Group Lock Out (GLO) Permit.
- Work at Height Permit.
- Man Cage Permit (suspended or forklift).
- Hot work Permits.
- Confined Space Entry Permit.
- High Voltage Access Permit.
- High Voltage Switching Permit.
- Overhead High Voltage Vicinity Permit.
- Permit to Dig.
- Permit to Clear.
- Permit to Burn.

A Job Safety Analysis (JSA) must be completed as minimum at all times prior to obtaining any of the permits. Refer to GEN-OHS-PRO-6040-0025 MRM Job Safety Analysis Procedure and GEN-GEN-TPL-6040-0002 Job Safety Analysis Template.

12.11 Work Permits

12.11.1 Work at Height Permit

Work at Height is defined as whenever people are at risk of falling from, into or through one level to another.

A Work at Heights Permit is required to perform a task where it has been deemed necessary to work in a fall arrest harness and lanyard in a situation where there is a potential for free fall. Approval for working at height is given by the area Supervisor, through the approval of a Job Safety Analysis (JSA) done for the task.

For more detail refer to GEN-OHS-PRO-6040-0027 MRM Working at Height Procedure and GEN-OHS-FRM-6040-0023 Working at Height Permit Form.

12.11.2 Man Cage Permit

There are two types of a Man Cage Permit at MRM:

- A Suspended Man Cage Permit: used to suspend a person from a crane hook when accommodated in a workbox. The use of the workbox shall be limited to those situations where it is necessary to elevate personnel to carry out work where it is not possible to use scaffolding or equipment designed specifically to lift personnel.

- A Forklift Man Cage Permit: used where maintenance platforms and work platforms supported by industrial trucks are being used to support personnel.

For more detail refer to GEN-OHS-FRM-6040-0010 Forklift Man Cage Permit and GEN-OHS-FRM-6040-0012 Suspended Man Cage Permit.

12.11.3 Confined Space Permit

A Confined Space Entry Permit is required every time when work is conducted in a confined space.

Confined space at MRM is defined as an enclosed or partially enclosed space that is not intended or designed primarily for human occupancy, within which there is a risk of one or more of the following:

a. An oxygen concentration outside the safe oxygen range.

b. A concentration of airborne contaminant that may cause impairment, loss of consciousness or asphyxiation.

c. A concentration of flammable airborne contaminant that may cause injury from fire or explosion.

d. Engulfment in a stored free-flowing solid or a rising level of liquid that may cause suffocation or drowning.

For more detail refer to GEN-OHS-PRO-6040-0053 MRM Confined Space Procedure and GEN-OHS-FRM-6040-0009 Confined Space Permit.

12.11.4 Overhead High Voltage Vicinity Permit

This permit is required to allow the operation of cranes or mobile equipment in the vicinity of overhead power lines where they encroach upon the safe distances as described in GEN-OHS-PRO-6040-0006 Working in the Vicinity of Overhead Powerlines. For more detail also refer to GEN-OHS-PRT-6040-006A Overhead High Voltage Vicinity Permit.

12.11.5 High Voltage Switching & Access Permits

High Voltage V Switching & Access Permits are required to safely and effectively carry out HV switching operations to provide safe access to conductors and/or apparatus that are normally alive at voltages in excess of 1,000 volts. These operations can be completed by licensed electricians only.

For more detail refer to GEN-ELE-SWP-6040-0001 High Voltage Switching Procedure.

12.11.6 Hot Work Permit

A Hot Work Permit is required when hot work is conducted anywhere outside of designated hot work area.

Hot work at MRM includes but is not limited to grinding, welding, thermal or oxygen cutting or heating, and other related heat-producing or spark-producing operations.

For more detail refer to GEN-OHS-PRO-6040-0022 MRM Hot Work Procedure and GEN-OHS-FRM-6040-0006 Hot Work Permit.

12.11.7 Permit to Dig

A Permit to Dig is required before any excavation, drilling, picket driving or any other activity which will be at depth greater than 300mm is performed on site below the normal lay of the land, this does not include stockpiles. This is necessary to ensure employees are protected

from buried high voltage cables or gas lines, this is also necessary to protect critical infrastructure such as telephone lines.

For more detail refer to GEN-SD-PRO-6040-0027 Land Clearing and Digging Permit Procedure and GEN-SD-FRM-6040-0001 Permit to Dig and Clear Form.

12.11.8 Permit to Clear

A Permit to Clear is required to ensure that all clearing activities are conducted in accordance with the current Sustainable Development Mining Management Plan (SD MMP). It provides an opportunity to assess potential environmental and community issues as well as ensure the protection of services and infrastructure.

For more detail refer to GEN-SD-PRO-6040-0027 Land Clearing and Digging Permit Procedure and GEN-SD-FRM-6040-0001 Permit to Dig and Clear Form.

12.12 Isolations and Barricading

Stored energy can be described as energy waiting for an action to release it e.g. electricity, vehicle and mechanical movement, air pressure, hydraulic pressure and water pressure.

If you are working on or near a piece of equipment that could endanger your safety by its operation, you must protect yourself by isolating the energy source and attaching a lock and personal danger tag to the lock.

For more detail refer to GEN-OHS-PRO-6040-0021 Barricading, Tagging and Isolation Procedure.

12.12.1 Levels of Isolation

McArthur River Mine has two levels of isolation they are:

- **Level 1 'Standard Isolation'- Low Risk**: A standard isolation can be performed by any competent MRM employee or Contractor. The personnel performing the work must lock their own Personal Danger Tag(s) in place.
- **Level 2 "Group/High Risk Isolation"**: Only competent MRM Personnel with the appropriate training are permitted to complete Group/High Risk Isolations.

Workers working under this Induction must be competent in Level 1 isolation to be authorised to conduct Isolations at McArthur River Mining.

Consult the MRM Safety Advisor responsible for the area in which you are working or Supervisor when planning isolations & the installation of barricades.

12.13 Barricades

Barricade Use

Barricades are used to restrict access to areas where a hazard exists. Anyone can erect a barricade for the safety of others providing that the correct procedure is followed. Barricades should be erected a safe distance from the hazard to provide adequate warning.

Barricades ***SHALL*** be used with, but are not limited to the following High Risk operations:

- Mobile Crane lifting operations/slewing crane lifting zones, where there is the potential for people not related to the work, entering the area (around crane base/outriggers to prevent crush injuries to personnel).
- Excavation work.
- Abrasive and water blasting work.
- Where there is a danger of an injury from any equipment and/or process e.g. Unguarded machinery, maintenance of switchboards & high voltage testing.
- Objects falling from above, etc.

How to construct a Barricade

- Identify the reason for erecting the barricade.
- Select the appropriate type of barricade.
- Select the correct danger/caution signage and Information Tags.
- Identify all the entry points that need to be barricaded to prevent unauthorised access.
- Tag all barricading.

Barricade construction requirements

- As per Australian Standards barricades are to be set up two metres from an opening.
- The barricaded area must encompass the entire potentially affected area of the hazard – i.e. sparks, falling objects, leaks etc. (take into account the possible deflection of an object from a structure below if it falls) Where this is not practical the barricade shall be erected and located in such a manner as to eliminate or minimise the risk of injury or damage to personnel and equipment.
- Barricades and tapes should be installed to a height of approximately one (1) metre and shall be adequately supported on posts, star pickets (safety caps to be placed on top of star picket), and the supports being no further than four (4) metres apart.
- Solid, extendable, danger taped and flagged barricades shall have information tag(s) tied securely to each side of the barricade, ensuring that the tag is clearly visible.
- Caution taped barricades shall have an information tag(s) tied securely to each side of the barricade, ensuring that the tag is clearly visible.
- When the hazard or risk has been removed, for which the barricade was erected, the barricade shall be completely removed. (E.g. When there is no load suspended from the crane or when crane operations are suspended.) Leaving barricading in place or

only partial removal of tape introduces uncertainty into the area risks and therefore cannot be tolerated.

Barricading Maintenance

- It is the responsibility of the personnel conducting the work to properly install, maintain and dispose of their barricades. Barricading material that has been dislodged and is lying on the ground shall be reinstated immediately.
- When safety barricades are found to be apparently abandoned, personnel shall not enter the area until it is determined that the hazard no longer exists. The (contact) person identified on the Information Tag is to be contacted prior to any actions being taken. If prevented from contacting the (contact) person (e.g. shift changes, staff resignation, leave taken), then the area superintendent or delegate shall be contacted for assistance.
- Barricades must be inspected by the person responsible for that area, at a minimum of once within his/her swing of day shifts. Any problems identified during the inspection must be corrected.

If you are not able to inspect the barricade make arrangements with your Supervisor to ensure it is inspected.

12.13.1 Types of Barricading

1. Solid (long term – more than a month or where there is a danger of falling from height)
2. Extendable (medium term – should not be longer than a month)
3. Soft (short term – should not be longer than a week)

Solid: (long term – more than a month)

- Solid barricades in high visibility colours and that are compliance certified shall be used for all areas deemed high risk and any area to be restricted for longer than one (1) month.
- In such circumstances, solid barricades are to form a 'solid' continuous barrier. They shall be of such design to prevent any person inadvertently passing or falling through or over them.
- They can be erected from steel pipe and fixed across walkways or welded to a structure as a permanent fixture but shall then be painted in a high visibility colour or if not becoming a fixture have Danger tape, which needs to be strung across it.
- When erected, a solid barricade shall have Information tag(s) tied securely to each side of the barricade, at regular intervals a maximum of 10 meters apart, ensuring that the tags are clearly visible.

A Solid Barricade shall:

- Have a solid top and mid rail (e.g. scaffold tube or equivalent) with the applicable sign attached. The top rail must be between 900mm and 1100mm high; mid rail shall be no more than 560mm from the floor if no toe board is fitted and 450mm between rails.

- The installation of a kick rail or mesh to contain objects etc shall be by risk assessment and detailed in the JSA.
- Be able to withstand an impact of 550N outwards or down on the top rail. Additional controls may be required to secure free standing barricades.
- Be erected by a competent person.
- Water filled plastic barricades are classed as a suitable barricading method. Where they are used with potential for a vehicle impact they shall be linked together and filled.
- Where solid barricades are used they shall be accompanied with signs/tags to communicate the hazard information. Danger barricade may be used to highlight the existence of the barricaded area.
- Where barricades are installed across roadways and will remain in place during hours of darkness, the barricade shall be fitted with flashing lights or reflective tape to identify the barricade/traffic obstruction.

Examples of situations requiring solid barriers are:

- Grating removed from walkways.
- Excavation work.
- Edge protection for an open void, hole or removed guardrails.
- Prevention of pedestrian heavy vehicle interaction.

NOTE: No person *SHALL* enter into an area with solid barricade without contacting the (contact) person named on the Information Tag or the specific Area Superintendent. JSA's and permits *SHALL* be signed onto prior to authorised entry to the barricaded area where they exist. This is to ensure that the person entering the barricaded area is fully aware of the hazards in the area and is informed of the necessary controls, and that he/she is added to the permits controlling the area.

Extendable: (medium term – should not be longer than a month)

- Extendable barricades must be used to prevent entry of personnel and equipment as an immediate or temporary control to a hazard.
- These barricades must be constructed of orange barrier mesh with two tension wires/rope, one along the top and one through the middle for support. Support wires must be secured at either end to a secure structure.
- If a barricade is greater than 3 meters long, a support stand must be placed between the barricade supports to prevent sagging.
- When erected, extendable barricades shall have Information tag(s) tied securely to each side of the barricade, ensuring that the tag is clearly visible.

NOTE: No person SHALL enter into an area with an extendable barricade without contacting the (contact) person named on the Information Tag or the specific Area Superintendent. JSA's and permits SHALL be signed onto prior to authorised entry to the barricaded area where they exist. This is to ensure that the person entering the barricaded area is fully aware of the

hazards in the area and is informed of the necessary controls and that he/she is added to the permits controlling the area.

Soft: (short term – should not be longer than a week)

12.13.2 Flags/Bunting and Tapes

All temporary lifting zones created from mobile cranes, ***SHALL*** be barricaded by means of danger tape. No person, other than a member of the work team, directly involved with that specific lifting task, will be allowed to enter the area while lifting operations are in progress.

Yellow Caution Tape

It is used to define an area of 'caution', meaning that the area can still be entered, but caution is required. When erected, caution tape shall completely surround the hazard and have Information tag(s) tied securely to the tape, ensuring that the tags are visible on each side of the barricading.

CAUTION TAPE WILL NOT STOP PEOPLE FROM FALLING.

If there is a risk of falling, a physical barrier must be put in place.

E.g. hand rail removed or damaged, flooring removed or damaged or a hole **Remember:** Caution tape still allows people to enter the area.

When using Caution Tape it ***SHOULD***, if possible, be erected **at least two (2) metres** from the hazard to prevent the possibility of people getting too close to a hazardous area.

All personnel ***SHOULD*** avoid areas surrounded by Caution Tape and Tags unless they are involved in work to remove the hazard surrounded by the tape and tags.

Red Danger Tape

Danger tape is used to identify life threatening or high risk situations, where the area cannot be entered without appropriate authorisation.

Prior to entering a Danger tape barricaded area, JSA's and permits shall be signed onto.

When erected, danger tape shall completely surround the hazard and have Information tag(s) tied securely to the tape, ensuring that the tags are visible on each side of the barricading.

Examples of situations requiring danger tape are:

- Exclusion zone for high risk work.
- People working above.
- Falling objects hazard.
- Exclusion zones for voids and holes.
  The distance from the hazard must be greater than 2 metres

- Areas of High Risk around cranes such as crush zones and laden hook path; Note: this may include the entire operating radius of the crane.
- Suspended Loads.
- Areas where equipment and machine guards have been removed.
- Excavation work.
- Hazardous area or tasks occurring which require "Authorised Personnel Only Entry".
- Barricade off hazardous material.
- Investigation in progress and area excluded to unauthorised personnel.
- Confined space work areas.
- Hot work areas.
- Working at Height areas, etc.

Under **NO** circumstances shall soft barricading (tape, plastic mesh, flags etc) be used as a substitute for edge protection or guardrails.

NOTE: No person SHALL enter into an area with a flagged or danger tape barricade without contacting the (contact) person named on the Information Tag or the specific Area Supervisor. JSA's and permits SHALL be signed onto prior to authorise entry to the barricaded area where they exist. This is to ensure that the person entering the barricaded area is fully aware of the hazards in the area and is informed of the necessary controls and that he/she is added to the permits **controlling the area.**

Flags/Bunting

Flags/bunting shall be considered to have the same purpose as danger tape and shall be used where:

- There is a risk of serious injury.
- An exclusion zone for high risk work – authorized personnel only.

NB: People can only access the area after contacting the person named on the Information tag and signing onto the relevant JSA and permits.

12.13.3 Tagging

Personal Danger Tags

White with black writing and a Black and Red Danger Sign with white writing.

Hand Written/Disposable PDT

MRM Photo

ID PDT

Personal Danger Tags are for your personal protection only.

A Personal Danger Tag can only be removed by the person whose name is on the tag.

A Personal Danger Tag ***SHALL*** be used when isolating any equipment that may present a hazard to any person while carrying out their normal work and are used to:

- Identify the person that is being protected by the lock and tag.
- Inform personnel that the equipment is not to be operated.

NOTE: A Personal Danger Tag must be locked in position using a safety lock; the key to which must remain in the possession of the person whose name is on the tag *AT ALL TIMES*.

Hand written Personal Danger Tags ***SHALL*** have ***ALL*** sections completed before they are locked into place. It is critically important that this information is written clearly in ball point pen to show the:

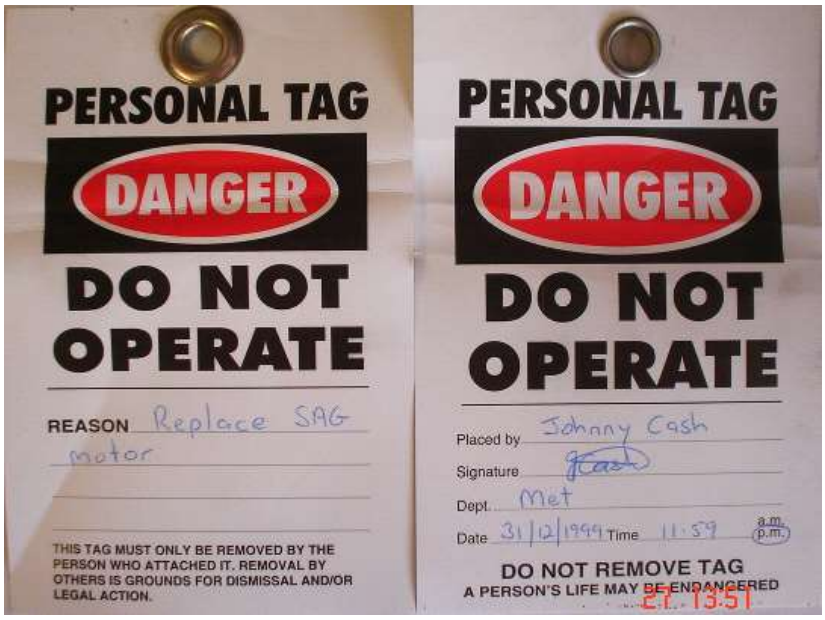
- SURNAME (in block letters) of the person placing the tag.
- Signature of the person placing the tag.
- Relevant department responsible for the work.
- Date and time the tag was fitted.
- Reason for isolating the equipment.

It is not permitted for any person to work under someone else's Personal Danger Tag.

Every person working on the equipment ***SHALL*** lock one of their own, correctly completed, Personal Danger Tags to every one of the required isolation points before starting work.

Correctly Completed Personal Danger Tags

Personal Danger Tag



Personal Danger Tags ***SHALL*** only be used while work is being carried out. When going to crib, the warehouse for parts, or other short term breaks the tag can be left in place.

If a job is not complete, but work has stopped, ***ALL*** Personal Danger Tags must be removed in which case the equipment is Out of Service. When a piece of equipment is Out of Service, but not being worked on, a correctly completed Caution Out of Service Tag ***SHALL*** be fitted

to ***ALL*** the isolation points required to insure that piece of equipment cannot be operated or energised.

If it is not possible to lock a Personal Danger Tag on to the isolation point/s required, a solution to this problem should be discussed with your Supervisor, it may be necessary to lodge a Work Order or Hazard Report to rectify this situation.

It may be possible to source an isolation device that will permit the equipment to be locked out or change the equipment type.

Disposable Personal Danger Tags must be destroyed and disposed of correctly after use.

Permit Danger Tags

Red and black striped, with black writing and a black and red danger sign with white writing.

Permit Danger Tag

Permit Danger Tags effectively replace Personal Danger Tags under the PTW Group Lock Out System and have the same level of importance as Personal Danger Tags.

Permit Danger Tags are designed to protect multiple personnel under the Permit to Work Group Lock Out System. The Permit to Work Group Lock Out System streamlines the isolation process by minimising the number of Personal Danger Tags on equipment isolation points.

The Permit to Work Group Lock Out System also ensures that complex isolations are carried out by competent persons and Isolation Officers.

Permit Danger Tags ***SHALL*** have ***ALL*** sections completed before they are locked into place, it is critically important that this information is written clearly in ball point pen to show the:

- Permit number.
- PTW Group Lock Out Box number.
- Relevant department responsible for the work.
- Date and time the tag was fitted.
- Comments.

Any comments that may be required can be written on the back of the tag. Such as the circuit that is under the group lockout.

Where a safety lock is used to lock a Permit Danger Tag onto an isolation point; the key to that lock ***SHALL*** be locked in the correct PTW Group Lock Out Box by the Isolation Officer.

Every person working on equipment that is isolated using a Permit to Work Group Lock Out System ***SHALL*** lock one of their own Personal Danger Tags onto the PTW Group Lock Out Box, sign on to the Permit to Work Group Lock Out Permit and follow ***ALL*** instructions issued by the Isolation Officer.

Permit Danger Tags *SHALL* only be used for Group Isolation.

Correctly completed Permit Danger Tags

Figure 5.12

Permit Danger Tags must be destroyed and disposed of correctly after use.

Removal of Danger Tags

There are exact procedures for the use of Danger Tags; the most important component of these procedures for the use of Danger Tags is responsibility.

The removal of a Danger Tag, Personal or Permit, by any person other than the person responsible for the tag is treated very seriously. The main function of Danger Tags is the protection of people so their removal in this manner ***SHALL*** only be done using the following procedures, which reflects the importance of the ownership/responsibility for tags and the fact that removal of a Danger Tag without following the procedure could endanger someone's life and lead to disciplinary action.

There are four procedures for the removal of a Danger Tag:

1. The standard procedure which is, the person responsible for the tag removes it.
2. Lost/broken key to, or malfunction of the lock used to fit a Personal Danger Tag to an isolation point.
3. Lost/broken key to, or malfunction of the lock used to fit a Personal Danger Tag to a PTW Group Lock Out Box.
4. The person responsible for the tag is not available to remove it.

If a Personal Danger Tag has been left on a piece of equipment which is ready for and required for use and the person has left site, ***ALL EFFORTS MUST BE MADE TO LOCATE THAT PERSON***.

If the person is found back at camp, or in another area, and is fit to return they ***SHALL*** return to site to remove their lock and tag.

If the person is not in work clothes they ***SHALL*** change into work clothes, including ***ALL*** required P.P.E. and remove their lock and Personal Danger Tag.

Lost/broken key to, or malfunction of, the lock used to fit a Personal Danger Tag to an isolation point. If a key cannot be located, or a lock cannot be opened for a Personal Danger Tag locked on to an isolator, within 15 minutes of the need to do it, it can be declared 'Lost'. In this event:

1. The owner of the lock ***SHALL*** inform his/her Supervisor.
2. The lock can ***ONLY*** be removed by the owner of the lock.
3. Ownership of the lock ***SHALL*** be established beyond doubt.
4. It ***SHALL*** be the last lock removed.
5. The Supervisor ***SHALL*** witness the removal of the lock.

Lost/broken key to, or malfunction of, the lock used to fit a Personal Danger Tag on a PTW Group Lock Out Box. If a key cannot be located, or a lock cannot be opened for a Personal Danger Tag locked on to a PTW Group Lock Out Box, within 15 minutes of the need to do it, it can be declared 'Lost'. In this event:

1. The owner of the lock ***SHALL*** inform his/her Supervisor and the current Isolation Officer.
2. The lock can ***ONLY*** be removed by the owner of the lock.

3. Ownership of the lock ***SHALL*** be established beyond doubt.
4. It ***SHALL*** be the last lock removed.
5. ***ALL*** other personnel must have signed off the PTW Group Lock Out Permit.
6. The Isolation Officer ***SHALL*** witness the removal of the lock .

NOTE: Removal of a Danger Tag that is not your own *WILL* result in disciplinary action *UNLESS* the relevant Tag Removal procedure is followed without deviation.

Person responsible for a Danger Tag is not available to remove it.

In cases where a Personal Danger Tag and safety lock needs to be removed from an isolation point or Group Lock Out Box and the person who fitted the lock has:

- Left site and flown out or driven out and cannot be contacted.
- Been injured or is sick and cannot return.
- Left the site and is unfit to return.

The Personal Isolation Removal and Permit Signing Authority Form ***SHALL*** be used and the procedure outlined followed ***WITHOUT DEVIATION***.

The procedure outlined on this form is designed to put in place measures that ensure that the lock is removed ***ONLY*** when the whereabouts of the person responsible for the lock is known. If the person's whereabouts cannot be confirmed, beyond reasonable doubt, the lock ***SHALL*** stay in place until it is.

The procedure ***SHALL*** be completed, ***ALL*** questions answered and then removal of the lock authorised by the area manager or his/her delegated representative.

When a Danger Tag is removed using the Personal Isolation Removal and Permit Signing Authority Form and an incident report *MUST* be lodged

Caution Out Of Service Tags

Yellow with black writing and a Black Caution Sign with yellow writing.

They are used to indicate that a piece of equipment is not to be used because it is faulty or hazardous to operate and therefore in need of maintenance, or maintenance has been started but not completed. Other uses are listed below:

Caution Out of Service Tags are used to prevent the operation of equipment for any reason other than it is being worked on. Any person who becomes aware of unsafe equipment ***SHALL*** attach a Caution Out of Service Tag to it.

If the equipment is fed by an energy source then that ***SHALL*** be isolated after informing a responsible person from the Department that controls that equipment.

When this has been done, isolation and then fitting of the Caution Out of Service Tag can proceed without causing an unforseen problem.

In the case of in line equipment that does not have a dedicated energy source, for example a valve, the same protocol applies. The valve may need to be tagged in either the open or closed position depending on the demands of the process at that time. Any piece of equipment that is sent to another Department for maintenance ***SHALL*** have a correctly completed Caution Out of Service Tag attached to it.

Caution Out of Service Tags ***SHALL*** have ***ALL*** sections completed before they are fitted, it is critically important that this information is written clearly in ball point pen to show the:

- Classification.
- Department.
- Date and time the tag is fitted.
- Reason for the tag being fitted.
- Name of the person fitting the tag.

Correctly Completed Caution Out of Service Tags

Caution Out of Service Tags should be destroyed and disposed of correctly after use.

Removal of Caution Out of Service Tags

Any authorised person may remove a caution Out of Service Tag when the:

- Equipment is ready to be brought back on line.
- Hazard being identified by the Tag has been removed.

Authorised person refers to the qualified person that has repaired/eliminated the hazard or the person responsible for the area which contains the hazard.

12.13.4 Long Term Out of Service Tags

Sometimes it is necessary to place equipment out of service for a considerable amount of time. The problem here is that the tags fade and after a relatively short period of time the tag and the information on it is illegible.

When a piece of equipment has been, or is expected to be out of service for four weeks or more a Long Term Out of Service Tag is used.

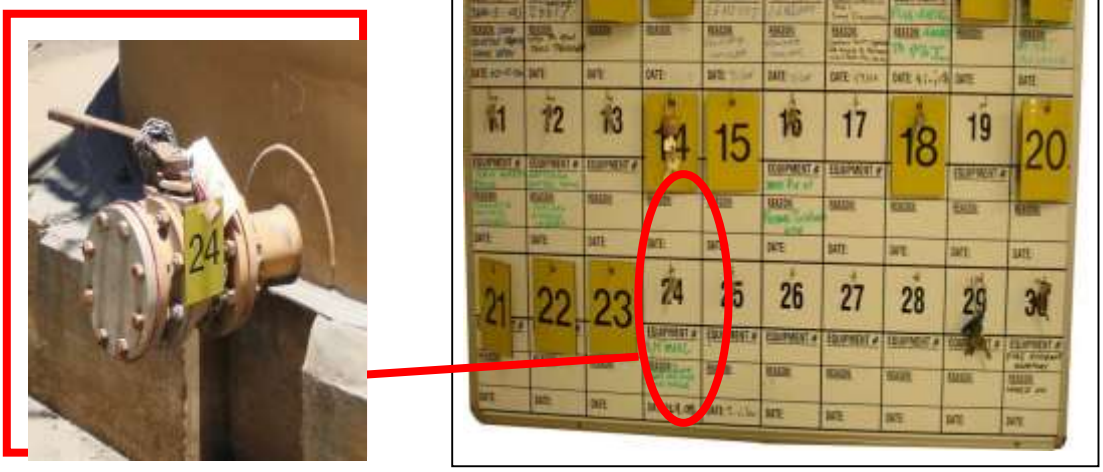
These tags are far more robust but they are not designed to be written on. They are found on the Long Term Out of Service Board in the Mill Control Room. Before fitting the Tag the following information ***SHALL*** be written on to the board in the correct place, underneath where the tag was hanging:

- Equipment number.
- Reason for the tag being fitted.
- Date it was fitted.

If it is expected that a piece of equipment, plant or structure needs to be tagged out for longer than 6 months, GEN-SD-PRO-6040-0026 Decommissioning of Plant and Equipment Procedure shall be followed.

Long Term Out Of Service Register

Long Term Out of Service Tag



12.13.5 Information Tags

Information tags ***SHALL*** only be used to convey general information about plant and equipment. It shall not be used as a substitute for a Personal Danger Tag, Permit Danger Tag or an Out of Service Tag. An Information Tag can be attached to any piece of equipment to allow the transfer of information.

Common uses for information tags include:

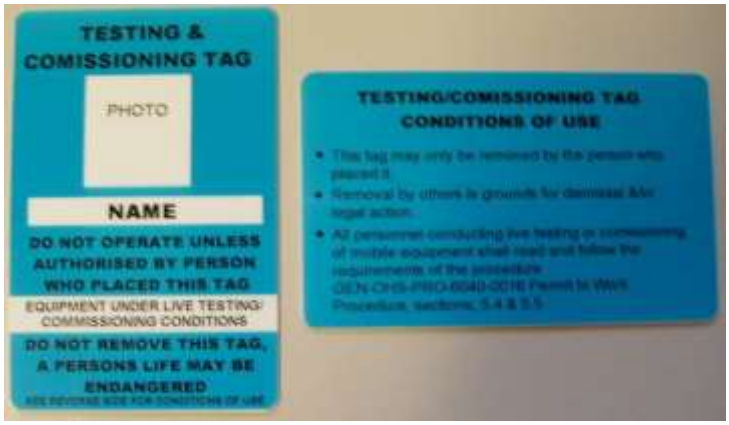
- Attach to ***Caution Taped and Danger Taped barricaded areas*** to explain the reason, contact personnel information, allowing contact to made 24 hours a day (where requires) for the barricade.
- Identify equipment items for which a maintenance notification has been raised (i.e. a leaking valve).
- Under maintenance operations, label pipelines, cabling etc.

Information Tags

12.13.6 Mobile Testing and Commissioning Tags

These Tags are used for the testing and commissioning of mobile equipment where there is a requirement for the ignition circuit to be live or the equipment to be operated whilst personnel are on or near the equipment. These Tags are photo identification Tags and are reusable, however if the writing or photo becomes illegible the Tag may not be used and should be destroyed.

Mobile Testing and Commissioning Tags



12.14 Working in the vicinity of overhead power lines

Work which is to be conducted in the vicinity of Overhead Powerlines is potentially hazardous therefore minimum approach distances have been set for this work in Tables 1and 2 to ensure that personnel are not unduly exposed to the risk of electrocution or other hazards as a result of vehicles/machinery coming into contact with the overhead lines.

Table 1:

CLEARANCES FOR CRANES & EWP's IN THE VICINITY TO OVERHEAD POWER LINES

	Overhead power lines up to and including 133 kv	**Overhead power lines greater than 133 kv**
NO GO ZONE **(Isolation Required)**	3 metres either side 3 metres below Any extension over lines	8 metres either side 8 metres below Any extension over lines
SPOTTER REQUIRED **(Permit Required)**	3 – 6.4 metres	8-10 metres
NO VICINITY REQUIREMENTS **(Mandatory Safe Distance)**	Greater than 6.4 metres	Greater than 10 metres

CLEARANCES FOR VEH'S & MACHINERY TRAVELLING UNDER OVERHEAD POWER LINES

	Overhead power lines up to and including 133 kv	Overhead power lines greater than 133 kv
NO GO ZONE **(Isolation Required)**	Less than 2.5 metres below	Less than 4 metres below
SPOTTER REQUIRED **(Permit Required)**	Less than 3.5 metres below	Less than 8 metres below
NO REQUIREMENT **(Mandatory Safe Distance)**	Greater than 3.5 metres	Greater than 8 metres

Note 1: This table only applies to vehicles and machinery travelling from one side to the other under overhead power lines. Table 1 shall apply where the vehicle/machine is required to travel/work parallel to the lines or travel along.

Note 2: All mobile plant fitted with a boom or attachment which is able to be raised inside of the safe distances shall have spotter if that machinery is to travel under or along the overhead power lines.

Permit: If a permit is required as per tables 1and 2 contact the Department Manager responsible to obtain the permit.

GEN-OHS-PRO-6040-0006 Procedure for Working in the Vicinity of Overhead Power lines

12.15 Equipment Safety

12.15.1 Particle Generation and High Impact

Many eye injuries are attributed to high impact or particle generation work such as, angle grinding, chipping weld slag, wire brushing, and hitting wedges with hammers etc.

For tasks like these we must wear double protection. Impact rated Goggles with a face protector or glasses with an impact rated face shield.

12.15.2 Angle Grinding

Angle grinders have the potential to cause serious injuries if not used correctly. Our procedure states that only qualified Boiler Makers and Metal Trades personnel may use these machines without specific training. The use of 9" angle grinders is only permissible under approved situations.

GEN-OHS-PRO-6040-0018 Portable angle grinder procedure.

12.15.3 Oxy Cutting and Welding

Before any hot work can commence in areas other than the Welding workshop, which is designated as a Hot Work Area; a Hot Work Permit is required.

Only personnel, who have received instruction on the safe use of welding, cutting and grinding equipment, are permitted to use them.

When welding, cutting or grinding, approved PPE designed for these tasks must be used.

A Job Safety Analysis must be completed prior to doing hot work on a vessel that contained flammables liquid or gas.

At all times, oxygen and acetylene cylinders must be secured, used in the upright position and transported using approved lifting boxes or cradles. They must never be lifted or lowered using a sling or chains.

Flashback arresters must be fitted to regulator outlets or hand pieces on all Oxy / acetylene equipment.

When welding, keep in mind that in some conditions stray currents could affect structures and equipment around you.

Always check the condition of equipment before use.

Fumes and dusts can be harmful or fatal, always consider ventilation options and appropriate additional PPE.

Welding in saturated wet clothes, boots or wet conditions greatly increases the risk of an electric shock. Always make sure that you are dry and not a better conductor than the earth lead when welding.

GEN-OHS-PRO-6040-0008 Procedure for storage, handling, transport and use of portable gas cylinders.

GEN-OHS-PRO-6040-0043 Welding and Allied Processes.

12.15.4 Electrical safety

Faulty power tools/leads are the most common cause of electrical accidents and deaths in the workplace.

All equipment must be checked for damage, frayed or burnt leads, etc.

All portable electrical equipment must be fitted with a current electrical inspection tag.

All power equipment brought on site must be inspected, by a MRM electrician.

Only electrical trade personnel are permitted to repair electrical equipment. Never attempt to repair it yourself.

If you find a damaged piece of electrical equipment, fit a Caution Out of Service tag and report it.

Electrical appliances should not be used when in contact with water or if there is a possibility of them coming into contact with water.

Entry to transformer yards is not permitted unless you are a qualified electrician or you are with one.

Only electrical trade personnel are permitted to open electrical cabinets.

Any non electrical trade personnel who open an electrical cabinet will be subject to disciplinary action.

We have a site wide procedure for working near live high voltage power lines. It is based on AS 2550.1-2002. This states that plant will not operate between 6.5 to 3 meters from power lines without a spotter. Inside the 3 meter radius is a no go zone. A JSA must be completed, approved by the manager and signed by the operator before working near live power lines can commence.

ELECTRIC SHOCKS

ALL ELECTRIC SHOCKS, NO MATTER HOW MINOR MUST BE REPORTED.

Even a small electric shock can cause problems to a heart up to 24 hours after the incident. The person who has received the shock is not to be left alone. Observers cannot determine how severe the shock may have been. The only time such a person may be moved is when a phone, radio or help isn't available, in which case they may be moved only as far as the nearest phone, radio or help. When emergency response has been contacted, stay with the person until medical personnel have arrived.

GEN-OHS-PRO-6040-0013 Procedure for use, inspection and testing of Electrical equipment.

GEN-OHS-PRO-6040-0006 Working in the vicinity of overhead power lines.

MRM-OHS-PRT-6040-006A Overhead high voltage vicinity permit

12.16 Conveyor Safety

No personnel are allowed to perform work near, on, climb under or over a conveyor where there is a risk of contacting moving parts. It must be isolated, locked and tagged out.

All conveyors are equipped with emergency trip lanyards on each accessible side of the conveyor. In an emergency, pull the trip lanyard sharply to stop the conveyor.

12.17 Machinery Guarding

Guards must not be removed without first isolating and tagging the machine or equipment.

Guards removed for maintenance purposes must be replaced before restarting machinery.

12.18 Height Safety

It is possible to sustain serious injuries by falling from any height. Always consider scaffolding, EWPs, platform ladders, fencing edge protection and physical barriers to safely work in areas where there is a risk of falling.

Work at Height is defined as whenever people are at risk of falling from, into or through one level to another,

If you are required to work in the Man basket, Elevated work platform (EWP) or unprotected heights above 2 meters a harness and fall restraint or arrest system must be used:

- In the Franna Man basket the harness must be attached to the crane, not the basket;
- In the EWP and forklift man cage the harness must be attached to the lanyard attachment points provided in the Man cage:
- If the risk assessment highlights that there is a reasonable risk of falling and being suspended while working in a harness, then a spotter with communication must be used. A suitable rescue plan must be developed.
- If a person becomes suspended, coach them to try and get their weight off the harness by using the leg loop or swing their legs gently to maintain circulation. Call (MRM) phone 222 or VHF radio ch 5 immediately to get help and reduce the risk of suspension trauma.

If you have questions about this equipment, ask your Supervisor or host.

GEN-OHS-PRO-6040-0027 Working at height procedure.

12.18.1 Lifting and Fall Arrest Equipment

All lifting and fall arrest equipment must be inspected for defects by a person that has been trained to do so prior to each use.

An independent inspection is conducted twice yearly. During this inspection a coloured tag is placed on serviceable equipment.

Signs have been placed on the Concentrate shed and lifting equipment container to inform people what the current colour code is for previous inspection.

If equipment is found not to have the correct colour tag then a Caution Out of Service tag must be fitted and your Host or supervisor informed.

People without the appropriate licence are not permitted to sling loads for or guide crane lifts.

GEN-OHS-PRO-6040-0015 Lifting equipment procedure specifications, maintenance and use.

12.18.2 Ladders

Ladders must be set securely prior to use. If a ladder cannot be secured properly, then a safe alternative must be found. Place the ladder on a substantial, level base. Wooden blocks, bricks etc are not to be used.

All ladders must have their condition inspected before use. Tag out any defective ladder and report it.

- Always maintain three points of contact.
- All non step ladders must have a rope at the top so they can be tethered to a structure. Have someone hold the ladder while the ladder is secured.
- If using a ladder for access or egress, the top must extend 1 meter above the landing.
- The angle of the ladder must be set so that the angle at the base is ¼ of its length from vertical.
- Never use metal ladders for live electrical work.
- Never use a ladder for any other purpose than for what it was intended.
- Ladders must not be spliced or used as scaffold / work platform components.
- Never place a ladder in front of a door that is not secured and tagged out.

12.18.3 Scaffolding

Only qualified personnel are permitted to construct or alter scaffolding and work platforms. A qualified person must inspect the scaffolding before the commencement of a job.

12.19 Open Holes and Trenches

If a hand rail, piece of floor mesh or other physical barrier designed to stop entry or falling is removed for any reason, then a temporary physical barrier must be put in its place to do its job. Caution tape or signs alone are not adequate replacements for a physical barrier.

If a trench or hole is left open then it should have adequate warning and barricading at a safe distance from the hole or trench.

12.20 High Pressure Air and Fluids

Anything under high pressure can be dangerous when not respected.

Care must be taken when working with or around anything under high pressure. It is possible for fluid, air, etc under high pressure to penetrate the skin, enter the blood stream and possibly result in brain damage or death.

ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT MAY BE REQUIRED WHEN WORKING WITH ANYTHING UNDER HIGH PRESSURE.

12.20.1 Air/Water

- All air/water minsup hose coupling joins must be secured with Minsup Safety Clips.
- Air tools and equipment should always be checked before use.
- Check the condition of the hose and couplings before placing any hose or tool under pressure. Broken or uncoupled hoses can whip uncontrollably.
- Before breaking any joint or removing any tool, ensure that the air supply is turned off and the pressure released.
- Always wear gloves and the correct PPE when sand blasting.
- Do not use air to cool or dust yourself off.
- When using a pressure cleaner check the condition of the pressure hose, couplings and handpiece before starting the machine. Never point it towards yourself or others.
- Whenever possible hoses must be turned off and coiled up when not in use.

12.20.2 Oil

Never exceed the recommended maximum operating pressure for hydraulic equipment.

Always isolate the energy source and bleed off the pressure before commencing work on any hydraulic equipment.

Never run your hand down a hydraulic hose. Sharp wires could cut or high pressure oil could inject into your body.

Check the condition of the hoses, lines, couplings, etc before placing any hydraulic equipment under pressure.

12.21 Mobile Equipment and Overhead Cranes

Only authorised personnel with a current driver's licence are permitted to drive MRM light vehicles.

Relevant licences must be sighted and recorded. In most cases a site assessment or familiarisation will also need to be completed.

Contractors and employees may only operate MRM Mobile Equipment and Over Head Cranes when authorised by their Supervisor.

- Northern Territory road rules apply on site.
- Seat belts must be worn where fitted.
- Pre-start checks must be performed on all equipment and all faults reported.
- If there is a fault that affects the safety of the machine a Caution Out of Service Tag must be fitted describing the unsafe component. Report the fault. Do not use equipment that is unsafe to operate.
- If there is a non safety related fault then an information tag should be used.
- Pre start inspection book must be filled in prior to operation.
- Give way to heavy vehicles.

- Contractor's vehicles are only permitted to operate on site after they have been inspected as per MRM Light Vehicle workshops.

Speed limits: As per signposts or slower if conditions are not ideal.

12.22 Light Vehicle Operation

A Light Vehicle Driving Permit shall only be issued to personnel whose work duties require them to drive on the MRM Mining lease but not into the Open Pit area. All personnel operating Light Vehicles shall hold a current Australian State or Territory 'C' class drivers license and have written authorisation from their Department Manager (GEN-TRN-FRM-6080-0001 Light Vehicle Driving Permit Request) and having successfully completed the MRM Light Vehicle Driving Assessment.

A Light Vehicle is a vehicle which**:**

- Can be registered for use on a public road.
- Has four or more wheels.
- Seats a maximum of 12 adults (including the driver).
- That where registered, could be legally driven on a public roadway by a driver issued with a standard basic level – public road driver's licence.
- Does not exceed 4.5 tonnes gross vehicle mass (GVM), which is the maximum loaded mass of the motor vehicle as specified by:
    - The vehicle's manufacturer.
    - An approved and accredited automotive engineer, if the vehicle has been modified to the extent that the manufacturer's specification is no longer appropriate.

Light vehicles may include the following categories of vehicles being used for work related activity:

- MRM owned or leased vehicles.
- Hired vehicles (for example Budget or Hertz rental vehicles).
- Contractor or supplier vehicles operating on company property.

Further information can be located in GEN-GEN-PRO-6040-0008 Light Vehicle Procedure.

12.23 General Safety Information

12.23.1 Personal Protective Equipment (PPE)

Standard PPE is: Safety Boots, Safety Glasses, Hard Hat, High visibility shirt with reflective tape striping that meets Australian standards and Long drill trousers. High visibility vests are available.

All PPE shall comply with GEN-OHS-PRO-6040-0007 Personal Protective Equipment Procedure.

Gloves must be worn for all manual handling tasks, and are to be carried at all times when in the operational area.

PPE MUST BE WORN AT ALL TIMES IN OPERATIONAL AREAS.

Other than the standard PPE required on site, there may be a need for additional PPE such as dust masks, chemical gloves or suits, respirators, goggles, face shields, fall arrest kits, etc.

The need for these should be identified while planning your jobs. Any PPE you require can be obtained from the warehouse via your Supervisor or host.

12.23.2 Safety Signs

There are five types of safety signs used at MRM. Please familiarise yourself with the signs in area you are working and what their instructions are.

Sign	Meaning	Description
 Mandatory	Must be followed	Blue and White. eg. "Hearing Protection Must Be Worn"
 Caution / Warning	Advisable to follow	Yellow and Black. eg "Fork lift operating area."
 Danger	To warn of a dangerous hazard	Red writing on white with black border and instructions. eg "Danger No Travelling"
 Safety	Directions and Locations	Green and White eg. Exits, First Aid signs
 Prohibited	Actions which are prohibited	Red circle with a slash. eg. "No Smoking" sign.

12.23.3 Safety Data Sheets (SDS)

Safety Data Sheet's are designed to provide you with information on, how to work safely with chemicals in the area you are working. They provide information like the health hazards associated with the chemical, the appropriate PPE to be worn, first aid required if affected, etc. SDS sheets can be obtained from the Chemalert chemical register on the intranet.

A folder containing MSDS sheets for the chemicals in that work area will stored in central location.

If you require an SDS contact your host or Supervisor.

12.23.4 Chemicals

There are many chemicals used at MRM. Before any new chemicals are brought to site they must go through an approval process.

GEN-SD-FRM-6040-0001 Requesting a new hazardous substance form.

Before working with any chemicals, you should read and understand the instructions and Material Safety Data Sheets (MSDS) and ensure you have the correct PPE, and are familiar with how to transport, use and store the product.

When working on pressurised reagents lines the immediate source shall be isolated and the pressure released and pipe flushed with water before opening the reagent line.

All spills should be reported immediately to your supervisor and an incident / hazard form completed.

Contain or isolate chemical spills if safe to do so. Never place yourself in danger.

For further information refer to GEN-OHS-PRO-6040-0005 Hazardous Substance Procedure.

12.23.5 Safety Showers and Eye Wash Stations

Safety shower and eye wash stations are set strategically onsite where chemical/hazardous substances are stored/utilised. They have green lights and signs installed above them to make their location stand out.

To operate the Safety Shower stand under the shower rose and pull the lever.

To operate the eye wash push the lever mounted on the side of the eye wash forward or lift the lid on the eye wash basin.

12.23.6 Dust

The reduction of dust produced in the workplace should be part of our daily tasks. The fine grind size and lead content of our ore and concentrate add to the potential health hazards of dust.

Use water sprays or other methods of dust suppression. Clean up spills as soon as possible.

12.23.7 Housekeeping

Good housekeeping promotes safety and improves productivity. It includes all the practices which keep the work area, and all equipment organised, clean and clear of rubbish. Housekeeping is everyone's responsibility and should be performed continually or on a regular basis. If your job site becomes cluttered during a job, stop the job and clean up the area.

A job site must always be left in a safe condition.

Remember that a job is not complete until the work area has been cleaned up and waste/excess materials have been removed or disposed of.

12.23.8 Working alone or in remote locations

In the event of you working away from the main Mining Operational Area, you are required to adhere to the Remote Working Procedure. You must have a radio (if coverage is available), in addition to a Satellite Phone. You must identify a responsible contact whilst you are out in

the field and report in every two hours. Prior to leaving site, you must provide the responsible contact with a map displaying the location(s) where you will be working. If you will be working in several locations you must provide the order in which you will be at the locations and approximate time.

If you fail to report in to the responsible contact, a search will be initiated after 30 minutes of the call being overdue. The Emergency Response Team will be notified and directed to the location by the responsible contact. GEN-HSE-PRO-6040-0018 Remote Working Procedure.

13.0 ENVIRONMENT

13.1 Environmental Legislation

13.1.1 NT Mining Management Act

Part 3 The Environment

Division 1 Environmental obligations

17 Obligations of worker

1. A worker must keep himself or herself informed about, and comply with, work instructions and procedures applying to the worker that are included in the management system for the site.
2. A worker must, as soon as practicable, report to the operator for the site or, if employed by a contractor, to the contractor:
   a. the occurrence of a serious accident or critical incident; or
   b. a situation the worker has reason to believe may present a risk to the environment.

13.2 MRM Environmental policies and procedures

The Mine Management Plan contains our plans and Environmental requirements.

GEN-ENV-PLN-6040-0001

13.2.1 Environmental Incident Reporting

All environmental incidents are to be reported on the Incident or report forms and given to your immediate Supervisor; it is then entered into Site Safe. The Supervisor should then report the incident to the environment staff as some incidents may be classified as critical incidents or serious accidents and will require reporting to DPIFM. Examples of environmental incidents are:

- Any spills (fuel, oil, reagents, slurry, process water) in areas other than the concentrator.
- Waste disposal in non-designated areas.
- Complaints about environmental impact.
- Unauthorised land clearance or fire.

13.2.2 Site Environmental Guidelines

There are a number of guidelines that must be followed on site, such as:

- All materials must be cleaned before leaving the concentrator area (unless it is waste).
- No access to watercourses (creeks, river) other than river crossings.
- No new tracks and no off-road driving.
- All vehicles travelling out from the Barney Hill and Bing Bong sites must be clean (there are designated wash down bays and a wheel-wash).
- No fishing on the mining lease or interference with native animals.
- No unauthorised lighting of fires.

- No littering.
- No entering or damaging sacred sites.
- No clearing unless a permit has been obtained.
- All hazardous materials must be correctly stored in bunded facilities.
- Compliance with the Mining Management Plan is required at all times.
- All wastes must be disposed of correctly (contaminated separated from non contaminated material and disposed in the correct location). Check with your Supervisor for the appropriate location of waste.

13.3 Waste and Resource Management

All contaminated wastes must be taken to the waste dump at the Tailings Storage Facility Contaminated wastes include:

- All reagent bags and boxes.
- Anything that may have been contaminated with concentrate, oils, fuels, waste rock, tailings and mill reagents.

13.4 Land Clearance

All personnel intending to conduct land clearance on the McArthur River Mining Leases must complete a permit to clear form. This will ensure that McArthur River Mining complies with requirements regarding disturbance to ground or vegetation with respect to environmental and cultural heritage issues.

Prior to clearing approval a map of the area to be disturbed must be produced (assistance can be provided by the Environment section with the use of electronic aerial photographs or topographic maps). The map must clearly indicate the area of proposed disturbance.

The Permit is to be approved by:

- Environment Section Representative.
- Community Relations Representative.
- Survey Department Representative.
- Metallurgy Electrical Section Representative.

A JSA will need to be completed on the task to ensure all hazards are addressed.

The person conducting the work must have a copy of the permit to clear within the equipment used for clearing.

On completion of works a representative from the Environment Section will conduct an inspection of the clearing works to ensure the area cleared is consistent with the Permit to Clear Form.

Ask your Host or Supervisor to explain the process to obtain a Permit to Clear.

Permits are also required to conduct any burning activities. The permit to burn form is found on the Intranet. This requires sign off from the Mines Rescue Coordinator, Metallurgy Electrician, Environment personnel and Community Relations representative. The fire and

rescue service need to be notified of any controlled burning along with our local neighbours. The permit also alerts the Mines Rescue Coordinator to ensure that rescue team members are available in the event of the fire becoming uncontrolled.

13.5 Inspections Requirements of Vehicle, Goods and Equipment

Any vehicle, goods or equipment that are being sent off site either for repair, replacement or when they have completed their use at MRM, must be inspected to ensure it is free of contamination.

Supervisors from each area can conduct this inspection or it can be completed by a member of the Environment Section. The person conducting the inspection is responsible for ensuring the vehicles are clean.

A form will need to be completed to verify that an inspection has taken place and that the person is satisfied that the equipment, goods or vehicle is not contaminated. The form used for this is GEN-ENV-FRM-6040-0004 – Environment Equipment Inspection Form.

14.0 COMMUNITY

MRM is committed to supporting initiatives that contribute to the prosperity and the sustainable development of the communities associated with our operations, employees and families. This commitment is set out in the Glencore business principals and is defined in the Corporate Social Involvement Policy.

One such commitment at Bing Bong is the MAWA (Marwurli and Wirriwangkuma Aboriginal Corporation) shipping contracts. The directors of MAWA represents the four aboriginal language groups present in the Borroloola region. MAWA with the assistance from the Aboriginal Commercial Development Corporation have formed a partnership with P&O shipping and are responsible for the shipping side of the mining operations at the Bing Bong Bulk Loading Facility.

14.1 Local Community

MRM is situated in or near the traditional domain of four distinct Aboriginal language groups.

- Gurdanji;
- Yanyuwa;
- Garawa; and
- Mara.

The following diagram gives you a geographical idea of where the lands start and finish.

14.2 Sacred Sites

As part of MRM's effort to understand and respect traditional culture we identify and avoid any sacred sites that may affect our operations. All personnel entering MRM operations are

Not permitted to enter sights of significance or sacred sites. Personnel found in these areas may have their employment terminated and may be subject to fines under the Northern Territory Sacred Sites Act 1989 as listed below.

OFFENCE	CORPORATE PENALTY	INDIVIDUAL (Natural person Penalty)
Entry to sacred site	1000 penalty units	200 penalty units or imprisonment for 1 year
Work on Sacred Sites	2000 penalty units	400 penalty units or imprisonment for 2 years
Desecration	2000 penalty units	400 penalty units or imprisonment for 2 years

NB: 1 penalty unit is equal to $149

15.0 GENERAL INFORMATION

15.1 Equal Employment, Opportunity and Harassment

MRM is committed to achieving equal opportunity in the workplace and providing a work environment free from harassment and discrimination.

MRM has developed a wide range of policies and procedures which are consistent with NT Legislation. These define how we treat our employees and, correspondingly, contribute to the building of a productive, accountable and fair culture.

Contact your Host or Supervisor for issues relating to harassment and or discrimination.

GEN-HR-POL-6030-0001 Equal Employment Opportunity Policy

15.2 Request to Leave Site

Keeping track of personnel's whereabouts will aid a quick, safe response in emergency situations.

For this reason all personnel (including locals) are required to have written permission if they wish to leave the mine site unless the following covers them.

They are on direct work related business. (Supervisor knows where they are); or

They have been booked out of camp accommodation. (On rostered break)

The form can be obtained from your host or Supervisor. GEN-GEN-POL-6040-0007 Request to leave site policy. GEN-GEN-FRM-6040-0007 Request to leave Site form.

15.3 Telephone and Communication Policy

Purpose of the Policy

To ensure that communication equipment, including Mobile Phones, are used in line with the Company policies and in such a manner that their operation and use does not compromise safety.

- It is an offence to use a Mobile Phone whilst driving a vehicle. This rule, which is applicable on all public roads, is also applicable when using mobile equipment for any operations associated with McArthur River Mining Pty Ltd.
- Private Mobile Phones shall not be used during working hours unless at designated breaks.
- Private Mobile Phones must be turned off at all other times.
- All Mobile Phones must be switched off on the air side of the Airport.
- All Mobiles Phones must also be turned off whilst refuelling activities are being conducted.
- Department Managers may authorise Supervisors or Superintendents to utilise a work Mobile Phone as part of their day to day duties in the workplace.

GEN-OHS-POL-6040-0001 MRM Telephone and Communication Policy.

In the event of personnel failing to comply with this Policy, disciplinary action will be taken.

15.4 Warehouse

A purchase requisition must be raised on Ellipse before the warehouse will release any stock. If you need parts or items ordered, then please advise your host or supervisor.

15.5 Hours of work

Day Shift: Personnel should be in their work area by 06:00 for work assignment and hand over.

Shift concludes at 18.00 or 18:15 after hand over to nightshift if applicable.

Night Shift: Personnel should be in their work area by 6.00pm for work assignment and hand over.

Shift concludes at 06:15 after hand over to dayshift.

Shifts are inclusive of crib breaks of up to a maximum of one (1) hour per shift.

Check with your supervisor about the best time for breaks.

16.0 REVISION HISTORY

Issue No	Revision No	Section	Brief Description	Initials	Date
1	0	Title	Title change from ADM-HSE-TMD-6040-009 Admin Contractors Induction to GEN-GEN-MAN-6080-005 Site Short Term Induction Training Handbook.	WW	27/8/12
		All	Review and update GEN-GEN-MAN-6080-005 Site Short Term Induction Training Handbook. Realigned topics into HSEC subject areas.		
		All	Created Sustainable Development section		
		2	Created Catastrophic Hazards paragraph in Safety section		
		5	Updated information on Isolation, Tagging & Barricading		
		5	Updated work in Vicinity of Overhead Power Lines		
		5	Updated sacred site penalty table		
		7 9	Included information on local community Created Revision History table.		
2	0	Cover	Removed photos and included current MRM logo	WW	4/2/15
		2	Travel & Arrival section included	WW	4/2/15
		3	Village General Information included	WW	4/2/15
		4	Village Rules included	WW	4/2/15

Issue No	Revision No	Section	Brief Description	Initials	Date
		5	Glencore Values included	WW	4/2/15
		7	Glencore Code of Conduct included	WW	4/2/15
		8	Glencore Anti Corruption included	WW	4/2/15
		11.9	Lead Awareness Included	WW	4/2/15
		11.10	SO2 Awareness included	WW	4/2/15
		12.2	Life Saving Behaviours included	WW	4/2/15
		12.5.1	Definition 'Catastrophic Hazard' updated	WW	4/2/15
		12.18	Work at Height definition updated	WW	4/2/15
		12.22	Light Vehicle Operation included	WW	4/2/15
		14.2	Sacred Site statutory penalty unit dollar figure updated	WW	4/2/15
2	1	Intro	Included figure 2 – overview of village map	WW	5/8/15
		3.1	Inclusion of (Village) Evacuation procedure	WW	5/8/15