Appendix 33

Emergency Management Plan

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1. INTRODUCTION

1.1 Objective

The objective of this Emergency Management Plan is to detail emergency planning and response procedures for the range of emergency situations identified in the hazard and risk assessment (refer Chapter 32 and Appendix 32 of this environmental impact statement [EIS]). This is a draft plan which addresses the identified potential emergencies. This plan will evolve as the project commences in consultation with coal mine workers as per the requirements of the *Coal Mining Safety and Health Act 1999*.

This plan addresses the terms of reference (TOR) for an EIS issued by the Queensland Coordinator-General Department of State Development, Infrastructure and Planning (DSDIP) (formerly Department Employment, Development and Economic Innovation (DEEDI)) dated July 2011.

1.2 Scope

Presented in this plan is information on the design and operation of the proposed safety / contingency systems to address the following emergency issues, identified in the risk assessment:

- floods
- terrorist attack
- major health concerns such as flu pandemics
- fire prevention / protection
- explosions
- leak detection / minimisation
- release of contaminants
- emergency shutdown systems and procedures.

Outlines of emergency planning and response strategies to deal with the emergency issues described above are presented. These have and will be determined through ongoing consultation with state and regional emergency service providers and police services.

Preliminary plans for emergency medical response and transport and first aid matters are addressed.

As described in Chapter 3, accommodation will be off tenement in Glenden and will require development approval under the Sustainable Planning Act 2009 (SP Act). The proponent has an arrangement with a third party who will develop the accommodation facilities in Glenden and seek all relevant approvals for the construction and operation of the facilities. This will include emergency management planning for accommodation facilities and detailed maps showing the emergency management features. If this accommodation development approval option is rejected by the local authorities, the proponent will seek the necessary approvals to accommodate all workers in a camp on the project mining leases.

1.3 Methodology

An assessment of hazards and risk to people and property from the construction, operation and decommissioning of the project was undertaken via a preliminary risk assessment in accordance with

AS/*NZS ISO 31000: 2009. Risk Management – Principles and Guidelines* and *IEC/ISO 31010 Risk Management: 2009. – Risk Assessment Techniques* and presented in the Hazard and Risk Report.

Consultation with state and regional emergency service providers was undertaken as part of the Social Impact Assessment (refer Chapter 31).

The following emergency services organisations and agencies were identified as stakeholders and appropriate consultation has been undertaken:

- Department of Environment and Heritage Protection
- Department of Natural Resources and Mines
- Department of Employment, Education and Training (DETE – formerly Department of Education)
- Department of Local Government and Planning (now also linked with the Department of State Development, Infrastructure and Planning (DSDIP))
- Department of Families, Youth and Community Care
- Department of Transport and Main Roads
- Queensland Fire and Rescue Service
- Queensland Rural Fire Service
- Queensland Police Service
- Queensland Health
- Queensland Ambulance Service
- Department of Emergency Services
- Queensland State Emergency Services
- Isaac Regional Council
- Whitsunday Regional Council
- Mackay Regional Council

Based on the consultation made, it was determined that the proponent will provide all resources, training and equipment for first response capability for all foreseeable incidents and emergencies. The Queensland Rural Fire Service (QRFS) will be relied upon for a coordinated response to bushfires in the region. In this instance, the proponent will provide site resources to supplement the existing QRFS equipment and personnel.

1.4 Site Details

The project is located in the Whitsunday Regional Council and Isaac Regional Council government areas (in the north and south respectively). It is located approximately 20 km west of the mining township of Glenden, 60 km south of Collinsville, and lies approximately 140km west of the regional centre of Mackay.

1.5 Existing Emergency Services

There is a police station located in Glenden which is attended by a single police officer who is permanently based in the town. Back up police services are provided from Nebo and Mackay.

The Glenden fire station is supported by the Queensland Fire and Rescue Services, which operates from 38 urban fire stations with a staff of over 620 full time and auxiliary firefighters. There is a Glenden State Emergency Services shed that is only staffed during emergencies and disasters.

The Queensland Ambulance Service and the private Glenden Medical Practice provide medical services and patient care to Glenden residents and surrounding landholders. There is one full time ambulance officer based in Glenden. The Glenden Medical Practice is open Monday to Friday from 9am to 12pm and 1pm to 5pm and staffed by a single doctor.

The Glenden SES is no longer operational and as such all SES involvement is provided from the Nebo SES.

1.6 Existing Medical Resources

The social impact assessment (SIA) identified the following health services in the project region (refer Table 1-1).

Table 1-1 Existing Health Services In the Study Area

Locality	Health services available
Glenden	• Glenden Community Health Centre • Glenden Medical Practice
Mackay	• Mackay Hospital • Mackay Mater Misercordie Hospital • Eight Community Health Centres.
Isaac	• Nebo Medical Centre • Moranbah Hospital
Whitsunday	• Whitsunday Community Health Centre • Collinsville Hospital • Bowen Hospital

Source: Queensland Health website, July 2012.

The Glenden Community Health Centre is staffed by a nurse and in addition to emergency and medical practice is staffed by a single doctor.

The key Queensland Health facilities in the Bowen Basin providing accident and emergency services include the Collinsville and Moranbah Hospitals. The Mackay Base Hospital is the major hospital for the Central Queensland Region providing the full range of specialist services, clinics, and allied health along with outreach and support services. There is also a private hospital located in Mackay.

In addition the area is serviced by the RACQ Central Queensland rescue helicopter based out of Mackay.

2. PROPOSED SITE EMERGENCY RESOURCES

2.1 Resources

The details of personnel and resources involved in emergency response are yet to be finalised, the following resourcing requirements are expected to be in place prior to construction:

- appropriate number of trained personnel in the following:
  - first aid and resuscitation
  - fire fighting
  - rescue – pit / wall failure
  - rescue – confined space
  - rescue – at heights
  - rescue – water
  - rescue – explosives
  - rescue – electricity
  - rescue – from vehicles
  - spills management
- emergency management team on site at all times
- occupational health nurse, occupational health first aiders
- emergency response truck
- 2 water trucks with fire fighting capabilities, as required

2.2 First Aid

The project Emergency Response Team (ERT) will be trained in occupational first aid and will be the authorised personnel on site to administer first aid.

2.3 Training

All coal mine workers will be trained and assessed in the emergency management plans, as follows:

- initially, during site inductions
- periodically through drills conducted in accordance with the training plan.

The Emergency Response Team and workers requiring specialised skills will be identified in the training needs analysis process, as part of the Health, Safety and Environmental Management System.

3. IDENTIFIED EMERGENCY SITUATIONS

An emergency is defined as an abnormal, dangerous or potentially dangerous situation which requires urgent action to control, correct and return to a safe state.

The following high / extreme risks to people and property were identified in the hazard and risk assessment and are deemed as emergency situations that would trigger the emergency management plan:

- fire
- vehicle collisions and accidents
- explosion
- snake bite
- fly rock projecting outside blast zone
- pit slope failure in the removal of waste rock
- wall / slope failure operating the waste rock dump
- dam failure or overtopping of storage facility
- land instability during earthworks
- final land form (interaction with final void)
- sabotage
- disease outbreak.

In addition to the above identified emergency situations, a significant spill of fuel would constitute an emergency situation that would be addressed by an emergency management plan.

Of these identified emergencies, detailed procedures and plans will be developed as the project progresses as part of Byerwen Coal's risk management strategy and Health, Safety and Environmental Management System. Job specific plans will be developed to address the following scenarios:

- fly rock projecting outside blast zone
- pit slope failure in the removal of waste rock
- wall / slope failure operating the waste rock dump
- dam failure or overtopping of storage facility
- land instability during earthworks
- final land form (interaction with final void)

3.1 Emergency Response

In the event of an emergency requiring the activation of the Emergency Management Plan the Emergency Response Team Leader is to:

- undertake an initial evaluation
- identify a safe approach
- contact relevant personnel and agencies (e.g. dial 000)
- establish a command post
- undertake a risk assessment taking into account the following:

- is evacuation required
- means by which first aid can be safely administered
- preparation of the emergency management team
- contact external agencies, if required
- plant isolation
- fire fighting requirements, spills management
- resource allocation

Personnel should not undertake tasks for which they are not trained or competent. Personnel should not undertake tasks which could put them at risk of significant risk of injury or illness.

4. EMERGENCY PLANS

Emergency management planning, including fire management, management of contaminant releases and evacuation protocols are described below.

In accordance with *section 35 and 37* of the *Coal Mine Safety and Health Regulation 2001*, emergency response and fire fighting equipment for a coal mine must be identified and implemented based on risk assessment. By necessity the provision of emergency response, fire management and fire protection equipment is identified using risk assessment during the detailed design phase utilising a cross section of the workforce.

Accordingly the process of detailed design for all project plant (e.g. the CHPPs), site facilities (e.g. the MIAs) and hazardous materials stores will include emergency management plans showing incident control points, fire fighting equipment, emergency entry and exit points and other relevant emergency management features.

4.1 Fire Management

4.1.1 Fire Management Strategies

For the specific issue of fire, the following management strategies will be developed:

- fire management systems to ensure the retention of fire water on site and/or other fire suppressants required to combat emergency incidents
- building safety measures for any construction or permanent accommodation
- emergency response plans and bushfire mitigation plans under *State Planning Policy 1/03: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide*
- provide on-site fire-fighting equipment and train staff to who will be tasked with emergency management activities to an appropriate level
- provision of detailed maps showing the plant outline, potential hazardous material stores, incident control points, fire-fighting equipment, emergency entry and exit points to site facilities.
- design and management of dangerous goods stores associated with the plant operations, including fuel storage and emergency response plans.

4.1.2 Fire Management Plan

Prior to each bushfire danger period, the mining manager is to ensure that the fire management plan is reviewed and equipment is tested. A Fire Officer will be delegated by the Mine Manager with responsibilities for the following:

- compliance with the bushfire management plan
- maintenance and inspection of the fire-fighting equipment
- establishment and training of the fire-fighting team.

The fire management plan will be updated to include further detail as the project progresses and include the following detail:

- details of fire protection controls in place and maintenance requirements
- location of fire equipment

- material safety data sheets (MSDS)
- location and quantity of hazardous substances
- drainage plans and operation of drainage equipment such as bunds and sumps
- back up generator for emergency equipment
- evacuation plan and evacuation points.

The following resources and equipment will be in place prior to construction:

- Fire fighting personnel will be available on site at all times. All site personnel will be trained in basic fire fighting procedures with hand held extinguishers and selected fire response crews will be trained in more advanced fire control techniques.
- A dedicated fire water ring main and hydrant system will be installed at the MIA. Fire water will be held in a raw water storage tank for delivery to the ring main, hydrants and hose reels by a dedicated electrically driven firewater pump set with diesel back up.
- Two vehicles with fire-fighting capability and dedicated fire water will be available. These may be used as water trucks for dust suppression when not required for fire-fighting purposes.
- Fire risk management includes firewalls, bunds, standard electrical protection, secondary route of egress, smoke detection in offices, accommodation, warehouses and switch rooms.
- All fire fighting facilities and equipment will be installed, serviced, maintained and inspected by certified personnel.

4.1.2.1 Equipment Operation

All plant and equipment will be maintained with efficient exhaust systems. Regular inspections are to be undertaken. All vehicles and mobile equipment will be fitted with appropriate fire extinguishers suitable for the control of flammable liquid and electrical fires. Heavy machinery and vehicles will be fitted with independent fire suppression systems and fire extinguishers, while light vehicles will be fitted with a minimum of one fire extinguisher.

4.1.2.2 Fixed Plant and Equipment

All buildings will be equipped with suitable fire extinguishers. Their location will be indicated by the appropriate signage. These will be indicated on a site map that will be developed during detailed design.

4.1.2.3 Flammable Liquids

Fuel storage will be designed and operated in accordance with AS1940. Bunds, signage, spill procedures, emergency response planning, training, inspection and a maintenance program will be maintained.
Fire fighting equipment will be installed.

4.1.2.4 Clearing Operations

Clearing operations will not be undertaken during periods of high fire danger. When clearing, a filled water truck will be available and be able to access the area of clearing. Site personnel will be trained in the use of site fire-fighting equipment. All suitable cleared vegetation will be retained for rehabilitation and there will be no burning of cleared vegetation. All vehicle movements will be restricted to designated roads and tracks.

4.1.2.5 Blasting Operations

All blasting operations will be undertaken in the designated area, as per the blast management plan. All flammable materials will be removed by pre-stripping the topsoil prior to any drilling and blasting.

4.1.2.6 Welding Operations

All welding activities, where practicable, will be conducted in the main workshop area. Where welding and cutting are undertaken outside the workshop area, the following procedures will take place:

- the area will be cleared of flammable materials
- a suitable fire extinguisher will be positioned within reach of the work area

4.1.2.7 Fire-fighting Equipment and Protection

A suitable fire break will be established and maintained around the perimeter of the MIA and rail loop. The fire breaks will be a minimum of 6 metres wide and kept free of flammable material.

All fire-fighting extinguishers will comply with AS/NZS 1841.1:2007. Fire-fighting equipment will be compatible with that used by Queensland Rural Fire Service. Routine inspections of fire-fighting equipment will take place at least weekly.

4.1.2.8 Training

All mining workers, including contractors, will receive basic fire control training as part of the induction process and receive regular refresher training.

4.1.2.9 External Resources

In the event a fire cannot be controlled by mine workers, or threatens public property, the Queensland Rural Fire Service shall be contacted.

4.2 Vehicle Accident or Collision

The response to a vehicle accident will depend on the location, type of vehicle, occupants and number of occupants involved.

Contractors transporting explosives, fuel and other hazardous substances will be expected to have their own emergency response plans, which will be reviewed by Byerwen Coal as part of contractor management requirements in the Health, Safety and Environmental Management System.

Accidents that may occur on public roads involving transport of workers to and from site will be addressed via notification of emergency services by calling “000” as first priority.

Any accident that may occur on site will be handled by the Emergency Response Team and on-site first aid medical treatment and may involve relevant external agencies such as ambulance, depending on the circumstances.

Job safety risk assessments will take place for all transport tasks, as part of the traffic management plan. These will address the proposed action on accidents.

4.3 Explosion

Job safety risk assessments will take place for all tasks relating to use and storage of explosives. These will address the proposed action on explosion including treatment and management of casualties, evacuation and clean up.

4.4 Snake Bite

It is unlikely that a snake bit will occur, however if it does eventuate then appropriate first aid treatment will be administered.

The patient will be transferred Mackay or Collinsville Hospital.

4.5 Terrorist Attack/Sabotage

A plan will be developed as the project progresses.

4.6 Major Health Concerns

Major health concerns such as a flu pandemic will be managed in line with Queensland Health advice.

4.7 Flood

The plan for response to a flooding event will include immediate actions of providing an alert, monitoring flood levels and monitoring road access. As part of the risk assessment the following items will be addressed:

- impact to safety of site personnel
- impact to plant and equipment
- impact to processes
- impacts due to overflows of sewage, fuels and oils
- access for evacuation purposes.

4.8 Spills, Leaks and Release of Contaminants

To reduce the potential for spills that can have significant environmental impacts the following standards will be established in regards to spill containment:

- bunding containment is installed and maintained on outdoor storage tanks and areas
- bunding containment is installed on all designated internal liquid storage areas
- inspections of containment areas are regularly completed and records kept
- integrity inspections of tanks and field - constructed sumps are completed regularly.

All new major storage vessels will be constructed to comply with the following requirements:

- all storage tanks will be constructed in compliance with AS 1940
- adequate secondary containment equalling at a minimum 110% of the volume of the largest tank in the containment area
- reliable means of level detection
- must be constructed using material compatible with and impermeable to the fluid stored
- pipelines containing or transporting hazardous materials must be above ground.
- tanks and transfer areas should not be located in an area where worst case spills can cause release to sewer, body of water or soil

A detailed spills response procedure will be developed to address the following principles of spills management:

- Communicate that the spill has occurred to the relevant supervisor.
- Consider the risk to personal health and the environment. If possible secure the area, identify the substance and level of response required.

- Cease the flow from the source.
- Contain the spill to minimise contamination (e.g. temporary bund, cover drains).
- Clean up the spill and correctly dispose of the material.
- Investigate and reporting how the spill could have been prevented.

A detailed site plan will be available detailing drains, sumps and the location of equipment.

The following equipment will be available on site to assist with liquid spill management:

- vacuum truck
- spill response kits - placed around the site
- spill response equipment - emergency response trailer controlled by emergency management team
- oil absorbents
- sand bags
- earth moving equipment can be used to make temporary bunds for containment, if required

4.9 Emergency Shutdown Procedures

Emergency shutdown procedures will be developed based on a risk assessment with a cross-section of the workforce.

4.10 Evacuation Protocol

Certain emergency situations may require an evacuation of the Byerwen Coal Mine. This will be determined by the Incident Controller. In order to determine the need to evacuate, the following should be considered:

- the risk to people by not evacuating
- the risk to people evacuating and entering a dangerous area (e.g. in the case of a bushfire)
- how the evacuation can be controlled to avoid injury of personnel.

In such a situation the following procedure will apply:

- All personnel will move to their appropriate assembly area and await further directions from the Incident Controller.
- All staff and visitors will be accounted for.
- Relevant emergency services will be contacted.

Examples of where evacuation may be appropriate include:

- major spill with risk of explosion or fire
- large coal fire
- dam failure
- terrorist threat / sabotage

5. COMMUNICATIONS

5.1 Contact Details

Contact details will be included in the Emergency Management Plan prior to commencement of construction. Neighbouring properties will be advised, as necessary.

5.2 Key Responsibilities

5.2.1 Site Senior Executive (SSE)

The primary role of the SSE in the event of an emergency is the coordination of any external agencies that may be required in order to effectively manage the incident.

5.2.2 Incident Controller

Open Cut Examiners (OCE) shall act as the incident controller for all incidents that occur within the open cut areas of the mine. The Maintenance Supervisor will act as the incident controller for all incidents that occur within the workshop or the CHPP. The incident controller is primarily responsible for the management of the incident scene.

5.2.3 Emergency Response Team Leader (ERTL)

The most senior ERT member is to act as the ERTL. The ERTL's primary responsibility is to treat any injured personnel and make the incident scene safe.

5.2.4 Emergency Response Team Members

Conduct the rescue and treatment of any injured personnel under the control of the ERTL.

5.3 Alarm Systems

The Byerwen Coal Mine will have an emergency alarm system, built into the site radios, which can be activated by the OCE, Mining Supervisor, Maintenance Supervisor and the CHPP Supervisor. The emergency alarm will be broadcast across all radio frequencies at Byerwen Coal Mine.

6. AUDIT AND REVIEW

To ensure the effectiveness of the Emergency Management Plan, the plan will be periodically tested, audited and reviewed. An investigation will take place after any emergency. Inspections will take place regularly to ensure all emergency equipment is working and has been maintained. Regular training and testing of the emergency response workers will take place.