Environmental Pollution Incident Response Management Plan

March 2017

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Description</th>
<th>Author</th>
<th>Reviewer</th>
<th>Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>27 March 2017</td>
<td>Pollution Incident Response Plan</td>
<td>Environmental Advisor</td>
<td>Environment &amp; Approval Specialist</td>
<td>Manager Technical Services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ben Simpson</td>
<td>Craig White</td>
<td>John Campbell</td>
</tr>
</tbody>
</table>
Table of Contents

PART 1 – GENERAL ................................................................. 4
  Introduction ........................................................................ 4
  Objectives & Priorities ....................................................... 7
  Definitions ........................................................................ 7
  Accountabilities .................................................................. 9
  Document Maintenance ...................................................... 9

PART 2 – EMERGENCY RESPONSES .................................. 10
  General Emergency Procedure .......................................... 10
  Emergency Call Procedure ................................................ 10
  Person Receiving Call ....................................................... 11
  Emergency Evacuation Procedures ..................................... 12
  Emergency Response Guides ............................................. 14
  Hazardous Substances Spill ............................................... 15
  Failure of Staged Discharge Dam / CW1 .............................. 16
  Unplanned Effluent Discharge ........................................... 17
  Storm/Flood ....................................................................... 18
  Major Health Risk (e.g. Water Contamination) .................... 19
  Explosives ........................................................................ 20
  Radiation Emergencies ..................................................... 21

PART 3 – ERP ROLES AND RESPONSIBILITIES .............. 22

PART 4 – USEFUL DOCUMENTS ....................................... 23
  Initial Incident Report ....................................................... 23
  Communication of Environmental Incidents ....................... 23
  Maps ............................................................................... 25
  After Action Review - Debrief .......................................... 28
  Staff Training .................................................................... 28
  Testing the Plan ............................................................... 28

PART 5 – CONTACT INFORMATION .................................... 29
  Centre of Expertise Database ........................................... 29
  BMC Contact Numbers .................................................... 29
  External Emergency Numbers .......................................... 30
Appendices

Appendix A: Test Exercise 15 December 2016 .......................................................... 32
Appendix B: Initial Incident Report ............................................................................. 34
Appendix C: After Action Review – Debrief Table ....................................................... 37

Figures

Figure 1 Business Resilience Management Plan and associated documentation ................................................................. 4
Figure 2 Business Resilience and Recovery flow diagram ...................................... 6
Figure 3 Muster Points and Assembly Areas ............................................................. 13
Figure 4 Location of BMC ....................................................................................... 25
Figure 5 Potential air quality related pollution incident ........................................ 26
Figure 6 Potential water related pollution incident ................................................ 26
Figure 7 Location of potential pollutants on the premises ...................................... 27
PART 1 – GENERAL

Introduction
As the holder of an environment protection licence (EPL 6538) the Bengalla Mining Company Pty Limited (BMC) is required to comply with the new requirements introduced by the Protection of the Environment Operations Act 1997 (POEO Act). The POEO Act introduces several changes to improve the way pollution incidents are reported, managed and communicated to the general community. The Act includes a new requirement under Part 5.7A of the Act to prepare, keep, test and implement a pollution incident response management plan.

BMC’s Environmental Pollution Incident Response Management Plan (EPIRMP) is a subset of the Business Resilience & Recovery Management Program (BRRMP) and associated documents. These plans are document controlled and contain confidential information to ensure business resilience.

Figure 1 Business Resilience Management Plan and associated documentation
The BRRMP, the Emergency Response Plan (ERP), the Business Continuity Plan and the IT Disaster Recovery Plan are organised and laid out in exactly the same way. They are each organised into the same five tabs:

- General information regarding plan administration and the day-to-day running of business resilience and recovery.
- Response procedures for the plan. They differ according to the nature of the risks each plan deals with.
- Roles and responsibilities contain the Team Structure and checklists needed to put this plan into action.
- Useful documents to support the response as well as templates for initial incident reports, log sheets, briefing and planning guides.
- Contact information that may be needed to support the response.

Most incidents will follow the business resilience and recovery flow diagram (Figure 2). The flow chart outlines the initial escalation, notification and response stages. In addition, this diagram indicates when each plan may be required. If a pollution incident occurs at BMC such that material harm to the environment (within the meaning of section 147 of the Act) is caused or threatened, this EIRMP will be immediately implemented (through the BRRMP).
Figure 2 Business Resilience and Recovery flow diagram
Objectives & Priorities

The EPIRMP as a subset of the ERP sets out actions that need to be taken in the event of an environmental emergency at BMC.

The top priority for the ERP is for the protection and preservation of life, followed by the environment and assets. The ERP will be an effective mechanism for escalating an incident to the business resilience team when necessary.

The prime objectives of this plan are to ensure that:

- Emergency information is available and maintained current;
- Emergency response procedures are documented and communicated;
- Emergencies are managed according to defined protocols to minimise and control the risk of a pollution incident; and
- Emergencies are reported according to defined requirements.

The ERP will involve the use of DUTY CARDS. Duty Cards will be used where deemed necessary by the “Emergency Controller” who is the person responsible for area/personnel involved in the emergency. The allocation of these cards will ensure that the actions and protocols contained in the plan are maintained and managed, throughout the respective emergency.

Awareness training and simulations will ensure BMC staff, contractors and visitors understand that the immediate and controlled response to an emergency using the contents of this plan will be the foundation on which effective emergency actions are built.

Definitions

Emergency

An emergency is a situation that is developing, or has developed, that poses a threat to:

- Life;
- Environment; and
- Property,

which requires immediate action.

Pollution incident

Pollution incident means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.
A pollution incident is required to be notified if there is a risk of ‘material harm to the environment’, which is defined in section 147 of the POEO Act as:

(a) harm to the environment is material if:

(i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or

(ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (or such other amount as is prescribed by the regulations), and

(b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.

BMC shall report pollution incidents immediately to the EPA, NSW Ministry of Health, Fire and Rescue NSW, WorkCover NSW and the local council. ‘Immediately’ has its ordinary dictionary meaning of promptly and without delay.
Accountabilities
The Environment Specialist and Emergency Services Coordinator are accountable for preparing, maintaining and implementing the EPIRMP with assistance from the Emergency Response Team and Business Resilience Team, as required.

Document Maintenance
Clause 98E of POEO Act requires the EPIRMP to be tested routinely, at least once every 12 months and within 1 month of any pollution incident occurring in the course of an activity to which the licence relates so as to assess, in the light of that incident, whether the information included in the plan is accurate and up to date and the plan is still capable of being implemented in a workable and effective manner.

This plan will be reviewed by the Environment Specialist annually and after any incident or test, which provides suggestions for improvements. Additionally, changes can be made as a result of:
- Practice reviews;
- Local regulatory or procedural changes; and
- Amendments to Bengalla Mining Company (BMC) policies and procedures.

All changes to this plan must be approved by the Business Resilience Team (BRT) and authorised by the BRT Leader.

If necessary, legal advice will be obtained prior to approval of the amendment. When necessary, the revised procedure will be tested (rehearsed) prior to approval of the amendment.

This plan will be made publicly available on the Bengalla website:

The BRRMP and associated documentation are maintained as controlled documents. A soft copy is managed within the site’s Lotus Notes Database and document controlled hard copies are kept in the Mine Crib room, First Aid room, CHPP Control room and Administration area.
PART 2 – EMERGENCY RESPONSES

General Emergency Procedure

1. Persons witnessing or coming across an emergency situation, shall communicate details of the emergency situation using procedures outlined in the “Emergency Call Procedure”.

2. If safe to do so, attempt to assist any injured staff.

3. If safe to do so, attempt to extinguish any fire.

4. If instructed to evacuate your area, do so as described below.

5. IF OPERATING EQUIPMENT/MACHINERY, and it is possible to do so without risk of injury, isolate and park up equipment or if safe to do so drive to the designated assembly area in a safe manner.

6. IF NOT ON EQUIPMENT/MACHINERY, move in an orderly manner to your designated assembly area.

7. INFORM your Team Leader/Responsible Person if you are aware that any person(s) are still present or trapped in the emergency/disaster area.

8. Once in the designated assembly area DO NOT move from this area unless instructed to do so by a Fire Warden or your Team Leader/Supervisor.

9. DO NOT use radios/telephones unnecessarily (keep lines free for emergency co-ordination).

Emergency Call Procedure

EMERGENCY CALLS may be instigated:

1. BY TELEPHONE

   Dial 666 on the mine phone system, (CHPP CONTROL ROOM EMERGENCY PHONE.)

   State “THIS IS AN EMERGENCY CALL”

   Provide the following detail:
   
   - Your name;
   - Nature of the emergency (fire, vehicle accident, etc.);
   - Location of the emergency; and
   - Assistance required (first aid, firefighting support, etc.).

   Ensure message is clearly understood by repeating.

   Assist where possible without endangering yourself until help arrives.

   The control room operator will contact the relevant team leader and or nominate someone to activate the next stage of the EMERGENCY PROCEDURES, “Person Receiving Call”.

Environmental Pollution Incident Response Management Plan Page 10 of 37
2. BY RADIO

State  “EMERGENCY - EMERGENCY - EMERGENCY”

“THIS IS AN EMERGENCY”

Provide the following detail:

- Your name;
- Nature of the emergency (fire, vehicle accident, etc.);
- Location of the emergency; and
- Assistance required (first aid, firefighting support, etc.).

Ensure message is clearly understood by repeating.

Assist where possible without endangering yourself until help arrives.

This broadcast will notify the appropriate Personnel or Nominated Staff, who will answer the call and if required will nominate someone to proceed to the designated communications area and activate the next stage of the EMERGENCY PROCEDURES, listed below in “Person Receiving Call”

Radio Silence

Radio silence is to occur and the emergency tone is to be activated.

Only personnel directly assisting in emergency shall use the two-way radio during the emergency.

Person Receiving Call

A summary of the immediate action to be taken by person receiving call

1. The person RECEIVING the call must:
   - Ask the person making the call, “what is the problem”
     - Person making call may be in state of shock, extremely agitated or confused.
     - Try to reassure and calm him/her down
     - Do not panic
   - Gather pertinent incident details; who, when, where, what
   - Repeat questions until a satisfactory answer is acquired

2. When you have received the details of the emergency, advise your Team Leader/Responsible Person. It is also advisable to notify the other operations departments and advise them to be on standby in case extra resources are required to assist to manage the emergency situation, ie if in CHPP notify Production Team Leader and vice versa.

3. Depending on the level of emergency response required you may be requested by the Team Leader/responsible person to locate and open the ERP hardcopy in Mine Crib room, First Aid Room, CHPP Control Room or Administration area
4. Follow the appropriate Emergency Response Guide e.g. Persons Injured or Ill.

**Emergency Evacuation Procedures**

ALL STAFF – (other than designated Emergency Response Personnel/Fire Wardens)

In the event of an Emergency (Fire, Explosion, Chemical spill etc.), that requires evacuation of the Office Complex, Workshop, Coal Handling Prep Plant or Mine, all staff, contractors and visitors shall assemble at their designated area.

- Follow instructions given by Fire or Area Wardens
- On evacuation signal being sounded, or on instructions of Warden, move to your designated assembly area ~

**Evacuation Signal:** “WHOOP…WHOOP…WHOOP”

- Fire Warden to remain with mobility impaired person/s if area becomes unsafe
- After hours evacuate to nearest assembly area (Designated assembly areas are identified by a large white M on a green background)

**Designated Assembly Areas include (shown in Figure 3);**

- **OFFICE COMPLEX**------------------------------------------Office complex carpark
- **WORKSHOP**-----------------------------------------------Muster area carpark
- **COAL PREPARATION PLANT**-----------------------------Office complex carpark
- **MINE**-----------------------------------------------Crib hut hardstand

Staff will be notified of evacuation via any or all of the following methods:

- Communication by 2-way radio;
- Communication by telephone;
- Sounding of audible alarm, within office complex;
- The request of Fire Wardens or other Emergency Response Personnel.
If further evacuation is required, the Fire Wardens will move personnel to secondary Assembly Areas.

**All Clear and Re-entry** - The Team Leader/Supervisor shall issue the all clear and permission to re-enter the site of an emergency. Although the area of the emergency may be safe to enter, disaster management may continue for some time until recovery is enacted. The BRT Leader will formally announce the end to the disaster. Formal communication will be made with all involved agencies informing them of the completion of activities.

![Figure 3 Muster Points and Assembly Areas](image)

**Figure 3 Muster Points and Assembly Areas**
Emergency Response Guides
The ERP provides detailed emergency response guides for all identified types of potential emergencies (people, environmental, asset related incidents) at BMC. A summary of the following environment pollution related emergency guides is provided in this EPIRMP:

- Hazardous Substance Spills
- Failure of Stage Discharge Dam or CW1
- Unplanned Effluent Discharge
- Storm / Flood
- Major Health Risk (E.G. Water Contamination)
- Explosives
- Radiation Emergencies
**Hazardous Substances Spill**

BMC stores and uses a number of large quantities of hazardous substances, as listed in WorkCover Notifications of Dangerous Goods on Premises. Pollutants can include, but are not limited to, fuels and lubricants used for equipment or machinery, gas cylinders, waste materials or wastewater, effluents and sediment-contaminated stormwater, chemicals used in cleaning or production processes.

An unplanned hazardous substance spill may occur as a result of:

- Inundation by flood waters
- Failure of hazardous substance storage infrastructure
- Blockage in drains between dams and infrastructure in the system
- Unapproved hazardous substance use/disposal.

Any unplanned discharge is likely to leave site via Dry Creek catchment.

In the event of a significant unplanned spill/discharge the following actions are likely to be taken, dependant on the particular details of the event:

1. Persons witnessing or coming upon a significant spill shall activate the General Emergency Response Procedure.
2. Contain the spill:
   - Block off drains close to spill, Plug the leak at source or shut appropriate valve(s) (if safe to do so);
   - Confine land spills using booms, sand or other inert material;
   - Confine spills on water using dam booms & absorbent pads.
3. Clean-up the spill using absorbent material. Remove contaminated material for remediation or treat *in-situ*. Environmental Spill Kits are located in the following areas:
   - Mine Cribhut
   - Workshop Fuel Farm
   - In Pit Fuel Farm
   - Workshop
   - CHPP
   - Erection Pad
   - Orica Compound

   All contaminated products used to absorb the spill are to be placed in sealed containers and labelled, ready for appropriate disposal.
4. Reference to the operations spill reporting guide shall be made and follow-up reporting on the details and nature of the incident may be required, such as reporting the incident immediately to all relevant Authorities.
5. Undertake water or soil sampling and analysis, as deemed necessary
6. Post Incident debriefing with emergency response personnel and others involved to identify what went well, and opportunities for improvement.
Failure of Staged Discharge Dam / CW1

BMC operate two prescribed dams under the Dam Safety Act 1978. These dams are:

- Stage Discharge Dam (280ML); and
- Clean Water Dam 1 (CW1) (900ML).

Staged Discharge Dam is located in the upper catchment of Dry Creek and approximately 1.5km north-east of the mine’s infrastructure facilities (refer attached plan). The dam provides sufficient volume to store water for all but the most extreme wet weather conditions. The dam is maintained at a minimal operating level thus maximising the storage capacity of impounded water. The dam is the site’s licenced discharge facility for discharges under the Hunter River Salinity Trading Scheme.

CW1 is located north of Wybong Road in the Dry Creek catchment and approximately 200m north of the Bengalla pit. This dam is designed to catch and divert water away from the Bengalla Mine. As such, this dam is not designed to store water for long periods of time.

Failure of the Bengalla dams may occur as a result of:

- Inundation by flood waters
- Failure of the Real Time System and operational status of gate valves with restrictions imposed to discharge under the Hunter River Salinity Trading Scheme
- Instability of rock-lined embankment wall due to blast impacts or earthquake
- Liquefaction effects in wall foundation

In the event of failure to the dam wall the following actions are likely to be taken, dependant on the particular details of the event:

1. Persons witnessing or coming upon a significant spill shall activate the General Emergency Response Procedure.
2. Initiate and deploy equipment to contain released flood waters.
3. Contact tenants (all properties within likely impact zone are owned by BMC) downstream of mining operation and alert tenants of impending rising flood waters. Note: these tenants are above the 1 in 100-year flood zone.
4. Report incident immediately to all relevant Authorities, as necessary. Including, consult with the Dam Safety Committee and follow requirements of their “Emergency Management for Dams” (DSC2-G, June 2010).
5. Undertake water sampling and analysis, as deemed necessary
6. Post Incident debriefing with emergency response personnel and others involved to identify what went well, and opportunities for improvement.
Unplanned Effluent Discharge

BMC operate a waste water treatment plant (WWTP) on-site, it is located between the CHPP stockpiles and the East and West Facilities Dams. The WWTP receives waste water from the administration and bathhouse showers and toilets as well as from the Light Vehicle and Heavy Vehicle Washbays. The Waste Contractor also transports waste water to the WWTP from locations around site (e.g. erection pad crib huts).

An unplanned effluent discharge from the WWTP may occur as a result of:

- Inundation by flood waters
- Failure of the Real Time System and operational status of pumps within the system
- Blockage in drains between dams and infrastructure in the system

Any unplanned discharge is likely to pool in the drains surrounding the Waste Water Treatment Plant.

In the event of a significant unplanned effluent discharge the following actions are likely to be taken, dependant on the particular details of the event:

1. Persons witnessing or coming upon a significant spill shall activate the General Emergency Response Procedure.
2. Contain the spill:
   - Block off drains close to spill, Plug the leak at source or shut appropriate valve(s) (if safe to do so);
   - Find the cause of the discharge and amend if possible
3. Reference to the operations spill reporting guide shall be made and follow-up reporting on the details and nature of the incident may be required, such as reporting the incident immediately to all relevant Authorities.
4. Clean-up the spill
5. Undertake water or soil sampling and analysis, as deemed necessary.
6. Post Incident debriefing with emergency response personnel and others involved to identify what went well, and opportunities for improvement.
**Storm/Flood**

All dams have been designed to meet all the requirements of SSD-5170 and the requirements of the Dam Safety Committee, where applicable. All surface water diversion drains, outlets, contour drains, catch drains and other waterways have been designed to convey peak runoff discharge rates estimated using the Rational Method for a 1 in 20-year Average Recurrence Interval (ARI) storm event. All sedimentation dams are designed to contain the total runoff from a 1 in 10 year ARI storm event. All drains are typically trapezoidal in section with 3H:1V channel batters and are designed to convey runoff at non erosive velocities of less than 1.5 m/s.

Unplanned flooding of the operation may occur as a result of:

- Inundation by flood waters, due to a storm even with a greater ARI than the water management system’s design criteria.
- Prolonged wet period.

In the event of a significant storm/flood event the following actions are likely to be taken, dependant on the particular details of the event:

2. Take necessary steps to contain damage and ensure no ongoing threat to anyone working on site.
3. Liaise with site technical personnel, internal and external emergency response personnel to ascertain extent of damage and required response.
4. Report the incident immediately to all relevant Authorities, as necessary.
5. Pump water to other dams away from flood affected areas.
6. Contain contaminated material (caused by inundation and failure of machinery, diesel/ oil leaks) using booms if practicable.
7. Undertake water sampling and analysis, as deemed necessary.
8. Post Incident debriefing with emergency response personnel and others involved to identify what went well, and opportunities for improvement.
Major Health Risk (e.g. Water Contamination)

Potable water is trucked to site by a local water carrier from the Muswellbrook Shire Water Treatment Plant. This water is used for drinking and shower purposes within the main office, bathhouse and adjacent workshop areas and delivered to the dragline and drills for similar uses.

An unplanned health risk may occur as a result of:

- Contamination of equipment with Legionella bacteria and/or microbial organisms

In the event of a major health risk the following actions are likely to be taken, dependant on the particular details of the event:

1. Investigate problem. Identify and isolate contamination.
2. Isolate area until re-test takes place
3. Review water treatment programme
4. Take necessary remedial action including immediate on-line decontamination.
5. Undertake sampling and analysis
6. Report the incident immediately to all relevant Authorities, as necessary.
7. Undertake sampling, as required.
8. Post Incident debriefing with emergency response personnel and others involved to identify what went well, and opportunities for improvement.
Explosives

At any given time on a mine site there are vehicles that have the potential to create an explosive situation.

These can include:

- Bulk Explosive Trucks
- Shot Firers Vehicles
- Empty Bulk Fuel Tankers
- Bulk LPG Carriers

In an accident these vehicles can quickly become lethal weapons. From an environmental perspective, any spillage of explosives related material shall be treated similar to any other hazardous substance spill.


**Radiation Emergencies**

**Radioactive Source Locations at BMC**

- a) Centrifuge floor of CHPP Washery Building on correct medium pipeline one on each module
- b) In front of clarified water tank on the first thickener, underflow pump, delivery pipeline.
- c) In front of clarified water tank on the second thickener, underflow pump, delivery pipeline.
- d) In front of clarified water tank on the third thickener, underflow pump, delivery pipeline

The Basic Principles of Radiation Safety are:

- Minimum time – (near)
- Maximum distance – (from)
- Maximum shielding – (around)

In the event of radioactive gauge damage, the following actions are likely to be taken, dependant on the particular details of the event:

1. If a radiation source appears damaged in any way isolate the area for 5 metres around the source and notify relevant site personnel.
2. Inspect the gauge and render safe. Any work involving the removal or dismantling of any part of the gauges or sources is only to be carried out by a licensed R10 Radiation Worker.
3. Report the incident immediately to all relevant Authorities, as necessary.
4. Post Incident debriefing with emergency response personnel and others involved to identify what went well, and opportunities for improvement.
PART 3 – ERP ROLES AND RESPONSIBILITIES

In the emergency the roles defined in Table 1 shall be assigned to assist manage the event.

Table 1: Roles and responsibilities

<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Controller</td>
<td>Assess the situation and request resources and assistance required to manage the situation</td>
</tr>
<tr>
<td>Emergency Services Coordinator</td>
<td>Ensuring site emergency response capabilities and liaison between BRT and ERT operations</td>
</tr>
<tr>
<td>Communications Person</td>
<td>Contact on site ERT and call out extra mine personnel as required, keep a record of communications, issue duty cards</td>
</tr>
<tr>
<td>Emergency Response Team Captain / Delegate</td>
<td>Coordinate ERT actions, maintain regular communications, ensure ERT have required resources</td>
</tr>
<tr>
<td>Incident Environmental Officer</td>
<td>Assess the incident for environmental issues, coordinate any environmental clean-up, liaise with neighbours &amp; monitor site for issues.</td>
</tr>
<tr>
<td>Surveyor</td>
<td>Provide plans of affected area, prepare additional plans as required &amp; assist incident investigations</td>
</tr>
<tr>
<td>Mine Site Access Sentries</td>
<td>Control entry and exit from the site and ensure sentries are placed at each boom gate and access road.</td>
</tr>
<tr>
<td>Escorts</td>
<td>Escort authorized personnel to incident site.</td>
</tr>
<tr>
<td>Mechanical / Electrical Engineers</td>
<td>Check &amp; report on condition of essential services, inspect equipment involved &amp; assist with investigations</td>
</tr>
<tr>
<td>Supply Officer</td>
<td>Ensure stores are issued as required, record &amp; monitor stock depletion, organize canteen facilities for ERT personnel and other participants</td>
</tr>
</tbody>
</table>
PART 4 – USEFUL DOCUMENTS

Initial Incident Report
See Appendix B.

Communication of Environmental Incidents
NO EMERGENCY DETAILS TO BE RELEASED TO UNAUTHORIED PERSONS (e.g. MEDIA) WITHOUT GENERAL MANAGER’S PERMISSION

Communicating with neighbours and the local community is an important element in managing the response to any incident. Early warnings and regular updates (during and post incident) are to be provided (after appropriate internal approval) to the owners and occupiers of premises who may be affected by an environmental incident occurring at Bengalla.

Communication mechanisms may include incident notifications placed on the Bengalla website; the use of telephone calls or SMS; emails to community representatives; newsletter, community information meetings and doorknocking of affected community members, as appropriate to the circumstances. Consideration must also be given to notifying any sensitive premises in close proximity, such as schools, pre-schools, nursing homes and hospitals. The most appropriate communication mechanism will be employed based on the particular details of the incident, such as time of day, incident severity, available communication mechanisms.

Examples of the notification advice for environment related incidents are provided in Table 2.

Table 2: Examples of information that may need to be communicated to community

<table>
<thead>
<tr>
<th>Potential Emergency</th>
<th>Stakeholders to be notified</th>
<th>Key message</th>
<th>Possible Communication Mechanism During an Incident</th>
<th>Possible Communication Mechanism Post Incident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spill of a pollutant, (hazardous substance) with offsite impacts (water and/or land contamination)</td>
<td>• Downstream neighbours</td>
<td>Avoid incident zone</td>
<td>• Phone call /SMS • Door knocking</td>
<td>• Website notification • Community Information meeting • Newsletter</td>
</tr>
<tr>
<td></td>
<td>• If road closures are required – likely traffic such as emergency services and school buses.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air Pollution (e.g. tyre fire)</td>
<td>• Near neighbours downwind of operation • Sensitive receptors</td>
<td>Close windows and doors and remain inside.</td>
<td>• Phone call /SMS • Door knocking</td>
<td>• Website notification • Community Information meeting • Newsletter</td>
</tr>
<tr>
<td>Staged Discharge Dam failure (flooding)</td>
<td>• Downstream neighbours • If road closures are required – likely traffic such as emergency</td>
<td>• Relocate livestock and equipment</td>
<td>• Phone call /SMS • Door knocking</td>
<td>• Website notification • Community Information meeting • Newsletter</td>
</tr>
<tr>
<td>Unplanned Effluent Discharge</td>
<td>Keep clear of Dry Creek catchment</td>
<td>Do not use water from Dry Creek until further notified.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----------------------------------</td>
<td>--------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>services and school buses</td>
<td>• Downstream neighbours</td>
<td>Avoid incident zone</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Phone call /SMS</td>
<td>• Website notification</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Community Information meeting</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Newsletter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In determining the extent of community notification required, the particular details of an event and the environmental conditions at the time of the incident should be considered. For example, for potential air emission incidents the following aspects should be considered: type of pollutant, prevailing winds, height and magnitude of an emission, as well as the location of any on-site fallout or off-site impacts, the likelihood of the pollutant reaching ground level, and possible impacts on sensitive receptors.
Maps
The following figures (4 - 7) provide further reference for managing the likely impacts of environmental pollution incidents at BMC.

Figure 4 Location of BMC
Figure 5 Potential air quality related pollution incident

Figure 6 Potential water related pollution incident
Figure 7 Location of potential pollutants on the premises
**After Action Review - Debrief**

When a disaster/emergency has been resolved, ERT and Supervisor for the site emergency must conduct a Post-Incident Review within one month. A post-incident analysis report should be prepared with copies forwarded to the relevant stakeholders. All records of the incident, including the various logs and forms, should be filed for future reference across the operation. The incident investigation will contain actions where required that reflect response improvements. The review should utilise the following approach and consider the areas outlined in the table below:

- **Sustain** – Those policies, procedures, plans and actions that were deemed to be appropriate, functional or suitable;
- **Improve** – Those policies, procedures, plans and actions that were deemed to require attention and enhancement if an acceptable level of competency is to be achieved in future;
- **Fix** – Those policies, procedures, plans and actions that were deemed to be inadequate or absent and must be fixed if an acceptable level of competency is to be achieved in future.

See Appendix C for after action review debrief table.

**Staff Training**

Staff training will be undertaken in the form of toolbox talks, formal staff training and undertaking simulated incident exercisers at U-Day's and other workshops on a regular basis to ensure that all employees are familiar with the Plan. All records of training exercises are to be kept on the Environmental Management System in accordance with the POEO Act and EPL.

**Testing the Plan**

Under the POEO Act, clauses 98C(1)(n), (o) and (p), 90C(2)(f) and (g), 98E(1) and 98E(2); Plans must be tested routinely at least once every 12 months. The testing is to be carried out in such a manner as to ensure that the information included in the plan is accurate and up to date, and that each plan is capable of being implemented in a workable and effective manner.

The two usual methods of testing are undertaking desktop simulations and practical exercises or drills. Testing must cover all components of the plan, including the effectiveness of training.

Plans must also be tested within one month of any pollution incident occurring in the course of an activity to which a licence relates to assess, in the light of that incident, whether the information included in the plan is accurate and up to date, and the plan is still capable of being implemented in a workable and effective manner.

All records relating to the Testing of the Plan are to be retained on the Environmental Management System in accordance with the POEO Act and this Plan.
PART 5 – CONTACT INFORMATION

**Centre of Expertise Database**

A Centre of Expertise Database is a list of potential contacts for notification or assistance during an emergency. The database is maintained on site and stored electronically. Hard copies are maintained and stored with the BRMP and supporting plans.

**BMC Contact Numbers**

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Contact Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Craig White</td>
<td>Environment &amp; Approval Specialist</td>
<td>0428 429 525</td>
</tr>
<tr>
<td>OCE</td>
<td>Environmental Hotline</td>
<td>1800 656 892 (24 Hour Hotline)</td>
</tr>
</tbody>
</table>

Part 5.7 of the Protection of the Environment Operations Act 1997 (POEO Act) requires the occupier of the premises, the employer or any person carrying on the activity which causes a pollution incident to immediately notify each relevant authority when material harm to the environment is caused or threatened.

Firstly, call 000 if the incident presents an immediate threat to human health or property. Fire and Rescue NSW, the NSW Police and the NSW Ambulance Service are the first responders, as they are responsible for controlling and containing incidents.

If the incident does not require an initial combat agency, or once the 000 call has been made, notify the relevant authorities in the following order:
- Environment Protection Authority
- Ministry of Health via the local Public Health Unit
- SafeWork NSW – 13 10 50
- Muswellbrook Shire Council
- Fire and Rescue NSW
## External Emergency Numbers

<table>
<thead>
<tr>
<th>Muswellbrook</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambulance</td>
<td>Emergency - 000</td>
<td>General - 13 12 33</td>
</tr>
<tr>
<td>Police</td>
<td>Emergency - 000</td>
<td>General - 02 6542 6999</td>
</tr>
<tr>
<td>Fire Brigade</td>
<td>Emergency - 000</td>
<td>General – 02 6541 2846</td>
</tr>
<tr>
<td>Rural Fire</td>
<td>Emergency - 000</td>
<td>General – 02 6543 4246</td>
</tr>
<tr>
<td>Medical Centre</td>
<td></td>
<td>02 6543 1222 – Business Hours</td>
</tr>
<tr>
<td>Hospital</td>
<td></td>
<td>02 6542 2000 – Business Hours</td>
</tr>
<tr>
<td>Hospital Nurse’s Station</td>
<td></td>
<td>02 6542 2021 – After Hours</td>
</tr>
<tr>
<td>Environment Protection Authority (EPA) Environment Line</td>
<td></td>
<td>13 15 55</td>
</tr>
<tr>
<td>Public Health Officer (Ministry of Health) - Newcastle</td>
<td></td>
<td>02 4924 6477</td>
</tr>
<tr>
<td>SafeWork NSW</td>
<td></td>
<td>13 10 50</td>
</tr>
<tr>
<td>Muswellbrook Shire Council</td>
<td></td>
<td>02 6549 3700</td>
</tr>
<tr>
<td>Railways Duty Officer</td>
<td></td>
<td>1800 677 766</td>
</tr>
<tr>
<td>Singleton</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mine Rescue Brigade</td>
<td>6573 2999</td>
<td>02 6573 9000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDICES
Appendix A: Test Exercise 15 December 2016

Bengalla Mining Company conducted a test exercise on 15th December 2016.

BENGALLA PERSONNEL INVOLVED:
Laurel McGinnity (Environmental Advisor)
Ben Simpson (Environmental Advisor)
Craig White (Environmental & Approvals Specialist)
John Campbell (Technical Services Manager)

REQUIREMENTS OF TESTING (FROM POEO ACT):

98E Testing of Plan

(1) The testing of a plan is to be carried out in such a manner as to ensure that the information included in the plan is accurate and up to date and the plan is capable of being implemented in a workable and effective manner.

(2) Any such test is to be carried out:

(a) routinely at least once every 12 months, and

(b) within 1 month of any pollution incident occurring in the course of an activity to which the licence relates so as to assess, in the light of that incident, whether the information included in the plan is accurate and up to date and the plan is still capable of being implemented in a workable and effective manner.

SCENARIO:
Significant heating in the clean coal stockpile has resulted in a stockpile fire. Prevailing winds are carrying large volumes of smoke towards the town of Muswellbrook.

LEARNINGS AND IMPROVEMENTS TO PIRMP (TO BE COMPLETED BY ENVIRO TEAM):
Useful to include relevant documents to refer (i.e. EPL 6538, SSD-5170, relevant management plans)

Document Maintenance
Update website link and reference
Confirm that hard copies are kept in areas suggested
Changes to document must be approved by BRT leader
Legal advice may be required prior to approving amendments to the plan.
Hazardous Substances Spill
Confirm spill kits located in areas suggested

Unplanned Effluent Discharge
Remove reference to Orica crib huts

Storm/ Flood
Update reference to DA 211/93 to SSD-5170
Confirm design criteria for dams, contours and waterways

Part 4 – Useful Documents
Update Initial Incident Report to reflect current ownership structure (i.e. remove references to RTCA)
Incorporate details from POEO Act s.150 (Relevant information to be given)

Communication of Environmental Incidents
Update reference to Coal & Allied website

Maps
Update with current site maps as appropriate

Part 5 – Contact Information
Check phone numbers are current
## Appendix B: Initial Incident Report

<table>
<thead>
<tr>
<th>Nature of Incident:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Incident: Time of Incident:</td>
</tr>
<tr>
<td>Duration of Incident: Location of Incident:</td>
</tr>
<tr>
<td>Notified by: Contact Number:</td>
</tr>
</tbody>
</table>

### Incident Details

Circumstances Incident Occurred:

---

Cause of Incident:

---

Action Taken:

---

Estimated quantity or volume and concentration of all pollutants involved:

---

Risk of further injury or disruption to staff:
Details:

---

Risk to business functions:
Details:

---

Have staff been evacuated:
Details, including location:
Any injuries/fatalities:
Type of injury and how severe?

Which hospitals are they in?

<table>
<thead>
<tr>
<th>Notification Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EPA</strong></td>
</tr>
<tr>
<td>Details:</td>
</tr>
<tr>
<td><strong>Ministry of Health</strong></td>
</tr>
<tr>
<td>Details</td>
</tr>
<tr>
<td><strong>Muswellbrook Shire Council</strong></td>
</tr>
<tr>
<td>Details</td>
</tr>
<tr>
<td><strong>SafeWork NSW</strong></td>
</tr>
<tr>
<td>Details</td>
</tr>
<tr>
<td><strong>Fire and Rescue NSW</strong></td>
</tr>
<tr>
<td>Details</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal (Staff)</strong></td>
</tr>
<tr>
<td>Name/Details given:</td>
</tr>
<tr>
<td>Name/Details given:</td>
</tr>
<tr>
<td>Name/Details given:</td>
</tr>
<tr>
<td>Name/Details given:</td>
</tr>
<tr>
<td>External: (media, clients, suppliers)</td>
</tr>
<tr>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Name/Details given:</td>
</tr>
<tr>
<td>Name/Details given:</td>
</tr>
<tr>
<td>Name/Details given:</td>
</tr>
</tbody>
</table>

External agencies involved (Police, Hospitals, Fire):

| Any actions already taken? Focus on big picture – e.g. evacuated XX office, etc. |
|-------------------------------|---------------------------------|------------------|
| What?                         | Who is responsible for task     | When is task due? |
|                               |                                 |                  |
|                               |                                 |                  |
|                               |                                 |                  |

ONCE INITIAL REPORT ABOVE HAS BEEN TAKEN - fill in the boxes below

<table>
<thead>
<tr>
<th>Details confirmed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>This checklist was completed by</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date checklist completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time checklist completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>
## Appendix C: After Action Review – Debrief Table

<table>
<thead>
<tr>
<th>Phase</th>
<th>Sustain</th>
<th>Improve</th>
<th>Fix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentation and procedures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activation process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisation structure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stakeholder management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recovery management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training and preparedness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leadership</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>