COPPABELLA MINE

COP-ENV-MPL- WASTE MANAGEMENT PLAN

September 2014
Table of Contents

1.0 Purpose .................................................................................................................................... 3

2.0 Scope........................................................................................................................................ 3

3.0 Regulatory Framework ........................................................................................................... 3

4.0 Waste Management Objectives ............................................................................................ 3

5.0 Waste Type, Source, Management and Quantity ........................................................................ 4

6.0 Waste Management Hierarchy .................................................................................................. 6

  6.1 General Site Waste Management .......................................................................................... 7

  6.2 Waste Minimisation ............................................................................................................. 8

  6.3 Recycling ............................................................................................................................... 8

  6.4 Reuse ...................................................................................................................................... 9

  6.5 Waste Disposal .................................................................................................................... 9

7.0 Accidents, Spills and Incidents ............................................................................................... 9

8.0 Tyre Disposal .......................................................................................................................... 10

9.0 Locations of Disposal of Wastes ............................................................................................ 10

10.0 Monitoring, Reporting and Review ...................................................................................... 13

11.0 Responsibilities and Accountabilities .................................................................................... 14

12.0 Communication and Training ............................................................................................... 15
1.0 Purpose
Peabody Energy, Coppabella Mine shall ensure potential local community and environmental impacts, which may result from the generation and disposal of waste, is effectively managed by integrating the principles of the waste management hierarchy into daily operations. This document is to assist in control of environmental risks by outlining procedures and accountabilities which all Coppabella Mine site personnel must adhere to.

2.0 Scope
This management plan covers the documented procedures to identify and address waste generated from processes of all operational units at the Coppabella Mine and identify management practices to control waste through minimisation, tracking, handling, recycling and proper disposal methods, in accordance with corporate and regulatory requirements.

3.0 Regulatory Framework
Regulatory requirements which form a part of the governance of waste management at Coppabella Mine are:
- Queensland Environmental Protection Act 1994 (EP Act);
- Queensland Environmental Protection Regulation 1998 (EP Regulation);
- Queensland Environmental Protection (Waste Management) Policy 2000, and

Section 13 of the EP Act 1994 defines waste as anything that is 'left over, or an unwanted by-product from an industrial, commercial, domestic or other activity; or surplus to the industrial, commercial, domestic or other activity generating wastes'.

Coppabella Mine operates under a specific Environmental Authority, issued under the Environmental Protection Act (1994).
Additional environmental management documents which outline site waste management practices are located in Coppabella Mine’s Environmental Management System (EMS) and are stated below:
- Coppabella Environmental Management Plan 2010;
- Coppabella Mine Plan of Operations 1 January 2014 to 31 December 2014;
- Waste Tyre Storage and Disposal Procedure 2014, and

4.0 Waste Management Objectives
The objectives of waste management at Coppabella Mine are:
- To identify waste types and quantities on site;
- To maximise the beneficial use of production waste material for site activities;
To identify potential re-use or recycling opportunities and ensure appropriate handling and collection procedures are in place;
To investigate methods to minimise waste generated by the mine and implement reasonable and feasible measures to minimise waste;
To ensure the disposal of wastes conforms to applicable guidelines or licences;
To ensure areas where fuels, oils or other potential contaminants are stored are appropriately contained, bunded and managed, and
To ensure sewage disposal is managed properly.

5.0 Waste Type, Source, Management and Quantity
Waste which Coppabella Mine generates can be categorised into two streams; Production and Non-production waste.

Non-production waste includes:
- General domestic-type waste from the on-site buildings, amenities, ablutions, first aid facilities and routine maintenance consumables, i.e. paper and cardboard;
- Hydrocarbons, oils and grease;
- Scrap steel and other waste remaining from equipment maintenance, and
- Sewage/septic pump out.

Production waste consists of:
- Mined rock from the open cut mining area;
- Mined overburden and interburden materials from the open cut mining area, and
- Potentially contaminated solids from the maintenance workshop, wash-down pad and fuel storage areas.

Ultrafine, fine and coarse rejects generated by the coal handling and preparation plant (CHPP) in the production of coal are disposed of at the co-disposal area. Refer to the Coppabella Mine Co-disposal Operational Plan 2014 for additional details.

Waste type, source, management and quantities are listed in Table 1. These figures are representative of the FY2013 and subject to change over the life of the year.
### Table 1: Waste Type, Source, Management and Quantity

<table>
<thead>
<tr>
<th>Waste Type</th>
<th>Source</th>
<th>Management/Disposal</th>
<th>Annual Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper</td>
<td>Office/workshop areas</td>
<td>Paper to be placed into recycling bins for collection</td>
<td>109.6 tonnes (including cardboard and other recyclables)</td>
</tr>
<tr>
<td>Cardboard</td>
<td>Used as packaging for various items</td>
<td>Cardboard to be placed into recycling bins for collection</td>
<td>See above</td>
</tr>
<tr>
<td>PET bottles, aluminium cans, etc.</td>
<td>Office, Crib Huts, Workshop</td>
<td>Placed into recycling bins for collection</td>
<td>See above</td>
</tr>
<tr>
<td>Plastic packaging</td>
<td>Used for shrink wrap over large goods deliveries. Used for general packaging.</td>
<td>Placed into general rubbish receptacles for disposal to landfill</td>
<td>See below</td>
</tr>
<tr>
<td>Putrescible waste</td>
<td>Waste from employees</td>
<td>Placed into general rubbish receptacles for disposal to landfill</td>
<td>486.22 tonnes (includes all general waste i.e. plastic packaging)</td>
</tr>
<tr>
<td>Timber</td>
<td>Pallets/crates from goods deliveries</td>
<td>ERT fire training, stacks burnt on site</td>
<td>Variable</td>
</tr>
<tr>
<td>Metal</td>
<td>Scrap materials from maintenance</td>
<td>Metals to be stored separately and removed from site for recycling</td>
<td>Variable</td>
</tr>
<tr>
<td>Hydrocarbons</td>
<td>Used in workshop and servicing areas</td>
<td>Any excess oil which is collected will be stored in an appropriately bunded location prior to removal by a licensed waste oil recycling and</td>
<td>Grease Trap – 1400L Absorbent Oily rags – 228 tonnes</td>
</tr>
<tr>
<td>Waste Type</td>
<td>Details</td>
<td>Disposal Method</td>
<td>Status</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Batteries</td>
<td>Expended batteries from vehicle fleet</td>
<td>Will be removed from site for collection by a licensed contractor and transported to a licensed facility</td>
<td>Variable</td>
</tr>
<tr>
<td>Tyres</td>
<td>Expended tyres from vehicle fleet</td>
<td>Tyres will be disposed of in pit. Refer to the Waste Tyre Storage and Disposal Procedure 2014.</td>
<td>Refer to Waste Tyre Storage and Disposal Procedure 2014</td>
</tr>
<tr>
<td>Effluent</td>
<td>From toilets and office areas</td>
<td>Effluent will be pumped out by a licensed contractor for disposal at a licensed facility</td>
<td>Approximately 1.5ML</td>
</tr>
<tr>
<td>Waste rock</td>
<td>From mining activities</td>
<td>Backfilling of mined out areas and rehabilitated</td>
<td>Approximately 64 million tonnes</td>
</tr>
</tbody>
</table>

### 6.0 Waste Management Hierarchy

Peabody is committed to minimising the impact of waste on the environment and the community through the adoption of appropriate waste management principles.

The waste management hierarchy has been adopted at Coppabella Mine to achieve the best environmental outcomes and is as follows (listed in order of most preferred to least preferred):
The hierarchy and principles in waste management regulations underlie the waste management program for Coppabella Mine. Leading practice waste management will be incorporated into the Coppabella Mine through the ongoing assessment and application of cleaner production waste management opportunities throughout the life of the operations.

6.1 General Site Waste Management
The following actions/strategies have been put into practice to minimise the accumulation/generation of waste on site and disposal to landfill.

- All personnel working on the mine site undergo a site induction. The site induction includes the waste management practices on the mine site.
- Toolbox presentations encompass site waste management on a yearly basis to refresh and familiarise site personnel on disposal practices.
- All waste areas have been clearly identified as waste storage areas. This includes bins and other receptacles for domestic and recycling waste, which are marked according to the type of waste accepted, e.g. scrap metal, oil filters and oily rags, other recyclables, general waste, etc.
- All waste storage containers are colour coded (Table 2).
- Where possible, preference is given to contractors who remove their own waste products from site when they complete a job (e.g. some maintenance contractors collect waste oils and greases they generate, and remove them when they leave site).
- With the exception of scrap tyres, there is no long term storage of any waste materials on the mine site. Notably, small quantities of the mined rock have been utilised in the construction of rock bunds and other items of mine site infrastructure such as the ROM coal and product stockpile areas.

![Figure 1: Waste Management Hierarchy](image)

### Table 2: Container Types and Waste Collected

<table>
<thead>
<tr>
<th>Container Type</th>
<th>Waste Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title</th>
<th>Owner</th>
<th>Date Issued</th>
<th>Revision Status</th>
<th>Date Reviewed</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>COP-ENV-MPL Waste Management Plan</td>
<td>MT/AT</td>
<td>05/09/2014</td>
<td>Current</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>
### 6.2 Waste Minimisation

The following methods have been utilised to minimise waste production onsite:

- Ordering specifications of material quantities for the workshop and contractors are as accurate as possible to avoid the over-ordering of materials and the potential for excess waste.
- The use of degreasers is regulated in the workshop areas to ensure the efficiency of the oil-water separator.
- All waste items suitable for reuse or recycling are utilised in such a way.

### 6.3 Recycling

Coppabella has provided appropriate storage areas or receptacles for all materials that are suitable for recycling. The main recyclable waste materials that are generated by the mine and their primary source(s) are as follows:

- **Paper, plastics, aluminium cans and cardboard:** are primarily generated within the site office facilities and crib rooms, but also in lesser quantities from contractor offices and workshops. These items are placed into appropriate collection bins, which are collected by a recycling contractor on a regular basis.
- **Scrap metal:** is generated in significant amounts and on a continuing basis from the Coppabella Mine workshop and contractors. The scrap metal is placed into large skip bins, which are collected by a metal recycler as sufficient quantities are available.
- **Oil filters and oily rags:** are generated at the maintenance workshops on the mine site and have their own storage receptacles. A licenced contractor removes these products from site on a regular basis.
- **Waste oil:** is collected within a bunded storage facility onsite where it is stored until the licenced contractor removes the oils for recycling. Other waste oils and hydrocarbons captured in the sump of the wash bay from the refuelling and maintenance areas are stored within waste oil bins once it has passed through an oil-water separator. This waste oil is also removed from site by a licensed waste oil contractor for recycling.
• Batteries are stored in a bunded area on site and are removed from site for delivery to a facility able to dispatch them to an appropriate recycling facility.
• Miscellaneous recyclables: including printer cartridges and plastics are also stored at appropriate locations prior to collection by, or delivery to, appropriate recycling facilities.

Regular reports on compliance to recycling are received by Coppabella Mine’s waste contractor and are monitored to ensure that the appropriate separation and collection of waste is being managed appropriately.

6.4 Reuse
Opportunities for the re-use of materials on site are evaluated on a regular basis, i.e. mined rock is to be re-used where possible in rehabilitation activities.

6.5 Waste Disposal
Disposal is viewed as the last option in the management of waste, only if the avoidance, re-use or recycling of the waste in question is not practical. The following systems have been implemented at the mine in regard to waste disposal.
• Only transport operators or companies that are licensed by the appropriate authorities are contracted to remove waste from the mine site.
• Waste vehicle tyres are stockpiled in designated areas to await disposal in the pit as per the Waste Tyre Storage and Disposal Procedure 2014, where they will be dumped within the pit under the approval and direction of Coppabella Mine’s Environmental Department. Details will be recorded as outlined in the disposal procedure.
• Waste materials, which cannot be either re-used or recycled, are sent to a licensed landfill that may accept that category of waste. An experienced waste contractor will remove the waste off site.

All regulated wastes as nominated in Schedule 7 of the Environmental Protection Regulation 1998 are to be removed off site in accordance with the Queensland Waste Tracking Guidelines. This includes the use of Waste Tracking Certificates which are completed by a licensed waste operator prior to any materials being removed from site.

7.0 Accidents, Spills and Incidents
As per Condition C7 of Coppabella Mine’s EA, the process for managing emergency spills and uncontrolled discharge events must be detailed in the relevant Plan of Operations.

Emergency spills and uncontrolled discharge events will be managed as environmental incidents with the environmental team notified immediately with Coppabella Mine’s Emergency Response – Trigger Action response Plan initiated. Site emergency initiated if the event is identified as significant. See the relevant Plan of Operations for further details on the process for management of these events.

Spill response measures on dealing with non-emergency spills are outlined below.

1. Identify
• Identify what the spill is to determine the appropriate clean up

2. Control:
• Control the spill at the source if safe to do so
  • e.g. Turn off leaking valves, stand up overturned drum, isolate burst hose

3. Contain:
• Prevent the spread of the spill and the chance for further contamination
  • Utilise spill kits
  • Prevent spill from entering stormwater drains and other waterways through temporary bunding

4. Clean-Up & Dispose:
• Soak up spill through absorbent materials, available in spill kits
  • Contaminated material is disposed of in appropriate waste bins for collection by waste contractors.
  • Where necessary, contaminated soil is excavated and buried within the co-disposal area.

5. Report
• All spills in accordance with the Coppabella reporting matrix.
  • Incident details are to be entered into Coppabella Mine’s Incident reporting system (PIMS) for retention purposes.

8.0 Tyre Disposal
Scrap tyre disposal is permitted to occur at Coppabella Mine as per EA condition E3. Detailed processes on the site disposal of tyres is outlined within the Waste Tyre Storage and Disposal Procedure 2014 and corresponding Scrap Tyre Disposal Register.

9.0 Locations of Disposal of Wastes
All scrap tyres are disposed of appropriately in pit with specific locations logged within the Scrap Tyre Disposal Register.

The following figures provides details of locations of receptacles collecting recyclables, general waste, etc. Note: the location of bins in operational areas are changed regularly.
Figure 2: General Rubbish Locations - Mine Industrial Area

Figure 3: General Rubbish Locations – Orica
Figure 4: General Rubbish Locations - Site Wide

Figure 5: Septic Tank Locations - Mine Industrial Area
10.0 Monitoring, Reporting and Review

Coppabella Mine is provided with monthly waste reports from the waste contractor outlining:

- Details of all regulated waste collected
- Details of bins emptied (both recycled and general) and percentage full;
- Details of monthly costs
- Overall compliance and recycling figures.
Based on these reports and visual inspections of the waste management areas (e.g. chemical storages, bunding, waste bins), monitoring of waste segregation practices, recycling quantities and waste disposal quantities occur as required.

Waste quantities and recycling percentages are also captured and reported on a monthly basis internally within the Coppabella Mine Corporate Environmentally Monthly Report.

Information includes the quantities and type of waste removed off site for recycling or disposal, the contractor engaged to remove the wastes, and the final destination for all waste products.

This management plan will be reviewed every 2 years with an annual review on Coppabella Mine’s waste streams and segregation practices. Details will be provided on the success of the Waste Management Plan implemented and any areas that require improvements, included and highlighted. Opportunities for the implementation of waste reduction methods will be based on annual review findings.

11.0 Responsibilities and Accountabilities

The following Table 3 outlines the responsibilities and accountabilities of key roles for waste management.

<table>
<thead>
<tr>
<th>Role:</th>
<th>Responsibility:</th>
<th>Additional:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Site Executive (SSE), Mine Manager, Environmental Superintendent</td>
<td>• Ensuring that WMP is accurate and up to date in accordance with the current EA.</td>
<td></td>
</tr>
<tr>
<td>Environmental Team</td>
<td>• Development of WMP in accordance with the current EA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Implementation of the WMP to operators through designated training forums including inductions, toolbox talks and training days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Audits through area inspections.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Collation and development of internal and external waste reports.</td>
<td></td>
</tr>
<tr>
<td>Waste Project Manager</td>
<td>• Supervising the day to day operation of the waste contract in accordance with the WMP.</td>
<td></td>
</tr>
<tr>
<td>Area Managers, Coordinators and Supervisors</td>
<td>• Ensuring their operational areas comply with this standard</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Communicate the requirements of areas to the</td>
<td></td>
</tr>
</tbody>
</table>
| Contractors and Peabody Personnel | • Ensuring that all wastes are placed into the appropriate storage areas or receptacles;  
• Ensuring they comply with all on-site regulations;  
• Ensuring they engage in safe work practices; and  
• Undertaking work practices that comply with this Waste Management Plan. |

12.0 Communication and Training

The procedures and management measures presented in the Waste Management Plan will be made available to all members of the workforce at Coppabella Mine. The responsible workforce will be made aware of the procedures through inductions, training (as required) and regular toolbox talks/meetings.

Other communication such as posters will be displayed in appropriate locations to inform personnel of recycling and waste disposal requirements.