# WAMBO COAL PTY LIMITED



# SOUTH BATES EXTENSION UNDERGROUND MINE

EXTRACTION PLAN LONGWALLS 17 TO 20

APPENDIX F
PUBLIC SAFETY MANAGEMENT PLAN



# WAMBO COAL PTY LIMITED SOUTH BATES EXTENSION UNDERGROUND MINE

# PUBLIC SAFETY MANAGEMENT PLAN LONGWALLS 17 - 20



PREPARED BY
WAMBO COAL PTY LIMITED AND
RESOURCE STRATEGIES PTY LTD

APRIL 2018 Project No. WAM-09-15 Document No. WA-MIN-MP-633 (00910229)

# **DOCUMENT CONTROL**

Document No.	WA-MIN-MP-633 (PSMP LW17-20)
Title	Public Safety Management Plan for South Bates Extension Underground Mine Longwalls 17 to 20
General Description	A management plan to ensure public safety in the mining area of Longwalls 17 to 20 at the South Bates Extension Underground Mine
Key Support Documents	Wambo Coal Health Safety Management System

## Revisions

Rev No	Date	Description	Ву	Checked
А	April 2018	Final for Submission	WCPL and Resource Strategies	P. Jaeger

The nominated Coordinator for this document is	Technical Services Manager
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Public Safety Management Plan Trigger Action Response Plan

Wambo Coal Pty Limited Health and Safety Management System Overview

#### 1 INTRODUCTION

The Wambo Coal Mine is an open cut and underground coal mining operation located approximately 15 kilometres (km) west of Singleton, near the village of Warkworth, New South Wales (NSW). The Wambo Coal Mine is owned and operated by Wambo Coal Pty Limited (WCPL), a subsidiary of Peabody Energy Australia Pty Limited.

The South Bates Extension Underground Mine is a component of the approved Wambo Coal Mine. The South Bates Extension Underground Mine is scheduled to commence in Longwall 17 in September 2018 and involves extraction of coal by longwall mining methods from the Whybrow Seam within Coal Lease (CL) 397, Mining Lease (ML) 1594 and ML 1572 (**Figure 1**).

The potential environmental impacts of the existing Wambo Coal Mine were assessed in the *Wambo Development Project Environmental Impact Statement* (the Wambo Development Project EIS) (WCPL, 2003). Development Consent DA 305-7-2003 for the Wambo Coal Mine was granted on 4 February 2004 by the then NSW Minister for Urban Affairs and Planning under Part 4 of the NSW *Environmental Planning and Assessment Act, 1979.* 

An application to modify the Development Consent (DA 305-7-2003 MOD 17) to allow the development of the South Bates Extension Underground Mine (Longwalls 17 to 25) in the Whybrow Seam was approved in December 2017. The application was accompanied by the *South Bates Extension Modification Environmental Assessment* (WCPL, 2017).

#### 1.1 PURPOSE AND SCOPE

Purpose: This PSMP for Longwalls 17 to 20 at the South Bates Extension Underground Mine

outlines the management of potential risks to public safety resulting from the proposed

secondary workings described in the Extraction Plan for Longwalls 17 to 20.

Scope: This PSMP covers risks to public safety associated with extraction of Longwalls 17 to 20

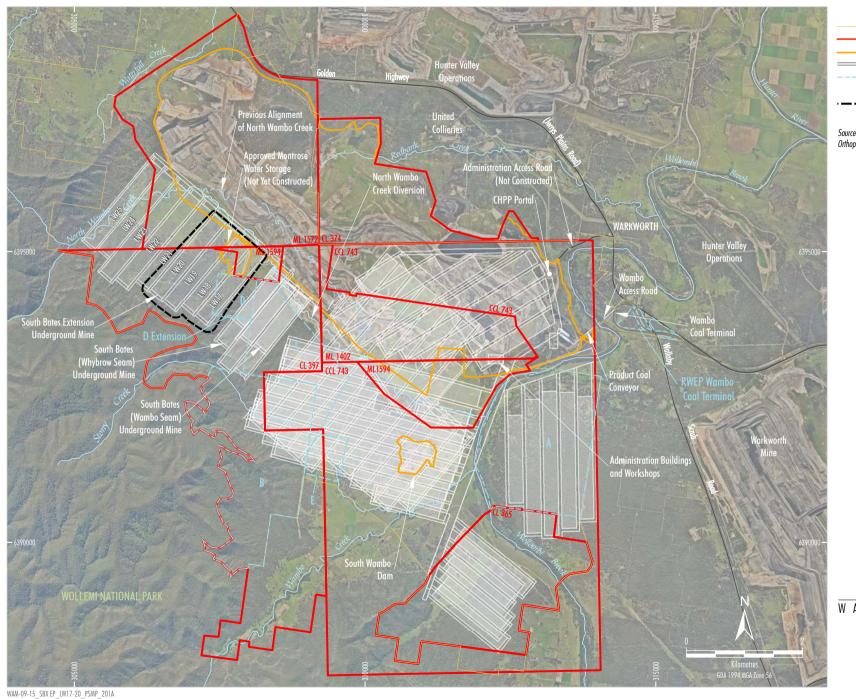
at the South Bates Extension Underground Mine (Figure 1).

**Hazards:** The primary hazards associated with the extraction of Longwalls 17 to 20 include:

- surface cracking;
- cliff instability;
- ground deformations; and
- damaged infrastructure (e.g. powerlines, roads and access tracks).

**Risks:** Members of the general public potentially at risk due to the extraction of Longwalls 17 to 20 are limited to those accessing WCPL-owned land.

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LEGEND
WCPL Owned Land
Mining and Coal Lease Boundary
Existing/Approved Surface Development Area
Approved Underground Development
Remnant Woodland Enhancement Program
(RWEP) Area
Extraction Plan Application Area

Source: Department of Lands (2017); WCPL (2018) Orthophoto: WCPL (May 2017)

<u>Peabody</u>

WAMBO COAL MINE

Approved Wambo Coal Mine Layout

This PSMP has been prepared in accordance with Condition 22C(g) of Schedule 4 of the Development Consent (DA 305-7-2003) as a component of the South Bates Extension Underground Mine Longwalls 17 to 20 Extraction Plan.

Management plan requirements applicable to the preparation of this PSMP, and where each of these requirements is addressed within this PSMP, are summarised in **Table 1**.

Table 1
Public Safety Management Plan Requirements

	Condition	PSMP Section
Conditio (DA 305-	n 22C(g) of Schedule 4 of Development Consent 7-2003)	
the sati	Applicant must prepare and implement an Extraction Plan for second workings within each seam to be mined to the sfaction of the Secretary. Each Extraction Plan must:	
 (g)	include the following to the satisfaction of DRG:	
	<ul> <li>a Public Safety Management Plan to ensure public safety in the mining area; and</li> </ul>	Management of potential risks to public safety are addressed in <b>Section 1.3</b> and <b>5</b> .

In addition to the requirements summarised in **Table 1**, the Draft *Guidelines for the Preparation of Extraction Plans Required under Conditions of Development Consents, Project Approvals and Mining Lease Conditions for Underground Coal Mining* (Version 5) (DP&E and NSW Trade & Investment – Division of Resources and Energy [DRE], 2015) requires:

The Public Safety Management Plan must address all potential safety hazards to the public. The scope of the Plan should include management of health and safety risks due to:

- potential subsidence impacts on built features;
- potential instability of cliff formations or steep slopes caused by subsidence;
- deformations or fracturing of any land caused by subsidence, and
- any other impacts of subsidence.

This Plan should address management measures such as:

- monitoring of areas posing safety risks;
- erection of warning signs and possible entry or use restrictions;
- backfilling of surface cracks and/or re-profiling of humps and swales on tracks and roads;
- infilling of pot holes;
- securing of potentially unstable structures and rock masses;
- identification of potential flood-related impacts that may pose a risk to public safety; and
- provision of regular updates regarding mining progress to the community where management of public safety is a significant issue.

The relevant management measures addressing these requirements are described in **Section 5**. As described above, this PSMP covers the extraction of Longwalls 17 to 20 at the South Bates Extension Underground Mine.

This PSMP has been prepared by WCPL, with assistance from Resource Strategies. The appointment of the team of suitably qualified and experienced experts (which includes representatives from WCPL and Resource Strategies) has been endorsed by the Secretary of the DP&E.

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#### 1.2 KEY PERSONNEL

Contact details for key personnel in relation to this PSMP are summarised in Table 2.

Table 2
Public Safety Management Plan Key Personnel Contact Details

Organisation	Position	Contact Name	Phone Number
WCPL	Health Safety Training Manager	Mark Cook	(02) 6570 2309
	Environment and Community Manager (Acting)	Peter Jaeger	(02) 6570 2206
	Technical Services Manager	Michael Berry	(02) 6570 2330
	General Manager Albert Scheepers		
	Mining Engineering Manager (Underground Mine Manager) (Acting)  Peter Jandzio		
	Control Room (24 hours)		(02) 6570 2240
	Community Hotline		(02) 6570 2245
Subsidence	Emergency Service (24 hours)		1800 248 083
Advisory NSW	Newcastle District Office		(02) 4980 4300

#### 1.3 STRUCTURE OF THE PUBLIC SAFETY MANAGEMENT PLAN

This PSMP forms part of WCPL's Environmental Management System for the Wambo Coal Mine. The relationship of this PSMP to the Wambo Coal Mine Environmental Management System is shown on **Figure 2**.

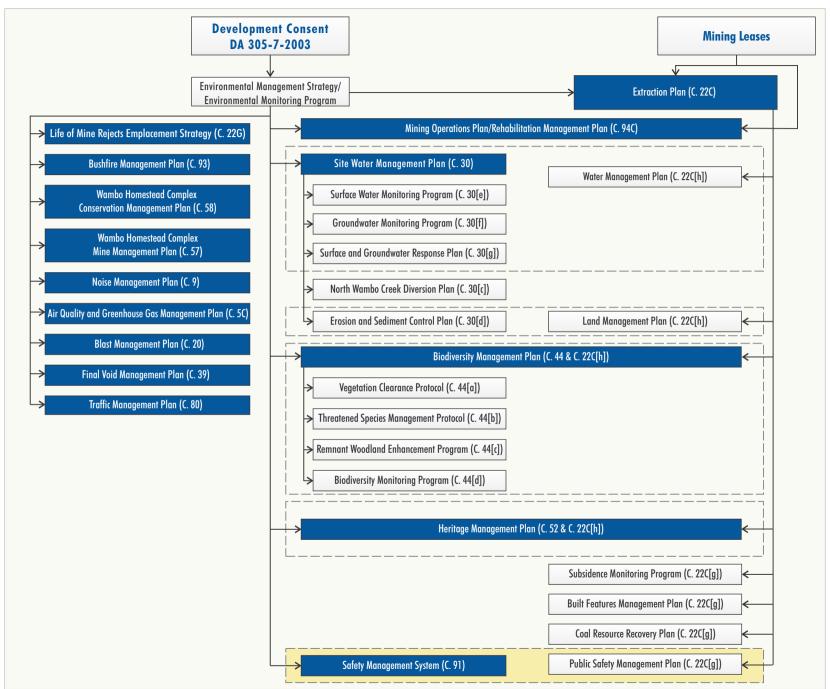
Longwalls 17 to 20 are located wholly within WCPL owned land. No privately held land or public roads are located within the Longwalls 17 to 20 Application Area. Therefore, the risks to public safety associated with the extraction of Longwalls 17 to 20 are limited.

A Trigger Action Response Plan (TARP) for this PSMP is provided in **Attachment 1**, which is a simple and transparent snapshot of the monitoring of subsidence impacts and corresponding public safety hazards, and where required the implementation of management and/or contingency measures.

WCPL's approach to health and safety on-site is outlined in the Health Safety Management System (HSMS) and is summarised in the HSMS Overview. To avoid duplication of existing Management Plans, this PSMP references components of the existing HSMS as summarised in the HSMS Overview.

The sections of the HSMS Overview relevant to the PSMP are summarised in **Table 3**. The HSMS Overview is included as **Attachment 2**. If the HSMS is revised separately, **Attachment 2** of this PSMP will be updated with the most recent HSMS Overview.

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<u>Peabody</u>

W A M B O C O A L M I N E
Wambo Coal Mine

Environmental Management System

Figure 2

Table 3
Health and Safety Management System Overview – Reference Summary

PSMP Component	HSMS Overview Reference	Section Description
Management Measures	Section 3.2 – Elements of the Safety Management System <sup>1</sup>	Section 3.2 of the HSMS Overview outlines the elements of the safety management system including a process for the development and implementation of policy, standards, management plans (e.g. the Principal Mining Hazard Management Plans and Principal Control Plans) and procedures, including adherence to legislation, standards, guidelines and codes of practices and implementation of a risk management process.
	Section 3.3 – Occupational Health and Safety Policy Statement <sup>1</sup>	Section 3.3 of the HSMS Overview provides Wambo's commitment in regard to providing a safe, healthy workplace.
	Section 3.16 – Incident and Notifiable Incident Response and Investigation <sup>1</sup>	Section 3.16 of the HSMS Overview provides a summary of the system to report and investigate Health, Safety and Environmental incidents in an endeavour to provide a safe place of work.

Not a specific requirement of this PSMP under Condition 22C(g) of Schedule 4 of the Development Consent (DA 305-7-2003).

#### 2 PERFORMANCE MEASURES

This PSMP has been developed to manage the potential risks to public safety of the proposed secondary workings described in the Extraction Plan for Longwalls 17 to 20.

In accordance with Conditions 22 and 22A of Schedule 4 of the Development Consent (DA 305-7-2003), WCPL must ensure that there is no exceedance of the subsidence impact performance measures listed in Tables 14A and 14B of Schedule 4 of the Development Consent (DA 305-7-2003). The performance measure specified in Table 14B of Schedule 4 of the Development Consent (DA 305-7-2003) relevant to public safety is listed in **Table 4**.

Table 4
Public Safety Performance Measure

Feature	Subsidence Impact Performance Measure	
Public Safety	No additional risk.	

Source: Table 14B of Schedule 4 of the Development Consent (DA 305-7-2003).

**Section 6** provides a summary of the analysis of monitoring data that will be undertaken to assess the impact of Longwalls 17 to 20 against the performance measure.

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#### 3 PREDICTED SUBSIDENCE IMPACTS

Longwalls 17 to 20 are located wholly within WCPL owned land. No privately held land or public roads are located within the Longwalls 17 to 20 Application Area.

WCPL owned lands that are not subject to mining operations or reserved as part of the Remnant Woodland Enhancement Program (RWEP) are occasionally utilised for the agistment of stock.

Given the above, it is considered that potential public safety issues resulting from the extraction of Longwalls 17 to 20 are limited to:

- agistees accessing the Longwalls 17 to 20 Application Area to manage stock;
- unauthorised access to the Longwalls 17 to 20 Application Area (e.g. looking for firewood, hunting or horse riding); and
- members of the Rural Fire Service accessing Longwalls 17 to 20 Application Area.

A subsidence risk assessment was undertaken as part of the Extraction Plan process for Longwalls 17 to 20. The subsidence risk assessment did not identify any public safety issues in addition to those listed above (Operational Risk Mentoring, 2018). Potential subsidence impacts are predicted to include surface cracking, changes in stream bed gradients, erosion, cliff instability and ponding (Mine Subsidence Engineering Consultants [MSEC], 2018). Surface cracking, erosion and cliff instability may be considered to pose a safety hazard.

The maximum subsidence, tilts and strains predicted for Longwalls 17 to 20 are summarised in **Table 5** and the location of predicted subsidence is presented in **Figure 3**.

Table 5
Maximum Predicted Subsidence, Tilt and Strains for Longwalls 17 to 20

Subsidence Parameter	Maximum Values Predicted Anywhere Above the Longwalls
Maximum Subsidence (mm)	1,950
Maximum Tilt (mm/m)	90
Maximum Hogging Curvature (km <sup>-1</sup> )	> 3.0
Maximum Sagging Curvature (km <sup>-1</sup> )	> 3.0

Source: MSEC (2018).

mm = millimetre.

mm/m = millimetres per metre.

km<sup>-1</sup> = per kilometre.

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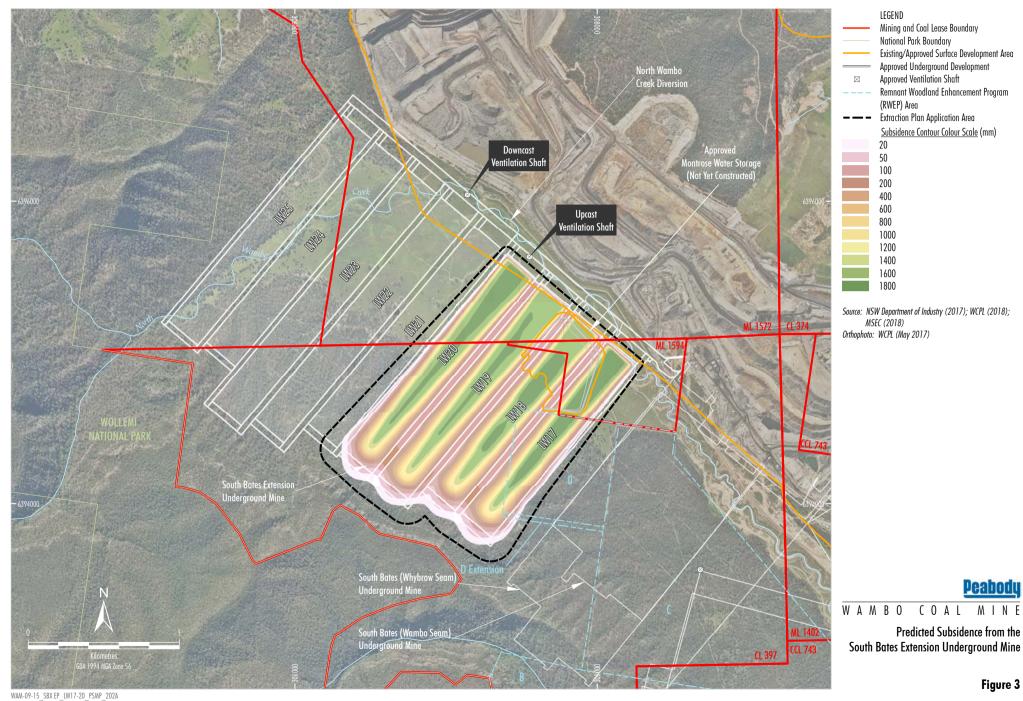


Figure 3

## 4 MONITORING

A monitoring program will be implemented to monitor the subsidence impacts of Longwalls 17 to 20 in consideration of risks to public safety. Key components of the monitoring program are summarised in **Table 6**.

Table 6
Public Safety Management Plan Monitoring Program Overview

Monitoring Component	Parameter	Timing/Frequency	Responsibility		
Pre-Mining					
Visual inspection of the integrity of fences.	Initial condition of fences.	Prior to secondary extraction of each longwall.	Mine Surveyor		
Visual assessment of existing warning signs.	Condition of existing warning signs (e.g. legibility).	Prior to secondary extraction of each longwall.	Underground Mine Engineer		
During Mining					
Subsidence monitoring lines as described in the Subsidence Monitoring Program.	Monitoring parameters include:  • subsidence;  • tilt;  • tensile strain;  • compressive strain; and  • absolute horizontal translation.	Monitoring during secondary extraction in accordance with the Subsidence Monitoring Program.	Mine Surveyor		
Visual inspection of integrity of cliffs and steep slopes.	Potentially unstable structures and/or rock masses.	Monitoring during secondary extraction in accordance with the Land Management Plan.	Mine Surveyor		
Visual inspection of the integrity of fences.	Condition of fences.	Prior to secondary extraction within 100 m of any active WCPL fences (i.e. fences being used to hold stock or prevent public access) and undertaken at 50 m intervals until the active mining face is 100 m past the WCPL fence.	Mine Surveyor		
Visual assessment of the effectiveness of warning signs.	Condition of warning signs (e.g. legibility).	Monthly inspections during secondary extraction.	Underground Mine Engineer		
Post-Mining	Post-Mining				
Visual inspection of the integrity of fences.	Condition of fences following extraction.	Following completion of secondary extraction.	Mine Surveyor		

In addition to the monitoring summarised in **Table 6**, monitoring of surface cracking, cliff instability, erosion and ponding resulting from the extraction of Longwalls 17 to 20 is described in the Land Management Plan for South Bates Extension Underground Mine Longwalls 17 to 20.

Details of any subsidence impacts observed in relation to public safety will be recorded in the Subsidence Impact Register and relevant assessment forms as provided in Attachment 2 of the Subsidence Monitoring Program for South Bates Extension Underground Mine Longwalls 17 to 20. The Subsidence Impact Register will be maintained as an electronic spreadsheet on-site, with hard copies of assessment forms filed in a folder. The Subsidence Impact Register is discussed further in the Subsidence Monitoring Program for South Bates Extension Underground Mine Longwalls 17 to 20.

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## 5 MANAGEMENT MEASURES

A number of potential management measures are available to mitigate/remediate potential risks to public safety resulting from the extraction of Longwalls 17 to 20. The key management measures are summarised in **Table 7**.

Table 7
Public Safety Management Plan Key Management Measures

Management Measure	Timing/Frequency	Responsibility	
Pre-Mining			
Restricted access (i.e. the general public are not allowed on WCPL-owned land used for mining purposes). Permanent signage located at the entrance to WCPL-owned land will be maintained.	Ongoing.	Relevant Area Manager as per the WCPL HSMS	
All personnel and visitors accessing the Wambo site are subject to the requirements of:	Ongoing.	Relevant Area Manager as per the WCPL HSMS	
WA-TRG-MP-302 Wambo Training and Competency Management Plan; and			
WA-TRG-SIA-035/036/037/046 Site Inductions.			
Posting of warning signs at suitable locations on property boundaries, fences and access tracks. The signs will indicate that underground mining (with surface subsidence) is being undertaken on WCPL-owned land and will prohibit entry by unauthorised persons.	Prior to secondary extraction of each longwall.	Technical Services Manager	
Notification to agistees of areas of longwall mining and active subsidence, and exclusion of agistment grazing from areas where surface cracking presents a reasonable risk to people and/or livestock.	Prior to secondary extraction of each longwall.	Environment and Community Manager	
During Mining			
All personnel and visitors accessing the Wambo site are subject to the requirements of:	Ongoing.	Relevant Area Manager as per the WCPL HSMS	
WA-TRG-MP-302 Wambo Training and Competency Management Plan; and			
WA-TRG-SIA-035/036/037/046 Site Inductions.			
Management of surface cracking and areas of subs Plan for Longwalls 17 to 20.	Management of surface cracking and areas of subsidence troughs in accordance with the Land Management Plan for Longwalls 17 to 20.		
Management of potential cliff or slope instability in a Longwalls 17 to 20.	accordance with the Land Mana	gement Plan for	
Maintenance of warning signs.	Ongoing.	Technical Services Manager	
All safety incidents will be handled in accordance with the HSMS (refer to <b>Table 3</b> ).	Ongoing.	All staff	
Post-Mining			
Repair of fences in accordance with the Land Mana	gement Plan for Longwalls 17 t	o 20.	
Review of warning sign placement and removal if no longer required.	Following completion of secondary extraction.	Technical Services Manager	

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#### 6 ASSESSMENT OF PERFORMANCE INDICATORS AND MEASURES

In accordance with Condition 22C(d) of Schedule 4 of the Development Consent (DA 305-7-2003), performance indicators have been developed for the performance measure listed in **Table 4**.

The performance indicator for the public safety performance measure will be considered to have been exceeded if a hazard to the general public arising from subsidence effects, not previously identified and mitigated accordingly, becomes evident.

Monitoring conducted to inform the assessment of the secondary extraction of Longwalls 17 to 20 against the performance indicator for the performance measure relevant to public safety is outlined in **Section 4** of this PSMP. The monitoring process and subsequent assessment of performance indicators and measures is outlined in **Figure 4**.

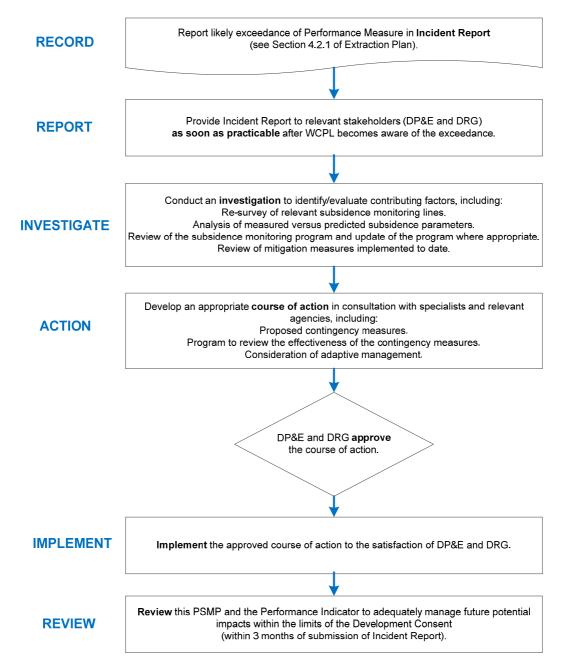
If data analysis indicates the performance indicator has been exceeded or is likely to be exceeded, an assessment will be made against the performance measure (i.e. additional risk to public safety). If the performance measure is considered to have been exceeded, the Contingency Plan will be implemented (**Section 7**). If data analysis indicates that the performance measure has not been exceeded, WCPL will continue to monitor.

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WAMBO COAL MINE

## 7 CONTINGENCY PLAN

In the event the public safety performance measure is considered to have been exceeded or is likely to be exceeded, in accordance with the schematic presented in **Figure 4**, WCPL will implement the following Contingency Plan:



Note: DRG = NSW Department of Planning and Environment – Division of Resources and Geoscience

The framework for the various components of the PSMP are summarised in the PSMP TARP which is included as **Attachment 1**. The PSMP TARP illustrates how the various predicted subsidence impacts, monitoring components and responsibilities are structured to achieve compliance with the relevant statutory requirements, and the framework for management and contingency actions.

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## **8 ROLES AND RESPONSIBILITIES**

Key responsibilities of WCPL personnel in relation to this PSMP are summarised in **Table 8**. Responsibilities may be delegated as required.

Table 8
Public Safety Management Plan Responsibilities Summary

Responsibility	Task
All	Ensure the safety of WCPL employees and the public in relation to WCPL operations.
General Manager	Ensure resources are available to WCPL personnel to facilitate the completion of responsibilities under this PSMP.
Mining Engineering	Ensure this PSMP is implemented.
Manager (Underground Mine Manager)	Notify the Regulator as per the NSW Work Health and Safety (Mines and Petroleum Sites) Regulation, 2014.
Technical Services	Ensure the Subsidence Monitoring Program is implemented.
Manager	Ensure monitoring and reporting required in accordance with this PSMP is carried out within specified timeframes, are adequately checked and processed and are prepared to the required standard.
	Notify the Underground Manager of Mining Engineering of any safety incidents reported during safety inspections.
	Prepare training documentation in association with the Health Safety Training     Manager and Environment and Community Manager.
Environment and Community Manager	Liaise with relevant stakeholders regarding subsidence impact management and related public safety hazards (e.g. notify the DRG [Principal Subsidence Engineer] and DP&E of any significant public safety incidents).
	Notify agistees of areas of longwall mining and active subsidence, and ensure agistment is excluded from areas where surface cracking presents a reasonable risk to people and/or livestock.
	Prepare training documentation in association with the Technical Services Manager and Health Safety Training Manager.
Health Safety Training Manager	Maintain records of training documentation on WCPL's site training system.
	Prepare training documentation in association with the Technical Services Manager and Environment and Community Manager.
Underground Mining Engineer	Undertake relevant monitoring and implementation of management measures summarised in <b>Tables 6 and 7</b> respectively.
(Subsidence Inspector)	Take actions to rectify any public safety issues identified.
ороског,	<ul> <li>Complete subsidence impact register as described in the Extraction Plan for Longwalls 17 to 20 and notify the Technical Services Manager and Environment and Community Manager of public safety breaches (i.e. an exceedance of the public safety performance measure).</li> </ul>
Mine Surveyor (Subsidence	Undertake all subsidence monitoring to the required standard within the specified timeframes and ensure data are adequately checked, processed and recorded.
Inspector)	Undertake relevant monitoring summarised in <b>Table 6.</b>
	Take actions to rectify any public safety issues identified.
	Complete subsidence impact register as described in the Extraction Plan for Longwalls 17 to 20 and notify the Technical Services Manager and Environment and Community Manager of public safety breaches (i.e. an exceedance of the public safety performance measure).

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#### 9 TRAINING

All personnel who conduct inspections and have responsibilities in accordance with this PSMP will be trained in the requirements of this PSMP and other management plans associated with the Extraction Plan.

## 10 REFERENCES

- Department of Planning and Environment and NSW Trade & Investment Division of Resources and Energy (2015) Guidelines for the Preparation of Extraction Plans Required under Conditions of Development Consents, Project Approvals and Mining Lease Conditions for Underground Coal Mining. Version 5. Draft.
- Mine Subsidence Engineering Consultants (2018) South Bates Extension Subsidence Assessment Subsidence Predictions and Impact Assessments for the Natural and Built Features in Support of the Extraction Plan Application for the South Bates Extension WYLW17 to WYLW20.

  Report prepared for Wambo Coal Pty Limited.
- Operational Risk Mentoring (2018) South Bates Extension Underground Mine Longwalls 17 to 20 Subsidence Risk Assessment Report. Report prepared for Wambo Coal Pty Limited.

Wambo Coal Pty Limited (2003) Wambo Development Project Environmental Impact Statement.

Wambo Coal Pty Limited (2017) South Bates Extension Modification Environmental Assessment.

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## **ATTACHMENT 1**

PUBLIC SAFETY MANAGEMENT PLAN TRIGGER ACTION RESPONSE PLAN

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Table A1-1
Public Safety Management Plan Trigger Action Response Plan

0 124	Normal	Level 1	Level 2	
Condition	Predicted Impacts	Implement Management Measures	Restoration/Contingency Phase	
Trigger	Predicted subsidence impacts and associated risks to public safety, described in Section 3.	Management measures implemented (with regard to the specific circumstances of the subsidence impact [e.g. the location, nature and extent of the impact] and the assessment of subsidence impacts in accordance with Section 6).	If the public safety performance measure has been exceeded, or is likely to be exceeded.	
Action	Conduct monitoring, consistent with <b>Table 6</b> and the Subsidence Monitoring Program (Appendix H of the Extraction Plan).	Implement management measures, as required, in accordance with <b>Table 7</b> .	Implement Contingency Plan described in Section 7.	
	Assess the subsidence impacts in accordance with <b>Section 6</b> .			
	Assess the need for management measures in accordance with <b>Table 7</b> .			
Frequency	Frequency consistent with <b>Table 7</b> .	As required, in accordance with Section 6.	As required, in accordance with Section 7.	
Position of Decision-Making	<ul> <li>Environment and Community Manager.</li> <li>Technical Services Manager.</li> </ul>	Mining Engineering Manager (Underground Mine Manager).	General Manager.	

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## **ATTACHMENT 2**

WAMBO COAL PTY LIMITED
HEALTH AND SAFETY MANAGEMENT SYSTEM OVERVIEW

PSMP LW17-20 Rev A April 2018



WAMBO COAL Health Safety Management System Overview WA-SAH-GUI-0000 July 2017



<b>Document Owner</b>		Document Approver	
Manager Health Safety Training		Manager Health Safety Training	
Version	Approval Date	Approver Name	
3	July 2017	Mark Cook	

# **General Description of Changes from Previous Version**

Updated to included correct references to legislation and site principal hazard management plans and principal control plans.

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# 1.0 Purpose

Provide an overview of the Wambo Coal Health Safety Management System (HSMS) for managing the health and wellbeing of all personnel that access the site. It is the primary means of ensuring safe operation of a mine, by bringing together a number of procedures and policies that enable Wambo Mine to follow a systematic approach to achieving and monitoring an effective level of health and safety.

## 2.0 Scope

This document will refer to Wambo Coal.

- Meaning the whole site including:
  - UG: Components specific to the Underground
  - CHPP: Components specific to the Coal Handling and Preparation Plant
  - OC: Components specific to the Open Cut
  - ROCH: Remainder of Colliery Holdings
- Tie all of the elements together into an integrated system to effectively manage the risks to the health and safety of all workers
- Provide an overall site system under which all work processes operate within.
- Has a structured alignment to AS4804 and AS4801
- Is developed to demonstrate legislative compliance to relevant standards, guidelines and codes of practice.

This HSMS shall ensure that the content within include the following as a minimum:

- Health and Safety Policy
- Arrangements for managing risk
- Systems, procedures ad plans to control risk Including principal hazard management plans and principal control plans
- Management structure and organisational chart
- Coordination of PCBU's
- Contractor and contractor health and safety management process and/or plans
- Emergency plans and procedures
- Withdrawal conditions
- Information, training and instruction
- Induction
- Supervision
- Health Monitoring
- Consultation and safety role for workers
- Incident and notifiable incident response and investigation
- Review of control measures
- Records management
- Communication
- Other monitoring
- Measuring and managing performance of the SMS



# 3.0 Requirements

## 3.1 Health Safety Management System Ownership

The Wambo HSMS is owned by everyone in the Peabody organisation.

The system is maintained at senior management levels that are in a position to facilitate significant system change.

HSMS change is consulted and communicated through the following process:

#### Reference:

WA-SAH-PCP-210 Consultation and Communication Control Plan WA-SAH-PRO-306 Change Management

## 3.2 Elements of the Safety Management System



## 3.3 Health and Safety Policy

Wambo is committed to providing a safe, healthy workplace pursuant to Peabody's safety vision.

Reference: WA-SAH-POL-101 Health and Safety Policy



## 3.3.1 Peabody's Safety Vision

## Peabody's vision is to operate safe workplaces that are incident free.

The following governing principles for safety and health apply to everyone at a Peabody workplace:

- The safety and health of our most important asset, our employees, is a core value that is integrated into all areas of our business;
- All workplace incidents can be eliminated, including injuries, occupational illnesses, property damage and near misses;
- Management has the overall accountability for employee safety and health;
- Employees are responsible for their own safety and health, as well as promoting the safety of their co-workers;
- Employees must be empowered with the skills and authority to perform their jobs in a safe manner;
- All employees must comply with established safety rules and regulations;
- Open, honest and effective safety communication is essential;
- All safety and health efforts must be sustainable and will be continuously reviewed and improved; and
- The workplace is anywhere a Peabody employee is on the job.

## 3.4 Arrangements for managing risk

Wambo Coal ranks their risk under 3 categories:

- Business risk management that in general terms integrates both an organisational and operational perspective.
- Organisational risk management that has a focus on aligning strategy, processes, technology and knowledge with an objective of evaluating and managing the uncertainties faced by site in terms of health and safety. This includes BBRA and Change management risk assessments.
- Operational risk management that is for day to day issues faced by the organisation and individuals in terms of health and safety, that includes such tools as design, equipment, chemical and work process risk assessments, hazard & operability analysis (HAZOP), job safety analysis (JSA), safe work method statements (SWMS) down to levels of awareness such as Take 2.

#### 3.4.1 Types of risk assessment

Risk assessment types are categorised as either formal or informal. The trigger for progression from one level of risk assessment to another is based on whether the persons participating in the risk assessment are satisfied that all hazards have been controlled to As Low as Reasonably Practical (ALARP).

- Level 1 Take 2 (Individual Pocket Risk Assessment Tool)
- Level 2 JSA (Job safety analysis tool)
- Level 3 Formal Risk Assessment (FRA)



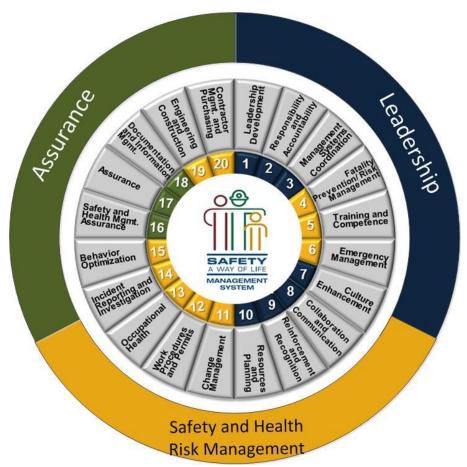
Reference:

WA-SAH-MP-305 Risk Management Plan WA-SAH-POL-105 Risk Management Policy

## 3.5 Systems, procedures and plans to control risks

As part of the Wambo Coal HSMS system Peabody are committed to Safety a Way of Life. As part of the SAWOL system (Safety a Way of Life) Wambo coal have committed their agreement and adherence to the following requirements within SAWOL:

- All locations will implement an appropriate management system for that location that complies with local requirements and the requirements of the Safety A Way of Life Management System
- All locations will be externally audited against this standard every three years
- Audit results will be reported to Executive Leadership
- All locations will implement a continuous Improvement process to improve the effectiveness of their
- Safety A Way of Life Management System and to rectify identified shortcomings
- Elements 1 through 20 outline the Safety A Way of Life Management System requirements that each location must comply with.



Picture shown above is the SAWOL wheel where site documents are stored.



Reference: PE-SAH-STD-SAWOLMS Peabody Energy – Safety a Way of Life Management System Standard

The types of documents that Wambo utilise are as follows:

- Policy
- Corporate document
- Principal Hazard Management Plans
- Principal Control Plans
- Management Plans
- Procedure
- Standard
- Forms

#### Reference:

WA-SAH-STD-1609 Document Control Standard

### **3.5.1 Policy**

Wambo will define all Health & Safety policies that demonstrate a clear direction for the organisation to follow and facilitate commitment to its HSMS. This includes but not limited to the following;

- Corporate Policy
- Operation Site Policy
- Legislative compliance

### 3.5.2 Documents

All documents that are used under the Wambo HSMS are to comply with the Peabody Energy corporate standard PP-SAH-STD-010.1 Document Control. Wambo Coal will incorporate the following subordinate documents into the HSMS:

- Guides
- Registers
- Permits
- Forms
- Templates
- Manuals
- JSA's

## 3.5.3 Principal Hazard Management Plans

Principal hazard management plans will be developed through a Risk Management process by either:

- Formal Risk Assessment
- Bow tie



These principal hazards will be identified either through legislative requirements or via the site's broad brush risk assessment.

Principal Hazard management plans will be compliant to the Work Health & Safety (WHS act and regs) as well as the Work Health & Safety (Mines & Petroleum act & regs).

## 3.5.4 Principal Control Plans

Principal control plans will be developed through a Risk Management process utilising the formal risk assessment methodology.

These PCP's will be developed either through legislative requirements or the site's broad brush risk assessment.

Principal control plans will be compliant to the Work Health & Safety (WHS act and regs) as well as the Work Health & Safety (Mines & Petroleum act & regs)

#### 3.5.5 Procedures

All procedures will be identified by Risk Assessment and developed under the relevant principal hazard management plans, principal control plans or management plans.

#### 3.5.6 Standards

Wambo will adhere to all Standards, Guidelines and Codes of Practices that are developed and implemented. They will do this through review and documentation against any;

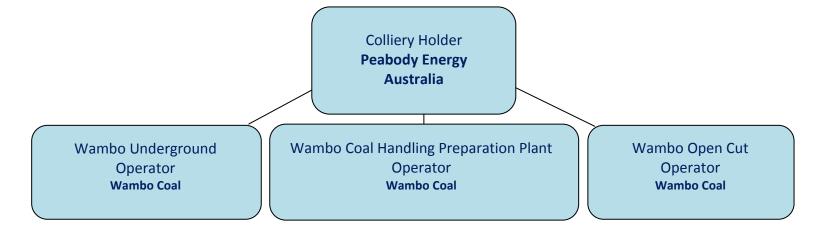
- Corporate Standards and Guidelines
- Operational Site Standards and Guidelines
- Australian Standards
- Mine Design Guidelines
- Workcover NSW and Safe Work Australia Codes of Practices

Standards will be developed as identified by the following processes;

- Broad Brush Risk Assessment
- Formal Risk Assessment
- Bow Tie analysis
- Incident and Hazard Investigation
- Legislative Changes



## 3.6 Company Operational Structure



#### Reference:

WA-HRS-GUI-301 Management Organisational Structure and Responsibility

#### 3.7 Consultation & Communication

Wambo Coal consults and communicates with employees & contractors via the Consultation and Communication control plan. This plan has been developed to cover the process of:

#### Consultation -

- Sharing of relevant information in regard to health and safety
- Providing opportunity for employees to express views and ideas in relation to health, safety and welfare issues at their workplace
- Acknowledging the value of the workplace input

The consultation utilises basic principles:

- Consult before any decisions are made not after
- Utilise appropriately skilled personnel to facilitate consultation processes
- Communicate honestly with integrity and without excessive emotion
- We will foster an open and transparent process to establish trust and respect between employer and employee
- We will promote opportunities for one on one communication when required
- We will focus on improving systems for managing safety

Communication - Wambo will ensure effective communication is achieved by addressing the following-

- Identifying the target audience
- Identify what the target audience has to complete
- Identify the resources required to implement any actions
- Attempt to predict likely reactions to take pre-emptive action



- Decide on appropriate medium for the communication
- Communicate
- Monitor the effects of the communication

The tools that are utilised at Wambo to communicate are:

- Safety Contact/Safety Shares
- Pre-Start Information (PSI)
- General Manager State of the Nation Talks
- Safety Scrums
- Toolbox talks
- Bulletins and Safety Alerts
- Notice Boards
- Newsletters
- Signage
- Electronic/hard copy mailing
- One on one discussions
- TV screen display

#### Reference:

WA-SAH-PCP-210 Consultation and Communication Control Plan

## 3.8 Contractor Management

Wambo Coal manages contractors via our contractor management plan. The purpose of the plan is:

- Outline the Health and Safety requirements for contractors
- Identify the consistencies or gaps between the Wambo Coal Health Safety Management System (HSMS) and a contractors Safety Management Plan (SMP)
- Agree on the HSMS that contractors are to utilise whilst working at Wambo.

#### Reference:

PA-WA-SAH-MP-307 Contractor Management Plan

## 3.9 Emergency Procedures and Plans

Wambo Coal has a site Emergency Preparedness and Response Management Plan (EPRMP) that is the source of emergency resources and processes to utilise during an emergency event. The objective of this document is to integrate the preparedness and response into a consistent approach across site.

The EPRMP document covers the following locations at Wambo:

- CHPP
- Open Cut
- Underground
- Remainder of Colliery Holdings including exploration



#### Reference:

WA-SAH-PCP-0209 Emergency Control Plan
PA-WA-SAH-PRO-209.1 Building Evacuation Procedures
PA-WA-SAH-PRO-209.2 Emergency Secondary Response Procedures
WA-SAH-PRO-209.3 Emergency Warden Duty Card
WA-SAH-PLN-209.4 Incident Management Emergency First Response Plan
WA-SAH-PRO-209.5 Duty Card Activation Pack
WA-SAH-PRO-209.6 Pre-Incident Planning – Fire Fighting

#### 3.10 Withdrawal Conditions

The purpose of these conditions are to define circumstances at Wambo site whether this be in the Underground, Open Cut, CHPP or Rest of Colliery Holdings where persons at the mine or a part of the mine are to be withdrawn to a place of safety, and to remain withdrawn as a precautionary measure where a risk to health and safety warrants that withdrawal.

These conditions will comply with the requirements of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014, Clause 14 (1) (h), and have been developed to align with the measures outlined in MDG 1020. Reference:

WA-MIN-PRO-616 Withdrawal conditions WA-MIN-MP-1213 Withdrawal WA-CPP-MHMP-912 Withdrawal Conditions WA-CPP-FRM-912.1 Withdrawal Re-entry Checklist

## 3.11 Information, training and instruction

Wambo Coal provides information, training and instructions over various processes. This could be through processes such as Onsite trackeasy login communications and training process, through the sites and/or visitors induction to name a few.

Site communicates suitable and adequate information, training and instruction to workers in regards to the nature of the work, the risks associated with the work and the control measures implemented via the following:

- Pre shift communications.
- Onsite track easy login process.
- Sites area inductions.
- Sites visitor inductions where applicable.
- Sites training and competency management plan process and training needs analysis developed for specific role requirements across the site.

#### Reference:

WA-SAH-PCP-210 Consultation and Communication Control plan WA-TRG-MP-302 Training and Competency Management Plan Y:\THS (Training Health Safety)\Training\Training Needs Analysis



#### 3.12 Induction

Wambo Coal has separate inductions specific to their areas. These areas are:

- Visitor
- Surface
- Underground Mine Worker
- Open Cut Mine Worker
- CHPP Worker

Within each of these inductions it allows the participant to understand the duration of the induction they are completing ie: Expiry of. It also informs them of how their induction material is stored and managed via the Onsite trackeasy system and where an update occurs how it may affect them. Whether this update may require a refresher update, retraining or removal of that competence.

#### Reference:

WA-TRG-SIA-037 CHPP Induction WA-TRG-SIA-046 Open Cut Induction WA-TRG-SIA-035 Underground Induction WA-TRG-SIA-036 Surface Induction

## 3.13 Supervision

All persons at Wambo Coal are appointed when supervising Peabody Energy employees and contractors. Some of these supervisors' roles require statutory appointments these are roles are Deputy, Undermanager, and Open Cut examiners. Their pre requisites are noted in the sites training and competency management plan referenced below.

Each of the documents referenced below dictates the levels of supervision required for the specific areas. This is due to the complexity of some tasks. For example the document WA-MIN-PRO-615 dictates how all supervisors must be trained for the task they are to undertake, the requirements of a person whom is to complete works whilst working alone and the process they are to follow prior to starting any tasks.

## Reference:

WA-TRG-MP-302 Training and Competency Management Plan Y:\THS (Training Health Safety)\Training\Training Needs Analysis WA-MIN-PRO-615 Supervision Arrangements WA-MIN-MP-1209 Supervision and Inspection

## 3.14 Health Monitoring

All persons at Wambo Coal are required to complete a compliant Order 41 medical prior to attending site for any works. The only persons exempt from this requirement are visitors that attend the site for tasks other than work. Such as meetings in administration areas, inpit tours etc



Once these medicals come up for expiry which is 3 years, whether a contractor or Peabody Energy Employee each person is required to complete a periodic medical. These medicals consist of the following, but not limited to:

- Physical fitness test
- Eye / visual test
- Audiometric test
- Spiro / Lung test
- Drug and Alcohol test
- Urinalysis diabetes
- Blood Pressure
- Height / weight/BMI
- Medical history
- Musculoskeletal
- Life style risk assessment
- Respiratory
- Hazardous exposures
- Cardiovascular fitness
- Manual handling

Wambo Coal also complete various other forms of monitoring from regulated Order 42 testing, Health programs, injury management and return to work programs, Airborne dust monitoring, Noise monitoring, whole body vibration testing, diesel exhaust fumes and particulates, welding fume testing and health surveillance and records.

#### Reference:

WA-SAH-PCP-0207 Health Control Plan

WA-MIN-PCP-602 Ventilation Arrangements Principal Control Plan

WA-MIN-PCP-0601 Gas Monitoring Control Plan

WA-MIN-MP-1209 Inspection and Supervision Management Program

WA-MIN-PRO-615 Supervision Arrangements

WA-ENV-MP-504 Air Quality

WA-ENG-PCP-1700 Mechanical Engineering Control Plan

WA-SAH-HMP-0329 Air Quality or Dust or Other Airborne Contaminants

## 3.15 Work Health and Safety Consultation

Wambo Coal consults with the workforce via 3 separate work health and safety committees. The areas that are covered across Wambo are:

- CHPP
- Open Cut
- Underground

Each of the committees has a procedure that has been written in line with the Work Health and Safety Act and Regulations 2011 as well as the Work Health and Safety (Mines and Petroleum) Act and Regulations 2013/14.

These meetings have set agendas they work off. The agendas look into outstanding actions relevant to the health and safety of those onsite, any new health and safety



actions that weren't able to be completed on shift or have been delayed, document reviews and any new risks or Peabody significant incidents that have occurred post their last meeting. Meeting dates and schedules will also be agreed at these meetings.

This element should also be read in conjunction with element 3.7 of this document.

#### Reference:

WA-SH-PRO-316 WHS Committee Procedure WA-SH-PRO-316.1 WHS Charter

## 3.16 Incident and Notifiable incident response and investigation

Wambo Coal have an incident hazard and investigation and reporting management plan that provides a detailed system to report ad investigate Health, Safety and Environmental incidents in an endeavour to provide a safe place of work.

This document has been written based off sites risk assessments and in line with legislation risk identification and notification requirements. The areas covered are as follows and not limited to: Section 14, 15 & 16 of the Work Health and Safety Act as well as Clauses 128, 178 and 179 of the Work Health and Safety Regulations (Mines and Petroleum). Wambo Coal also utilise SAP for incident evidence history as each reported incident onsite is added into this system. Each incident where applicable will have actions for follow up within. These are captured in one of two systems either within the incident in SAP or within PIMS with the incident number from SAP noted in the information bar.

#### Reference:

WA-SAH-MNP-0308 Incident Hazard Investigation and Reporting

## 3.17 Review of Control Measures

Wambo Coal has an audit monitoring and measurement plan which specifies the process for reviewing control measures. This includes critical control audits, internal and external audits and recording keeping.

#### Reference:

WA-S&H-MP-403 Audit Monitoring and Measurement Plan

## 3.18 Records Management

Wambo Coal abides by the Peabody Energy records retention policy. This document dictates retention processes for all of their sites. This includes emails, paper records, backup storage, applications and databases. It dictates the required storage periods and types.

Sites also adhere to legislative requirements as part of the process as per ISO 15489.1:2002 Records Management Part 1 & ISO 15489.2:2002 Records Management Part 2.



#### Reference:

Peabody Energy Policy – Records Retention 200.25 November 2014 Peabody Energy Corporation – Records Retention Schedule Australia 29/9/14

## 3.19 Measuring and managing performance of the SMS

Peabody conducts annual audits of each site to ensure compliance to the SAWOLMS Standard. The SAWOLMS Standard has been developed as Peabody's Health and Safety Management System. Wambo is required to gain 100% compliance to this standard each year.

Wambo Coal conduct internal audits, this would include but are not limited to;

- Critical Control Audits
- Road Construction Audits
- Training and Competency Audits
- Working At HeightsAudits

#### Reference:

WA-S&H-MP-403 Audit Monitoring and Measurement Plan PE-SAH-STD-SAWOLMS Peabody Energy – Safety a Way of Life Management System Standard

#### 3.20 Resources

This document has been written with the assistance of the NSW code of practice – Safety Management systems in mines.

As follows are other applicable resources that should be utilised in conjunction with this health and safety management system.

#### 3.20.1 Management Overview Plans

This section covers overviews of any systems in place under the Health Safety Management System (HSMS) including the following;

- Health Safety Management System WA-SAH-GUI-000
- Major Hazard Management WA-SAH-GUI-003

## 3.20.2 Policy

Wambo will define a Health & Safety policy that demonstrates a clear direction for the organisation to follow and facilitates commitment to its HSMS. This section contains overarching site Policies:

- Health and Safety WA-SAH-POL-101
- Smoking on Site WA-SAH-POL-102
- Mobile Phones in the Workplace PA-SAH-PLY-0003
- Workers Compensation and Return to Work Policy WA-SAH-POL-104



- Risk Management WA-SAH-POL-105
- Fitness for Work WA-SAH-POL-108

#### 3.20.3 Planning

This section of the HSMS is addressed within other components and specifically outlines the following:

- Fitness for Work Procedure PA-WA-SAH-PRO-202
- Drug and Alcohol Testing Procedure WA-SAH-PRO-0204
- Fatigue Management Plan PA-WA-SAH-MP-205
- Health Control Plan WA-SAH-PCP-0207
- Emergency Control Plan WA-SAH-PCP-0209
- Communication and Consultation WA-SAH-PCP-210
- Security Management Plan WA-SAH-MP-219
- Inclement Weather Management WA-SAH-MP-220

## 3.21 Wambo Coal Safety Management Documentation

This section of the HSMS references management plans and procedures that are relevant to Wambo coal as a whole, documents included are as follows:

- Training and Competency Management Plan WA-TRG-MP-302
- Risk Management Plan WA-SAH-MP-305
- Change Management WA-SAH-PRO-306
- Contractor Management PA-WA-SAH-MP-307
- Incident and Hazard Investigation Management WA-SAH-MNP-0308
- First Aid Management WA-SAH-MNP-0309
- Hazardous Substances and Dangerous Goods WA-SAH-MP-313
- Surface Roads or Other Vehicle Operating Areas Principal Hazard Management Plan WA-SAH-HMP-0319
- Asbestos Management Plan WA-SAH-MNP-320
- Laser Management Plan WA-SAH-MNP-0222
- Air Quality or Dust or Other Airborne Contaminants Principal Hazard Management Plan WA-SAH-HMP-0329
- Surface Spontaneous Combustion Principal Hazard Management Plan WA-MIN-HMP-0330
- Surface Fire or Explosion Principal Hazard Management Plan WA-MIN-HMP-0331
- Process for Managing Safety Alerts WA-SAH-PRO-0332
- Surface Inundation and Inrush Principal Hazard Management Plan WA-MIN-HMP-0333

#### 3.21.1 Environment

The environment section outlines all requirements to ensure environments conditions are maintained for the short and long term of the mine.



- Environmental Management Plan WA-ENV-MP-501
- Waste Water Management Plan WA-ENV-MP-502
- Pollution Incident Response Management Plan WA-ENV-MP-503
- Air Quality WA-ENV-MP-504
- Flora and Fauna Management WA-ENV-MP-506

## 3.21.2 Underground Major Operational Hazards

This section of the HSMS covers the major operational hazards for the Underground Operations:

- Gas Monitoring Control Plan WA-MIN-PCP-0601
- Ventilation Control Plan WA-MIN-PCP-602
- Roads or Other Vehicle Operating Areas Underground WA-SAH-HMP-0603
- Interaction with Open Cut Blasting WA-MIN-PRO-604
- Ground or Strata Failure Principal Hazard Management Plan WA-MIN-HMP-0605
- Underground Inundation or Inrush Principal Hazard Management Plan WA-MIN-HMP-0606
- Underground Fire or Explosion Principal Hazard Management Plan WA-MIN-HMP-0607
- Airborne Dust Management WA-MIN-MHMP-608
- Spontaneous Combustion WA-MIN-MP-609
- Dust Explosion Management WA-MIN-MHMP-610
- Slope Stability WA-MIN-MHMP-611
- Inspection Program WA-MIN-MP-614
- Supervision Arrangements WA-MIN-PRO-615
- Withdrawal Conditions WA-MIN-PRO-616
- Auxiliary Fan Management WA-MIN-MP-617
- Wind Blast Management WA-MIN-MP-618
- Survey and Plan Arrangements WA-MIN-PRO-619
- Underground Shotfiring WA-MIN-MHMP-620
- Self-Escape WA-MIN-MP-621
- Outburst Management WA-MIN-MP-622
- Subsidence Management WA-MIN-MP-623
- Life cycle WA-MIN-MP-624
- Sealed goaf WA-MIN-MP-625
- Surface transport WA-MIN-MHMP-626
- Emergency response WA-MIN-MP-627
- Public Safety Management Plan WA-MIN-MP-628

#### 3.21.3 CHPP Management Plans

This area addresses the major operational hazards for the CHPP:

- Stockpile Management WA-CPP-MHMP 906
- Airborne Dust WA-CPP-MHMP 907
- Reclaim Tunnel WA-CPP-MHMP 910
- Withdrawal Conditions WA-CPP-MHMP 912



## 3.21.4 Open Cut Management Plans

Open Cut operations are documented in the following;

- Surface Explosives Control Plan WA-MIN-PCP-1201
- Airborne Dust Management WA-MIN-MHMP-1205
- Inspection and Supervision Management Plan WA-MIN-MNP-1209
- Withdrawal Conditions WA-MIN-MP-1213

#### 3.21.5 Wambo Coal Standards

This is additional to any Australian, Corporate or Legislative standard:

- PPE WA-SAH-STD-1604
- Prohibited Articles WA-SAH-STD-1605
- Working at Heights WA-SAH-STD-1608
- Light Vehicle and Forklift WA-SAH-STD-1614
- Pre-Employment Standard WA-SAH-STD-1629
- Confined Space Standard WA-SAH-STD-1630
- Road Construction and Maintenance Standard WA-SAH-STD-1631
- Wambo Coal Isolation Standard WA-SAH-STD-1639

## 3.22 HSMS Planning

An annual Health Safety Management Plan will be developed and implemented with appropriate actions that incorporate the site initiatives towards Health and Safety

# 4.0 References and Supporting Documents

The Wambo Health Safety Management System is compliant to the following legislation;

- WHS Act 2011
- WHS Regulation 2011
- NSW WHS (Mines and Petroleum) Act 2013
- NSW WHS (Mines and Petroleum) Regulation 2014

The Wambo Health Safety Management System structure is aligned with;

Australian Standard AS/NZS 4804:2001