# BLAST MANAGEMENT PLAN

<table>
<thead>
<tr>
<th>Version</th>
<th>Issue Date</th>
<th>Section Modified</th>
<th>Reason for Modification</th>
<th>Review Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mar 2010</td>
<td>All</td>
<td>Original Blast Management Plan</td>
<td>S. Peart</td>
</tr>
<tr>
<td>2</td>
<td>June 2013</td>
<td>All</td>
<td>Updated to include OC2 and OC3</td>
<td>Environmental Department</td>
</tr>
<tr>
<td>3</td>
<td>Nov 2014</td>
<td>All</td>
<td>Update to include Open Cut 1 and Open Cut 2 Extension Areas (05_0117 MOD-9)</td>
<td>Environmental Department</td>
</tr>
<tr>
<td>4</td>
<td>May 2015</td>
<td>All</td>
<td>To include management and mitigation measures for both Stage 1 and Stage 2 of the Project</td>
<td>MCO, SLR Consulting Australia Pty Ltd</td>
</tr>
</tbody>
</table>

Approved: [Signature] Date: 25/06/2015

<table>
<thead>
<tr>
<th>Document</th>
<th>Version</th>
<th>Issue Date</th>
<th>Effective Date</th>
<th>Review Date</th>
<th>Author</th>
<th>Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCO_ENV_PLN_0023</td>
<td>4</td>
<td>May 2015</td>
<td>June 2015</td>
<td>June 2016</td>
<td>MCO</td>
<td>S Archinal</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS

1.0 INTRODUCTION............................................................................................................. 1
   1.1 SCOPE......................................................................................................................... 4
   1.2 STRUCTURE OF THE BMP.......................................................................................... 5

2.0 STATUTORY REQUIREMENTS....................................................................................... 6
   2.1 EP&A ACT PROJECT APPROVAL.................................................................................. 6
       2.1.1 Blast Management Plan....................................................................................... 6
       2.1.2 Management Plan Requirements......................................................................... 7
   2.2 LICENCES, PERMITS AND LEASES........................................................................... 8
   2.3 OTHER LEGISLATION.................................................................................................... 8

3.0 BLAST CRITERIA AND PERFORMANCE INDICATORS............................................... 9
   3.1 PROJECT APPROVAL CONDITIONS............................................................................ 9
   3.2 LICENCE CONDITIONS.............................................................................................. 9
   3.3 PERFORMANCE INDICATORS..................................................................................... 10

4.0 EXISTING ENVIRONMENT ......................................................................................... 11
   4.1 BASELINE DATA........................................................................................................ 11
   4.2 SENSITIVE RECEPTORS........................................................................................... 11

5.0 BLAST IMPACTS ..................................................................................................... 12
   5.1 OVERPRESSURE AND VIBRATION............................................................................. 12
   5.2 FLYROCK.................................................................................................................. 12
   5.3 FUME....................................................................................................................... 12

6.0 BLAST MANAGEMENT AND CONTROL MEASURES.............................................. 14
   6.1 PUBLIC SAFETY.......................................................................................................... 14
   6.2 RESIDENTIAL LOCATIONS....................................................................................... 15
       6.2.1 Public Notice........................................................................................................ 15
       6.2.2 Property Inspections and Investigations............................................................... 15
   6.3 INFRASTRUCTURE .................................................................................................... 16
   6.4 ABORIGINAL ROCK SHELTER SITES......................................................................... 18
   6.5 BLASTING CONTROLS............................................................................................. 20
       6.5.1 Pre-blast Environmental Assessment................................................................. 21
   6.6 FUME....................................................................................................................... 21
   6.7 ENVIRONMENTAL FORECASTING SOFTWARE......................................................... 22
   6.8 CUMULATIVE IMPACTS............................................................................................. 22

7.0 BLAST MONITORING PROGRAM ........................................................................... 23
   7.1 BLAST OVERPRESSURE AND VIBRATION MONITORING....................................... 23
   7.2 BLAST FUME MONITORING .................................................................................... 25
   7.3 RECORDS................................................................................................................. 25
8.0 RESPONSE PROTOCOLS .................................................................26
  8.1 BLAST FUME EMERGENCY RESPONSE........................................28

9.0 CONTINGENCY PLAN .................................................................29
  9.1 POTENTIAL CONTINGENCY MEASURES........................................29

10.0 ANNUAL REVIEW AND IMPROVEMENT OF BLAST MANAGEMENT PLAN 30
  10.1 ANNUAL REVIEW ........................................................................30
  10.2 BLAST MANAGEMENT PLAN REVIEW ....................................30

11.0 REPORTING SYSTEMS ..............................................................32
  11.1 INCIDENT REPORTING ..............................................................32

12.0 REFERENCES ...........................................................................33
LIST OF TABLES

Table 1: Management Plan Requirements
Table 2: Blasting Criteria
Table 3: Monitoring Parameters
Table 4: Location of Monitoring Equipment

LIST OF FIGURES

Figure 1: Regional Location
Figure 2: Approved Moolarben Coal Project (Stage 1 and Stage 2) General Arrangement
Figure 3: Blast Fume Classification Table
Figure 4: Independent Dispute Resolution Process
Figure 5: Moolarben Coal Complex Blast Monitoring Sites
Figure 6: Blasting Criteria Review Protocol

LIST OF APPENDICES

Appendix A: Relevant NSW Project Approval Conditions (05_0117 and 08_0135)
Appendix B: Event Duty Card – Exposure to NOx Fume
Appendix C: Agency Correspondence
1.0 INTRODUCTION

The Moolarben Coal Complex is located approximately 40 kilometres (km) north of Mudgee in the Western Coalfield of New South Wales (NSW) (Figure 1).

Moolarben Coal Operations Pty Ltd (MCO) is the operator of the Moolarben Coal Complex on behalf of the Moolarben Joint Venture (Moolarben Coal Mines Pty Ltd [MCM], Sojitz Moolarben Resources Pty Ltd and a consortium of Korean power companies). MCO and MCM are wholly owned subsidiaries of Yancoal Australia Limited (Yancoal).

Mining operations at the Moolarben Coal Complex are currently approved until 31 December 2038 and would continue to be carried out in accordance with NSW Project Approval (05_0117) (Moolarben Coal Project Stage 1) as modified and NSW Project Approval (08_0135) (Moolarben Coal Project Stage 2).

The current Stage 1 mining operations are undertaken in accordance with Approval Decision (EPBC 2007/3297) granted on 24 October 2007 (and varied by notice on 25 February 2009 and 11 May 2010) and (EPBC 2013/6926) granted on 13 November 2014 under the Commonwealth Environment Protection and Biodiversity Conservation Act, 1999 (EPBC Act). A Variation of Proposal to take Action (EPBC 2008/4444) under the EPBC Act for Moolarben Coal Project Stage 2 was accepted on 26 April 2012. The Variation of Proposal to take Action (EPBC 2008/4444) will require approval under the EPBC Act now that the Moolarben Coal Project Stage 2 Project Approval (08_0135) has been determined.

The current mining operations at the Moolarben Coal Complex are conducted in accordance with the requirements of the conditions of Mining Lease (ML) 1605, ML 1606, ML 1628 and ML 1691 granted under the Mining Act, 1992. A Mining Lease Application for mining activities within Stage 2 of the Moolarben Coal Complex has been lodged with the NSW Department of Trade and Investment, Regional Infrastructure and Services.

Stage 1 of the Moolarben Coal Complex has commenced and at full development will comprise three open cut mines (OC1, OC2 and OC3), a longwall underground mine (UG4), and mining related infrastructure (including coal processing and transport facilities) (Figure 2).

Stage 2 of the Moolarben Coal Complex will include (Figure 2):

- construction and operation of an open cut mining operation (OC4) extracting up to 12 million tonnes per annum (Mtpa) run-of-mine (ROM) coal and up to 13 Mtpa combined rate with the Stage 1 open cut mines;
**ULAN MINE COMPLEX**

Mains Access to UG4

Stage 1 ROM Coal Facility

Stage 1 Infrastructure

Stage 1 Workshop and Administration

UG1 Highwall Entry

Stage 2 - Haul Road

Stage 2 Conveyor

Administration Facilities and Associated Mine Infrastructure Area

ML1628

CHPP Area

Road Realignment (not yet constructed)

FIGURE 2

Approved Moolarben Coal Project (Stage 1 and Stage 2)

General Arrangement

**MOOLARBEN COAL COMPLEX**

Source: MCO, 2015
• construction and operation of two underground mine operations (UG1 and UG2) extracting up to 4 Mtpa ROM coal cumulative with the Stage 1 underground mine (UG4);
• construction and operation of the Stage 2 ROM coal facility;
• extension of the use of the existing approved Stage 1 Coal Handling and Preparation Plant (CHPP) to Year 24 of Stage 2 and increased throughput of up to 17 Mtpa ROM coal (13 Mtpa open cut and 4 Mtpa underground);
• development of an out-of-pit emplacement area;
• construction and operation of two conveyors and associated facilities between the Stage 2 ROM coal facility and Stage 1 CHPP;
• construction and use of access roads;
• construction and operation of administration offices, workshops and related facilities;
• diversions of Murragamba and Eastern Creeks;
• development of water management infrastructure;
• installation of supporting power and communications infrastructure; and
• other associated minor infrastructure, plant, equipment and activities, including ancillary works, minor modifications and alterations to existing infrastructure as required.

1.1 SCOPE

This Blast Management Plan (BMP) has been prepared by MCO (with input from experienced and qualified blast experts [SLR Consulting Australia Pty Ltd]) to satisfy the requirements of NSW Project Approval (05_0117) (as modified) and the requirements of NSW Project Approval (08_0135).

The BMP describes the management of blasting associated with open cut operations (including management of overpressure, vibration, flyrock and fume) at the Moolarben Coal Complex in accordance with the above listed Project Approvals. Blast fume is managed in accordance with MCO’s Blast Fume Management Strategy (ENV_MCO_PLN_0033).

This BMP supersedes the BMP dated November 2014.
1.2 STRUCTURE OF THE BMP

The remainder of the BMP is structured as follows:

Section 2: Outlines the statutory requirements applicable to the BMP.
Section 3: Outlines the relevant blast criteria applicable to Moolarben Coal Complex operations.
Section 4: Outlines the existing environment.
Section 5: Outlines potential impacts of blasting.
Section 6: Outlines blast management and control measures.
Section 7: Outlines the blast monitoring program components.
Section 8: Provides the response protocols for an exceedance of criteria.
Section 9: Provides a contingency plan to manage any unprecedented impacts and their consequences.
Section 10: Provides details for the review and improvement of environmental performance process.
Section 11: Describes the management and reporting of incidents, complaints and non-compliances.
Section 12: Provides the references cited in the BMP.
2.0 STATUTORY REQUIREMENTS

MCO’s statutory obligations are contained in:

i. the conditions of the NSW Project Approval (05_0117) (as modified) and NSW Project Approval (08_0135);

ii. relevant licences and permits, including conditions attached to the Environment Protection Licence (EPL) and mining leases; and

iii. other relevant legislation.

Obligations relevant to this BMP are described below.

2.1 EP&A ACT PROJECT APPROVAL

The conditions of the NSW Project Approvals (05_0117 and 08_0135) relevant to the BMP are described below. A comprehensive list of all conditions in the NSW Project Approvals (05_0117 and 08_0135) relevant to blasting, is provided in Appendix A. A summary of all commitments relevant to blasting in Appendix 3 of the NSW Project Approvals (05_0117 and 08_0135), including where they are referenced in the BMP, is provided in Appendix A.

2.1.1 Blast Management Plan

Condition 15, Schedule 3 of Project Approval (05_0117) requires the preparation of a BMP. Condition 15 states:

Blast Management Plan

15. The Proponent shall prepare and implement a Blast Management Plan for the project prior to undertaking any blasting on site to the satisfaction of the Secretary. This plan must:

(a) be prepared in consultation with the EPA and be submitted to the Secretary for approval by 31 March 2015;

(b) describe the measures that would be implemented to ensure compliance with the blast criteria and operating conditions in this approval;

(c) propose and justify any alternative ground vibration limits for public infrastructure in the vicinity of the site (if relevant); and

(d) include a monitoring program for evaluating compliance with the blasting criteria and operating conditions of this approval.
Condition 16, Schedule 3 of Project Approval (08_0135) requires the preparation of a BMP. Condition 16 states:

**Blast Management Plan**

16. The Proponent shall prepare and implement a Blast Management Plan for the project to the satisfaction of the Secretary. This plan must:

(a) be prepared in consultation with the EPA, and submitted to the Secretary for approval prior to the conducting any blasting on site;

(b) describe the measures that would be implemented to ensure compliance with the blast criteria and operating conditions of this approval;

(c) propose and justify any alternative ground vibration limits for public infrastructure in the vicinity of the site (if relevant); and

(d) include a monitoring program for evaluating and reporting on compliance with the blasting criteria and operating conditions of this approval.

### 2.1.2 Management Plan Requirements

Condition 3, Schedule 5 of Project Approval (05_0117) and Condition 3, Schedule 6 of Project Approval (08_0135) outline the general management plan requirements that are applicable to the preparation of the BMP. Table 1 presents these requirements and indicates where they are addressed within this BMP.

**Table 1: Management Plan Requirements**

<table>
<thead>
<tr>
<th>NSW Project Approval Condition</th>
<th>BMP Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:</td>
<td></td>
</tr>
<tr>
<td>(a) detailed baseline data;</td>
<td>Section 4.1</td>
</tr>
<tr>
<td>(b) a description of:</td>
<td></td>
</tr>
<tr>
<td>• the relevant statutory requirements (including any relevant approval, licence or lease conditions);</td>
<td>Section 2.0</td>
</tr>
<tr>
<td>• any relevant limits or performance measures/criteria;</td>
<td>Section 3.0</td>
</tr>
<tr>
<td>• the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures;</td>
<td>Section 3.3</td>
</tr>
<tr>
<td>(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;</td>
<td>Section 6.0</td>
</tr>
<tr>
<td>(d) a program to monitor and report on the:</td>
<td></td>
</tr>
<tr>
<td>• impacts and environmental performance of the project;</td>
<td>Section 7.0</td>
</tr>
<tr>
<td>• effectiveness of any management measures (see c above);</td>
<td>Section 7.0</td>
</tr>
<tr>
<td>(e) a contingency plan to manage any unpredicted impacts and their consequences;</td>
<td>Section 9.0</td>
</tr>
<tr>
<td>(f) a program to investigate and implement ways to improve the environmental performance of the project over time;</td>
<td>Sections 8.0 and 10.0</td>
</tr>
</tbody>
</table>
2.2 LICENCES, PERMITS AND LEASES

In addition to the NSW Project Approvals (05_0117 and 08_0135) and Commonwealth Approvals (EPBC 2007/3297, 2013/6936 and 2008/4444), all activities at the Moolarben Coal Complex will be conducted in accordance with a number of licences, permits and leases which have been issued or are pending issue.

Key licences, permits and leases pertaining to the blasting at the Moolarben Coal Complex include:

- ML 1605 issued under Part 5 of the NSW Mining Act, 1992 and approved by the Minister for Mineral Resources in December 2007.
- ML 1606 issued under Part 5 of the NSW Mining Act, 1992 and approved by the Minister for Mineral Resources in December 2007.
- ML 1628 issued under Part 5 of the NSW Mining Act, 1992 and approved by the Minister for Mineral Resources in February 2009.
- ML 1691 issued under Part 5 of the NSW Mining Act, 1992 and approved by the Minister for Resources and Energy in September 2013.
- EPL 12932 issued under Part 3 of the NSW Protection of the Environment Operations Act, 1997 by the NSW Environment Protection Authority (EPA).
- Mining Operations Plan approved by the Division of Resources and Energy.

2.3 OTHER LEGISLATION

The NSW Acts that may be applicable to blasting at the Moolarben Coal Complex include, but are not limited to, the:

- Explosives Act, 2003;
- Work Health and Safety Act, 2011; and
3.0 BLAST CRITERIA AND PERFORMANCE INDICATORS

3.1 PROJECT APPROVAL CONDITIONS

Blasting criteria, blasting hours, blasting frequency, property inspection requirements and operating conditions are provided in Conditions 8 to 14, Schedule 3 and Conditions 9 to 15, Schedule 3 of the NSW Project Approvals (05_0117 and 08_0135, respectively) (Appendix A). The prescribed blasting criteria (Condition 8, Schedule 3 and Condition 9, Schedule 3 of [05_0117 and 08_0135, respectively]) is set out in Table 2.

Table 2: Blasting Criteria

<table>
<thead>
<tr>
<th>Location</th>
<th>Airblast Overpressure (dB(Lin Peak))</th>
<th>Ground Vibration (mm/s)</th>
<th>Allowable Exceedance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residence on privately owned land, churches and schools</td>
<td>120</td>
<td>10</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>115</td>
<td>5</td>
<td>5% of the total number of blasts over a period of 12 months</td>
</tr>
<tr>
<td>All public infrastructure</td>
<td>-</td>
<td>50</td>
<td>0%</td>
</tr>
</tbody>
</table>

Note: These criteria do not apply where MCO has a written agreement with the private landowner or public infrastructure authority and has advised the terms of this agreement to DP&E.

Blasting for open cut operations is only carried out at the Moolarben Coal Complex between 9.00 am and 5.00 pm Monday to Saturday inclusive. No blasting is allowed on Sundays, public holidays, or at any other time without the written approval of the Secretary of the DP&E.

3.2 LICENCE CONDITIONS

An application will be submitted to vary the blasting conditions of EPL 12932 (Condition L6.2) to be consistent with the NSW Project Approvals (05_0117 and 08_0135).

Mining Lease conditions relating to blasting are consistent with the airblast overpressure and vibration blasting criteria provided in the NSW Project Approvals (05_0117 and 08_0135).
3.3 PERFORMANCE INDICATORS

The extent of compliance with the above criteria and requirements will be measured by the following performance indicators:

- compliance with the relevant criteria at monitoring locations;
- number of Level 3 or above blast fume incidents generated annually at the Moolarben Coal Complex; and
- compliance with this plan, as indicated through annual reporting.
4.0 EXISTING ENVIRONMENT

4.1 BASELINE DATA

MCO undertakes up to 9 blasts per week on average including overburden, interburden and coal shots. The nature of blast shots varies with the terrain, material and bench height (among other factors). A summary of the environmental monitoring results collected by MCO including blast is presented on the Moolarben Coal website every month in accordance with Condition 11(a), Schedule 5 and Condition 11(a), Schedule 6 of the NSW Project Approvals (05_0117 and 08_0135, respectively). This summary includes the results of blast monitoring.

Meteorological monitoring is undertaken at MCO, in accordance with NSW Project Approval and EPL requirements. MCO has three Automatic Weather Stations (Section 7.1). One is located at the mine site’s administration office (referred to as WS1), one is located on a property on Ulan Road and is referred to as WS3 and one is a mobile unit (referred to as WS5). WS3 is linked into the real-time monitoring system and is the main weather station for reporting purposes with WS1 and WS5 used to supplement weather data as required.

4.2 SENSITIVE RECEPTORS

Privately owned residences potentially sensitive to blasting impacts from operational activities associated with the Moolarben Coal Complex are shown on Figure 5 (refer Page 19 of this BMP).

In addition to privately owned residences, other sensitive (non-mine owned) features include:

- infrastructure, including Ulan Road bridge, Ulan-Wollar Road bridges, Sandy Hollow Gulgong railway line (and associated culverts), Wollar-Wellington 330 kilovolt (kV) transmission line, Essential Energy 66 kV transmission line;
- public roads (including Ulan-Wollar Road and Ulan Road); and
- heritage sites, including Aboriginal rock shelter sites.

Blasting impacts have been modelled as a component of the environmental assessments for the Moolarben Coal Project Stage 1 and Moolarben Coal Project Stage 2.
5.0 BLAST IMPACTS

Blasting has the potential to result in the following hazards which may present a risk to public safety or property damage, if inappropriately managed:

- overpressure (i.e. airblast) exceedances;
- excessive ground vibration;
- flyrock;
- fume; and
- misfires.

5.1 OVERPRESSURE AND VIBRATION

Blasting generates a transient air pressure greater than the surrounding atmospheric pressure, known as an overpressure. An overpressure has the potential to damage buildings and infrastructure.

Some of the energy released as a result of blasting can result in vibration of the ground which has the potential to damage buildings and infrastructure.

5.2 FLYROCK

Flyrock is any material ejected from the blast site by the force of the blast. Flyrock has the potential to damage buildings and infrastructure and poses a safety hazard.

5.3 FUME

Blasting has the potential to generate nitrogen oxides as a result of the use of ammonium nitrate-based explosives. Nitrogen oxides consist of nitric oxide and nitrogen dioxide, both of which are toxic. Nitric oxide is invisible while nitrogen dioxide ranges from yellow to dark red depending on the concentration and size of the gas cloud (Australian Explosives Industry and Safety Group Inc [AEISG], 2011).

In accordance with the AEISG (2011) *Code of Practice Prevention and Management of Blast Generated NOx Gases in Surface Blasting*, MCO uses a fume rating system (Figure 3) for all blasts. Fume is measured on a simple scale from 0 to 5 and the extent of the fume is assessed on a simple scale from A to C where:

- A – localised (i.e. fume localised across only a few blast holes);
- B – medium (i.e. fume from up to 50% of blast holes in the shot); and
- C – extensive (i.e. extensive generation of fume across the whole blast).

The number of blasts classified as Level 3 or above generated annually is an indicator of blasting performance at the Moolarben Coal Complex (Section 3.3).
<table>
<thead>
<tr>
<th>Level</th>
<th>Typical Appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 0</strong></td>
<td>No NOx gas</td>
</tr>
<tr>
<td><strong>Level 1</strong></td>
<td>Slight NOx gas</td>
</tr>
<tr>
<td>1A</td>
<td>Localised</td>
</tr>
<tr>
<td>1B</td>
<td>Medium</td>
</tr>
<tr>
<td>1C</td>
<td>Extensive</td>
</tr>
<tr>
<td><strong>Level 2</strong></td>
<td>Minor yellow/orange gas</td>
</tr>
<tr>
<td>2A</td>
<td>Localised</td>
</tr>
<tr>
<td>2B</td>
<td>Medium</td>
</tr>
<tr>
<td>2C</td>
<td>Extensive</td>
</tr>
<tr>
<td><strong>Level 3</strong></td>
<td>Orange gas</td>
</tr>
<tr>
<td>3A</td>
<td>Localised</td>
</tr>
<tr>
<td>3B</td>
<td>Medium</td>
</tr>
<tr>
<td>3C</td>
<td>Extensive</td>
</tr>
<tr>
<td><strong>Level 4</strong></td>
<td>Orange/red gas</td>
</tr>
<tr>
<td>4A</td>
<td>Localised</td>
</tr>
<tr>
<td>4B</td>
<td>Medium</td>
</tr>
<tr>
<td>4C</td>
<td>Extensive</td>
</tr>
<tr>
<td><strong>Level 5</strong></td>
<td>Red/purple gas</td>
</tr>
<tr>
<td>5A</td>
<td>Localised</td>
</tr>
<tr>
<td>5B</td>
<td>Medium</td>
</tr>
<tr>
<td>5C</td>
<td>Extensive</td>
</tr>
</tbody>
</table>

Source: Australian Explosives Industry and Safety Group Inc. 2011
6.0 BLAST MANAGEMENT AND CONTROL MEASURES

6.1 PUBLIC SAFETY

MCO has developed a blasting protocol to protect the safety of people, property and livestock. Specific actions to protect public safety include:

- A blast exclusion zone for production blasts (i.e. overburden, interburden and coal shots) of 500 m is established in accordance with the MCO Standard Work Procedures.
- Pre-blast inspections are undertaken.
- Sentries are posted at all points to prevent access to a blast exclusion zone.
- Registered residences are notified of blasting times.
- The public are notified through methods such as newspaper advertisements, direct contact with residents, signs and the Moolarben Coal website.
- Emergency services and government agencies are notified, including the following:
  - Mudgee Police;
  - Mudgee Ambulance;
  - Mid-Western Regional Council;
  - Roads and Maritime Services (RMS) (Parkes Office); and
  - Rural Fire Service.
- Blast fume emergency response procedures.
- Procedures to be undertaken in the event of delays are developed.
- Accountabilities and responsibilities are clearly identified.
- Record keeping, reporting and audit/review requirements are specified.

A Road Closure Procedure has also been developed to the satisfaction of Mid-Western Regional Council and includes the following:

- Public notification of the date and time of blast related road closures in a local newspaper, via road signage and on MCO’s website.
- Implementation of road closure and traffic controls (including RMS traffic control training for relevant personnel).
- Post-blast road inspections and road clearance (where required) prior to road re-opening.
6.2 RESIDENTIAL LOCATIONS

6.2.1 Public Notice

Any private landholder within 2 km of open cut operations at the Moolarben Coal Complex (or any other private landowner) that registers an interest in being informed of the blasting schedule is notified via telephone, e-mail or as otherwise agreed between the parties. A pre-blast notification register is maintained with contact numbers for those residents that have registered an interest in receiving the blast schedule. Those listed on the pre-blast contact list are contacted prior to blasting and will be renotified if a blast is delayed by more than two hours.

In order to keep the local community informed of the blasting activities at the Moolarben Coal Complex, MCO operates and maintains a 24 hour free-call Community Response Hotline (1800 556 484) and a public website (www.moolarbencoal.com.au) where up-to-date information on the blasting schedule is available.

The Community Response Hotline will operate for the life of the Moolarben Coal Complex and the contact number will be advertised in local media, via the MCO Community Newsletter and will be advertised on the Moolarben Coal website.

6.2.2 Property Inspections and Investigations

All private residences within a 2 km radius of Moolarben Coal Complex open cut mining operations have been notified in writing that they are entitled to a structural property inspection prior to the start of mining operations in the respective open cuts.

Written notifications have also been addressed to:

- Ulan Public School;
- Ulan Anglican Church;
- Persons responsible for, or who have ownership over the historic heritage items with moderate to exceptional heritage significance identified in Appendix 10 and Appendix 9 of the NSW Project Approvals (05_0117 and 08_0135, respectively).

Upon agreement with the landowner, the inspections are performed by a qualified and experienced independent expert that has been approved by the Secretary of the DP&E. The inspection includes an assessment of the condition of the building or structure and recommended measures to mitigate any potential blasting impacts. A copy of the report is provided to the resident.
Should any private landholder within a 2 km radius of open cut operations at the Moolarben Coal Complex claim that buildings and/or structures on their land have been damaged as a result of blasting activities at the Moolarben Coal Complex, an investigation will be performed by a qualified and experienced independent expert that has been approved by the Secretary of the DP&E. This investigation will be undertaken within three months of the claim with a copy of the report to be provided to the resident.

If this investigation confirms the landholder’s claim, and both parties agree with these findings, MCO will repair the damages to the satisfaction of DP&E. However if the landholder or MCO disagree with the findings of the report, either party may refer the matter to DP&E. If the matter is not resolved within 21 days, it will be referred, by DP&E, to an Independent Dispute Resolution Process (Figure 4) to be resolved.

6.3 INFRASTRUCTURE

The closest non-mine owned infrastructure potentially sensitive to blasting activities at the Moolarben Coal Complex include the Ulan Road bridge over the Sandy Hollow Gulgong railway line (east of the Ulan Coal Mine rail loop), the Sandy Hollow Gulgong railway line (and associated culverts), Ulan-Wollar Road bridges, Ulan Road, Ulan-Wollar Road (and other minor public roads), the Essential Energy 66 kV transmission line and the Wollar-Wellington 330 kV transmission line.

MCO has written agreements with TransGrid and Australian Rail Track Corporation (ARTC) to undertake blasting within 500 metres (m) of the Wollar-Wellington 330 kV transmission line and within 500 m of ARTC infrastructure, respectively. MCO has implemented specific procedures to manage blasting within 500 m of these infrastructure assets, including:

- communication protocols to inform TransGrid and ARTC of proposed blasting activities within 500 m of the applicable infrastructure;
- implementation of agreed controls, including but not limited to vibration limits;
- monitoring and provision of monitoring results, post blasting;
- notifications regarding criteria exceedances or infrastructure damage;
- investigation or inspection regimes required post blasting; and
- responsibility for repair of any MCO related blasting impacts.
Independent Dispute Resolution Process
(Indicative only)

Matter referred to Independent Dispute Facilitator appointed by the Department in consultation with Council

Independent Dispute Facilitator meets with parties discuss dispute

Dispute resolved

Dispute not resolved

Facilitator consults relevant independent experts for advice on technical issues

Facilitator meets with relevant parties and experts

Dispute resolved

Dispute not resolved

Facilitator consults the Department and final decision made

Agreed Outcome

Source: Appendix 11 of NSW Project Approval (05_0117)
Based on work undertaken by Terrock Consulting Engineers, TransGrid and MCO have agreed that peak particle velocity (i.e. ground vibration limits) for the Wollar-Wellington 330 kV transmission line should not exceed 50 millimetres per second (mm/s) for tension towers and 100 mm/s for suspension towers.

Blasting limits for ARTC infrastructure (i.e. rail line, culverts, bridges) are managed according to a risk management approach agreed to between MCO and ARTC. Notwithstanding, by managing blasting such that vibration at the 330 kV suspension towers does not exceed 50 mm/s, a vibration limit of 50 mm/s at ARTC infrastructure is also maintained.

Detailed monitoring of all blasts will be undertaken throughout the life of the Moolarben Coal Complex at relevant infrastructure locations to enable modification and refinement of blast designs as necessary.

6.4 ABORIGINAL ROCK SHELTER SITES

Rock Shelter Sites S1MC55 and S1MC56
Blast vibration monitoring will be undertaken when open cut blasting is within 500 m of the sites two Aboriginal rock shelter sites known as S1MC55 and S1MC56.

Rock Shelter Sites S2MC229, S2MC232 and S2MC233
In accordance with Condition 14(b), Schedule 3 of the NSW Project Approval (08_0135), MCO will ensure that that blasting on the site does not damage Aboriginal rock shelter sites S2MC229, S2MC232 or S2MC233 (Figure 5).

As mining at the Moolarben Coal Complex progresses, MCO will engage a suitably qualified expert (e.g. geotechnical engineer) to determine the appropriate blast vibration limits to ensure that damage is avoided for Sites S2MC232 and S2MC233. This will occur prior to blasting within 500 m of these sites.

Rock Shelter Sites S1MC343, S1MC344, S1MC345 and S1MC352
NSW Project Approval (05_0117) (Appendix 3) requires subsurface testing and potential salvage of S1MC343-345 and S1MC352 where blasting is assessed to adversely impact these sites.

Condition 39, Schedule 3 of NSW Project Approval (05_0117) also requires a detailed archaeological test excavation and potential salvage program for sites S1MC343 and S1MC344, if it is determined by a qualified archaeologist that these sites may be subject to impacts associated with blasting.

---

1 MCO will ensure that site S2MC229 is not damaged by blasting until such time as the management strategy of detailed recorded and surface collection, including closer inspection of the drip line has been undertaken in accordance with the Heritage Management Plan.
In accordance with the Heritage Management Plan, MCO will engage an appropriately qualified expert to assess the potential of sites S1MC343, S1MC344, S1MC345 and S1MC352 to be adversely impacted by blasting and to determine applicable blast criteria.

Should blasting be determined to have the potential to adversely affect these sites, MCO will engage a suitable qualified archaeologist to undertake subsurface testing and potential salvage.

Monitoring for these sites would cease when blasting is greater than 500 m away from the sites and/or the sites have been excavated and/or salvaged as necessary.

6.5 BLASTING CONTROLS

MCO is committed to designing and managing its blasting operations to meet all relevant statutory requirements and to minimise the risk of impacts to residential receivers and sensitive infrastructure.

To meet all blasting related requirements, MCO implements procedures to minimise blast overpressure, vibration levels, flyrock and fume from its blasting operations. Blast management procedures include:

- training all relevant personnel on environmental obligations and explosives management;
- use of appropriate initiation and detonation systems and adherence to blast loading and initiation designs;
- use of adequate burden, stemming lengths and stemming material to confine explosives;
- designing all blasts to comply with vibration and airblast limits;
- monitoring of all blasts at locations outlined in Section 7.0;
- calibration of site models, using monitored data from previous blasting, to enable refinement and assessment of ongoing impacts;
- development of a blast record system which captures sufficient information to allow appropriate categorisation and comparison of blasts (Section 7.3);
- periodic review of blasting procedures to evaluate performance;
- evaluation of new technology and alternative blasting methodologies as they become available; and
- implementation of procedures to mitigate fume for all blasts (Section 6.6).
6.5.1 Pre-blast Environmental Assessment

Prior to each blast, a pre-blast environmental assessment is prepared by the Drill and Blast Coordinator and assessed by the Drill and Blast Superintendent (or delegate). The Mine Manager and/or Technical Services Manager will review the assessment where it is identified that unfavourable conditions are forecast or if factors are present which may increase fume generation. The objective of the assessment is to minimise dust, fume and blast overpressure impacts on privately owned residences. The pre-blast environmental assessment actions include:

- a minimum blast exclusion zone of 500 m;
- assessment of wind conditions prior to the blast to identify personnel and community members that may be impacted;
- radio contact on site to evacuate work areas if required;
- design of the blast (e.g. right product for the conditions); and
- notifications to external stakeholders prior to blasting.

The protocol enables a ‘red light’/‘green light’ system which will be refined and implemented throughout the life of the operation. The pre-blast environmental assessment will be continually updated to reflect changes to the mine design, community expectations and regional land ownership.

6.6 FUME

MCO has developed a blast fume management strategy based on the AEISG Code of Practice (2011). This includes consideration of the following factors and practices to mitigate fume for all blasts:

- domain risk area;
- blast design;
- sleep time;
- explosives quality;
- explosives selection;
- on-bench practices;
- blast initiation;
- ground condition;
- reporting and documenting; and
- training.

Further detail is provided in the Blast Fume Management Strategy (MCO_ENV_PLN_0033).
6.7 ENVIRONMENTAL FORECASTING SOFTWARE

MCO operates an environmental forecasting model as part of the blast management system at the Moolarben Coal Complex which allows MCO to simulate potential dust and fume impacts from a blast, up to 48 hours in advance and reschedule or redesign blasting, as required.

6.8 CUMULATIVE IMPACTS

A communications protocol has been developed with Ulan Coal Mine and Wilpinjong Coal Mine so that cumulative impacts from simultaneous blasting are avoided. This protocol outlines that blast times are rescheduled where there is potential for blasts to occur concurrently. The protocol requires positive email, fax or telephone communication to be made prior to each blast with both Ulan Coal Mine and Wilpinjong Coal Mine.
7.0 BLAST MONITORING PROGRAM

7.1 BLAST OVERPRESSURE AND VIBRATION MONITORING

Monitoring frequency and parameters are outlined in Table 3. Monitoring sites have been selected in consultation with the EPA and are representative of the nearest privately owned residences, and other sensitive infrastructure located within 2 km of blasting activities.

Table 3: Monitoring Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units of measure</th>
<th>Frequency</th>
<th>Sampling Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overpressure</td>
<td>dB (Lin Peak)</td>
<td>Every Blast</td>
<td>Type 1 noise blast logger</td>
</tr>
<tr>
<td>Ground vibration</td>
<td>mm/s</td>
<td>Every Blast</td>
<td>Geophone logger or similar</td>
</tr>
<tr>
<td>Fume</td>
<td>AEISG Code of Practice Fume Rating System</td>
<td>Every Blast</td>
<td>Observation and video recording</td>
</tr>
</tbody>
</table>

Blast monitoring locations relative to open cut operations at the Moolarben Coal Complex are illustrated in Figure 5 and described in Table 4. Blast monitoring locations will be reviewed and where necessary modified as a result of changes to the geographical location of blasting or changes to land ownership (where relevant).

Blast overpressure and ground vibration monitoring locations for OC3, will be established prior to commencement of operations in OC3. These locations will be dependent on access and land ownership.

All blast monitoring instrumentation will be installed, calibrated and maintained in accordance with both AS2187.2-2006 and the manufacturer’s specifications.

Table 4: Location of Monitoring Equipment

<table>
<thead>
<tr>
<th>Locations</th>
<th>Site ID</th>
<th>Parameters</th>
<th>Frequency</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ulan Public School</td>
<td>BM1</td>
<td>Blast overpressure and vibration</td>
<td>Every blast</td>
<td>Permanent blast monitor located at, or adjacent to Ulan Public School for the purposes of amenity monitoring. Representative of nearest privately owned residences to the north-west of OC1.</td>
</tr>
<tr>
<td>Ridge Road</td>
<td>BM5</td>
<td>Blast overpressure and vibration</td>
<td>Every blast</td>
<td>Permanent blast monitor located at, or adjacent to the nearest privately owned residence to the south-west of OC1 and west of OC2 for the purposes of blasting.</td>
</tr>
<tr>
<td>Moolarben Road1</td>
<td>BM6</td>
<td>Blast overpressure and vibration</td>
<td>Every blast following commencement of OC3</td>
<td>Permanent blast monitor located at, or adjacent to the nearest privately owned residence to the west and south-west of OC3.</td>
</tr>
</tbody>
</table>
### Aboriginal rock shelter sites:
- S1MC35; and
- S1MC56.

<table>
<thead>
<tr>
<th>Locations</th>
<th>Site ID</th>
<th>Parameters</th>
<th>Frequency</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aboriginal rock shelter</td>
<td>BM2</td>
<td>Blast vibration</td>
<td>Every blast within 500 m of the Aboriginal rock shelter sites, and as required, to validate compliance with criteria in Appendix A.¹</td>
<td>Portable blast monitor located at the Aboriginal rock shelter site or representative site for the purposes of structural integrity monitoring.</td>
</tr>
<tr>
<td>sites²</td>
<td>Various</td>
<td>Blast vibration</td>
<td>Every blast within 500 m of the Aboriginal rock shelter sites, and as required, to validate compliance with criteria in Appendix A.</td>
<td>Portable blast monitor located at the Aboriginal rock shelter site or representative site for the purposes of structural integrity monitoring.</td>
</tr>
<tr>
<td>Other Infrastructure³</td>
<td>Various</td>
<td>Blast vibration</td>
<td>Blast monitoring will be undertaken when blasting is proposed within 500 m of the relevant structure.</td>
<td>Portable blast monitor located at, or adjacent to infrastructure for the purposes of structural integrity monitoring.</td>
</tr>
<tr>
<td>MCO Administration</td>
<td>Weather Station (WS1)</td>
<td>Full Meteorological Complement*</td>
<td>Continuous.</td>
<td>Permanent meteorological station representative of site conditions.</td>
</tr>
<tr>
<td>Ulan Road</td>
<td>Weather Station (WS3)</td>
<td>Full Meteorological Complement*</td>
<td>Continuous.</td>
<td>Permanent meteorological station representative of conditions near non-mine owned residences to the south-west of the operation.</td>
</tr>
<tr>
<td>Mobile</td>
<td>Weather Station (WS5)</td>
<td>Full Meteorological Complement*</td>
<td>Continuous.</td>
<td>Mobile unit moved as required to supplement data from other sites.</td>
</tr>
</tbody>
</table>

* Full Meteorological compliment consists of sensors and calculations that provide the following:
  - wind speed at 10 m;
  - wind direction at 10 m;
  - standard deviation of wind direction (sigma-theta) at 10 m;
  - temperature at 2 m and 10 m;
  - relative humidity at 2 m;
  - solar radiation at 2 m;
  - temperature difference between 2 m and 10 m; and
  - rainfall (gauge at ground-level).

¹ Monitoring location will be established prior to commencement of blasting operations in OC3.
² Where access to the site is unsafe, an alternative, representative monitoring site may be used.
³ Monitoring will be undertaken if it is determined that these sites may be subject to impacts associated with blasting. Monitoring would cease when blasting is greater than 500 m away from the sites and/or the sites have been excavated and/or salvaged as necessary.
⁴ MCO will ensure that site S2MC229 is not damaged by blasting until such time as the management strategy of detailed recording and surface collection, including closer inspection of the drip line has been undertaken in accordance with the Heritage Management Plan.
⁵ No blasting is permitted to occur within 500 m of non-mine owned lands or infrastructure unless suitable arrangements have been made with the landowners/infrastructure owners and tenants to minimise risk of flyrock related impact.
7.2 BLAST FUME MONITORING

The amount of NOx gases and extent of fume generated from a blast are assessed against the AEISG (2011) Blast Fume Classification Table (Section 5.3 and Figure 3). In addition to visual monitoring of fume, a video of each blast is also recorded.

7.3 RECORDS

Results of monitoring will be kept in a legible form for at least four years after each blasting event has been undertaken. These records are available to any authorised officer of the EPA or DP&E when requested.

The following is recorded for each blast:

- date and time of blasting event;
- location of blasting event;
- location where monitoring was conducted;
- fume rating;
- fume characteristics;
- meteorological information;
- overpressure and vibration at each location; and
- Maximum Instantaneous Charge (MIC) (commenced 1st June 2013).

A video of each blast is also recorded.
8.0 RESPONSE PROTOCOLS

Following each blast event, the Blasting Criteria Review Protocol in Figure 6 will be followed by the Drill and Blast Coordinator. Incident reporting is described further in Section 11.0.

Any exceedance of the blasting criteria in Section 3.0 will be investigated to determine the likely cause of the exceedance. The investigation will seek to determine:

- whether the exceedance of the criteria was directly related to the blast or if environmental factors contributed to the exceedance;
- the primary cause of the incident;
- any contributing factors which led to the incident; and
- whether appropriate controls were implemented to prevent the incident.

Corrective and/or preventative actions will be assigned to relevant responsibilities as a result of the investigation. Actions will be communicated through planning meetings and toolbox talks and outstanding actions will be monitored for their effectiveness upon completion. Blast and fume pollution incidents will be investigated and reported in accordance with the Blasting Criteria Review Protocol (Figure 6), Section 11.0 and MCO’s Pollution Incident Response Management Plan (PIRMP).

All environmental incidents will be recorded and maintained for a period of no less than four years.

In the event that an investigation concludes that an exceedance of the criteria outlined in Section 3.0 was directly attributed to MCO’s blasting activities, MCO will notify affected landholders and tenants (of privately owned properties) of the exceedance as soon as practicable and provide them with regular blast monitoring results, until the results show that the MCO is complying with the blasting criteria.

Where an exceedance of criteria in Section 3.0 is deemed to have been caused by MCO’s blasting operations, MCO will, on request, undertake property investigations in accordance with Condition 12, Schedule 3 and Condition 13, Schedule 3 of the NSW Project Approvals (05_0117 and 08_0135, respectively).
Do the results exceed the criteria in Appendix A?

- Update blast monitoring database and report accordingly
- No exceedance from blast verified
- Qualified person to review result and advise of amended result
- Exceedance from blast verified
- Exceedance of airblast overpressure criteria
  - Notify affected owner of private residence
  - MCD Exceedance Investigation (why, what, how and recommendations for improvement)
- Exceedance of vibration criteria
  - Notify affected owner/manager of private residence or sensitive infrastructure
  - Undertake post blast inspection and compare with pre-blasting inspections
  - Consult with owner/manager regarding any damage to residence or infrastructure and proposed repairs (if required)
- Document and report exceedance to EPA and DP&E within 7 days of notification
- Implement agreed repairs (if required)
- Refer to Secretary of DP&E

Yes

Is the exceedance influenced by environmental factors e.g. Wind?

- No
- Yes

Notify affected owner of private residence
Report results to EPA and DP&E immediately
Detailed investigation by Drill & Blast Department
Document and report exceedance to EPA and DP&E within 7 days of notification

Agree

Disagree

Implement agreed repairs (if required)
Independent, qualified and experience person to assess damage and prepare report
Refer to Secretary of DP&E

MOLARBEN COAL COMPLEX

FIGURE 6
Blasting Criteria Review Protocol
8.1 BLAST FUME EMERGENCY RESPONSE

Onsite Incident
Any person (whether employee, contractor or visitor) who believes that they may have been exposed to blast fumes should report to their immediate supervisor to be treated according to the treatment protocol below.

Offsite Incident
In the event that blast fume rated at Level 3 (Figure 3) or higher leaves site the following actions will take place:

1. The Technical Services Manager/Mine Manager will be notified that a fume event has occurred that may put members of the local community at risk.
2. The Technical Services Manager/Mine Manager will contact the Environment and Community Manager immediately and notify them of the situation.
3. The Environment and Community Manager will initiate an incident response in accordance with the PIRMP.

Treatment Protocol
Where a person has been exposed to blast fumes or displays symptoms associated with blast fume their immediate supervisor should be notified immediately.

Where a member of the public or community has been exposed to blast fumes or displays symptoms associated with blast fume, MCO will declare an incident in accordance with the PIRMP including notification of any sensitive receivers. The Event Duty Card (Appendix B) Exposure to NOx Fume will outline the specific treatment protocol should exposure occur.
9.0 CONTINGENCY PLAN

In the event that a blasting criterion detailed in Section 3.0 and Appendix A is considered to have been exceeded, MCO will implement the following Contingency Plan:

- The Environmental Coordinator will report the likely exceedance to the Environment and Community Manager within 24 hours of assessment completion.
- MCO will report the exceedance of the blasting criteria to the EPA and the DP&E as soon as practicable.
- MCO will identify an appropriate course of action with respect to the identified impact(s), in consultation with specialists, DP&E and the EPA, as necessary. For example contingency measures, such as, but not limited to, those described in Section 9.1 of this BMP.
- MCO will, on request, submit the proposed course of action to the DP&E for approval.
- MCO will implement the approved course of action to the satisfaction of the DP&E.

9.1 POTENTIAL CONTINGENCY MEASURES

Potential contingency measures will be reviewed during revisions of this BMP. Key potential contingency measures to be implemented (following the exceedance of blasting criteria and completion of criteria review protocol as described in Section 8.0) may include the following:

- MCO will notify affected landholders and tenants of the exceedance as soon as practicable and provide them with regular blast monitoring results, until the results show that the MCO is complying with the blasting criteria.
- MCO will, on request, undertake property investigations in accordance with Condition 12, Schedule 3 and Condition 13, Schedule 3 of the NSW Project Approvals (05_0117 and 08_0135, respectively).
- MCO will investigate blast design with a view to mitigate the potential for future exceedances, if monitoring results indicate this is required.
10.0 ANNUAL REVIEW AND IMPROVEMENT OF BLAST MANAGEMENT PLAN

10.1 ANNUAL REVIEW

In accordance with Condition 4, Schedule 5 and Condition 4, Schedule 6 of the Project Approvals (05_0117 and 08_0135, respectively) MCO will conduct an annual review of operations prior to 31 March and annually thereafter.

This annual review will specifically address the following aspects of Condition 4, which directly relate to blasting:

- Include a comprehensive review of the monitoring results and complaints records of MCO operations over the previous calendar year, which includes a comparison of these results against the:
  - relevant statutory requirements, limits or performance measures/criteria;
  - monitoring results of previous years; and
  - relevant predictions in the EA.

- Identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance.

- Identify any trends in the monitoring data over the life of the project.

- Identify any discrepancies between the predicted and actual impacts of MCO operations, and analyse the potential cause of any significant discrepancies.

The annual review will be made publically available on the Moolarben Coal website in accordance with Condition 11, Schedule 5 and Condition 11, Schedule 6 of the Project Approvals (05_0117 and 08_0135, respectively).

10.2 BLAST MANAGEMENT PLAN REVIEW

In accordance with Condition 5, Schedule 5 and Condition 5, Schedule 6 of the Project Approvals (05_0117 and 08_0135, respectively) this BMP will be reviewed, and if necessary revised to the satisfaction of the Secretary of the DP&E, within 3 months of the submission of:

(a) An Annual Review in accordance with Condition 5, Schedule 5 and Condition 5, Schedule 6 of the Project Approvals (05_0117 and 08_0135, respectively);

(b) An incident report in accordance with Condition 7, Schedule 5 and Condition 7, Schedule 6 of the Project Approvals (05_0117 and 08_0135, respectively);
(c) An audit in accordance with Condition 9, Schedule 5 and Condition 9, Schedule 6 of the Project Approvals (05_0117 and 08_0135, respectively); and

(d) Any modification to the conditions of the Project Approvals.

This BMP will be made publically available on the Moolarben Coal website, in accordance with Condition 11, Schedule 5 and Condition 11, Schedule 6 of the Project Approvals (05_0117 and 08_0135, respectively).
11.0 REPORTING SYSTEMS

In accordance with Condition 3, Schedule 6 and Condition 3, Schedule 5 of the NSW Project Approvals (05_0117 and 08_0135, respectively), MCO has developed protocols for managing and reporting the following:

- incidents;
- complaints;
- non-compliances with statutory requirements; and
- exceedances of the impact assessment criteria and/or performance criteria.

These protocols are described in detail in the Environmental Management Strategy.

Blast monitoring and management is reported as part of the Annual Review described in Section 10.1 and in accordance with EPL 12932 as described in the Environmental Management Strategy.

11.1 INCIDENT REPORTING

In the event that the Blasting Criteria Review Protocol (Section 8 and Figure 6) concludes that a non-compliance of the relevant blast criteria has occurred (i.e. an incident), the event will be reported to DP&E, EPA and other relevant agencies immediately upon identifying the exceedance.

Within seven days of notifying the DP&E, EPA and other relevant agencies of an exceedance, MCO will submit a written report that:

(a) describes the date, time, and nature of the exceedance;
(b) identifies the cause (or likely cause) of the exceedance;
(c) describes what action has been taken to date; and
(d) describes the proposed measures to address the exceedance.

MCO will also provide regular monitoring results to DP&E, EPA, other relevant agencies and affected landowners until the results show that the project is complying with relevant criteria.
12.0 REFERENCES


Appendix A

Relevant NSW Project Approval Conditions
(05_0117 and 08_0135)
## Table A-1 Blast Management Plan Requirements

<table>
<thead>
<tr>
<th>Stage 1 - NSW Project Approval (05_0117)</th>
<th>BMP Section</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Blast Management Plan</strong></td>
<td></td>
</tr>
<tr>
<td>15. The Proponent shall prepare and implement a Blast Management Plan for the project prior to undertaking any blasting on site to the satisfaction of the Secretary. This plan must:</td>
<td></td>
</tr>
<tr>
<td>(a) be prepared in consultation with the EPA and be submitted to the Secretary for approval by 31 March 2015;</td>
<td></td>
</tr>
<tr>
<td>(b) describe the measures that would be implemented to ensure compliance with the blast criteria and operating conditions in this approval;</td>
<td>Section 6.0</td>
</tr>
<tr>
<td>(c) propose and justify any alternative ground vibration limits for public infrastructure in the vicinity of the site (if relevant); and</td>
<td>Section 6.3</td>
</tr>
<tr>
<td>(d) include a monitoring program for evaluating compliance with the blasting criteria and operating conditions of this approval.</td>
<td>Section 7.0</td>
</tr>
</tbody>
</table>

## Table A-2 Blast Management Plan Requirements

<table>
<thead>
<tr>
<th>Stage 2 - NSW Project Approval (08_0135)</th>
<th>BMP Section</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Blast Management Plan</strong></td>
<td></td>
</tr>
<tr>
<td>16. The Proponent shall prepare and implement a Blast Management Plan for the project to the satisfaction of the Secretary. This plan must:</td>
<td></td>
</tr>
<tr>
<td>(a) be prepared in consultation with the EPA, and submitted to the Secretary for approval prior to the conducting any blasting on site;</td>
<td></td>
</tr>
<tr>
<td>(b) describe the measures that would be implemented to ensure compliance with the blast criteria and operating conditions of this approval;</td>
<td>Section 6.0</td>
</tr>
<tr>
<td>(c) propose and justify any alternative ground vibration limits for public infrastructure in the vicinity of the site (if relevant); and</td>
<td>Section 6.3</td>
</tr>
<tr>
<td>(d) include a monitoring program for evaluating and reporting on compliance with the blasting criteria and operating conditions of this approval.</td>
<td>Section 7.0</td>
</tr>
</tbody>
</table>
### Table A-3 NSW Project Approval Conditions Relating to Blasting

<table>
<thead>
<tr>
<th></th>
<th>NSW Project Approval (05_0117)</th>
<th>NSW Project Approval (08_0135)</th>
<th>BMP Section</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Blasting Criteria</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. The Proponent shall ensure that the blasting on the Moolarben mine complex does not cause exceedances of the criteria in Table 4.</td>
<td><strong>Schedule 3</strong></td>
<td><strong>BMP Section</strong></td>
<td></td>
</tr>
<tr>
<td>Table 4: Blasting Criteria</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td><strong>Airblast overpressure (dB[Lin Peak])</strong></td>
<td><strong>Ground vibration (mm/s)</strong></td>
<td><strong>Allowable exceedance</strong></td>
</tr>
<tr>
<td>Residence on privately owned land</td>
<td>120</td>
<td>10</td>
<td>0%</td>
</tr>
<tr>
<td>All public infrastructure</td>
<td>115</td>
<td>5</td>
<td>5% of the total number of blasts over a period of 12 months</td>
</tr>
<tr>
<td>All public infrastructure</td>
<td>-</td>
<td>50 (or a limit determined by the structural design methodology in AS 2187.2-2006, or its latest version, or other alternative limit for public infrastructure, to the satisfaction of the Secretary)</td>
<td>0%</td>
</tr>
<tr>
<td>Residence on privately owned land</td>
<td>-</td>
<td>50 (or a limit determined by the structural design methodology in AS 2187.2-2006, or its latest version, or other alternative limit for public infrastructure, to the satisfaction of the Secretary)</td>
<td>0%</td>
</tr>
</tbody>
</table>

However, these criteria do not apply if the Proponent has a written agreement with the relevant owner, and has advised the Department in writing of the terms of this agreement.

### Section 3.0

However, these criteria do not apply if the Proponent has a written agreement with the relevant owner to exceed these criteria, and has advised the Department in writing of the terms of this agreement.
<table>
<thead>
<tr>
<th>Blasting Hours</th>
<th>Blasting Hours</th>
<th>BMP Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. The Proponent shall only carry out blasting on the site between 9am and 5pm Monday to Saturday inclusive. No blasting is allowed on Sundays, public holidays, or at any other time without the written approval of the Secretary.</td>
<td>10. The Proponent shall only carry out blasting on site between 9 am and 5 pm Monday to Saturday inclusive. No blasting is allowed on Sundays, public holidays, or at any other time without the written approval of the Secretary.</td>
<td>Section 3.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Blasting Frequency</th>
<th>Blasting Frequency</th>
<th>Property Inspections</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. The Proponent may carry out a maximum of:</td>
<td>11. The Proponent may carry out a maximum of:</td>
<td>Property Inspections</td>
</tr>
<tr>
<td>(a) 2 blasts a day; and</td>
<td>(a) 2 blasts a day; and</td>
<td>12. If the Proponent receives a written request from the owner of any privately-owned land within 2 kilometres of any approved open cut mining pit on site for a property inspection to establish the baseline condition of any buildings and/or structures on his/her land, or to have a previous property inspection updated, then within 2 months of receiving this request the Proponent shall:</td>
</tr>
<tr>
<td>(b) 9 blasts a week, averaged over a calendar year, at the Moolarben mine complex.</td>
<td>(b) 9 blasts a week, averaged over a calendar year, at the Moolarben mine complex.</td>
<td>(a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to:</td>
</tr>
<tr>
<td>This condition does not apply to blasts that generate ground vibration of 0.5 mm/s or less at any residence on privately-owned land, blasts misfires or blasts required to ensure the safety of the mine or its workers.</td>
<td>This condition does not apply to blasts that generate ground vibration of 0.5 mm/s or less at any residence on privately-owned land, blast misfires or blasts required to ensure the safety of the mine or its workers.</td>
<td>• establish the baseline condition of any buildings and other structures on the land, or update the previous property inspection report; and</td>
</tr>
<tr>
<td>Note: For the purposes of this condition, a blast refers to a single blast event, which may involve a number of individual blasts fired in quick succession in a discrete area of the mine.</td>
<td>Note: For the purposes of this condition, a blast refers to a single blast event, which may involve a number of individual blasts fired in quick succession in a discrete area of the mine.</td>
<td>• identify measures that should be implemented to minimise the potential blasting impacts of the project on these buildings and/or structures; and</td>
</tr>
<tr>
<td>Property Inspections</td>
<td>Property Inspections</td>
<td>Property Inspections</td>
</tr>
<tr>
<td>11. If the Proponent receives a written request from the owner of any privately-owned land within 2 kilometres of any approved open cut mining pit on site for a property inspection to establish the baseline condition of any buildings and/or structures on his/her land, or to have a previous property inspection updated, then within 2 months of receiving this request the Proponent shall:</td>
<td>12. If the Proponent receives a written request from the owner of any privately-owned land within 2 kilometres of any approved open cut mining pit on site for a property inspection to establish the baseline condition of any buildings and/or structures on his/her land, or to have a previous property inspection updated, then within 2 months of receiving this request the Proponent shall:</td>
<td>If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Proponent or the landowner disagrees with the findings of the property inspection report, either party may refer the matter to the Secretary for resolution.</td>
</tr>
<tr>
<td>(a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to:</td>
<td>(a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to:</td>
<td></td>
</tr>
<tr>
<td>• establish the baseline condition of any buildings and other structures on the land, or update the previous property inspection report; and</td>
<td>• establish the baseline condition of any buildings and other structures on the land, or update the previous property inspection report; and</td>
<td></td>
</tr>
<tr>
<td>• identify measures that should be implemented to minimise the potential blasting impacts of the project on these buildings and/or structures; and</td>
<td>• identify measures that should be implemented to minimise the potential blasting impacts of the project on these buildings and/or structures; and</td>
<td></td>
</tr>
<tr>
<td>(b) give the landowner a copy of the new or updated property inspection report.</td>
<td>(b) give the landowner a copy of the new or updated property inspection report.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Document</th>
<th>Version</th>
<th>Issue</th>
<th>Effective</th>
<th>Review</th>
<th>Author</th>
<th>Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCO_ENV_PLN_0024</td>
<td>4</td>
<td>May 2015</td>
<td>June 2015</td>
<td>June 2016</td>
<td>MCO</td>
<td>S Archinal</td>
</tr>
</tbody>
</table>
### NSW Project Approval (05_0117)

#### Property Investigations

12. If the owner of any privately-owned land claims that buildings and/or structures on his/her land have been damaged as a result of blasting on the site, then within 2 months of receiving this claim the Proponent shall:

(a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to investigate the claim; and

(b) give the landowner a copy of the property investigation report.

If this independent property investigation confirms the landowner’s claim, and both parties agree with these findings, then the Proponent shall repair the damage to the satisfaction of the Secretary.

If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Proponent or the landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Secretary for resolution.

#### Operating Conditions

13. The Proponent shall:

(a) implement best practice blasting management to:

- protect the safety of people and livestock in the surrounding area;
- protect public or private infrastructure/property in the surrounding area from any damage; and
- minimise the dust and fume emissions of any blasting;

(b) operate a suitable system to enable the public to get up-to-date information on the proposed blasting Schedule on site; and

### NSW Project Approval (08_0135)

#### Property Investigations

13. If the owner of any privately-owned land claims that buildings and/or structures on his/her land have been damaged as a result of blasting on the site, then within 2 months of receiving this claim the Proponent shall:

(a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to investigate the claim; and

(b) give the landowner a copy of the property investigation report.

If this independent property investigation confirms the landowner’s claim, and both parties agree with these findings, then the Proponent shall repair the damage to the satisfaction of the Secretary.

If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Proponent or the landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Secretary for resolution.

#### Operating Conditions

14. The Proponent shall:

(a) implement best management practice to:

- protect the safety of people and livestock in the surrounding area;
- protect public or private infrastructure/property in the surrounding area from any damage; and
- minimise the dust and fume emissions of any blasting;

(b) ensure that blasting on the site does not damage Aboriginal rock shelter sites S2MC229 (AHIMS No. 36-3-1376), S2MC232 (AHIMS No. 36-3-1379) or S2MC233 (AHIMS No. 36-3-1380);

(c) operate a suitable system to enable the public to get up-to-date information on the proposed blasting Schedule on site; and

### Table

<table>
<thead>
<tr>
<th>Document</th>
<th>Version</th>
<th>Issue</th>
<th>Effective</th>
<th>Review</th>
<th>Author</th>
<th>Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCO_ENV_PLN_0024</td>
<td>4</td>
<td>May 2015</td>
<td>June 2015</td>
<td>June 2016</td>
<td>MCO</td>
<td>S Archinal</td>
</tr>
<tr>
<td>NSW Project Approval (05_0117)</td>
<td>NSW Project Approval (08_0135)</td>
<td>BMP Section</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------------------</td>
<td>-------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| (c) co-ordinate the timing of blasting on site with the timing of blasting at the Ulan and Wilpinjong mines to minimise cumulative blasting impacts, to the satisfaction of the Secretary. | (d) co-ordinate the timing of blasting on site with the timing of blasting at the Ulan and Wilpinjong mines to minimise cumulative blasting impacts, to the satisfaction of the Secretary.  
*Note: To identify the Aboriginal rock shelter sites, see the applicable figure in Appendix 8.* | Section 6.8 |

14. The Proponent shall not undertake blasting on site within 500 metres of:
   - (a) any public road;
   - (b) the Gulgong to Sandy Hollow Railway Line;
   - (c) the Wollar-Wellington 330kV Transmission Line; or
   - (d) any land outside the site not owned by the Proponent, unless the Proponent has:
     - demonstrated to the satisfaction of the Secretary that the blasting can be carried out closer to the infrastructure or land without compromising the safety of people or livestock or damaging the infrastructure and/or other buildings and structures; and
     - updated the Blast Management Plan to include the specific measures that would be implemented while blasting is being carried out within 500 metres of the infrastructure or land; or
     - a written agreement with the relevant infrastructure owner or landowner to allow blasting to be carried out closer to the infrastructure or land, and the Proponent has advised the Department in writing of the terms of this agreement.

15. The Proponent shall not undertake blasting on site within 500 metres of:
   - (a) any public road;
   - (b) the Gulgong to Sandy Hollow Railway Line;
   - (c) the Wollar-Wellington 330kV Transmission Line; or
   - (d) any land outside the site not owned by the Proponent, unless the Proponent has:
     - demonstrated to the satisfaction of the Secretary that the blasting can be carried out closer to the infrastructure or land without compromising the safety of people or livestock or damaging the infrastructure and/or other buildings and structures; and
     - updated the Blast Management Plan to include the specific measures that would be implemented while blasting is being carried out within 500 metres of the infrastructure or land; or
     - a written agreement with the relevant infrastructure owner or landowner to allow blasting to be carried out closer to the infrastructure or land, and the Proponent has advised the Department in writing of the terms of this agreement.

<table>
<thead>
<tr>
<th>Document</th>
<th>Version</th>
<th>Issue</th>
<th>Effective</th>
<th>Review</th>
<th>Author</th>
<th>Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCO_ENV_PLN_0024</td>
<td>4</td>
<td>May 2015</td>
<td>June 2015</td>
<td>June 2016</td>
<td>MCO</td>
<td>S Archinal</td>
</tr>
</tbody>
</table>
### NSW Project Approval (05_0117)

**Schedule 4**

**NOTIFICATION OF LANDOWNERS/TENANTS**

1. By the end of March 2015, the Proponent shall:
   - (a) notify in writing the owners of:
     - any land in Table 1A and any land or residence exceeding the criteria in Tables 2A and 2 (respectively) of Schedule 3 that they have the right to require the Proponent to acquire their land at any stage during the project;
     - any residence on the land listed in Table 3 and any residence exceeding the criteria in Table 3A of Schedule 3 that they have the right to request the Proponent for additional noise mitigation measures to be installed at their residence at any stage during the project; and
   - any privately-owned land within 2 kilometres of the approved open cut mining pit/s that they are entitled to ask for an inspection to establish the baseline condition of any buildings or structures on their land, or to have a previous property inspection report updated;
   - (b) notify the tenants of any mine-owned land of their rights under this approval; and
   - (c) send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the owners and/or existing tenants of any land (including mine-owned land) where the predictions in the EA identify that dust emissions generated by the project are likely to be greater than the relevant air quality criteria in Schedule 3 at any time during the life of the project.

3. As soon as practicable after obtaining monitoring results showing:
   - (a) an exceedance of any relevant criteria in Schedule 3, the Proponent shall notify affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the project is again complying with the relevant criteria; and
   - (b) an exceedance of the relevant air quality criteria in Schedule 3, the Proponent shall send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land (including the tenants of any mine-owned land).

### NSW Project Approval (08_0135)

**Schedule 5**

**NOTIFICATION OF LANDOWNERS/TENANTS**

1. Within 1 month of the date of this approval, the Proponent shall:
   - (a) notify in writing the owners of:
     - any land listed in Table 1 and any residence or land exceeding the criteria in Tables 4 or 5 (respectively) of Schedule 3 that they have the right to require the Proponent to acquire their land at any stage during the project;
     - any residence on the land listed in Table 2 and any residence exceeding the criteria in Table 6 of Schedule 3 that they have the right to request the Proponent for additional noise mitigation measures to be installed at their residence at any stage during the project; and
     - any privately-owned land within 2 kilometres of the approved open cut mining pit/s that they are entitled to ask for an inspection to establish the baseline condition of any buildings or structures on their land, or to have a previous property inspection report updated;
   - (b) notify the tenants of any mine-owned land of their rights under this approval; and
   - (c) send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the owners and/or existing tenants of any land (including mine-owned land) where the predictions in the EA identify that dust emissions generated by the project are likely to be greater than the relevant air quality criteria in Schedule 3 at any time during the life of the project.

3. As soon as practicable after obtaining monitoring results showing:
   - (a) an exceedance of any relevant criteria in Schedule 3, the Proponent shall notify affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the project is again complying with the relevant criteria; and
   - (b) an exceedance of the relevant air quality criteria in Schedule 3, the Proponent shall send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land (including the tenants of any mine-owned land).

---

<table>
<thead>
<tr>
<th>Document</th>
<th>Version</th>
<th>Issue</th>
<th>Effective</th>
<th>Review</th>
<th>Author</th>
<th>Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCO_ENV_PLN_0024</td>
<td>4</td>
<td>May 2015</td>
<td>June 2015</td>
<td>June 2016</td>
<td>MCO</td>
<td>S Archinal</td>
</tr>
</tbody>
</table>
### Table A-4: Relevant Commitments Relating to Blasting in Appendix 3 of Stage 1 NSW Project Approval Conditions

<table>
<thead>
<tr>
<th>Appendix 3: Statement of Commitments</th>
<th>BMP Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Management and Mitigation – Modification of Stage 1</td>
<td>Section 6.4</td>
</tr>
<tr>
<td>- The Aboriginal Cultural Heritage Management Plan will be updated to include:</td>
<td></td>
</tr>
<tr>
<td>- Sub-surface testing and potential salvage of S1MC343-345 and S1MC352 where blasting is assessed to adversely impact these sites.</td>
<td></td>
</tr>
</tbody>
</table>

**Document Details**

<table>
<thead>
<tr>
<th>Document</th>
<th>Version</th>
<th>Issue</th>
<th>Effective</th>
<th>Review</th>
<th>Author</th>
<th>Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCO_ENV_PLN_0024</td>
<td>4</td>
<td>May 2015</td>
<td>June 2015</td>
<td>June 2016</td>
<td>MCO</td>
<td>S Archinal</td>
</tr>
</tbody>
</table>
Table A-5: Relevant Commitments Relating to Blasting in Appendix 3 of Stage 3 NSW Project Approval Conditions

<table>
<thead>
<tr>
<th>Appendix 3: Statement of Commitments</th>
<th>BMP Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>(4) MCM will revise the Stage 1 Environmental Management System to incorporate the MCC Stage 2 project in consultation with relevant regulators and stakeholders (where appropriate). This may require revision or preparation of monitoring and management plans as prescribed by the Project Approval, such as (where relevant):</td>
<td>This BMP</td>
</tr>
<tr>
<td>• Environmental Monitoring Program;</td>
<td></td>
</tr>
<tr>
<td>• Air Quality and Greenhouse Gas Management Plan (including energy savings actions);</td>
<td></td>
</tr>
<tr>
<td>• Spontaneous Combustion Management Plan;</td>
<td></td>
</tr>
<tr>
<td>• Noise Management Plan;</td>
<td></td>
</tr>
<tr>
<td>• Blast Management Plan;</td>
<td></td>
</tr>
<tr>
<td>• Water Management Plan (including groundwater and surface water);</td>
<td></td>
</tr>
<tr>
<td>• Creek and Aquatic Rehabilitation Plan;</td>
<td></td>
</tr>
<tr>
<td>• Rehabilitation Management Plan;</td>
<td></td>
</tr>
<tr>
<td>• Biodiversity Management Plan;</td>
<td></td>
</tr>
<tr>
<td>• Subsidence Management Plan;</td>
<td></td>
</tr>
<tr>
<td>• Aboriginal Cultural Heritage Management Plan;</td>
<td></td>
</tr>
<tr>
<td>• Non Aboriginal Heritage Management Plan;</td>
<td></td>
</tr>
<tr>
<td>• Erosion and Sediment Control Plan;</td>
<td></td>
</tr>
<tr>
<td>• Social Engagement and Issue Response Strategy;</td>
<td></td>
</tr>
<tr>
<td>• Bushfire Management Plan; and</td>
<td></td>
</tr>
<tr>
<td>• Waste Management Plan. (Note where applicable or appropriate some of these plans may be combined).</td>
<td></td>
</tr>
<tr>
<td>...</td>
<td></td>
</tr>
<tr>
<td>(8) MCM will develop and implement meteorological criteria to help ensure that blasting is not undertaken under unfavourable wind and/or atmospheric conditions which would result in an exceedance of relevant criteria.</td>
<td>Sections 6.5 and 6.7</td>
</tr>
<tr>
<td>(14) MCM will work cooperatively with neighbouring mines to develop a blast monitoring system which is representative of the closest sensitive receivers to ensure compliance with the relevant blast criteria.</td>
<td>Section 6.8</td>
</tr>
<tr>
<td>...</td>
<td></td>
</tr>
<tr>
<td>(16) MCM will continue to advise neighbours of blasting schedules upon request so that any concerns regarding blasting and impacts to pets and livestock can be managed by neighbours.</td>
<td>Section 6.2</td>
</tr>
</tbody>
</table>
Appendix B

Event Duty Card – Exposure to NOx Fume
Exposure to NOx Gases

Event Card

In the event that a person/s are exposed to NOx Gases.

<table>
<thead>
<tr>
<th>Action</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Activate Site Emergency Response Team (ERT) by Calling 6376 1555 or Emergency, Emergency, Emergency on the Radio</td>
<td></td>
</tr>
<tr>
<td>2. Request Rescue 2 Respond with Oxygen Therapy Unit</td>
<td></td>
</tr>
<tr>
<td>3. Do Not Put yourself or others in danger</td>
<td></td>
</tr>
<tr>
<td>4. Call NSW Ambulance on 000 if external assistance is required and advise of possible Exposure to NOx</td>
<td></td>
</tr>
<tr>
<td>5. Request a guide be sent to wait and escort Ambulance on arrival to location</td>
<td></td>
</tr>
<tr>
<td>6. Comfort and reassure casualty</td>
<td></td>
</tr>
<tr>
<td>7. If casualty is able to be safely transported to First Aid room at the Open Cut do so</td>
<td></td>
</tr>
<tr>
<td>8. If the casualty is unable to be transported to first aid room wait for arrival of the ERT Team</td>
<td></td>
</tr>
<tr>
<td>9. Assist ERT members if requested.</td>
<td></td>
</tr>
<tr>
<td>10. Request Information for Treating Medical Staff Accompany Ambulance Officers to the Hospital (Located in the Open Cut First Aid Room)</td>
<td></td>
</tr>
<tr>
<td>11. Information for Treating Medical Staff to be faxed to Hospital the patient is being transported to.</td>
<td></td>
</tr>
<tr>
<td>12. Post sentries to stop unauthorised people from entering the area.</td>
<td></td>
</tr>
<tr>
<td>13. Notify the relevant people of the situation who will escalate the information.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix C

Agency Correspondence
<table>
<thead>
<tr>
<th>Document</th>
<th>Version</th>
<th>Issue</th>
<th>Effective</th>
<th>Review</th>
<th>Author</th>
<th>Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCO_ENV_PLN_0024</td>
<td>4</td>
<td>May 2015</td>
<td>June 2015</td>
<td>June 2016</td>
<td>MCO</td>
<td>S Archinal</td>
</tr>
</tbody>
</table>
Mr Graham Chase
Environment & Community Manager
Moolarben Coal Operations Pty Ltd
Locked Bag 2033
MUDGEE NSW 2850

Dear Graham,

Moolarben Coal
Approval of Management Plans

Thank you for forwarding the following management plans required under NSW Project Approval (05_0117) (Stage 1) as modified and Project Approval (08_0135) (Stage 2) for the Department’s consideration:

- Heritage Management Plan - Version 4 - April 2015

The Department’s has reviewed these plans and is satisfied that they generally address the requirements set out in the relevant conditions of each project approval. Accordingly the Secretary has approved these management plans.

Please ensure a copy of these management plans are placed on your website in accordance with PA 05_0117, Schedule 5, Condition 11 and PA 08_0135, Schedule 6, Condition 11.

If you require further information please contact Wayne on 6575 3406 or by email to wayne.jones@planning.nsw.gov.au.

Yours sincerely

[Signature]

22 JUNE 2015

Wayne Jones
A/Investigations (Lead) Compliance
As the Secretary’s Nominee