

# MAC-ENC-MTP-041

## ENVIRONMENTAL MANAGEMENT STRATEGY

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### Revision History

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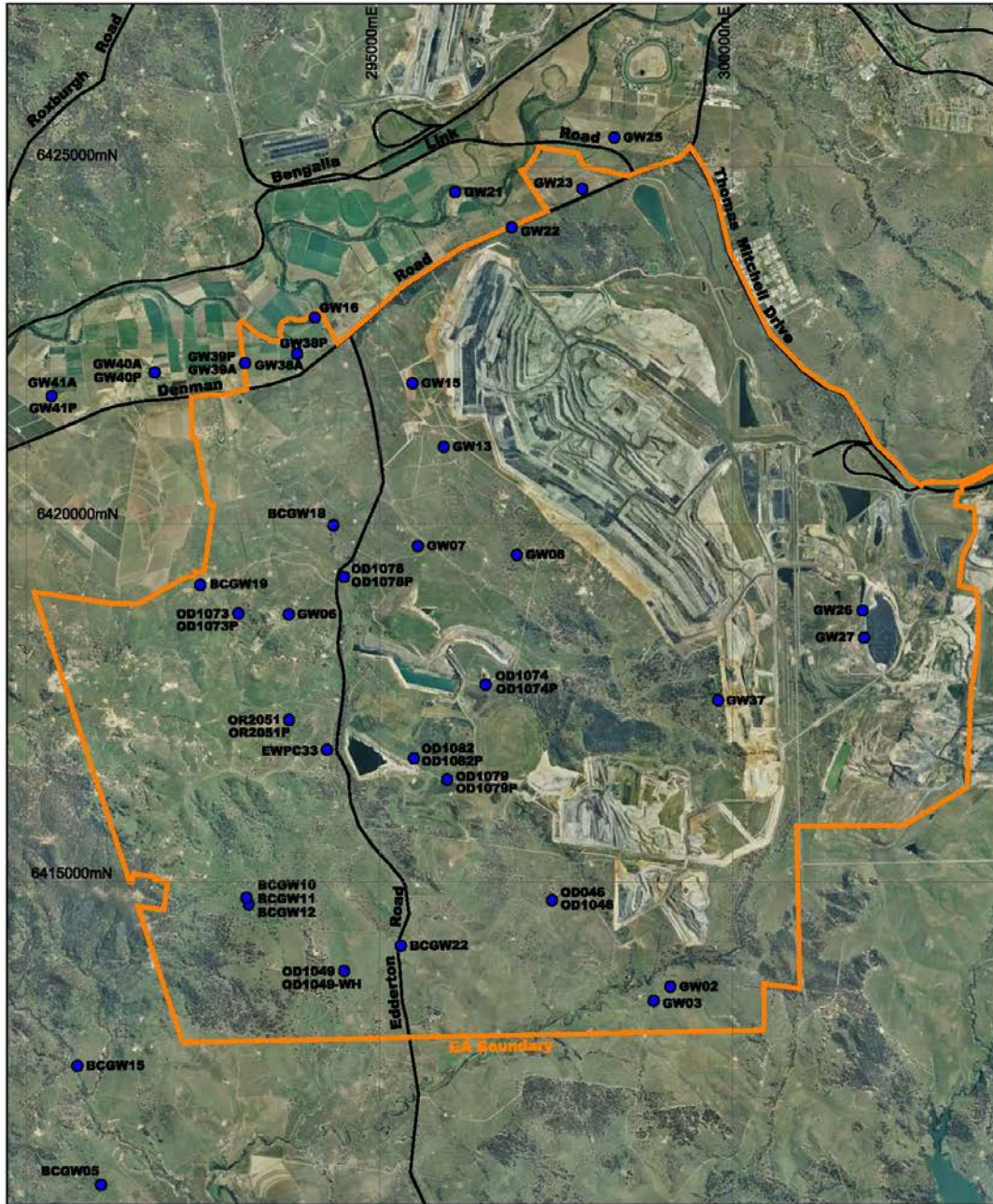
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DESIGNED DNF	SCALE 1: 75,000	<p><b>Gilbert &amp; Associates</b> Pty Ltd                  Hydrology &amp; Water Management Consultants</p> <p>PO Box 2143 Toowoong QLD 4086                  PH (07) 3367 2388                  FAX (07) 3367 2833                  gaoconst@bigpond.net.au</p>	Mt Arthur Coal	
DRAWN SK	LEVEL DATUM MGA		Site Water Management Plan Groundwater Monitoring Plan	
CHECKED LG	SHEET SIZE A4		Groundwater Monitoring Bore Locations	
APPROVED LG	CAD FILE MonitoringPlan.dwg		DRAWING NO. Figure 2	REV NO. D
DATE 16/03/2011	TITLE A			

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## 1. Introduction

Hunter Valley Energy Coal Pty Ltd operates the Mt Arthur Coal Complex which consists of approved open cut and underground mining operations, a rail loop and associated rail loading facilities. The operations are located in the Upper Hunter Valley, NSW approximately five kilometres south west of Muswellbrook.

The proposed Mt Arthur Underground operation has not commenced. This management plan will be reviewed and updated prior to the commencement of underground operations.

This Environmental Management Strategy (the Strategy) has been developed to provide an overview of environmental management at the Mt Arthur Coal Complex. The Strategy is based on Mt Arthur Coal's Environmental Management System (EMS), which is certified under ISO14001. The Strategy also addresses the requirements of the specific Project Approval (09\_0062) dated 24 September 2010 conditions that require an Environmental Management Strategy (refer Section 3 and Appendix 1).

### 1.1 Objectives

The objectives of the Strategy are to meet the requirements of the Project Approval, and give the community an overview of the Environmental Management System in place at Mt Arthur Coal to manage and minimise the impact of the Mt Arthur Coal Complex on the surrounding environment and community.

The requirements of Schedule 5 Condition 1 of the Project Approval are listed in Appendix 1.

### 1.2 Environmental Management System

Mt Arthur Coal has a firm commitment to minimising the impact of its operations on the local environment and community, and has a comprehensive Environmental Management System (EMS) in place to fulfil this commitment. The Strategy provides the strategic framework for environmental management of the Mt Arthur Coal Complex.

### 1.3 Consultation Process

The Strategy has been prepared in consultation with Department of Planning and Infrastructure (DoPI). All management plans and monitoring programs that fall under the framework of the Strategy have been prepared in consultation and approved by DoPI and other relevant authorities.

## 2. Strategic Framework

The Strategy provides the strategic framework for the Mt Arthur Coal EMS. Figure 1 illustrates the Strategy framework.

The purpose of the EMS is to provide for effective environmental management of Mt Arthur Coal's operations. Mt Arthur Coal aims to maintain and continually improve environmental and community performance through effective policy, planning, communication, documentation, implementation, review and feedback.

The Strategy and underlying EMS documents align with the requirements of ISO 14001, and incorporate the principles of:

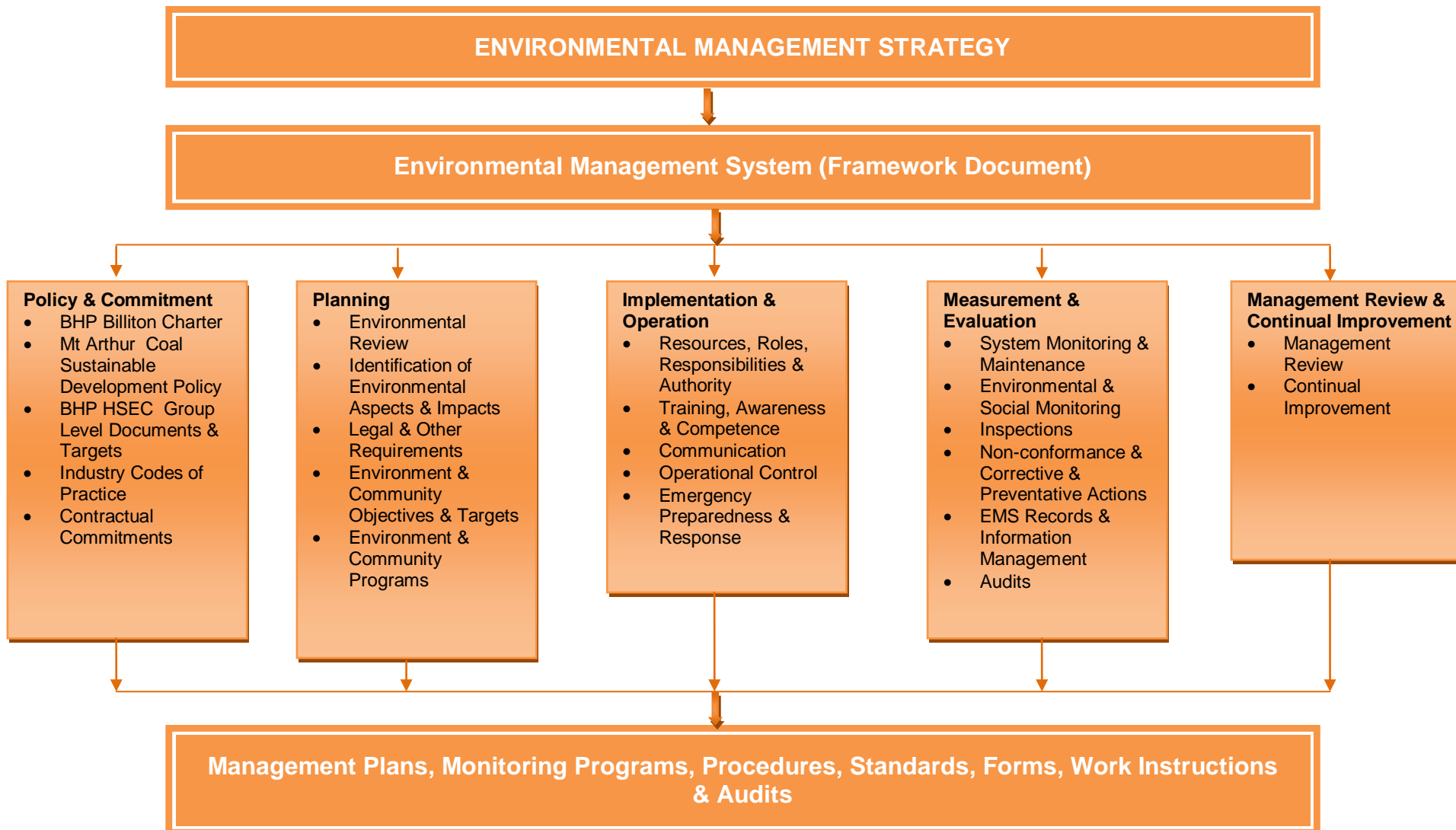
- Policy
- Planning
- Implementation and operation
- Measurement and evaluation
- Continuous review and improvement

The EMS Framework comprises four major components including:

1. EMS Framework Document
2. Environment and Community Improvement Programs
3. Environment and Community Management Plans
4. EMS System and Operational Procedures



Figure 1: The Strategy Framework



### 3. Statutory Approvals

Mt Arthur Coal Complex statutory licences and approvals are summarised in Table 1. Project Approvals can be accessed from the Mt Arthur Coal website [Bhpbilliton.com/regulatoryinformation](http://Bhpbilliton.com/regulatoryinformation).

**Table 1: Mt Arthur Coal Complex Licences and Approvals**

APPROVAL	ISSUING AUTHORITY	ISSUE DATE	EXPIRY DATE
<b>PROJECT APPROVALS</b>			
Mt Arthur Coal Mine – Open Cut Consolidation project	DoPI	24/9/2010	30/6/2022
Mt Arthur Coal Mine – Underground Project	DoPI	2/12/2008	31/12/2030
<b>ENVIRONMENT PROTECTION LICENCE</b>			
EPL 11457	OEH	09/10/2001	Not Specified
<b>MT ARTHUR COAL MINING LEASES AND EXPLORATION LICENCES</b>			
A171	I&I	27/10/2004	*
CCL 744	I&I	03/07/1989	21/01/2028
MPL 263	I&I	17/10/1990	*
CL 396	I&I	03/05/2003	03/02/2024
A437	I&I	04/03/1991	04/03/2015
ML 1358	I&I	21/09/1994	20/09/2015
EL 5965	I&I	15/07/2002	15/07/2012
ML 1593	I&I	30/04/2007	29/04/2028
ML 1487	I&I	13/06/2001	12/06/2022
ML 1548	I&I	31/05/2004	30/05/2025
ML1655	I&I	03/03/2011	03/03/2032

**Note:** NSW Office of Environment and Heritage (OEH)  
 Industry and Investment NSW (I&I) Mining Lease (ML)  
 Mining Purpose Lease (MPL) Coal Lease (CL)  
 Consolidated Coal Lease (CCL) Authorisation Area (A)  
 \* Application for renewal of licence has been submitted to I&I.

In 2009, Hunter Valley Energy Coal Pty Ltd lodged an application under Part 3A of the New South Wales (NSW) *Environmental Planning and Assessment Act, 1979* to extend open cut operations and consolidate existing approvals for open cut mining operations and surface infrastructure. The 2009 Environmental Assessment sought to consolidate all previous open cut mining approvals with the exception of the Mt Arthur Underground approval (PA 06\_0091) which is restated in this assessment. The Mt Arthur Coal Consolidation Project was subsequently approved by the then NSW Minister for Planning on 24 September 2010 (PA 09\_0062). The open cut is approved with a mining rate of up to 32 million tonnes per annum (Mtpa).

In addition, underground mining with a rate of up to 8 Mtpa was approved under PA 06\_0091 on 2 December 2008. The Mt Arthur Underground approval was restated in the 2009 Open Cut Consolidation Project Environmental Assessment. It should be noted that although open cut and underground mining are approved to rates of 32 and 8 Mtpa, respectively, the total site extraction rate is limited to 36 Mtpa by PA 09\_0062.

Mt Arthur Coal has not yet commenced underground mining activities.



## 4. Plans and Procedures Specific to the Strategy

Mt Arthur Coal has a range of plans and procedures that fall under the EMS,. The relevant procedures are referenced and described briefly in Table 2, and procedure summaries are provided in Appendix 3.

**Table 2: Procedures specific to the Environmental Management Strategy**

PROJECT APPROVAL EMS REQUIREMENTS	DESCRIPTION	MT ARTHUR COAL PROCEDURES
<b>External Communications</b>	All external communications will be undertaken in accordance with MAC-ENC-PRO-008.	MAC-ENC-PRO-008 Communication and Reporting
<b>Stakeholder Engagement</b>	All stakeholder engagement will be undertaken in accordance with NEC-ENC-MTP-001	NEC-ENC-MTP-001 Stakeholder Engagement Management Plan
<b>Complaints</b>	All complaints will be received, handled, responded to and recorded in accordance with procedure MAC-ENC-PRO-042.	MAC-ENC-PRO-042 Community <i>Complaints Handling, Response and Reporting</i>
<b>Disputes</b>	Disputes associated with the operation and management of Mt Arthur Coal will be managed in accordance with a variety of procedures and parameter specific management plans.	MAC-ENC-PRO-008 <i>Communication and Reporting</i> MAC-ENC-PRO-042 <i>Community Complaints Handling, Response and Reporting</i>
<b>Non-compliances</b>	Non-compliances associated with the operation and management of Mt Arthur Coal will be managed in accordance with a variety of procedures and parameter specific management plans.	MAC-ENC-PRO-042 <i>Community Complaints Handling, Response and Reporting</i> MAC-ENC-PRO-008 <i>Communication and Reporting,</i> MAC-ENC-PRO-047 <i>Monitoring and Evaluation,</i> MAC-ENC_PRO-051 <i>Environment and Community Auditing,</i> MAC-ENC-PRO-001 <i>EMS Review</i> MAC-ENC-PRO-003 <i>Environmental Risk Assessment</i> <i>Other parameter specific management plans</i>
<b>Emergencies</b>	Emergencies associated with the operation and management of the environment of the Mt Arthur Coal Complex will be responded to in accordance with procedure MAC-ENC-PRO-043 and MAC-STE-MTP-009	MAC-ENC-PRO-043 <i>Environmental Emergency Response</i> MAC-STE-MTP-009 <i>Crisis and Emergency Response</i>

Management Plans required under the Project Approval can be found on the internet at [Bhpbilliton.com/regulatoryinformation](http://Bhpbilliton.com/regulatoryinformation), and include:

**Table 3: Procedures specific to Environmental Management Strategy**

Document	Date Submitted to DP&I	Date Approved
<b>Management Plans</b>		
MAC-ENC-MTP-015 Blast Management Plan	31 March 2011	14 November 2012
MAC-ENC-MTP-018 European Heritage Management Plan	18 March 2011	18 September 2012
MAC-ENC-MTP-032 Noise Management Plan	31 March 2011	6 June 2012
MAC-ENC-MTP-034 Site Water Management Plan	31 March 2011	23 August 2012
MAC-ENC-MTP-040 Air Quality Management Plan	31 March 2011	6 June 2012
MAC-ENC-MTP-042 Aboriginal Heritage Management Plan	15 March 2012*	20 August 2012
MAC-ENC-MTP-044 Biodiversity and Rehabilitation Management Plan	31 March 2012	14 November 2012
MAC-ENC-MTP-024 Road Closure Management Plan	31 March 2011	6 June 2012
Visual Impacts Management Report 2011	24 March 2011	6 June 2012
<b>Programs</b>		
MAC-ENC-PRO-055 Blast Monitoring Program	31 March 2011	14 November 2012
MAC-ENC-PRO-057 Air Quality Monitoring Program	31 March 2011	6 June 2012
MAC-ENC-PRO-059 Site Water Balance	31 March 2011	20 August 2012
MAC-ENC-PRO-060 Erosion and Sediment Control Plan	31 March 2011	20 August 2012
MAC-ENC-PRO-061 Surface Water Monitoring Program	31 March 2011	20 August 2012
MAC-ENC-PRO-062 Groundwater Monitoring Program	31 March 2011	20 August 2012
MAC-ENC-PRO-063 Surface and Ground Water Response Plan	31 March 2011	20 August 2012
MAC-ENC-PRO-066 Noise Monitoring Program	31 March 2011	6 June 2012
<b>Strategies</b>		
MAC-ENC-PRO-064 Rehabilitation Strategy	30 September 2011	14 November 2012

\* Extension to lodgement date approved by the Department of Planning and Infrastructure

## 5. Strategy Performance

The performance of the Strategy is managed and monitored in accordance with Section 5: Measurement and Evaluation of the *MAC-ENC-STD-008 EMS Framework Document*, which includes:

- System Monitoring and Maintenance
- Environmental and Social Monitoring
- Inspections
- Non-conformance and Corrective and Preventative Actions
- EMS Records and Information Management
- Audits

The performance of the EMS and its associated plans, programs and documents are reported annually in the Annual Environmental Management Report (AEMR), in accordance with the Project Approval, and in the Annual Return in accordance with Environmental Protection Licence 11457.

## 6. Continual Improvement

In accordance with *MAC-ENC-STD-008 EMS Framework Document*, continual improvement will be achieved through ongoing monitoring and evaluation, implementation of preventative and corrective actions, communication with internal and external stakeholders and measuring progress against objectives and targets and program milestones. Opportunities for improvement are implemented through changes to the EMS Framework Document, objectives and targets, programs and EMS procedures as appropriate.

## 7. Review and Reporting

### 7.1 Review

The Strategy and all EMS policies, plans, programs, procedures and documents will be reviewed in accordance with Section 6 of *MAC-ENC-PRO-001 EMS Review* and *MAC-STE-PRO-069 Document Control Procedure*.

This Environmental Management Strategy will be reviewed, and if necessary revised to the satisfaction of the Director-General (in consultation with relevant government agencies) in accordance with Condition 4 of Schedule 5 of the Project Approval:

- within 3 months of the submission of an:
  - annual review under Condition 3, Schedule 5 of the Project Approval;
  - incident report under Condition 7, Schedule 5 of the Project Approval;
  - Independent Environmental Audit report under Condition 9, Schedule 5 of the Project Approval;
  - Modification to the conditions of the Project Approval.

### 7.2 Reporting

The results of the Strategy and the EMS and its associated plans, programs and documents will be reported annually in the AEMR, in accordance with relevant Approvals and Licences.

### 7.3 Exceedance Protocol

All incidents, as defined in the Project Approval, will be reported to the Department of Planning and Infrastructure (DP&I) and other relevant government agencies in accordance with the following steps:

- An email notification will be provided to the DP&I as soon as practicable after becoming aware of the incident.
- Exceedances of impact assessment criteria will be notified as an 'interim exceedance'
- An investigation will be conducted to determine the cause of the incident, and in the case of an exceedance, the monitoring result will also be validated in accordance with exceedance protocols described within the relevant Management Plans.
- A written report on the incident will be provided to the DP&I within 7 days of becoming aware of the incident (or as otherwise directed by the DP&I).

An incident includes contravention of conditions within Schedule 3 of Mt Arthur Coal Consolidation Project Approval.

A technical non-compliance includes contravention of a condition of Schedules 2, 4 or 5 of Mt Arthur Coal Consolidation Project Approval and are associated with administrative, procedural and reporting matters. Such contraventions will only be classified as technical non-compliances if the actual or potential harm to the environment is assessed as negligible. Technical non-compliances will be reported to the Department of Planning and Infrastructure in accordance with the following steps:

- Internally reported within the incident reporting system
- Email notification to the DP&I
- Reported in the AEMR

## 8. Roles, Responsibilities, Authority & Accountability

The roles, responsibilities, authorities and accountabilities for key personnel involved in the environmental management of the project are summarised in Table 4.

**Table 4: Roles, Responsibilities, Authorities and Accountabilities Relevant to Environmental Management**

WHO	TASK	TASK DESCRIPTION
President NSWEC	Implementation and governance	Ensure that there are sufficient resources and support to enable implementation of the EMS.
Mt Arthur Coal General Manager and Departmental Managers	Implementation and governance	Provide sufficient resources and support for implementation of the EMS in their area of authority and for reporting any deficiencies to the President NSW Energy Coal and Environment Manager.
Environment Manager	Implementation and governance	<ul style="list-style-type: none"> <li>• Ensure continual implementation of the EMS, including review and improvement in accordance with the requirements of ISO 14001</li> <li>• Monitor the EMS and reporting the results to the Mt Arthur Coal management team for review and improvement purposes</li> </ul>
Mine personnel and contractors	Implementation and operational control	Comply with site procedures and work instructions

Specific roles and responsibilities are outlined in the Environment and Community Management Plans, environment and community Programs, EMS System and Operational Procedures.

## 9. Access to Information

In accordance with Condition 11 of Schedule 5 of the Project Approval, the Strategy and all plans and programs required by the Project Approval will be made publically available on the Mt Arthur Coal website.

Mt Arthur Coal employ various tools to ensure that the community is kept informed about the environmental performance of the site. Information available on the internet at [Bhpbilliton.com/regulatoryinformation](http://Bhpbilliton.com/regulatoryinformation) includes:

- Approvals relevant to Mt Arthur Coal's operations
- Coal Transport information
- Environmental Management Plans and Programs
- Pollution Reduction Programs
- CCC meeting minutes and reports
- Community Complaint logs
- Annual Environmental Management Reports
- Environmental Monitoring Data.

Other forms of communication include regular advertising of the community response hotline in local newspapers, and regular mailouts to residents that request blasting information.

Other community engagement activities are held throughout the year on an as-needs basis, and according to Mt Arthur Coal's stakeholder engagement programs.

## 10. References

Department of Planning (24/09/10) Mt Arthur Coal Mine – Open Cut Consolidation Project Approval (09\_0062)

NSW Office of Environment and Heritage (12/11/09) Environmental Protection Licence 11457

Department of Planning (02/12/08) Mt Arthur Coal – Underground Project Approval (06\_0091)



## Appendix 1: Project Approval and EPL

Consent/Licence	Schedule : Condition	Condition / Requirement	Management Plan Section
Open Cut Consolidation Project Approval	5:1	<p><b>Environmental Management Strategy</b></p> <p>1. The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. The strategy must:</p> <ol style="list-style-type: none"> <li>be submitted to the Director-General for approval by the end of March 2011;</li> <li>provide the strategic framework for environmental management of the project;</li> <li>identify the statutory approvals that apply to the project;</li> <li>describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;</li> <li>describe the procedures that would be implemented to:                             <ul style="list-style-type: none"> <li>keep the local community and relevant agencies informed about the operation and environmental performance of the project;</li> <li>receive, handle, respond to, and record complaints;</li> <li>resolve any disputes that may arise during the course of the project;</li> <li>respond to any non-compliance;</li> <li>respond to emergencies; and</li> </ul> </li> <li>include:                             <ul style="list-style-type: none"> <li>copies of the various strategies, plans and programs that are required under the conditions of this approval once they have been approved; and</li> <li>a clear plan depicting all the monitoring to be carried out in relation to the project.</li> </ul> </li> </ol>	<p>Appendix 2 2 3 8 4</p> <p>Appendix 4 Appendix 5</p>
Open Cut Consolidation Project Approval	3:9	<p><b>Noise Management Plan</b></p> <p>9. The Proponent shall prepare and implement a Noise Management Plan for the Mt Arthur mine complex to the satisfaction of the Director-General. This plan must:</p> <ol style="list-style-type: none"> <li>be prepared in consultation with DECCW, and be submitted to the Director-General for approval by the end of March 2011;</li> <li>describe the noise mitigation measures that would be implemented to ensure compliance</li> </ol>	<p>Appendix 4 Refer to Noise Management Plan</p>

Consent/Licence	Schedule : Condition	Condition / Requirement	Management Plan Section
		<p>with the relevant conditions of this approval, including a real-time noise management system; and</p> <p>c) include a noise monitoring program, that uses a combination of real-time and supplementary attended monitoring measures to evaluate the performance of the Mt Arthur mine complex, and includes a protocol for determining exceedances of the relevant conditions in this approval.</p>	
<p>Open Cut Consolidation Project Approval</p>	<p>3:17</p>	<p><b>Blast Management Plan</b></p> <p>17. The Proponent shall prepare and implement a Blast Management Plan for the project to the satisfaction of the Director-General. This plan must:</p> <p>(a) be prepared in consultation with DECCW, and be submitted to the Director-General for approval by the end of March 2011; and</p> <p>(b) describe the blast mitigation measures that would be implemented to ensure compliance with the relevant conditions of this approval, including detailed demonstration that blasting within the hatched area shown on the figure in Appendix 6 can be undertaken in a manner that will meet the blast impact assessment criteria in Table 8 at all times;</p> <p>(c) describe the measures that would be implemented to ensure that the general public and surrounding landowners and tenants to get up-to-date information on the blasting schedule;</p> <p>(d) include a road closure management plan, prepared in consultation with the applicable roads authority, that includes provisions for:</p> <ul style="list-style-type: none"> <li>• minimising the duration of closures, both on a per event basis and weekly basis;</li> <li>• avoiding peak traffic periods as far as practicable; and</li> <li>• coordinating with neighbouring mines to minimise the cumulative effect of road closures; and</li> </ul> <p>(d) include a blast monitoring program for evaluating blast-related impacts (including blast-induced seismic activity) on, and demonstrating compliance with the blasting criteria in this approval for:</p> <ul style="list-style-type: none"> <li>• privately-owned residences and structures;</li> <li>• items of Aboriginal (including scarred trees and axe grinding grooves) and nonindigenous cultural heritage significance (including Edinglassie, Rous Lench and Balmoral); and</li> </ul>	<p>Appendix 4          Refer to Blast Management Plan</p>

Consent/Licence	Schedule : Condition	Condition / Requirement	Management Plan Section
		<ul style="list-style-type: none"> <li>• publicly-owned infrastructure;</li> </ul>	
Open Cut Consolidation Project Approval	3:24	<p><b>Air Quality and Greenhouse Gas Management Plan</b>                      24. The Proponent shall prepare and implement an Air Quality and Greenhouse Gas Management Plan for the Mt Arthur mine complex to the satisfaction of the Director-General. This plan must:</p> <ol style="list-style-type: none"> <li>a) be prepared in consultation with DECCW, and be submitted to the Director-General for approval by the end of March 2011;</li> <li>b) describe the air quality mitigation measures that would be implemented to ensure compliance with the relevant conditions of this approval, including a real-time air quality management system; and</li> <li>c) include an air quality monitoring program, that uses a combination of real-time monitors, high volume samplers and dust deposition gauges to evaluate the performance of the Mt Arthur mine complex, and includes a protocol for determining exceedances of the relevant conditions in this approval.</li> </ol>	Appendix 4 Refer to Site Water Management Plan
Open Cut Consolidation Project Approval	3:29	<p><b>Site Water Management Plan</b>                      29. The Proponent shall prepare and implement a Water Management Plan for the Mt Arthur mine complex to the satisfaction of the Director-General. This plan must:</p> <ol style="list-style-type: none"> <li>a) be prepared in consultation with NOW and DECCW, and be submitted to the Director-General for approval by the end of March 2011; and</li> <li>b) include a:                             <ul style="list-style-type: none"> <li>• Site Water Balance;</li> <li>• Erosion and Sediment Control Plan;</li> <li>• Surface Water Monitoring Program;</li> <li>• Groundwater Monitoring Program; and</li> <li>• Surface and Ground Water Response Plan.</li> </ul> </li> </ol>	Appendix 4 Appendix 5
Open Cut Consolidation Project Approval	3:40	<p><b>Biodiversity Management Plan</b>                      40. The Proponent shall prepare and implement a Biodiversity Management Plan for the project to the satisfaction of the Director-General. This plan must:</p> <ol style="list-style-type: none"> <li>a) be prepared in consultation with DECCW, NOW and Council, and be submitted to the</li> </ol>	10 Appendix 5

Consent/Licence	Schedule : Condition	Condition / Requirement	Management Plan Section
		<p>Director-General for approval by the end of March 2012;</p> <p>b) describe how the implementation of the offset strategy would be integrated with the overall rehabilitation of the site (see below);</p> <p>c) include:</p> <p>(i) a description of the short, medium, and long term measures that would be implemented to:</p> <ul style="list-style-type: none"> <li>• implement the offset strategy; and</li> <li>• manage the remnant vegetation and habitat on the site and in the offset areas;</li> </ul> <p>(ii) detailed performance and completion criteria for the implementation of the offset strategy;</p> <p>(iii) a detailed description of the measures that would be implemented over the next 3 years, including the procedures to be implemented for:</p> <ul style="list-style-type: none"> <li>• implementing revegetation and regeneration within the disturbance areas and offset areas, including establishment of canopy, sub-canopy (if relevant), understorey and ground strata;</li> <li>• protecting vegetation and soil outside the disturbance areas;</li> <li>• rehabilitating creeks and drainage lines on the site (both inside and outside the disturbance areas), to ensure no net loss of stream length and aquatic habitat;</li> <li>• managing salinity;</li> <li>• conserving and reusing topsoil;</li> <li>• undertaking pre-clearance surveys;</li> <li>• managing impacts on fauna;</li> <li>• landscaping the site and along public roads (including Thomas Mitchell Drive, Denman Road, Edderton Road and Roxburgh Road) to minimise visual and lighting impacts;</li> <li>• collecting and propagating seed;</li> <li>• salvaging and reusing material from the site for habitat enhancement;</li> <li>• salvaging, transplanting and/or propagating threatened flora and native grassland;</li> <li>• controlling weeds and feral pests;</li> <li>• managing grazing and agriculture on site;</li> <li>• controlling access; and</li> <li>• bushfire management;</li> </ul> <p>(iv) a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria;</p> <p>(v) a description of the potential risks to successful revegetation, and a description of the</p>	

Consent/Licence	Schedule : Condition	Condition / Requirement	Management Plan Section
		contingency measures that would be implemented to mitigate these risks; and (vi) details of who would be responsible for monitoring, reviewing, and implementing the plan.	
Open Cut Consolidation Project Approval	3:44	<p><b>Rehabilitation Management Plan</b></p> <p>44. The Proponent shall prepare and implement a Rehabilitation Management Plan for the project to the satisfaction of the Director-General of I&amp;I NSW. This plan must:</p> <ul style="list-style-type: none"> <li>(a) be prepared in consultation with the Department, DECCW, NOW, Council and the CCC, and be submitted to the Director-General of I&amp;I NSW for approval by the end of March 2012;</li> <li>(b) be prepared in accordance with the relevant I&amp;I NSW guideline, and be consistent with the Rehabilitation Strategy (see condition 42);</li> <li>(c) build, to the maximum extent practicable, on the existing management plans required under this approval; and</li> <li>(d) include a research program that seeks to improve the understanding and application of rehabilitation techniques and methods in the Hunter Valley.</li> </ul>	10 Appendix 5
Open Cut Consolidation Project Approval	3:45	<p><b>Heritage Management Plan</b></p> <p>45. The Proponent shall prepare and implement a Heritage Management Plan for the project to the satisfaction of the Director-General. This plan must:</p> <ul style="list-style-type: none"> <li>(a) be prepared in consultation with DECCW, the Aboriginal community, the Heritage Branch, Council, local historical organisations and relevant landowners, and be submitted to the Director-General for approval by the end of March 2011;</li> <li>(b) include the following for the management of Aboriginal heritage on site:             <ul style="list-style-type: none"> <li>o a plan of management for the Thomas Mitchell Drive Offset Area; and</li> <li>o a program/procedures for:                 <ul style="list-style-type: none"> <li>• salvage, excavation and/or management of Aboriginal sites and potential archaeological deposits within the project disturbance area;</li> <li>• protection and monitoring of Aboriginal sites outside the project disturbance area, including the 10 scarred trees and 3 axe grinding grooves identified on the site;</li> <li>• managing the discovery of any new Aboriginal objects or skeletal remains during the project;</li> <li>• maintaining and managing access to archaeological sites by the Aboriginal community; and</li> </ul> </li> </ul> </li> </ul>	10 Appendix 5 Refer to European Heritage Management Plan

Consent/Licence	Schedule : Condition	Condition / Requirement	Management Plan Section
		<ul style="list-style-type: none"> <li>• ongoing consultation and involvement of the Aboriginal communities in the conservation and management of Aboriginal cultural heritage on the site; and</li> <li>(c) include the following for the management of other historic heritage on site:                             <ul style="list-style-type: none"> <li>○ conservation management plans for the Edinglassie and Rous Lench homesteads;</li> <li>○ a detailed plan for the relocation of the Beer Homestead, including provision for a landscape study to determine the most appropriate location and an architectural report to determine the most sympathetic method for relocation; and</li> <li>○ a program/procedures for:                                     <ul style="list-style-type: none"> <li>• photographic and archival recording of potentially affected heritage items;</li> <li>• protection and monitoring of heritage items outside the project disturbance area;</li> <li>• monitoring, notifying and managing the effects of blasting on potentially affected heritage items; and</li> </ul> </li> <li>• additional archaeological excavation and/or recording of any significant heritage items requiring demolition.</li> </ul> </li> </ul>	
Open Cut Consolidation Project Approval	5:2	<p><b>Management Plan Requirements</b></p> <p>2. The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:</p> <p>(a) detailed baseline data;</p> <p>(b) a description of:</p> <ul style="list-style-type: none"> <li>• the relevant statutory requirements (including any relevant approval, licence or lease conditions);</li> <li>• any relevant limits or performance measures/criteria;</li> <li>• 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;</li> </ul> <p>(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;</p> <p>(d) a program to monitor and report on the:</p> <ul style="list-style-type: none"> <li>• impacts and environmental performance of the project;</li> <li>• effectiveness of any management measures (see c above);</li> </ul>	10 Appendix 4 Appendix 5



Consent/Licence	Schedule : Condition	Condition / Requirement	Management Plan Section
		(e) a contingency plan to manage any unpredicted impacts and their consequences; (f) a program to investigate and implement ways to improve the environmental performance of the project over time; (g) a protocol for managing and reporting any: <ul style="list-style-type: none"> <li>• incidents;</li> <li>• complaints;</li> <li>• non-compliances with statutory requirements; and</li> <li>• exceedances of the impact assessment criteria and/or performance criteria; and</li> </ul> (h) a protocol for periodic review of the plan.	
Open Cut Consolidation Project Approval	5:4	<p><b>Revision of Strategies, Plans and Programs</b></p> <p>4. Within 3 months of the submission of an:</p> <p>(a) annual review under condition 3 above;            (b) incident report under condition 7 below;            (c) audit under condition 9 below; and            (d) any modification to the conditions of this approval, the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Director-General.</p> <p>Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the project.</p>	7.1
Open Cut Consolidation Project Approval	5:7	<p><b>REPORTING</b></p> <p><b>Incident Reporting</b></p> <p>7. The Proponent shall notify the Director-General and any other relevant agencies of any incident associated with the project as soon as practicable after the Proponent becomes aware of the</p>	7.2

Consent/Licence	Schedule : Condition	Condition / Requirement	Management Plan Section
		incident.  Within 7 days of becoming aware of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident.	
Open Cut Consolidation Project Approval	5:8	<b>Regular Reporting</b>  8. The Proponent shall provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval, and to the satisfaction of the Director-General.	7.2
Open Cut Consolidation Project Approval	5:11	<b>ACCESS TO INFORMATION</b>  11. From the end of December 2010, the Proponent shall:  (a) make the following information publicly available on its website: <ul style="list-style-type: none"> <li>• a copy of all current statutory approvals for the project;</li> <li>• a copy of the current environmental management strategy and associated plans and programs;</li> <li>• a summary of the monitoring results of the project, which have been reported in accordance with the various plans and programs approved under the conditions of this approval;</li> <li>• a complaints register, which is to be updated on a monthly basis;</li> <li>• a copy of the minutes of CCC meetings;</li> <li>• a copy of any Annual Reviews (over the last 5 years);</li> <li>• a copy of any Independent Environmental Audit, and the Proponent's response to the recommendations in any audit;</li> <li>• any other matter required by the Director-General; and</li> </ul> (b) keep this information up to date, to the satisfaction of the Director-General.	9.0

## Appendix 2: Government Correspondence



Michael White  
General Manager Operations  
Mt Arthur Coal  
PMB 8  
MUSWELLBROOK NSW 2333

Contact: Ben Harrison  
Phone: 02 6575 3402  
Fax: 02 6575 3515  
Email: [benjamin.harrison@planning.nsw.gov.au](mailto:benjamin.harrison@planning.nsw.gov.au)  
Our ref: 10/20755

Dear Mr White,

**Mt Arthur Coal Mine – PA 09\_0062  
Environmental Monitoring and Management Plans**

Thank you for forwarding the following management plans required under project approval 09\_0062 for the Department's consideration:

- European Heritage Management Plan (Condition 45 of Schedule 3);
- Environmental Management Strategy (Condition 1 of Schedule 5);

The Department has reviewed these plans (as amended following previous correspondence) and is satisfied that they generally address the requirements set out in the relevant conditions of the project approval. Consequently, I would like to advise you that the Director-General has approved the plans.

Could you please forward finalised copies of the above plans for the Department's records at your earliest convenience.

Should you have any enquiries on this matter please contact Ben Harrison on (02) 6575 3402.



Scott Brooks  
**Team Leader Compliance**

As Nominee for the Director-General

18-9-12



Contact: Ben Harrison  
Phone: 02 6575 3402  
Fax: 02 6575 3515  
Email: [benjamin.harrison@planning.nsw.gov.au](mailto:benjamin.harrison@planning.nsw.gov.au)  
Our ref: 10/20755

Michael White  
General Manager Operations  
Mt Arthur Coal  
PMB 8  
MUSWELLBROOK NSW 2333

Dear Mr White,

**Mt Arthur Coal Mine – PA 09\_0062  
Environmental Monitoring and Management Plans**

Thank you for forwarding the following modified management plans required under project approval 09\_0062 for the Department's consideration:

- Blast Management Plan, inclusive of monitoring program (Condition 17, Schedule 3);
- Air Quality Management Plan inclusive of monitoring program (Condition 24, Schedule 3)
- Noise Management Plan, inclusive of monitoring program (Condition 9, Schedule 3)
- Environmental Management Strategy (Condition 1, Schedule 5)

The Department has reviewed these plans and is satisfied that they generally address the requirements set out in the relevant conditions of the project approval. Consequently, I would like to advise you that the Director-General has approved the plans.

Could you please forward finalised copies of the above plans for the Department's records at your earliest convenience.

Should you have any enquiries on this matter please contact Ben Harrison on (02) 6575 3402.



Scott Brooks  
**Team Leader Compliance**

As Nominee for the Director-General

27-5-2013

### Appendix 3: Mt Arthur Coal EMS Document Summaries

MAC-ENC-PRO-042

Community Complaints Handling, Response and Reporting Procedure Summary

<b>Purpose</b>	The procedure ensures that incidents and complaints are received, recorded, investigated and responded to within an appropriate timeframe, and that potential impacts are mitigated through corrective and preventative actions. In addition, the procedure ensures that, where necessary, incidents are appropriately reported in accordance with legal and other requirements.
<b>Scope</b>	This document applies to all community complaints resulting from Mt Arthur Coal's activities.
<b>Responsibilities</b>	Responsibilities for Community Complaints Handling, Response and Reporting are assigned to personnel, based on positions and roles within the organisation.
<b>Actions</b>	Once a complaint is received via the 24 hour enquiries line, or other channel (CCC, reception, email etc.) the message is passed onto the Environment and Community Team. The complaint is logged in the database and initial complaint investigations are carried out. Immediate corrective actions are implemented if applicable or practical. An investigation is carried out and entered into the database and corrective and preventive actions area assigned as necessary. The complainant is contacted and provided with result of the investigation as soon as possible or within 24 hours (unless there is a request not to be contacted). If the complainant is unable to be contacted by phone within 24 hours, a letter or email will be sent if possible.
<b>Dispute Resolution</b>	If Mt Arthur Coal's response to the complaint is not considered acceptable by the complainant, Mt Arthur Coal will continue to liaise with the complainant to achieve a mutually acceptable outcome. If this is not possible, the dispute resolution process referenced in the Project Approval will be followed.
<b>Review</b>	A review of this procedure will be conducted every five years or more often as required.
<b>References</b>	<ol style="list-style-type: none"> <li>1. Environment Protection Licence No 11457</li> <li>2. Project Approvals for Open Cut and Underground Operations</li> <li>3. Mining Leases and Mining Operations Plans</li> <li>4. Water Licences</li> <li>5. Controlled Activity Approvals (3A Permits)</li> <li>6. Protection of the Environment Operations Act 1997 (NSW)</li> <li>7. Mining Act 1992 (NSW)</li> <li>8. National Parks and Wildlife Act 1974 (NSW)</li> </ol>

MAC-ENC-PRO-008

Communication and Reporting Procedure Summary

<b>Purpose</b>	The purpose of this procedure is to describe the processes in place for internal and external communication of issues relating to environmental and external affair management at Mt Arthur Coal.
<b>Scope</b>	The procedure details all aspects of communication at Mt Arthur Coal, including: <ul style="list-style-type: none"> <li>• Internal communication;</li> <li>• Internal reporting;</li> <li>• External communication; and</li> <li>• External reporting.</li> </ul>
<b>Responsibilities</b>	Responsibilities for communication and reporting are assigned to personnel based on positions and roles within the organisation.
<b>Communication Procedures</b>	<p>Mt Arthur Coal believes that effective communication between employees, the community and all interested parties is of paramount importance for the successful implementation and maintenance of an Environmental Management System.</p> <p><b>Communication procedures categories include:</b></p> <ol style="list-style-type: none"> <li>1. Internal Reporting          Internal communications include communications within Mt Arthur Coal and between Mt Arthur Coal and BHP Billiton. Internal communication of environmental and community performance is facilitated through e-mail, verbal communications tracked in communications register, Managers meetings, training and inductions, site notices, website, tool box talks, and monthly reporting processes.</li> <li>2. Internal Meetings          The Environment &amp; Community Manager, or their representative, is responsible for coordinating all internal environment and community communication. There are various internal meetings between various sections / areas of the Mt Arthur Coal, and the Environment &amp; Community team is represented at the appropriate meetings.</li> <li>3. External Correspondence          All external correspondence received by the Environment and Community team is to be reviewed on a daily basis by members of the team. Once reviewed, all correspondence will be responded to as necessary and copies of related documents are to be filed with original external correspondence in the Environment and Community team filing system in accordance with relevant administrative procedures.</li> <li>4. Community Consultative Committees (CCC)          The Mt Arthur Coal CCCs provide an ongoing forum for communication with external stakeholders. The Mount Arthur Coal CCC meets on a bi-monthly basis. The Joint Rail Loop meeting with Drayton and Mt Arthur Coal members meets on a six monthly basis. Meetings are held in accordance with Department of Planning and Infrastructure guidelines.</li> </ol>
<b>Records</b>	All records at Mt Arthur Coal are stored in the Environment and Community team filing system in accordance with relevant internal administrative procedures.
<b>Review</b>	The Communication and Reporting Procedure is reviewed every five years, as part of the EMS review or more often as required.
<b>References</b>	BHP Billiton Group Level Documents SAPEC Reporting Procedure Mt Arthur Coal Community Engagement Plan EMS Documents
<b>Definitions</b>	EMS - Environmental Management System NSWEC – NSW Energy Coal HSEC – Health, Safety, Environment and Community NPI – National Pollution Inventory AEMR – Annual Environmental Management Report



	<p>EPL – Environmental Protection Licence CCC – Community Consultative Committee OEH – NSW Office of Environment and Heritage DPI – NSW Department of Planning and Infrastructure PI – M&amp;P – Primary Industries – Minerals and Petroleum MSC – Muswellbrook Shire Council EMP – Environmental Management Plan</p>
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MAC-ENC-PRO-047

Monitoring and Evaluation Procedure Summary

<p><b>Purpose</b></p>	<p>The purpose of this procedure is to establish and maintain a monitoring system that ensures:</p> <ul style="list-style-type: none"> <li>• Monitoring required by regulatory authorities and statutory approvals is carried out</li> <li>• The EMS is properly implemented, maintained and achieving continual improvement</li> <li>• Environment and social impacts from activities are detected, measured and evaluated</li> <li>• Data collected is accurate</li> <li>• Data is collected, analysed and reported in accordance with relevant standards and legal requirements and in accordance with an appropriate quality control systems</li> <li>• Monitoring is properly planned and reviewed</li> <li>• Results are adequately reported and stored in an appropriate manner.</li> </ul>
<p><b>Scope</b></p>	<p>This procedure provides a summary of EMS, environmental and complaints monitoring activities, including:</p> <ul style="list-style-type: none"> <li>• System monitoring and maintenance. This encompasses:                         <ul style="list-style-type: none"> <li>a) <i>Tracking progress towards achievement of objectives and targets</i></li> <li>b) <i>Monitoring progress of environmental programs</i></li> <li>c) <i>Monitoring inspections required under the EMS</i></li> <li>d) <i>Tracking closeout of non-conformances and corrective actions and complaints.</i></li> </ul> </li> <li>• Environmental monitoring, including:                         <ul style="list-style-type: none"> <li>a) <i>Meteorological</i></li> <li>b) <i>Water</i></li> <li>c) <i>Air quality</i></li> <li>d) <i>Noise</i></li> <li>e) <i>Flora and fauna</i></li> <li>f) <i>Spontaneous combustion</i></li> <li>g) <i>Rehabilitation</i></li> <li>h) <i>Blasting (vibration and blast overpressure)</i></li> <li>i) <i>Complaints</i></li> </ul> </li> <li>• Social monitoring is detailed within internal procedures and management plans.</li> </ul>
<p><b>Responsibilities</b></p>	<p>Responsibilities associated with the monitoring and evaluation procedure are assigned to personnel, based on positions and roles within the organisation.</p>
<p><b>Actions</b></p>	<p><b>SYSTEM MONITORING AND MAINTENANCE</b></p> <p>System monitoring and maintenance refers to the monitoring or tracking of progress of Mt Arthur Coal in meeting the objectives and targets set out in the EMS and in implementing Environment and Community Programs.</p> <p>Performance will be measured against the targets and the performance indicators specified for each of the objectives, with the review of monitoring results also including the trending of data over relevant periods to identify any positive or negative trends.</p> <p><b>ENVIRONMENTAL MONITORING</b></p> <p>Environmental monitoring relates to the monitoring of physical parameters associated with Mt Arthur Coal's operations, as required by project approvals, Environment Protection Licences, other statutory approvals and environmental management plan requirements. Environmental monitoring is to be undertaken in accordance with relevant procedures at monitoring locations identified in appropriate monitoring plans and programs.</p> <p>The Environment Coordinator is to compare monitoring results against the relevant limits/criteria specified in project approvals. Any non-conformances identified are to be investigated and corrective and/or preventative actions implemented. The effectiveness of the corrective and/or preventative action is to be assessed by analysis of the next available monitoring results and other indicators of performance, including complaints and inspection findings.</p> <p>All monitoring (collection and analysis) is to be conducted in accordance with the relevant Australian Standards, project approvals and NSW Office of Environment &amp; Heritage requirements. All monitoring</p>

	<p>equipment is to be calibrated in accordance with legal and manufacturer requirements. Calibration records are to be stored in the Environment and Community filing system.</p> <p>All analyses will be carried out by laboratories that are either accredited with the National Association of Testing Authorities (NATA) or have equivalent quality assurance accreditation systems. The date, time, location and sample number of each dust and water sample is to be recorded together with the name of the person who collected the sample. This information is to be provided in the monitoring contractor's monthly report after which it will be filed in the Environment and Community filing system.</p>
<b>Reporting</b>	<p><b>1 EMS MONITORING</b>          Compliance with scheduled inspections required under EMS operational procedures, progress in achieving objectives and targets and Environment and Community Programs, close-out of non-conformance and corrective actions and close-out of complaints is to be assessed and reported on a regular basis.</p> <p><b>2 ENVIRONMENTAL MONITORING REPORTING</b>          Environmental monitoring contractors are to provide a monitoring report to the Environmental Coordinator following completion of monitoring. As appropriate, calibration certificates are to be provided to the Environmental Coordinator with the monitoring reports.          Any non-conformances identified by the environmental monitoring contractor must be reported within 24 hours to the Environmental Coordinator. Non-conformances are to be managed in accordance with <i>MAC-ENC-PRO-050 Corrective and Preventative Action</i>.          Applicable monitoring results, as determined by the Environment Manager and statutory requirements, are to be reported in the Annual Environmental Management Report.</p>
<b>Records</b>	All monitoring records are to be stored in the Environment and Community team filing system, or stored electronically, in accordance with internal administrative procedures
<b>Review</b>	A review of this procedure will be conducted regularly as outlined in MAC-ENC-PRO-001 EMS Review.
<b>Definitions</b>	<b>EMS:</b> Environmental Management System
<b>References</b>	<ol style="list-style-type: none"> <li>1. 2. <i>MAC-ENC-PRO-008 Communication and Reporting</i></li> <li>3. 4. <i>MAC-ENC-PRO-050 Corrective and Preventative Action</i></li> </ol>

MAC-ENC-PRO-051

Environment and Community Auditing Procedure Summary

<p><b>Purpose</b></p>	<p>To establish and maintain a procedure for auditing EMS implementation and performance, that ensures that:</p> <ul style="list-style-type: none"> <li>• EMS complies with ISO 14001 and is effectively implemented</li> <li>• Mt Arthur Coal complies with BHP Billiton's Health, Safety, Environment, and Community (HSEC) standards.</li> <li>• Environment and community performance is regularly audited to identify non-conformances and achieve continual improvement</li> <li>• Mt Arthur Coal complies with statutory and BHP Billiton environment and community auditing requirements.</li> </ul>											
<p><b>Scope</b></p>	<p>This procedure encompasses all environmental and community auditing of Mt Arthur Coal activities.</p>											
<p><b>Definitions</b></p>	<table border="1"> <thead> <tr> <th data-bbox="384 745 608 779">Term</th> <th data-bbox="608 745 1414 779">Definition</th> </tr> </thead> <tbody> <tr> <td data-bbox="384 779 608 965"> <p><b>Audit</b></p> </td> <td data-bbox="608 779 1414 965"> <p>Systematic and documented process to objectively examine systems, procedures, information, practices and facilities to verify their compliance with a defined set of criteria or requirements. An audit will also assess the effectiveness of management practices and systems. Audits may be conducted on systems, compliance or technical aspects of the operation.</p> </td> </tr> <tr> <td data-bbox="384 965 608 1055"> <p><b>Audit Criteria</b></p> </td> <td data-bbox="608 965 1414 1055"> <p>Policies, practices, procedures or requirements against which the auditor compares collected audit evidence about the subject matter.</p> </td> </tr> <tr> <td data-bbox="384 1055 608 1122"> <p><b>Compliance Audit</b></p> </td> <td data-bbox="608 1055 1414 1122"> <p>Audit of site compliance against specific legal and other requirements</p> </td> </tr> <tr> <td data-bbox="384 1122 608 1305"> <p><b>EMS Audit</b></p> </td> <td data-bbox="608 1122 1414 1305"> <p>A systematic and documented verification process obtaining and evaluating evidence to determine compliance with EMS and ISO 14001 requirements. The Lead Internal Auditor for EMS audits can be any person with the competence to conduct an audit and who is in a position to do so impartially and objectively. A lead internal auditor may be a Mt Arthur Coal employee or an external person.</p> </td> </tr> </tbody> </table>	Term	Definition	<p><b>Audit</b></p>	<p>Systematic and documented process to objectively examine systems, procedures, information, practices and facilities to verify their compliance with a defined set of criteria or requirements. An audit will also assess the effectiveness of management practices and systems. Audits may be conducted on systems, compliance or technical aspects of the operation.</p>	<p><b>Audit Criteria</b></p>	<p>Policies, practices, procedures or requirements against which the auditor compares collected audit evidence about the subject matter.</p>	<p><b>Compliance Audit</b></p>	<p>Audit of site compliance against specific legal and other requirements</p>	<p><b>EMS Audit</b></p>	<p>A systematic and documented verification process obtaining and evaluating evidence to determine compliance with EMS and ISO 14001 requirements. The Lead Internal Auditor for EMS audits can be any person with the competence to conduct an audit and who is in a position to do so impartially and objectively. A lead internal auditor may be a Mt Arthur Coal employee or an external person.</p>	
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<p><b>Audit</b></p>	<p>Systematic and documented process to objectively examine systems, procedures, information, practices and facilities to verify their compliance with a defined set of criteria or requirements. An audit will also assess the effectiveness of management practices and systems. Audits may be conducted on systems, compliance or technical aspects of the operation.</p>											
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<p><b>EMS Audit</b></p>	<p>A systematic and documented verification process obtaining and evaluating evidence to determine compliance with EMS and ISO 14001 requirements. The Lead Internal Auditor for EMS audits can be any person with the competence to conduct an audit and who is in a position to do so impartially and objectively. A lead internal auditor may be a Mt Arthur Coal employee or an external person.</p>											
<p><b>Responsibilities</b></p>	<p>Responsibilities associated with environment and community auditing are assigned to personnel, based on positions and roles within the organisation.</p>											
<p><b>Actions</b></p>	<p>Audits of environmental and community aspects of Mt Arthur Coal's operations are to be conducted in following the audit process (below). The audit schedule is reviewed, updated and implemented on an annual basis, and forms part of the HSEC Team Audit schedule. The audit schedule shall be maintained regularly by the Environmental Superintendent (Approvals &amp; Systems). Following the completion of audits, any non-conformances identified are to be managed in accordance with MAC-STE-PRO-050 Hazard, Near Miss &amp; Incident Reporting &amp; Investigation Procedure.</p> <p><b>Audit Process Summary</b></p> <ol style="list-style-type: none"> <li>1. Determination of audit team, scope and methodology</li> <li>2. Site Audit</li> <li>3. Evaluation and Audit Findings</li> </ol> <p>Audit Report - All non-conformances identified during audits are to be managed in accordance with MAC-STE-PRO-050 Hazard, Near Miss &amp; Incident Reporting &amp; Investigation Procedure</p> <p>Audit Types - there are two main types of audits including internal audits and external audits. The following table summarises the various audits undertaken at Mt Arthur Coal Mine.</p> <table border="1" data-bbox="384 1827 1414 2007"> <thead> <tr> <th data-bbox="384 1827 552 1861">Audit Type</th> <th data-bbox="552 1827 783 1861">Audit Name</th> <th data-bbox="783 1827 1414 1861">Definition</th> </tr> </thead> <tbody> <tr> <td data-bbox="384 1861 552 2007"> <p>Internal</p> </td> <td data-bbox="552 1861 783 2007"> <p>Internal EMS Audit</p> </td> <td data-bbox="783 1861 1414 2007"> <p>Internal EMS audits are to be undertaken by a team approved by the Environment Manager and may consist of Mt Arthur Coal personnel or appropriately qualified and experienced consultants. The audits are to investigate conformance with EMS</p> </td> </tr> </tbody> </table>		Audit Type	Audit Name	Definition	<p>Internal</p>	<p>Internal EMS Audit</p>	<p>Internal EMS audits are to be undertaken by a team approved by the Environment Manager and may consist of Mt Arthur Coal personnel or appropriately qualified and experienced consultants. The audits are to investigate conformance with EMS</p>				
Audit Type	Audit Name	Definition										
<p>Internal</p>	<p>Internal EMS Audit</p>	<p>Internal EMS audits are to be undertaken by a team approved by the Environment Manager and may consist of Mt Arthur Coal personnel or appropriately qualified and experienced consultants. The audits are to investigate conformance with EMS</p>										

			components including with EMS objectives and targets, procedures and programs. The audits will be staged so as to audit operational areas on a rotational basis with each audit focusing on a particular area of the operation.
	External	EMS ISO14001 Audits Surveillance or Recertification	The Environment Manager is to co-ordinate external EMS surveillance audits on a (minimum) annual basis with the selected ISO14001 certifying company. A recertification audit is required on a three yearly basis. These audits are to be undertaken by appropriately qualified and experienced auditors to satisfy relevant requirements of ISO 14001 with non-conformances identified and action consistent with MAC- STE-PRO-050 Hazard, Near Miss & Incident Reporting & Investigation Procedure.
	External	BHP Billiton HSEC Self Assessment Audit	The Environment & Community Manager is to participate in the annual HSEC self assessment against environment and community components of the BHP Billiton Standards in accordance with BHP Billiton's requirements. The audit is to be conducted using the BHP Billiton HSEC Management Standard Self-Assessment Audit Protocol and results will be reported to the management team and BHP Billiton corporate and actioned as required.
	External	Statutory Audits	Mt Arthur Coal is required to coordinate a external compliance audits in accordance with the Mt Arthur Coal Mine - Consolidation Project and the Mt Arthur Coal Mine – Underground Project, Project Approvals. The scope and frequency of these audits is determined by the project approval conditions. The audit shall be conducted by a duly qualified independent person or team approved by the Director-General. Mt Arthur Coal may also be subject to ad hoc external statutory audits by government agencies. The Environment Manager is to act as Mt Arthur Coal's primary representative during these audits assisting with any matter raised.
	External	Issue Specific Audits	A number of issue specific audits, normally in the form of inspections and reviews, are required by legal and other requirements. These inspections are identified in an inspection register maintained by the Environmental Superintendent. Where appropriate, inspection records are to be kept and all non-conformances actioned as per MAC-ENC- STE-PRO-050 Hazard, Near Miss & Incident Reporting & Investigation Procedure.
<b>Review</b>	A review of this procedure will be conducted regularly as outlined in MAC-ENC-PRO-001 EMS Review.		
<b>References</b>	<ol style="list-style-type: none"> <li>1. MAC-ENC-PRO-001 EMS Review</li> <li>2. MAC- STE-PRO-050 Hazard, Near Miss &amp; Incident Reporting &amp; Investigation Procedure</li> <li>3. Project Approval 09_0062 Mt Arthur Coal Mine – Open Cut Consolidation Project and Project Approval 06_0091 Mt Arthur Coal – Underground Project Approval</li> <li>4. Guidance on auditing of environmental management systems - ISO 19011.</li> </ol>		

MAC-ENC-PRO-001  
 EMS Review Summary

<p><b>Purpose</b></p>	<p>To establish and maintain a procedure for continual review and improvement of Mt Arthur Coal's EMS, that ensures:</p> <ul style="list-style-type: none"> <li>• A review of EMS documentation, including Framework Document and Appendices, Environment and Community Programs and System and Operational Procedures, is undertaken on a risk based schedule;</li> <li>• The review is properly planned and carried out;</li> <li>• The review incorporates feedback from appropriate levels of site management regarding the continuing suitability, adequacy and effectiveness of the EMS</li> <li>• The review identifies observations and recommendations to ensure continued compliance with legal and other requirements and continuous improvement; and</li> <li>• Results from the review are communicated to management and broader workforce as appropriate.</li> </ul>
<p><b>Scope</b></p>	<p>This procedure relates to the review of the EMS and specifically the review of EMS documentation for continuing suitability, adequacy and effectiveness.</p>
<p><b>Responsibilities</b></p>	<p>Responsibilities for EMS review are assigned to personnel, based on positions and roles within the organisation.</p>
<p><b>Actions</b></p>	<p><b>EMS Review</b>          Reviews of the Mt Arthur Coal EMS are to be undertaken on a regular basis to determine the continuing suitability and effectiveness of the EMS and identify opportunities for continual improvement. The review frequency for all EMS documentation shall be risk based.</p> <p>The Environment Superintendent – Approvals and Systems is to coordinate review with appropriate delegation to other members of the Environment and Community team.          The review is to take into account the following:</p> <ul style="list-style-type: none"> <li>• Results of audits and monitoring</li> <li>• Trends in non-conformance, incidents and community complaints</li> <li>• Achievement of objectives and targets</li> <li>• Concerns of stakeholders</li> <li>• Changes in legislation, authority requirements and BHP Billiton requirements</li> <li>• Changes in the activities of Mt Arthur Coal</li> <li>• Changes in technology.</li> </ul> <p><b>Environment &amp; Community Management Plan Review</b>          Mt Arthur Coal Project Approvals require Environment and Community Management Plans to be approved by a regulatory authority and reviewed regularly. The Environment Superintendent – Approvals and Systems will coordinate the review of these Plans prior to statutory review dates. If changes are required, the plan will be revised and sent to the relevant regulatory authority for approval. Once approval is granted the plan review date will be changed.</p> <p><b>Annual Management Review Meeting</b>          An EMS review meeting is to be attended by the management team on an annual basis. The meeting will be coordinated by the Environment Superintendent – Approvals and Systems and be attended (as a minimum) by the General Manager Operations. The Environment Manager will chair the meeting. The meeting will discuss:</p> <ul style="list-style-type: none"> <li>• Results of internal audits and evaluations of compliance with legal requirements and with other requirements to which the organization subscribes,</li> <li>• Communication(s) from external interested parties, including complaints,</li> <li>• The environmental performance of the organization,</li> <li>• The extent to which objectives and targets have been met,</li> <li>• Status of corrective and preventive actions,</li> </ul>

	<ul style="list-style-type: none"><li>• Follow-up actions from previous management reviews,</li><li>• Changing circumstances, including developments in legal and other requirements related to its environmental aspects, and</li><li>• Recommendations for improvement.</li></ul> <p>The outcomes of the annual management review meeting are to be documented and the Environment Manager is responsible for ensuring the outcomes of the review are incorporated in the EMS where relevant.</p> <p><b>EMS Review due to cause</b> In addition to the review process outlined above, any aspect of the EMS may be reviewed on a more frequent basis. This review is to be specific to the EMS section requiring review, with any changes authorised by the Environment Manager or their delegate prior to adoption. The requirement for undertaking such reviews may be identified from the following:</p> <ul style="list-style-type: none"><li>• Changes in operations, personnel, legal requirements, BHP Billiton requirements</li><li>• Non-conformances, community complaints, monitoring results, incidents or audits</li><li>• New projects.</li></ul> <p><b>Communication of EMS Change</b> Any changes made to the EMS are to be communicated to relevant personnel through the internal communication mechanisms outlined in MAC-ENC-PRO-008 – Communication and Reporting, and, if necessary, training.</p>
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### MAC-ENC-PRO-003 Environmental Risk Assessment Summary

<b>Purpose</b>	To establish and maintain a process for the ongoing identification of environmental aspects and impacts relevant to Mt Arthur Coal's operations through completion of environmental risk assessments.	
<b>Scope</b>	This procedure applies to all activities undertaken by Mt Arthur Coal including those undertaken by contractors.	
<b>Definitions</b>	<b>Term</b>	<b>Definition</b>
	Environmental Aspect	Components of an organisation's activities, products and services that are likely to interact with the environment and are the cause of impacts to the environment (including community interactions and impacts).
	Environmental Impact	The environmental impacts resulting from the work activities and operations at the site (including community interactions and impacts).
	Risk	Risk is the chance of something happening that will have an impact upon the objectives or the task that was initially proposed. It is measured in terms of consequence (severity) and likelihood (exposure plus probability) of the event happening.
	Intolerable (unacceptable) risk	A risk that requires further reduction measures. All risks assessed as Extreme must have further mitigation measures identified and implemented as these are not tolerable risks.
<b>Responsibilities</b>	Responsibilities associated with environmental risk assessment are assigned to personnel, based on positions and roles within the organisation.	
<b>Actions</b>	<p><b>NEW PROJECTS REQUIRING DEVELOPMENT CONSENT</b></p> <p>All activities involving new or altered infrastructure, facilities or operations that require development consent must undergo environmental impact assessments in accordance with requirements of the <i>Environmental Planning and Assessment Act 1979</i> (NSW). Under the above circumstance, the Environment Manager is to commission a suitably qualified consultant to advise on, and prepare, the necessary impact assessment documents required for modifications to existing operations. Environmental and community risk assessments are to be undertaken and included as part of the approval documentation prepared for submission to government authorities.</p> <p>Once the impact assessment documents are completed and the proposals approved, the Environment and Community Manager will incorporate new or modified environmental aspects and impacts in consultation with the Project Director into the site risk register. The Environment and Community Manager and relevant Project Director, or their representative, will ensure appropriate controls are implemented to manage new or changed risks to tolerable levels.</p> <p><b>NEW PROJECTS NOT REQUIRING DEVELOPMENT CONSENT</b></p> <p>Where new works or changes to operations are required, but do not require development consent, the Environment and Community Manager or the relevant Department Manager is to trigger the risk assessment process.</p> <p>Where an aspect has not been identified as having a particular environmental impact, but investigations, complaints or incident/non-conformance reports have identified an impact, the aspect is to be reassessed by the Environment Manager. Any changes are to be incorporated in the site risk register and controls applied.</p> <p><b>IDENTIFICATION AND ASSESSMENT PROCESS FOR ASPECTS AND IMPACTS (RISK ASSESSMENT)</b></p> <p>Environmental risk assessments are to be undertaken in accordance with methodology outlined in BHP Billiton's risk management standards and <i>MAC-STE-PRO-005 Risk Management Procedure</i>. The methodology comprises six main steps, with communication and consultation with key persons maintained throughout the process. The steps include:</p> <p>Step 1 – Define the job or project steps (establish context)          Step 2 – Identify Risks (aspects/impacts)          Step 3 – Analyse Risks          Step 4 – Evaluate Risks</p>	

	<p>Step 5 – Control Risks (use Hierarchy of Controls when deciding on method)                      Step 6 – Communicate, Monitor and Review (for changes in risk)                      A number of methods can be used to assess risk and this will be dependent on factors, including scale, location and duration of the work.</p> <p>For normal day-to-day activities subject to risk assessments, including “60 Seconds for Safety” and/or Job Hazard Analyses (JHA’s), environmental considerations (aspects and impacts) are to be factored into these risk assessment processes. Controls are to be suitably applied that ensure any potential environmental and community risks, for example increased noise, dust, lighting, water, spills or waste impacts, are controlled to acceptable levels. For major projects or changes in activity or operations, then a more comprehensive qualitative risk assessment is required using the ALARP principle (Step 1 and 2).</p> <p>Risks are analysed by determining the consequence and likelihood of an impact occurring (Step 3). When assessing an environmental impact’s consequence, the natural environment and legal compliance implications are considered. The consequence and likelihood values are then combined using the following risk matrix to determine the risk rank of an impact occurring (Step 4). This is the Initial Risk Assessment and includes an assessment with the existing controls. Significant risks are defined as events with an assessed extreme or high risk rank and require further risk reduction measures (Step 5). A further risk assessment is completed (Steps 3 and 4) with consideration of these risk reduction measures and is called the Final Risk Assessment.</p> <p>The main requirement of this procedure is to ensure that environmental and community risks are captured as part of this process and that this is used as the basis to improve performance and identify changes in aspects and impacts that require attention.</p> <p>All environmental risk assessments must also consider the potential for environmental emergencies to occur in relation to the aspects being assessed. Potential emergency situations are to be managed in accordance with the <i>MAC-ENC-PRO-043 Environmental Emergency Response</i>.</p> <p>The Environment Manager is to ensure that environmental risks identified in the site-wide HSEC Risk Register are reviewed and amended as necessary every two years. This review is to be conducted in consultation with relevant Department Managers and other key personnel. The Risk Register may be updated more often based on the outcomes from completed risk assessments, inspections, incidents, audits, complaints, changes in technology, changes in social and environmental contexts and amendments or new legal and other requirements</p> <p>Any changes to the rankings in the Risk Register, particularly where new extreme or high risks are identified, are to be reported to relevant persons on-site with appropriate controls and improvement programs implemented to reduce the risk to acceptable levels.</p> <p><b>COMMUNICATION</b></p> <p>The Environment Manager, or the Departmental Manager will report new risks (aspects and impacts) of extreme or high environmental significance to the General Manager and the management team.</p> <p>Relevant risks will be communicated to the workforce through training (<i>MAC-ENC-PRO-006</i>) and through internal communication mechanisms (<i>MAC-ENC-PRO-008</i>). Relevant high or extreme risks may also be communicated to the local community and other stakeholders through the mechanisms outlined in Procedure <i>MACENC-PRO-008 Communication and Reporting</i>.</p>
<b>Review</b>	A review of this procedure will be conducted regularly as outlined in MAC EMS-001 EMS Review.
<b>References</b>	<ol style="list-style-type: none"> <li>1. Environmental Planning and Assessment Act 1979.</li> <li>2. <i>MAC-STE-PRO-005 Risk Management Procedure</i></li> <li>3. <i>MAC- ENC-PRO-001 EMS Review</i>.</li> <li>4. <i>MAC-ENC-PRO-008 Communication and Reporting</i>.</li> <li>5. <i>MAC-ENC-PRO-043 Environmental Emergency Response</i>.</li> </ol>

**MAC-ENC-PRO-043**

## Environmental Emergency Response Procedure Summary

<b>Purpose</b>	The purpose of this procedure is to enable an immediate and effective response to environmental emergency situations that occur on-site. In addition, this procedure has been developed to identify the resources and training necessary to enable a prompt and effective response to these situations.
<b>Scope</b>	This procedure applies to all environmental emergency situations that occur on Mt Arthur Coal-owned lands managed for mining purposes.
<b>Definition</b>	An environmental emergency is defined as: <i>Any event which poses serious harm to the community or environment caused as a result of carrying out activities associated with the operation or from acts of nature or people.</i>  Examples of possible environmental emergencies include: Grass fires, Dam failures, Major spills (eg. a tanker rupturing and spilling fuel into a clean water catchment), Unauthorised mine water discharges off-site, and significant uncontrolled pipeline rupture.
<b>Responsibilities</b>	Responsibilities associated with environmental emergency responses are assigned to personnel, based on positions and roles within the organisation.
<b>Environmental Emergency Notification</b>	<p style="text-align: center;">Emergency Notification Procedure          On The Two-Way          State          "Emergency, Emergency, Emergency"</p> <p>Give:</p> <ul style="list-style-type: none"> <li>• Your Name</li> <li>• Nature Of Emergency</li> <li>• Location Of Emergency</li> <li>• Assistance Required</li> </ul> <p>OCE/Supervisor/Manager:</p> <ul style="list-style-type: none"> <li>• Alert Rescue Team As Required</li> <li>• Alert Ambulance/Fire Brigade As Required</li> <li>• Alert Environment Manager</li> <li>• Raise Additional Help As Required</li> </ul> <p style="text-align: center;"><i>All other site two-way radio stations will immediately cease transmission and will not resume transmission until the emergency has passed or they are asked to take part.</i></p>
<b>Environmental Emergency Response</b>	In the event of an environmental emergency the following procedure is to be carried out: <ol style="list-style-type: none"> <li>1. Ensure personal safety and the safety of all other persons as a priority</li> <li>2. Follow the site environmental emergency notification procedure (refer <b>Section 5.0</b>)</li> <li>3. Where safe to do so, take immediate steps as appropriate and/or directed by the Incident Controller (person charged with responsibility for managing the overall response) to minimise or contain the potential for impacts resulting from the emergency situation</li> <li>4. The Environment Manager is to provide direction to minimise social and environmental impacts.</li> <li>5. Environmental emergencies are to be reported in accordance with <i>MAC-STE-MTP-009 Crisis and Emergency Management Plan</i></li> </ol>
<b>Training</b>	Training in relation to this procedure will be undertaken for all personnel. More comprehensive training is to be undertaken for the Mt Arthur Coal Rescue Team in responding to specific emergencies. The Environment Manager is to consult with the Health and Safety Manager regarding the inclusion of suitable environmental emergency drills in training. The emergency response procedure is to be periodically tested by conducting drills of possible environmental emergency scenarios on a regular basis. These drills are to include response to emergencies, including fires and large spills.
<b>Inspection of Emergency Equipment</b>	All emergency response equipment required for bushfire response is to be inspected and periodically maintained. The emergency spill response trailer is to be inspected in accordance with internal procedures
<b>BHP Billiton</b>	Environmental emergencies are to be reported to BHP Billiton as significant incidents, as required, in

<b>Reporting</b>	accordance with <i>MAC-STE-MTP-009 Crisis and Emergency Management Plan</i> .
<b>Contact Details</b>	Key contacts in the event of an environmental emergency are available on site.
<b>Review</b>	A review of this procedure will be conducted on an annual basis as part of the EMS review or more often as required. In addition, this procedure is to be reviewed following the occurrence of an environmental emergency or following the identification of a new potential emergency from an incident or environmental risk assessment.
<b>References</b>	<ol style="list-style-type: none"><li>1. <i>MAC-STE-PRO-010 Emergency Procedures – Bushfires.</i></li><li>2. <i>MAC-STE-MTP-009 Crisis and Emergency Management Plan MAC-ENC-PRO-029 Spill Response.</i></li></ol>

## **Appendix 4: Mt Arthur Coal Complex – Monitoring Locations**

### **Monitoring Plans**

Noise Monitoring Locations Plan

Blast Monitoring Locations Plan

Air Quality Monitoring Locations Plan

Surface Water Monitoring Locations Plan

Groundwater Monitoring Locations Plan



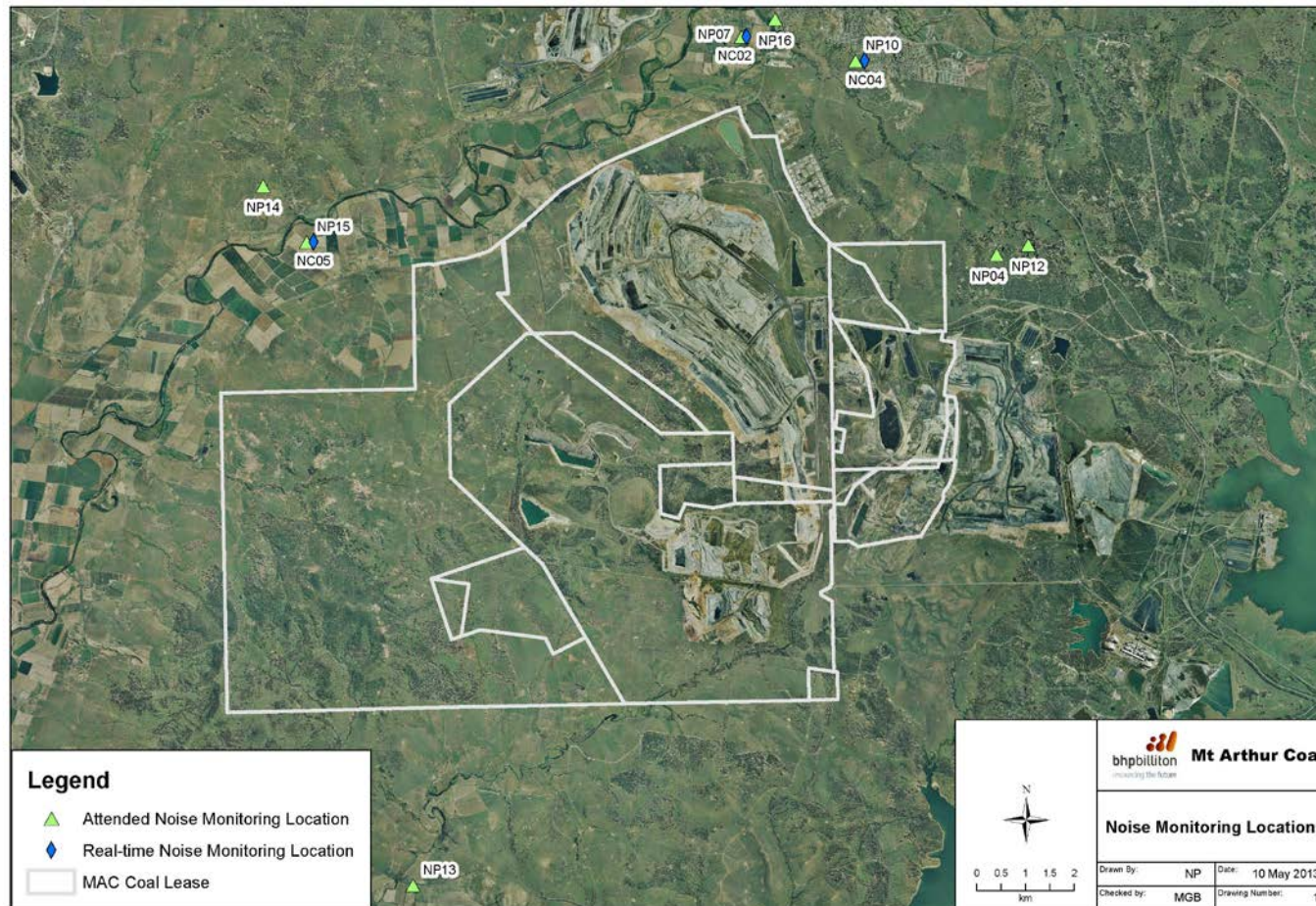


Figure 2: Noise Monitoring Locations Plan





**Figure 3: Blast Monitoring Locations Plan**



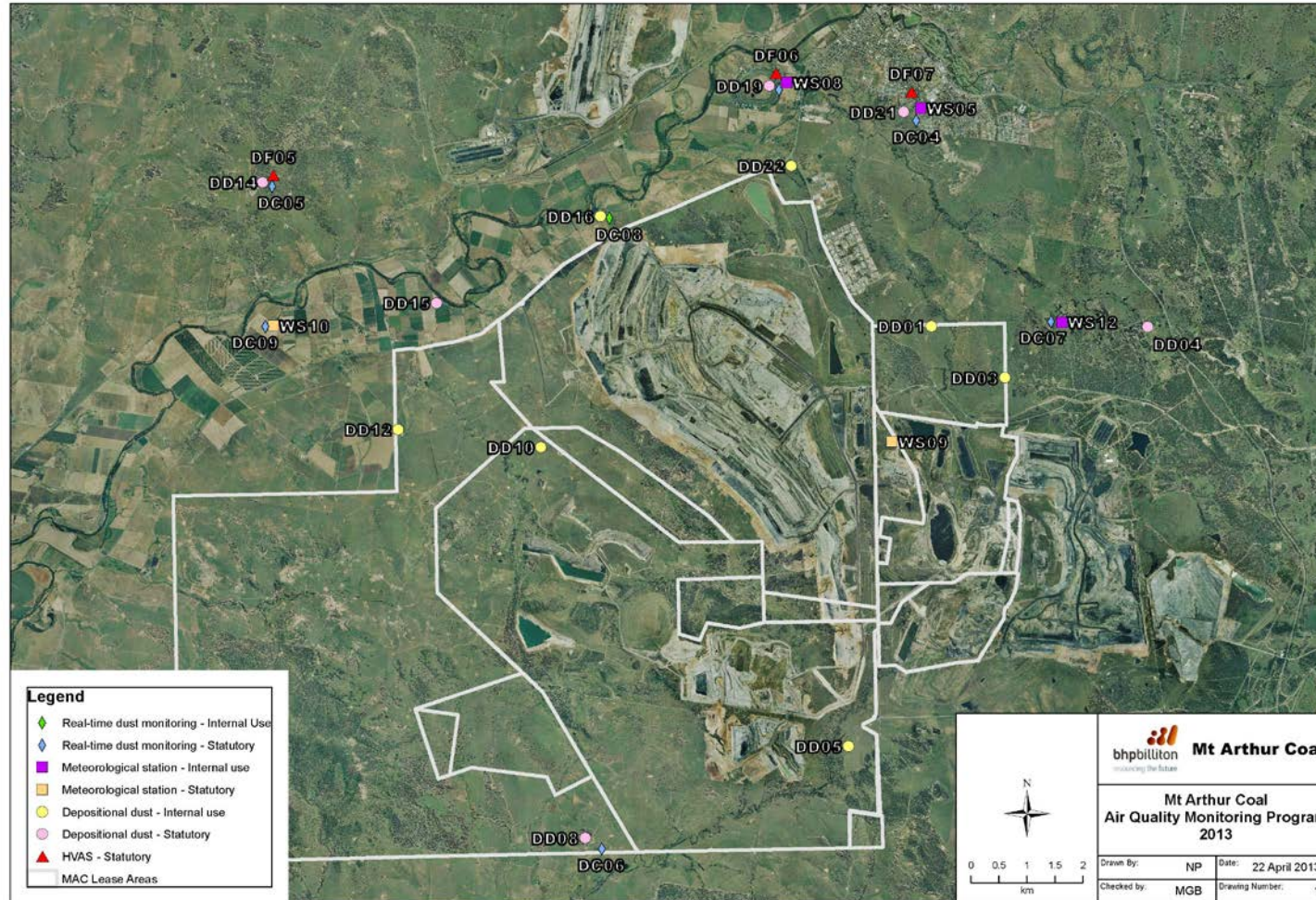


Figure 4: Air Quality Monitoring Locations Plan

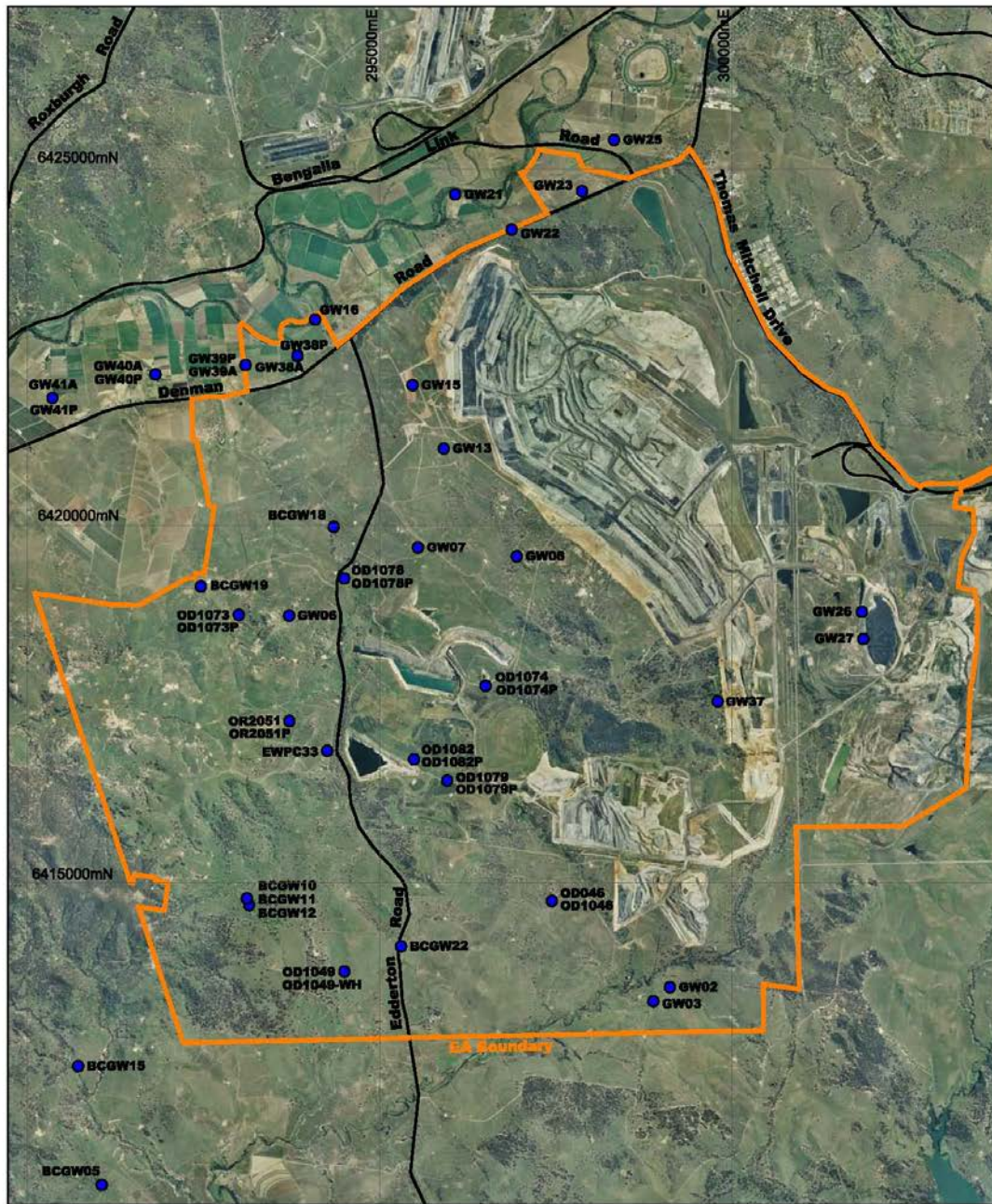




DESIGNED DNF	SCALE 1: 75,000	<p><b>Gilbert &amp; Associates</b> Pty Ltd                  Hydrology &amp; Water Management Consultants                  PO Box 2143 PH (07) 3367 2368                  Toowoong QLD 4066 FAX (07) 3367 2833                  gacoons@gbigpond.net.au</p>	Mt Arthur Coal	
DRAWN SK	LEVEL DATUM MGA		Site Water Management Plan Surface Water Monitoring Plan	
CHECKED LG	SHEET SIZE A4		Existing and Proposed Surface Water Monitoring Locations	
APPROVED LG	DATE FILE MonitoringPlan.dwg		DRAWING NO. Figure 2	REV NO. D
DATE 16/03/2011	ISSUE A			

Figure 5: Surface Water Monitoring Locations Plan





DESIGNED DNF	SCALE 1: 75,000	<b>Gilbert &amp; Associates</b> Pty Ltd Hydrology & Water Management Consultants PO Box 2143 Toowoong QLD 4086 PH (07) 3367 2388 FX (07) 3367 2833 giconsult@gilpond.net.au	Mt Arthur Coal	
DRAWN SK	LEVEL DATUM MGA		Site Water Management Plan Groundwater Monitoring Plan	
CHECKED LG	SHEET SIZE A4		Groundwater Monitoring Bore Locations	
APPROVED LG	CAD FILE Monitoring@mas.dwg		DRAWING NO. Figure 2	REV NO. D
DATE 16/03/2011	SCALE A			

Figure 6: Groundwater Monitoring Locations Plan

## **Appendix 5: Mt Arthur Coal Complex – Project Approval Plans, Strategies and Programs**

### **Management Plans**

*MAC-ENC-MTP-015 Blast Management Plan*

*MAC-ENC-MTP-018 European Heritage Management Plan*

*MAC-ENC-MTP-032 Noise Management Plan*

*MAC-ENC-MTP-034 Site Water Management Plan*

*MAC-ENC-MTP-040 Air Quality and Greenhouse Gas Management Plan*

*MAC-ENC-MTP-042 Aboriginal Heritage Management Plan*

*MAC-ENC-MTP-044 Biodiversity and Rehabilitation Management Plan*

### **Monitoring Programs**

*MAC-ENC-PRO-055 Blast Monitoring Program*

*MAC-ENC-PRO-057 Air Quality Monitoring Program*

*MAC-ENC-PRO-059 Site Water Balance*

*MAC-ENC-PRO-060 Erosion and Sediment Control Plan*

*MAC-ENC-PRO-061 Surface Water Monitoring Program*

*MAC-ENC-PRO-062 Groundwater Monitoring Program*

*MAC-ENC-PRO-063 Surface and Ground Water Response Plan*

*MAC-ENC-PRO-065 Biodiversity Monitoring Program*

*MAC-ENC-PRO-066 Noise Monitoring Program*

### **Strategies**

*MAC-ENC-PRO-067 Biodiversity Offset Strategy*

*MAC-ENC-PRO-064 Rehabilitation Strategy*