

Whitehaven Coal Limited

**Independent Environmental
Compliance Audit
Tarrawonga Coal Mine**

January 2012



Independent Environmental Compliance Audit Tarrawonga Coal Mine

Prepared by
Umwelt (Australia) Pty Limited
on behalf of
Whitehaven Coal Limited

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1.0 Introduction

1.1 Tarrawonga Coal Mine

Whitehaven Coal Limited (Whitehaven) is the leading coal producer in the Gunnedah basin. Whitehaven has one underground and four active open cut mining operations, including the Tarrawonga Coal Mine which is the subject of this independent environmental compliance audit.

The Tarrawonga Coal Mine (formerly the East Boggabri Coal Mine) was approved by the Minister for Planning on 9 November 2005 (Development Consent DA-88-4-2005) under the provisions of Part 4 of the *Environmental Planning & Assessment Act 1979* (EP&A Act). A modification of the consent under Section 75W of the EP&A Act was approved by the then Department of Planning on 15 October 2010. The development as modified includes:

- extracting about 16.4 million tonnes of coal by open cut mining methods at a maximum rate of 2 million tonnes a year over a mine life of 8 to 10 years;
- crushing and screening coal onsite;
- transporting it by road to the Whitehaven Coal Handling and Preparation Plant (CHPP) at Gunnedah;
- constructing mining-related infrastructure on the site; and
- rehabilitating the mine site.

The Tarrawonga Mine was approved subject to a range of conditions as specified in the Development Consent and the subsequent Section 75W modification. It is noted that the 2010 modification essentially replaces the original consent conditions, however many of the conditions in the modification were noted to be similar to the original conditions.

1.2 Independent Environmental Audit

Whitehaven commissioned Umwelt (Australia) Pty Limited (Umwelt) to conduct an independent environmental audit of its Tarrawonga operations. The audit was conducted in accordance with Condition 8 of Schedule 5 of the Tarrawonga Coal Mine modified Development Consent. The audit assessed the compliance status of Tarrawonga operations against the Development Consent, the modified Development Consent of October 2010 and other relevant environmental approvals and licences, for operations occurring between March 2009 and November 2011.

The on-site component of the environmental audit was conducted on 3 November 2011. Some information requested by the audit team but not available on-site at the time of the audit was subsequently provided to the audit team for review. This report provides an outline of the audit methodology and results, and provides recommended actions for achieving full compliance with environmental approvals. The appendices include detailed checklists of the status of compliance with the conditions of the modified Development Consent, Environment Protection Licence and Mining Lease for the project.

The audit was led by Jenny Ehmsen, a RABQSA registered Lead Environmental Auditor (Certificate No. 15186) and Senior Environmental Scientist with the assistance of Jenny Pengilly, Environmental Scientist. John Merrell, Associate, was the Project Director and reviewed this report.

1.3 Audit Objectives

The key objectives identified for the 2011 Independent Environmental Audit for the Tarrawonga Open Cut Coal Mine were:

- to undertake an independent environmental audit as required by Condition 8 of Schedule 5 of the Conditions of modified Development Consent; and
- to assess the environmental performance of the Tarrawonga operations and the ability of the Whitehaven environmental management systems and controls to provide for sustainable management of the operations.

1.4 Audit Scope

Condition 2 of Schedule 2 of the modified Development Consent provides the Terms of Approval for the project which identifies that the project shall be carried out generally in accordance with the:

- Environmental Impact Statement (EIS);
- Environmental Assessment (EA); and
- Conditions of the consent.

In order to assess the level of compliance with the terms of the consent, Condition 8 of Schedule 5 requires that an independent environmental audit be carried out.

Specifically, Condition 8 of Schedule 5 of the Tarrawonga Development Consent (as modified) states:

By the end of December 2011, and every 3 year thereafter, unless the Director-General directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:

- (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General;
- (b) include consultation with relevant agencies;
- (c) assess the environmental performance of the development and assess whether it is complying with the requirements in this consent and any relevant EPL or Mining Lease (including any strategy, plan or program required under these licences or leases);
- (d) review the adequacy of any approved strategies, plans and/or programs required under these approvals; and
- (e) recommend appropriate measures or actions to improve the environmental performance of the development, and/or any strategy, plan or program required under these approvals.

Notes: This audit team should be led by a suitably qualified auditor, and include experts in the field of noise, biodiversity and rehabilitation, and any other fields specified by the Director-General.

As required by the modified Development Consent, the audit scope covered the following key areas:

- consultation with relevant agencies;
- the environmental performance of the development, and its effect on the surrounding environment;
- compliance with relevant standards, performance measures and regulatory requirements; and
- the adequacy of the Environmental Management Strategy and environmental management plans/protocols.

1.5 Audit Criteria

Statutory compliance of the Tarrawonga operations was ascertained with reference to conditions and commitments made in the following documents:

- Development Consent DA-88-4-2005 (November 2005);
- Development Consent DA-88-4-2005 MOD 1 (October 2010);
- Environment Protection Licence No. 12365; and
- Mining Lease 1579.

Plans and programs prepared post approval for the Tarrawonga Open Cut Coal Mine and which were reviewed during the audit included:

- Noise Management Plan (Edition 2 Revision 0 dated March 2011);
- Blast Management Plan (Issue 1 dated 28 March 2011);
- Air Quality & Greenhouse Gas Management Plan (Edition 2 Revision 0 dated March 2011);
- Water Management Plan (Issue 1 dated 25 March 2011), including:
 - Site Water Balance;
 - Erosion Sediment Control Plan;
 - Surface Water Monitoring Program;
 - Groundwater Monitoring Program;
 - Surface and Groundwater Response Plan;
- Tarrawonga Coal Mine Offset Strategy (prepared by Ecological Australia, dated 28 November 2011);
- Aboriginal Heritage Management Plan (Edition 2 Revision 0 dated March 2011);
- Waste Management Plan (Issue 1 dated 28 March 2011);

- Bushfire Management Plan (Edition 1 Revision 1 dated September 2011);
- Rehabilitation Strategy (Edition 1 Revision 0 dated July 2011);
- Environmental Management Strategy (Edition 2 Revision 0 dated July 2011); and
- Annual Review – two reports reviewed:
 - Annual Environmental Management Report for the Tarrawonga Coal Mine, 01 May 2009 to 30 April 2010; and
 - Annual Environmental Management Report for the Tarrawonga Coal Mine, 01 May 2010 to 30 April 2011.

Additionally, the Mining Operations Plan (MOP) for the Tarrawonga Coal Mine (the original MOP approved 9 May 2006 with amended MOP approved 12 October 2010) was reviewed although it was not specifically required by the conditions of the modified Development Consent. The MOP was prepared by Whitehaven Coal to guide the environmental management of the operations.

1.6 Structure of this Document

This report contains the following sections:

- **Section 1.0 – Introduction.** An overview of the Tarrawonga Coal Mine and purpose and scope of the audit;
- **Section 2.0 – Audit Process.** A detailed description of the audit process;
- **Section 3.0 – Audit Findings.** An overview of the findings of the audit, including detailed descriptions of any non-compliance identified;
- **Section 4.0 – Environmental Performance.** An overview of the environmental performance of the Tarrawonga operations, including the findings from the site inspection;
- **Section 5.0 – Conclusion;**
- **Appendix 1 – Agency Interview Questions;**
- **Appendices 2 to 4 – Checklists.** Results of the audit assessment against relevant approval documents applying to the project including the modified Development Consent, EPL and Mining Lease. The checklists provide a detailed review of each compliance condition applying to the project; and
- **Appendix 5 – Photographic Plates.** Photographs of key site features referred to in this report.

2.0 Audit Methodology

The audit process involved the interview of personnel and relevant regulatory agencies, a review of documentation and samples of records provided by Whitehaven Coal and a site inspection of the Tarrawonga operations to determine the level of environmental performance and compliance of the project. The audit process is described in more detail in **Sections 2.1 to 2.5**.

2.1 Preliminary Document Review

Prior to the audit, environmental documentation associated with the Tarrawonga mining operation was reviewed by the auditors. This involved a review of the EA and modified Development Consent for the project and the management plans that have been prepared to guide the environmental management of the operations.

2.2 Agency Consultation

As part of the audit process, interviews were undertaken with relevant government agency staff with a regulatory role relating to the project. The views of these agencies in relation to the project were determined through phone interviews. These phone interviews consisted of an Umwelt representative asking a standard set of questions which are provided in **Appendix 1**. A summary of the phone interviews is provided in **Section 3.2**.

2.3 Site Interviews and Inspections

2.3.1 Opening Meeting

The opening meeting was held at the Tarrawonga Coal Mine office commencing at 8.00 am on 3 November 2011. The list of participants is provided in **Table 2.1**.

Table 2.1 – Opening Meeting Attendees

Opening Meeting	Organisation	Title
Danny Young	Whitehaven	Group Environmental Manager
Jill Johnson	Whitehaven	Environmental Officer
Jason Conomos	Whitehaven	Project Manager
Jenny Ehmsen	Umwelt	Lead Environmental Auditor
Jenny Pengilly	Umwelt	Audit Assistant

The audit team was introduced and the scope of their responsibilities was conveyed to the auditees. The purpose, depth and scope of the audit were outlined. The methods to be used by the team to conduct the audit were explained. It was stated that the audit team would be interviewing personnel, reviewing site management plans, examining records and conducting a site inspection in order to address specific compliance requirements, particularly those related to the relevant approvals and licences for the Tarrawonga operations.

Following the opening meeting, a preliminary site inspection was undertaken to familiarise the audit team with the site and operations.

2.3.2 Audit Interviews

Audit interviews were conducted with Danny Young (Group Environmental Manager), Jill Johnson (Environmental Officer), Jason Conomos (Project Manager), Chris Mammen (Safety Training Officer) and Brad Taylor (Workshop Supervisor) during the site component of the audit on 3 November 2011.

2.3.3 Data Collection and Verification

Where possible, documents and data collected during the audit process were reviewed on site. A number of documents were provided to the audit team prior to the on-site component of the audit. Several documents that were not available during the on-site component of the audit were provided following the audit.

All information obtained during the audit process was verified by the audit team where possible. For example, statements made by site personnel were verified by viewing documentation and/or site inspections where possible. Where suitable verification could not be provided, this has been identified in the audit findings.

2.3.4 Site Inspections

A detailed site inspection of the key areas of the mine was undertaken as part of the audit. Danny Young, Jill Johnson and Jason Conomos accompanied the audit team during the site inspection. Areas observed during the inspection included:

- site facilities area;
- workshop and hardstand areas, including washdown areas and hazardous good storage;
- open cut pit;
- waste emplacement areas, including both the northern and southern emplacement areas;
- rehabilitation areas on the western and northern sides of the northern emplacement area;
- topsoil stockpiles and the scraper operations being undertaken to move the soil stockpiles from the eastern side of the site to the western side of the site;
- Run of Mine (ROM) coal stockpiling and crushing operations, including loading of the crusher receival bin by front end loader;
- product coal handling operations, including use of the storage bin and weigh bin;
- truck loading operations from the weigh bin;
- water management dams and wet weather discharge points; and
- coal transport route to the Gunnedah CHPP, including the private haul road sections, and the public road sections along Hoad Lane, Bluevale Road and the Kamilaroi Highway.

2.3.5 Closing Meeting

The closing meeting was held at the Tarrawonga Coal Mine office commencing at 2.40 pm on 3 November 2011. The list of participants is provided in **Table 2.2**.

Table 2.2 – Closing Meeting Attendees

Closing Meeting	Organisation	Title
Danny Young	Whitehaven	Group Environmental Manager
Jill Johnson	Whitehaven	Environmental Officer
Jason Conomos	Whitehaven	Project Manager
Jenny Ehmsen	Umwelt	Lead Environmental Auditor
Jenny Pengilly	Umwelt	Audit Assistant

The objectives of this meeting were to discuss any outstanding matters, present preliminary findings and outline the process for finalising the audit report.

2.4 Reporting

Following completion of the site audit, the development consent checklist was completed and audit notes were reviewed in order to compile a list of outstanding matters to be noted in the audit report. This report was prepared to provide an overview of the status of compliance by reference to the relevant compliance documentation and any other observations of the auditors during the site inspections and interviews. This report has been prepared on an exception basis, highlighting any areas where action or improvement is required.

2.5 Definitions

The reporting of results from the compliance audit was determined based on the following definitions.

Compliance

The intent and explicit requirements of the condition have been met. This includes meeting all requirements with respect to consultation (agency or otherwise), timing of actions or activities, the preparation of management plans or other specific requirements of the condition.

The failure to meet any or all of the specific requirements of the condition would result in a non compliance.

Non Compliance

A non compliance occurs when any of the specific requirements of the condition have not been met (i.e. if any sub-component of a requirement is not met, such as timing or consultation, the entire requirement is considered to be non-compliant).

Verification

The inability to provide formal written verification (letter, fax, email, meeting minutes, etc.) that a requirement has been met does not necessarily result in a non compliance. If the auditor is able to verify by other demonstrable means (visual inspection, personal communication, etc.) that a condition has been met then, in most cases, the operation should be considered to be in compliance for that condition.

Area of Concern

The intent of the condition has been met, however it is considered that either:

- the issue has the potential to deteriorate to a non-compliance if not further addressed; or
- further improvement is recommended.

Observation

A finding which:

- is not likely to significantly affect the operation;
- does not strictly relate to the scope of the audit of compliance; and
- could lead to performance improvement.

Not Triggered

A condition or requirement has an activation or timing requirement which had not been triggered or completed at the time of the audit and therefore a determination of compliance could not be made. It is recommended that future audits assess compliance of any conditions or requirements that were found to have not been triggered during this audit.

Timing of Environmental Performance

For the purpose of a compliance audit the timeframe for environmental performance against the Environment Protection Licence (EPL) can be divided into two periods:

- the current period which is the time from the beginning of the most recent EPL reporting period to the time the audit is conducted; and
- the historical period, which is the time prior to the most recent EPL reporting period.

3.0 Audit Findings

The detailed findings of the audit are presented in this section. Detailed assessments of compliance with relevant compliance documents are provided in **Appendices 2 to 4**. The findings of this audit are based upon visual observations of the site and its vicinity, interviews with site personnel and our interpretation of the documentation provided by Whitehaven Coal.

Opinions presented herein apply to the site as it existed at the time of the audit and from information provided by site personnel. Any changes to this information of which Umwelt is not aware and has not had the opportunity to evaluate therefore cannot be considered in this report.

A summary of the phone interviews undertaken with agencies with regulatory roles relating to the project is provided in **Section 3.2**. Specific findings of the audit in relation to each approval, lease or licence is discussed in **Section 3.3**. The results of the site inspections undertaken for the project and any other issues identified during the audit are provided in **Section 4.0**.

The audit found that the key non-compliance issues for the Tarrawonga Coal Mine relate to the management of wet weather discharges and notifications to affected landowners and tenants following an exceedance of relevant criteria under Schedule 3. Secondary non-compliance issues relate to the completion of outstanding components of the Water Management Plan and the Air Quality & Greenhouse Gas Management Plan and submitting management plans to the (then) DoP for approval within the required timeframe.

The development of the Biodiversity Management Plan has been delayed pending the finalisation with OEH and DP&I of the Whitehaven Regional Biodiversity Offset Strategy and the assessment and determination of the proposed Tarrawonga Life of Mine project, as both of these will have an impact on the existing operations. Rehabilitation activities on the northern waste emplacement area have also been delayed pending the assessment and determination of the proposed Tarrawonga Life of Mine Project, since some sections of the northern emplacement will be overlaid with additional overburden material as part of the proposed Life of Mine Project if it is approved. The lack of certainty with respect to the Offset Strategy and the Life of Mine Project approval has the potential to impact on the current operations, particularly as they relate to rehabilitation and management of the site.

Tarrawonga has experienced some environmental performance issues relating to air, noise, and blasting non-compliances. Many of these exceedances were during the early stages of operations and Whitehaven has investigated each incident and modified operations accordingly to minimise the potential for future exceedances. However, Tarrawonga is also experiencing an ongoing environmental performance issue relating to water discharge exceedances.

A summary of the compliance assessment is provided in **Table 3.1**.

Table 3.1 – Summary of Statutory Compliance

Approval/Licence	Not Triggered	Compliance	Non-Compliance	Verification Required	Area of Concern	Observation
Modified Development Consent DA 88-4-2005 including MOD 1	114	109	25	1	1	32
Environment Protection Licence No. 12365	13	56	7	0	0	2
Mining Lease 1579	14	37	0	1	0	6

Note that the numbers refer to the number of conditions and subconditions.

In addition, 17 conditions within the modified Development Consent could not be assessed. These conditions relate to the components of the Water Management Plan that have not yet been completed.

3.1 Status of Development at Tarrawonga Coal Mine

The audit has identified that the operations at the Tarrawonga Coal Mine are generally being undertaken in accordance with the development consent and associated approval documentation including the EA and the management plans subsequently prepared, and other permits, such as EPL (No. 12365) and Mining Lease (ML1579). Measures are generally in place to prevent and minimise environmental harm.

Mining has generally taken place in accordance with the approved EA, although production has not yet reached the approved tonnage of 2 mtpa. Currently the production rate is at approximately 1.6 mtpa. Key features of the current operations include:

- Operations are approved for 7am to midnight Monday to Friday and between midnight and 3:30am Tuesday to Saturday and 7am to 6pm on Saturday, excluding public holidays. Maintenance activities are permitted any time Monday to Sunday. Mining is currently undertaken over two shifts (day and night) with the night shift finishing at 2.30 am; and
- Waste emplacements have been constructed at both the northern and southern locations, although the northern emplacement is almost complete (in terms of the current consent).

3.2 Agency Consultation

Consultation was undertaken with relevant government agencies to identify any particular issues of concern relating to the Tarrawonga operations. The results of the consultation undertaken are tabled in **Table 3.2**.

Table 3.2 – Agency Consultation

Agency	Person Contacted	Date(s) Contacted	Response
DP&I	Steve O'Donoghue	31/10/11	Tarrawonga is generally well located with respect to adjacent landowners. Issues identified included delays in rehabilitation due to additional approvals being sought, capacity of the water management system, the interaction between Whitehaven Coal and Boggabri Coal with respect to blasting and rehabilitation issues.
DTIRIS	Michael Lloyd	31/10/11	No particular issues identified.
OEH	Michael Lewis	31/10/11	Messages have been left however no response has been received.
Gunnedah Council	Carolyn Hunt (Planning)	28/11/11	No particular issues were identified.
	Wayne Kerr (Engineering)	28/11/11	Message has been left however no response has been received.
Narrabri Council	Nick Wilton	28/11/11	No particular issues were identified.
NOW	Fergus Hancock	28/11/11	Message has been left however no response has been received.

3.3 Previous Independent Audit 2009

In March 2009, URS undertook an independent environmental compliance audit (URS Audit) in accordance with the requirements of DA 88-4-2005 Schedule 6 Condition No. 6. The audit methodology comprised:

- a site inspection and interviews with key site personnel nominated by Tarrawonga Coal, on 25 and 26 March 2009;
- review of relevant documentation provided by Tarrawonga Coal;
- submission of a Draft Report to Tarrawonga Coal outlining the audit finding; and
- submission of a Final Report to Tarrawonga Coal following comments made by Tarrawonga Coal on the draft.

The URS Audit identified 35 issues where action was required to address non-conformances or observations of concern. Key issues related to surface and groundwater management, noise exceedances, air quality monitoring, flora and fauna management, waste management, rehabilitation, and preparation of a Biodiversity Offset Strategy.

A review of the audit report from that audit and the Action Plan prepared by Whitehaven to address issues raised was undertaken as part of this 2011 audit. It is noted that the 2009 URS Audit was undertaken against the criteria of DA 88-4-2005. This 2011 Audit is being undertaken primarily against the criteria of DA 88-4-2005 MOD 1. Whilst the conditions between the two consent versions are similar in nature, there are differences. These have been noted where previous compliance issues would now be assessed against the DA 88-4-2005 MOD 1 conditions.

Whitehaven prepared an Action Plan to address the findings of the URS Audit (Tarrawonga Independent Audit Action Plan) and submitted this to (then) DoP in July 2009 (Tarrawonga Audit Action Plan_As Submitted.doc dated 21/07/2009). Evidence was sighted that the Action Plan was reviewed by Tarrawonga in January 2011 (Tarrawonga Audit Action Plan_Ongoing.doc dated 4/01/2011).

All findings of the 2009 URS audit were reviewed as part of the current independent environmental audit and evidence was sighted to verify the closure of 31 of the findings. The four actions that remain outstanding relate to the preparation of a Rehabilitation Plan for the mine and the implementation of the Biodiversity Offset Strategy required as part of the consent conditions. Issues associated with rehabilitation of the site and the preparation and implementation of a Biodiversity Offset Strategy are discussed in detail in **Section 3.5** of this report.

3.4 Compliance Issues

The Tarrawonga Coal Mine was found to be operating generally in compliance with the terms of the relevant approvals and licences applying to it. However, a number of non-compliances were identified where action is required to ensure full compliance is achieved for some conditions/requirements. A number of verifications were also identified, where full compliance with a condition/requirement could not be determined as either insufficient evidence was available but the auditor felt that the requirement had likely been met, or the determination of compliance was dependent on the outcome of a programmed action being finalised by Whitehaven Coal and there was no specific timing requirement in the condition.

A full compliance assessment against the requirements of relevant approval documents and licences is provided in **Appendices 2** to **4**. A summary of the non-compliances for each approval document is provided below.

3.4.1 Development Consent DA 88-4-2005

Operations at the Tarrawonga site during the period March 2009 to October 2010 were assessed against the original development consent DA 88-4-2005. Operations during that period were generally being undertaken in a manner that is consistent with the requirements of the Development Consent. One non-compliance was identified requiring no further action and one non-compliance was identified where action is required to ensure full compliance. The non-compliance that requires action relates to the publication on the Tarrawonga website of the previous Independent Audit undertaken in March 2009.

A full compliance checklist against the requirements of the Development Consent including the October 2010 modification (MOD1) is included as **Appendix 2**.

A summary of the non-compliance issues related to the Development Consent prior to MOD1 is provided below.

Schedule 4: Condition 6: Noise Impact Assessment Criteria – Non-compliance

The Applicant shall ensure that the noise generated by the development, including the noise generated on the private sections of the transport route, does not exceed the noise impact assessment criteria presented in Table 7 at any residence on privately owned land.

Day (Construction Stage) <i>L_{A10(15 minute)}</i>	Day (Operational Stage) <i>L_{Aeq(15 minute)}</i>	Evening <i>L_{Aeq(15 minute)}</i>	Night <i>L_{Aeq(15 minute)}</i>	Night <i>L_{A1(1 minute)}</i>
40	35	35	35	45

Table 7: Noise Impact Assessment Criteria dB(A)

Note:

- Noise from the development is to be measured at the most affected point or within the residential boundary, or at the most affected point within 30 metres of a dwelling (rural situations) where the dwelling is more than 30 metres from the boundary,
- To determine compliance with the *L_{Aeq(15 minute)}* noise limits in the above table, where it can be demonstrated that direct measurement of noise from the development is impractical, the DEC may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.
- Noise from the development is to be measured at 1 metre from the dwelling façade to determine compliance with the *L_{A1(1 minute)}* noise limits in the above table.
- The noise emission limits identified in the above table apply under meteorological conditions of:
 - wind speeds of up to 3 m/s at 10 metres above ground level; or
 - temperature inversion conditions of up to 3°C/100m, and wind speeds of up to 2 m/s at 10 metres above ground level.

The following elevated noise levels were recorded during June 2009 and September 2009:

- N4 – LAeq 40 dB(A) on 15-Jun-09 at 8.50 pm;
- N4 – LAeq 40 dB(A) on 16-Jun-09 at 7.25 am;
- Pine Grove – LAeq 41 dB(A) on 16-Jun-09 at 7.00 am;
- Kyalla – LAeq 40 dB(A) on 16-Jun-09 at 7.50 am; and
- Blair Athol – LAeq 38 dB(A) on 10-Sep-09 at 7.44 am.

Exceedances at N4, Pine Grove and Kyalla were attributed to noise from trucks on the private haul road.

Private agreements were established during October 2009 to December 2009 with owners of the properties at N4 (Ambardo), Pine Grove and Kyalla allowing elevated noise levels from trucks on the private haul roads, as specified in each agreement. The private agreements with the owners of properties at N4 (Ambardo), Pine Grove and Kyalla were sighted.

The property at Blair Athol was purchased by Whitehaven in June 2010. The properties “Ambardo” and “Pine Grove” were also purchased during 2010-2011. As the affected properties have either been purchased, or have a private agreement in place, no further action is required providing that future monitoring confirms that noise levels are within the criteria specified in the agreements.

Recommendation

No further action required.

Schedule 6: Condition 10: Access to Information – Non-compliance

Within 1 month of the approval of any management plan/strategy or monitoring program required under this consent (or any subsequent revision of these management plans/strategies or monitoring programs), the completion of the independent audits required under this consent (see conditions 3 2 or schedule 4 and condition 6 of schedule 6), or the completion of the AEMR (see condition 5 above), the Applicant shall:

(c) within 12 months of the date of this consent put a copy of the relevant documents on the Applicant's website;

It was noted during the audit that the independent environmental audit undertaken by URS in March 2009 is not available on the Whitehaven website.

Recommendation

Whitehaven should put a copy of the URS Independent Audit undertaken in March 2009 on the Tarrawonga website.

3.4.2 Development Consent DA 88-4-2005 MOD 1

Operations at the Tarrawonga site since October 2010 were assessed against the modified development consent DA 88-4-2005 MOD 1. Operations since October 2010 have generally been undertaken in a manner that is consistent with the requirements of the modified Development Consent. However, a number of non-compliances were identified where action is required to ensure full compliance. The key non-compliance issues relate to the management of wet weather discharges, completion of outstanding components of the Water Management Plan and the Air Quality & Greenhouse Gas Management Plan, and notifications to affected landowners and tenants following an exceedance of relevant criteria under Schedule 3.

A full compliance checklist against the requirements of the modified Development Consent was completed as part of the audit and is included as **Appendix 2**. A summary of the non-compliance issues is provided below.

Schedule 2: Condition 1 – Non-compliance

The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the project.

The site inspection and audit of compliance documentation found no significant issues relating to environmental management at the site. However several non-conformances have been identified as documented in the compliance checklists and summarised in this report. Tarrawonga has experienced some environmental performance issues relating to air, noise, blasting and water discharge exceedances. Many of these exceedances were during the early stages of operations and Whitehaven has investigated each incident and modified operations accordingly to minimise the potential for future exceedances. Environmental Management Plans have been prepared for a range of environmental issues and evidence was sighted that the plans that have been prepared have generally been implemented. It was noted that although Whitehaven has prepared and submitted revised management plans in accordance with the MOD1 consent requirements, these plans have not yet been approved by DP&I. In this regard, Whitehaven is continuing to operate under the previously approved management plans.

Schedule 2: Condition 2 (c) – Non-compliance

The Proponent shall carry out the project generally in accordance with the:
(c) conditions of this consent.

A number of non-compliances with the modified Development Consent were identified during the audit as noted in this report.

Schedule 2: Condition 12: Existing Plans, Programs, Strategies – Non-compliance

Until they are replaced by an equivalent strategy, plan or program approved under this consent, the Applicant shall continue to implement the existing strategies, plans or programs that apply to any development on site.

The currently approved Noise Management Plan (NMP) and the Road Noise Management Plan state that attended road noise surveys will be conducted on a quarterly basis (until such time as an alternative monitoring frequency/method is approved by DP&I) and that measurements will be taken during the day and evening time periods in each quarter.

The AEMR for 2009-2010 does not provide any monitoring results for the September 2009 quarter and the AEMR for 2010-2011 does not provide monitoring results for September 2010 and December 2010 quarters. Additionally, no evidence was sighted that would indicate that attended road noise surveys were undertaken for the evening period in any quarter.

Recommendation

Whitehaven should ensure that attended road noise monitoring sessions are undertaken quarterly during the day and evening time periods in accordance with the currently approved Noise Management Plan and the Road Noise Management Plan until such time as the revised Noise Management Plan (March 2011) is approved.

Schedule 3: Condition 11: Blasting Frequency – Non-compliance

The Applicant shall not carry out more than 1 blast a day on site, unless an additional blast is required following a blast misfire.

Blast Monitoring reports indicate that blasts occurred on 1 July 2011 at 11.54 am and 12.15 pm. There was no evidence that a misfire occurred on that day. Whitehaven advised that two blasting areas, one at each end of the pit, were intended to be concurrently detonated however a technical issue resulted in the blast at the southern end of the pit being delayed by approximately 21 minutes.

It is noted that this was an isolated occurrence, with blast records indicating that on all other occasions blasts were restricted to one blast per day.

Recommendation

No further action required.

Schedule 3: Condition 18: Air Quality – Non-compliance

The Applicant shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that the particulate emissions generated by the project do not exceed the criteria listed in Tables 6, 7 and 8 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.

Table 6: Long term criteria for particulate matter

Pollutant	Averaging period	^d Criterion
Total suspended particulate (TSP) matter	Annual	^a 90 µg/m ³
Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³

Table 7: Short term criterion for particulate matter

Pollutant	Averaging period	^d Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³

Table 8: Long term criteria for deposited dust

Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level
Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month

Notes for Tables 6-8:

- ^a Total impact (i.e. incremental increase in concentrations due to the project plus background concentrations due to other sources);
- ^b Incremental impact (i.e. incremental increase in concentrations due to the project on its own);
- ^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method; and
- ^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agree to by the Director-General in consultation with DECCW.

A review of the Templemore PM₁₀ High Volume Air Sampler (HVAS) monitoring results indicate the following exceedances of 24 hr average PM₁₀ levels:

- 20 November 2009 – 54 µg/m³; and
- 26 March 2010 – 91 µg/m³.

The deposited dust monitoring results indicated a number of events that may represent exceedances of the monthly maximum increase in deposited dust level criteria however there is no evidence to indicate whether these exceedances were the result of mining-related operations at TCM. Whitehaven continues to implement its air quality management controls and its air quality monitoring program. Given the isolated occurrences of the dust exceedances, it is considered that no further action is required.

Recommendation

No further action required.

Schedule 3: Condition 20: Air Quality – Non-compliance

The Applicant shall:

- (c) regularly assess the real-time air quality monitoring and meteorological forecasting data and relocate, modify and/or stop operations on site to ensure compliance with the relevant conditions of this consent;

Real-time air quality and meteorological data is not yet available. It is noted that Whitehaven is currently in the process of developing and implementing a real-time system in conjunction with the adjoining Boggabri Mine and Maules Creek Project.

Note that this condition also requires Whitehaven to assess real-time meteorological forecasting data.

Recommendation

Whitehaven should check whether the proposed real-time system is able to provide meteorological forecasting data and clarify these requirements with DP&I and finalise implementation of the proposed system.

Schedule 3: Condition 21: Air Quality & Greenhouse Gas Management Plan – Non-compliance

The Applicant shall prepare and implement a detailed Air Quality & Greenhouse Gas Management Plan for the project to the satisfaction of the Director-General. This program must:

(a) be prepared in consultation with DECCW, and submitted to the Director-General for approval by the end of March 2011;

The Air Quality & Greenhouse Gas Management Plan was submitted for approval on 31 March 2011 but does not include a GHG management component. Evidence was sighted that Whitehaven sought permission from DP&I to submit the Air Quality & Greenhouse Gas Management Plan on a progressive basis in accordance with Schedule 2 Condition 11 and to provide a revised plan containing the required GHG Management component by 31 December 2011. This would allow Whitehaven to incorporate into the Air Quality & Greenhouse Gas Management Plan any strategies identified as part of the Federal Government Energy Efficiency Opportunities Program in which the Tarrawonga operation is required to participate. There was no evidence that permission has been granted.

Recommendation

At this stage it is recommended that Whitehaven proceed with their commitment to complete the GHG Management component of the Air Quality & Greenhouse Gas Management Plan and submit the revised plan to DP&I for approval by 31 January 2012.

Schedule 3: Condition 22: Meteorological Monitoring – Non-compliance

While development is being carried out on site, the Applicant shall ensure that there is a suitable meteorological station operating in the vicinity of the site that:

(b) is capable of continuous real-time measurement of temperature lapse rate in accordance with the NSW Industrial Noise Policy (INP).

Measurement of temperature lapse rate in accordance with the INP requires measuring the temperature at two elevated levels over a 50 metre height interval (1.5 to 10 metres and 50 to 60 metres) to determine the temperature difference. This requires a tower greater than 50 metres in height.

It was observed that the meteorological station currently on site would not fulfil this requirement.

Recommendation

It is recommended that Whitehaven follow-up with DP&I to clarify the intent of the requirement and to discuss any implementation issues that may arise as a result of this condition.

Schedule 3: Condition 25: Water Discharges – Non-compliance

The Applicant shall ensure that all surface water discharges from the site comply with the relevant discharge limits (both volume and quality) in any EPL.

Management of rainfall runoff appears to be an issue during rainfall events equal to the design rainfall event for the sediment control dams i.e. 5 day 90th percentile design criteria. This issue was also raised during the previous audit. Whitehaven has been addressing this issue through the following mitigation measures:

- use of a liquid flocculant to lower TSS levels;
- pumping to upstream storages, as soon as available in order to reduce discharge potential;
- spraying water onto unused roads for evaporation in order to reduce water levels in storage dams and sediment basins; and
- Preference to utilise water in discharge dams SB14 and SD16 on the southern end of the southern emplacement area to avoid discharge wherever possible.

A review of the current Whitehaven surface water and erosion control structures was completed in July 2009 by the Department of Lands Soil Conservation Service. The review concluded that the site has sufficient storage capacity if managed efficiently.

It is noted that TSS exceedances in water discharges were reported in the 2009-2010 AEMR and the 2010-2011 AEMR indicating that the issue may be related to the management of the sediment control dams.

Recommendation

Whitehaven should undertake a review of the management procedures for sediment control dams and onsite water storage dams, in order to achieve a balance between operational requirements for stored water and sediment control requirements for available storage capacity.

Schedule 3: Condition 26: Water Management Plan – Non-compliance

The Applicant shall prepare and implement a Water Management Plan for the development to the satisfaction of the Director-General. This plan must:

- (c) include:
- a Site Water Balance;
 - an Erosion and Sediment Control Plan;
 - a Surface Water Monitoring Program;
 - a Groundwater Monitoring Program; and
 - a Surface & Ground Water Response Plan.

The Water Management Plan was completed and submitted to (then) DoP on 31 March 2011. The Water Management Plan included a Site Water Balance for the modified Development Consent, however the other plans and programs specified in this condition have not yet been completed. For these components of the Water Management Plan, Whitehaven is continuing to operate under the currently approved documents in accordance with Schedule 2 Condition 12. However, the currently approved documents do not cover all the conditions and requirements of the modified Development Consent and no evidence was sighted to indicate that approval had been sought or granted to submit the Water Management Plan on a progressive basis.

Recommendation

Whitehaven should complete the following components of the Water Management Plan as soon as possible and submit to the DP&I for approval:

- *Erosion and Sediment Control Plan;*
- *Surface Water Monitoring Program;*
- *Groundwater Monitoring Program; and*
- *Surface & Ground Water Response Plan.*

Schedule 3: Condition 28: Erosion and Sediment Control Plan – Non-compliance

The Erosion and Sediment Control Plan shall:

- (a) be consistent with the requirements of the Managing Urban Stormwater: Soils and Construction Manual (Landcom 2004, or its latest version);
- (b) identify activities that could cause soil erosion and generate sediment;
- (c) describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters;
- (d) describe the location, function, and capacity of erosion and sediment control structures; and
- (e) describe what measures would be implemented to maintain the structures over time.

The Erosion and Sediment Control Plan for the modified Development Consent has not yet been completed and Whitehaven is continuing to operate under the currently approved Erosion and Sediment Control Plan in accordance with Schedule 2 Condition 12. The Erosion and Sediment Control Plan is a required component of the Water Management Plan.

Additionally, the currently approved Erosion and Sediment Control Plan does not address part (d) of this condition that requires the Plan to include a description of the location, function, and capacity of the erosion and sediment control structures.

Recommendation

Whitehaven should complete the Erosion and Sediment Control Plan as soon as possible and submit to the DP&I for approval.

Schedule 3: Condition 29: Surface Water Monitoring Program – Non-compliance

The Surface Water Monitoring Program shall include:

- (a) detailed baseline data on surface water flows and quality in creeks and other water bodies that could be affected by the project;
- (b) surface water quality and stream health assessment criteria, including trigger levels for investigating any potentially adverse surface water impacts; and
- (c) a program to monitor:
 - surface water flows, quality, and impacts on water users;
 - stream health; and
 - channel stability,
 in the creeks and other water bodies that could be affected by the development on site, including the Bollol and Driggle Draggles Creeks in the vicinity of the road crossing works.

Whitehaven is continuing to operate under the currently approved Surface Water Monitoring Program in accordance with Schedule 2 Condition 12. However, the currently approved program does not meet all the conditions and requirements of the modified Development Consent, specifically:

- baseline data was not required in the currently approved SWMP but will need to be compiled and included in the new SWMP;

- assessment criteria are included in the currently approved SWMP however no trigger levels have been specified for investigating potential issues; and
- the currently approved SWMP does not include programs to monitor surface water flows, stream health or channel stability in accordance with this condition.

Recommendation

Whitehaven should complete the Surface Water Monitoring Program as soon as possible and submit to the DP&I for approval.

Schedule 3: Condition 30: Groundwater Monitoring Program – Non-compliance

The Groundwater Monitoring Program must include a program to:

- (a) detailed baseline data of groundwater levels, yield and quality in the region, and particularly any groundwater bores, springs and seeps (including spring and seep fed dams) that may be affected by mining operations on site;
- (b) a program to augment the baseline data over the life of the project;
- (c) groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts;
- (d) a program to monitor and/or validate:
 - groundwater inflows to the open cut mining operations;
 - the impacts of the project on the surrounding aquifers and any groundwater bores, springs and seeps on privately-owned land;
- (e) a program to validate the groundwater model for the project, and calibrate it to site specific conditions.

Whitehaven is continuing to operate under the currently approved Groundwater Monitoring Program in accordance with Schedule 2 Condition 12. However, the currently approved program does not meet all the conditions and requirements of the modified Development Consent, specifically:

- Baseline data was not required in the currently approved GWMP but will need to be compiled and included in the new GWMP;
- In the currently approved GWMP trigger levels (except for lead) are expressed as percentage variance from baseline levels, but baseline levels had not yet been established when document was written. The new GWMP should include properly expressed trigger levels that can be used for assessing the groundwater monitoring results and identifying potential impacts; and
- The currently approved GWMP does not include a program to validate the groundwater model for the project, and calibrate it to site specific conditions.

Recommendation

Whitehaven should complete the Groundwater Monitoring Program as soon as possible and submit to the DP&I for approval.

Schedule 3: Condition 31: Surface and Ground Water Response Plan – Non-compliance

The Surface and Ground Water Response Plan must describe what measures and/or procedures would be implemented to:

- (a) respond to any exceedances of the surface water, stream health, and groundwater assessment criteria;
- (b) compensate landowners of privately-owned land whose water supply is adversely affected by the project; and
- (c) mitigate and/or offset any adverse impacts on riparian vegetation.

Whitehaven is continuing to operate under the currently approved Groundwater Contingency Plan (GCP) in accordance with Schedule 2 Condition 12. However, the currently approved plan does not meet all the conditions and requirements of the modified Development Consent. Specifically, the currently approved GCP does not include procedures for:

- responding to exceedances of surface water or stream health criteria;
- mitigating and/or offsetting any adverse impacts on riparian vegetation.

Recommendation

Whitehaven should complete the Surface and Ground Water Response Plan as soon as possible and submit to the DP&I for approval.

Schedule 3: Condition 32: Biodiversity Offset – Area of Concern

The Biodiversity Offset Strategy was completed and submitted to (then) DoP for approval on 31 March 2011. Whitehaven advised during the audit that, based on their discussions with DP&I and OEH, the Biodiversity Offset Strategy, in its current form, is likely to be rejected as the offsets nominated within the strategy are located within areas that will be disturbed by the proposed TCM Life of Mine project.

The Biodiversity Management Plan, Rehabilitation Strategy and Rehabilitation Management Plan are dependent on the completion of the Biodiversity Offset Strategy.

Delays in completion of these plans have the potential to affect the management of environmental impacts associated with the Tarrawonga operation and could limit the ability of Whitehaven to achieve continued compliance with a number of modified Development Consent conditions.

It is understood from discussions with Whitehaven environmental staff that Whitehaven has been undertaking the preparation of a Regional Biodiversity Strategy to identify and manage appropriate offset areas for its various Gunnedah operations. The proposal was submitted to DECCW in February 2010 and DECCW completed their site inspection in May 2010, however Whitehaven is yet to receive advice as to the determination of the proposal.

Recommendation

Whitehaven should finalise the Biodiversity Offset Strategy for the site in accordance with the Regional Biodiversity Strategy and submit a revised plan to DP&I for approval as soon as possible.

Schedule 3: Condition 49: Rehabilitation Strategy – Non-compliance

By the end of March 2011, the Applicant shall prepare a Rehabilitation Strategy for the site to the satisfaction of the Director-General.

The Draft Rehabilitation Strategy was submitted on 17 August 2011 outside the timeframe required by this condition.

Recommendation

No further action is required as the plan has now been submitted.

Schedule 4: Condition 2: Notification of Landowners – Non-compliance

Within 2 weeks of obtaining results showing:

- an exceedance of the relevant criteria in Schedule 3, the Proponent shall notify the affected landowners and tenants in writing of the exceedance, and provide regular monitoring results to each of these parties until the development is complying with the relevant criteria;
- an exceedance of the relevant criteria in Condition 4(b) of Schedule 3, that they are entitled to ask for additional noise mitigation measures to be installed at their residence; and
- an exceedance of the relevant air quality criteria in Schedule 3, send the affected landowners and tenants (including the tenants of any mine-owned land) a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time).

Audit findings and discussions with Whitehaven confirm that notifications are not being provided to affected landowners and tenants following an exceedance of relevant criteria.

Recommendation

Whitehaven should implement a process to ensure that notification of exceedances is provided to affected landowners and tenants within the required timeframe.

Whitehaven should also implement a process to provide regular monitoring results to affected landowners and tenants after an exceedance until the relevant criteria is being met.

Schedule 5: Condition 1: Environmental Management Strategy – Non-compliance

The Applicant shall prepare and implement an Environmental Management Strategy for the development to the satisfaction of the Director-General. This strategy must:

- (a) be submitted to the Director-General for approval by the end of March 2011;

The Environmental Management Strategy was submitted on 25 July 2011 outside the timeframe required by this condition. It was noted that in March 2011 (letter sighted) Whitehaven had requested an extension of time from (then) DoP to prepare the required Plan, however advice from DoP was not subsequently received until 25 May 2011.

Recommendation

No further action is required as the plan has now been submitted.

Schedule 5: Condition 6: Incident Reporting – Non-compliance

The Applicant shall notify the Director-General and any other relevant agencies of any incident associated with the development as soon as practicable after the Applicant becomes aware of the incident. Within 7 days of the date of the incident, the Applicant shall provide the Director-General and any relevant agencies with a detailed report on the incident.

Evidence was sighted during the audit to indicate that where exceedances of the limits/performance criteria have been detected, these exceedances have generally been reported to both (then) DoP and DECCW. For example, letters dated 19 March 2010 and 10 May 2011 (wet weather discharges) and 3 October 2009 (noise exceedances). However, the notifications are generally not made as soon as practicable after the exceedance had been detected and there was no evidence that they were reported via the Environment Line service as required by the EPL.

No evidence was sighted during the audit to indicate that notification was provided to DoP/DP&I or DECCW/OEH for the blast non-compliance that occurred on 1 July 2011.

Recommendation

Whitehaven should implement a process to ensure that notification of exceedances is provided to relevant government agencies within the required timeframe.

3.4.3 Environment Protection Licence

Whitehaven Coal is required to and does hold an EPL for its Tarrawonga operation as it conducts an activity that requires a licence under the POEO Act. The EPL outlines Whitehaven Coal's responsibilities and the environmental performance standards it is required to meet, being:

- limit conditions;
- operating conditions;
- monitoring and recording conditions; and
- reporting conditions.

Whitehaven Coal reports its performance against the above responsibilities and environmental performance status via the submission of its Annual Return.

The licence reviewed as part of this audit has a review date of 18 Sep 2014.

Where the limit conditions specified in the EPL are also included in the modified Development Consent, the compliance assessment is undertaken against the modified Development Consent and any non-compliances against these limit conditions are discussed in **Section 3.4.2**.

A full compliance checklist against the requirements of EPL 12365 was completed as part of the audit and is included as **Appendix 3**. A summary of the non-compliance issues is provided below. Non-compliances that were noted against EPL limit conditions that are included in the modified Development Consent are discussed in **Sections 3.4.1** and **3.4.2**.

Condition R2.1 Notification of Environmental Harm – Non-compliance

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

Notifications must be made by telephoning the Environment Line service on 131 555.

Evidence was sighted during the audit to indicate that where exceedances of the limits/performance criteria have been detected, these exceedances have generally been reported to both DOP/DP&I and DECCW/OEH. For example, letters dated 19 March 2010 and 10 May 2011 (wet weather discharges) and 3 October 2009 (noise exceedances). However, the notifications are generally not made as soon as practicable after the exceedance had been detected and there was no evidence that they were reported via the Environment Line service.

No evidence was sighted during the audit to indicate that notification was provided to DOP/DP&I or DECCW/OEH for the blast non-compliance that occurred on 1 July 2011.

Recommendation

Whitehaven should implement a process to ensure that notification of exceedances is provided to relevant government agencies within the required timeframe.

Condition R2.2 Notification of Environmental Harm – Non-compliance

The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

Evidence was sighted during the audit to indicate that where exceedances of the limits/performance criteria have been detected, these exceedances have generally been reported to both DOP/DP&I or DECCW/OEH. For example, letters dated 19 March 2010 and 10 May 2011 (wet weather discharges) and 3 October 2009 (noise exceedances). However, the notifications are generally not made within 24 hours of detecting an exceedance and there was no evidence that they were reported via the Environment Line service.

No evidence was sighted during the audit to indicate that notification was provided to DOP/DP&I or DECCW/OEH for the blast non-compliance that occurred on 1 July 2011.

Recommendation

Whitehaven should implement a process to ensure that notification and reports of exceedances are provided to relevant government agencies within the required timeframe.

3.4.4 Mining Lease 1579

A full compliance checklist against the requirements of ML 1579 was completed as part of the audit and is included as **Appendix 4**.

No non-compliances were identified.

3.5 Environmental Management Plans

Whitehaven Coal has developed a number of environmental management plans and monitoring programs for the project in accordance with relevant requirements of the modified Development Consent. These documents address specific impacts associated with the project, such as noise, and reflect the requirements detailed in the modified Development Consent and statement of commitments. The plans and programs required to be prepared include:

- Noise Management Plan (Edition 2 Revision 0 dated March 2011);
- Blast Management Plan (Issue 1 dated 28 March 2011);
- Air Quality & Greenhouse Gas Management Plan (Edition 2 Revision 0 dated March 2011);
- Water Management Plan (Issue 1 dated 25 March 2011), including:
 - Site Water Balance;
 - Erosion Sediment Control Plan;
 - Surface Water Monitoring Program;
 - Groundwater Monitoring Program; and
 - Surface and Groundwater Response Plan;
- Biodiversity Offset Strategy (Tarrawonga Coal Mine Offset Strategy, prepared by Ecological Australia, dated 28 March 2011);
- Biodiversity Management Plan – not yet prepared;
- Aboriginal Heritage Management Plan (Edition 2 Revision 0 dated March 2011);
- Waste Management Plan (Issue 1 dated 28 March 2011);
- Bushfire Management Plan (Edition 1 Revision 1 dated September 2011);
- Rehabilitation Strategy (Edition 1 Revision 0 dated July 2011);
- Rehabilitation Management Plan – not yet required;
- Environmental Management Strategy (Edition 2 Revision 0 dated July 2011); and
- Annual Review – two reports reviewed:
 - Annual Environmental Management Report for the Tarrawonga Coal Mine, 01 May 2009 to 30 April 2010; and
 - Annual Environmental Management Report for the Tarrawonga Coal Mine, 1 May 2010 to 30 April 2011.

Additionally, the Mining Operations Plan (MOP) for the Tarrawonga Coal Mine (the original MOP approved 9 May 2006 with amended MOP approved 12 October 2010) was reviewed although it was not specifically required by the conditions of the modified Development Consent. The MOP was prepared by Whitehaven Coal to guide the environmental management of the operations.

Condition 8(c) of Schedule 5 of the modified Development Consent requires that the audit assess the environmental performance of the project against any plan or program made under the modified Development Consent or other approval. Condition 8(d) also requires that the audit review the adequacy of any plan or program made under an approval document.

The audit found that the management plans and programs that had been prepared for the project were generally adequate and prepared in accordance with the relevant compliance requirements. Whitehaven was found to be generally operating in accordance with those management plans that had been prepared. However, the key non-compliance issues in relation to the Tarrawonga operations relate to the completion of outstanding components of the Water Management Plan, completion of the Biodiversity Offset Strategy, and the implementation of the Noise Monitoring Program. Secondary non-compliance issues relate to submitting management plans to (then) DoP for approval within the required timeframe.

Key issues in relation to the adequacy of the documents reviewed and their implementation on-site are discussed in the following sections.

3.5.1 Air Quality and Greenhouse Gas Management Plan

The Air Quality and Greenhouse Gas Management Plan (AQ&GHGMP) was completed and submitted to (then) DoP for approval on 31 March 2011. However, the plan does not include any section on GHG management. Whitehaven sought permission from DP&I to submit the plan on a progressive basis (in accordance with Schedule 2 Condition 11) and to submit a revised AQ&GHG MP containing the GHG Management documentation by 31 December 2011. There was no evidence of a reply to this request.

Whitehaven is subject to assessment under the Federal Government Energy Efficiency Opportunities (EEO) Program and the first report was due for publishing at the end of December 2011. The completion of the Greenhouse Gas Management component of the AQ&GHGMP was delayed pending completion of the assessment under the EEO program so that any specific measures identified during that process could be incorporated into the revised plan.

The air quality assessment criteria in Schedule 3 Condition 18 of the modified Development Consent includes criteria for maximum increase in deposited dust levels. The EIS states that an annual average of 1.3 g per m² per month is a conservative estimate of pre-development background levels of deposited dust for the area surrounding TCM. This figure should be included in the AQ Monitoring Program with the AQ criteria in order to allow TCM to assess the maximum increase in deposited dust levels in accordance with the modified Development Consent.

Recommendation

Update the Air Quality Monitoring and Greenhouse Gas Management Plan to include the required Greenhouse Gas Management component and to reflect any greenhouse gas management measure identified during the EEO assessment.

Update the Air Quality Monitoring and Greenhouse Gas Management Plan to include the pre-development background levels of deposited dust for the area surrounding TCM.

3.5.2 Water Management Plan

The key issue relating to the Water Management Plan is that the following components have not yet been completed for the current consent:

- Erosion and Sediment Control Plan;
- Surface Water Monitoring Plan;
- Groundwater Monitoring Program; and
- Surface and Ground Water Response Plan.

Whitehaven is continuing to operate under the currently approved plans and programs in accordance with Schedule 2 Condition 12. However, the currently approved plans and programs do not meet all the conditions and requirements of the modified Development Consent.

The issues identified for each of the plans and programs within the Water Management Plan are detailed in the following sections.

3.5.2.1 Erosion and Sediment Control Plan

The Erosion and Sediment Control Plan (ESCP) for the current consent has not been completed and Tarrawonga is continuing to operate under the currently approved ESCP. However, the currently approved Erosion and Sediment Control Plan does not include a description of the location, function, and capacity of the erosion and sediment control structures as required by Schedule 3 Condition 28(d).

The audit found that the one of the key non-compliance issues for the Tarrawonga Coal Mine relates to the management of TSS levels in water discharges. Analysis of the water quality monitoring data for the licensed discharge points within the Tarrawonga operation has identified that the management of TSS levels in water discharges is generally only an issue during rainfall events equal to the design rainfall event for the sediment control dams i.e. 5 day 90th percentile design criteria. This issue was also raised during the previous audit. TCM has been addressing this issue through the following mitigation measures:

- use of a liquid flocculant to lower TSS levels;
- pumping to upstream storages, as soon as available in order to reduce discharge potential;
- spraying water onto unused roads for evaporation in order to reduce water levels in storage dams and sediment basins; and
- preference given to utilising water in discharge dams SB14 and SD16 on the south-east corner of the southern emplacement area to allow water from the dam to be used for dust suppression.

A review of the current TCM surface water and erosion control structures was completed in July 2009 by the Department of Lands Soil Conservation Service. The review concluded that the site has sufficient storage capacity if managed efficiently.

It was noted that TSS exceedances in water discharges were reported in the 2009-2010 AEMR and the 2010-2011 AEMR indicating that the issue may be related to the management of the sediment control dams.

It was also noted that rehabilitation activities on the northern waste emplacement area have been delayed pending the assessment and determination of the Tarrawonga Life of Mine Project. The delay in rehabilitation activities has the potential to impact on the management of the sediment loads on-site and TSS levels in water discharged from site.

Recommendation

Whitehaven should:

- *undertake a review of the management procedures for sediment control dams and storage dams onsite, in order to achieve a balance between operational requirements for stored water and sediment control requirements for available storage capacity;*
- *include procedures for effective management of sediment and sediment basins in the revised ESCP; and*
- *complete and submit a revised ESCP in accordance with Schedule 3 Condition 28 as soon as possible.*

3.5.2.2 Surface Water Monitoring Program

Whitehaven is continuing to operate under the currently approved Surface Water Monitoring Program in accordance with Schedule 2 Condition 12. However, the currently approved program does not meet all the conditions and requirements of the modified Development Consent.

In order to meet these conditions outlined in Schedule 3 Condition 29 the revised program would need to include baseline monitoring data, trigger levels for investigating potential issues and programs to monitor surface water flows, stream health or channel stability.

Recommendation

Whitehaven should complete the Surface Water Monitoring Program as soon as possible and submit to the DP&I for approval.

3.5.2.3 Groundwater Monitoring Program

Whitehaven is continuing to operate under the currently approved Groundwater Monitoring Program in accordance with Schedule 2 Condition 12. However, the currently approved program does not meet all the conditions and requirements of the modified Development Consent.

In order to meet these conditions outlined in Schedule 3 Condition 30, the revised program would need to include baseline monitoring data, properly expressed trigger levels that can be used for assessing the groundwater monitoring results and identifying potential impacts and a program to validate and calibrate the groundwater model for the project.

Recommendation

Whitehaven should complete the Groundwater Monitoring Program as soon as possible and submit to the DP&I for approval.

3.5.2.4 Surface and Ground Water Response Plan

Whitehaven is continuing to operate under the currently approved Groundwater Contingency Plan in accordance with Schedule 2 Condition 12. However, the currently approved plan does not meet all the conditions and requirements of the modified Development Consent.

In order to meet these conditions outlined in Schedule 3 Condition 31, the revised program would need to include procedures for responding to exceedances of surface water or stream health criteria and mitigating and/or offsetting any adverse impacts on riparian vegetation.

Recommendation

Whitehaven should complete the Surface and Ground Water Response Plan as soon as possible and submit to the DP&I for approval.

3.5.3 Biodiversity Offset Strategy

The Biodiversity Offset Strategy was completed and submitted to (then) DoP for approval on 31 March 2011. Whitehaven advised during the audit that, based on discussions with DP&I, the Biodiversity Offset Strategy in its current form is likely to be rejected since the offsets nominated within the strategy are located within areas that will be disturbed by the proposed TCM Life of Mine project.

It is understood from discussions with Whitehaven environmental staff that Whitehaven has been undertaking the preparation of a Regional Biodiversity Strategy to identify and manage appropriate offset areas for its various Gunnedah operations. The proposal was submitted to DECCW in February 2010 and DECCW completed their site inspection in May 2010, however Whitehaven is yet to receive advice as to the determination of the proposal.

The following plans are dependent on the completion of the Biodiversity Offset Strategy:

- Biodiversity Management Plan;
- Rehabilitation Strategy; and
- Rehabilitation Management Plan.

Delays in completion of these plans have the potential to affect the management of environmental impacts associated with the Tarrawonga operation and could limit the ability of Whitehaven to achieve continued compliance with a number of modified Development Consent conditions.

Recommendation

Whitehaven should finalise the Biodiversity Offset Strategy for the site in accordance with the Regional Biodiversity Strategy and submit a revised plan to DP&I for approval as soon as possible.

4.0 Environmental Performance

4.1 Site Inspection

As described in **Section 2.4**, inspections of the project site and associated infrastructure were undertaken on 3 November 2011. Areas inspected during the site inspection included the site facilities area, workshop and hardstand, coal crushing and stockpiling, product coal handling, open cut pit, waste emplacements, rehabilitation areas, water management structures and the coal transport route.

The site was found to be operating with environmental management controls in place and Whitehaven personnel were found to have a very good understanding of key environmental management issues. In particular, Whitehaven personnel were found to have genuine interest in effective rehabilitation techniques, a good understanding of dust, noise, and water management issues and overall indicated a genuine belief that minimising off-site environmental impacts is critical to the success and community acceptance of mining operations in the area.

Key observations made during the site inspection include:

- existing environmental management measures described by Whitehaven personnel during the audit interviews were verified during the inspection;
- all equipment was observed to be well maintained, with no maintenance issues being noted with equipment or vehicles;
- coal transport trucks were observed to be covered prior to leaving the site;
- the coal transportation route to the Whitehaven CHPP was generally observed to be well maintained and free of spilt coal;
- an oily water separator was observed in operation at the workshop. The oil is skimmed to the waste oil tank and water from the separator is discharged through a series of sediment basins prior to reaching the licensed discharge point;
- hydrocarbon storage and handling was noted to be generally well managed with all facilities observed being bunded;
- water sprays were observed in operation on the coal crushing plant and associated conveyor belts with very little dust noted at the time of the inspection;
- Whitehaven generally proactively manage wastes generated on-site. Waste bins are clearly defined and located around the site;
- delays in rehabilitation of the northern emplacement area have occurred due to the Tarrawonga extension modification and the Life of Mine project. The northern batter has been reshaped but not topsoiled or revegetated; and
- the rehabilitated western batter of the northern emplacement was observed to be well advanced with little maintenance appearing to be required.

4.2 Key Environmental Issues

4.2.1 Water Management

During the audit inspection surface water was observed to be generally well managed. Diversion drains and sediment basins were in operation at the time of the audit and the water management system was separating clean and dirty water streams. Diversion drains were generally well vegetated and the large drain on the western side of the northern emplacement had been rock-lined as an erosion and sediment control measure.

The northern batter of the northern emplacement area has been reshaped but not topsoiled or revegetated and some minor signs of erosion were observed in this area.

Audit findings relating to the management of wet weather discharges are discussed in **Section 3.4.2**.

4.2.2 Hydrocarbon and Chemical Management

Hydrocarbons including oils and greases were generally observed to be stored in impervious bunded areas at the workshop area (**Plate 1 in Appendix 5**). The bunded areas observed at the workshop during the audit would generally provide suitable secondary containment in the event of a spill with spill kits noted to be available in each bunded area. The main diesel storage tanks sighted at the workshop during the audit were self bunded containers with appropriate vehicle collision protection and impervious bunded areas for refuelling.

Waste oil is stored within an impervious metal bund inside a shipping container.

4.2.3 Noise

Whitehaven has established an attended noise monitoring program. A review of the monitoring data shows that the noise exceedances recorded mostly relate to traffic noise on the private sections of the haul road between Tarrawonga and the Whitehaven CHPP. Whitehaven has addressed this issue through discussions with affected landowners and have negotiated private agreements with them regarding acceptable noise levels from coal trucks on the private sections of the haul road, or have subsequently acquired the affected properties.

The actions taken by Whitehaven in responding to both the identified exceedances and the complaints from the community, in the auditors opinion, demonstrate a pro-active and positive approach to managing noise issues associated with the operations.

4.2.4 Air Quality

Whitehaven has an approved Air Quality Monitoring Program in place for the Tarrawonga operations and evidence was sighted during the audit to indicate that the approved plan is generally being implemented. For example, water sprays were in operation at the truck loading facility at the time of audit (**Plates 3 and 4 in Appendix 5**), watering water carts were in operation at the time of the audit, watering access roads around the site (**Plate 5 in Appendix 5**), and coal transport trucks were covered prior to leaving site. Dust levels were observed to be well managed during the site inspection (**Plate 2 in Appendix 5**), with staff interviews indicating a high level of environmental awareness, particularly in relation to dust control.

The audit found that there have been recorded exceedances of PM₁₀ criteria at the Tarrawonga operations and that Whitehaven has undertaken an investigation whenever such an exceedance is recorded. When exceedances have occurred, Whitehaven has notified both (then) DoP and DECCW and provided a report on the investigations and the probable cause of the exceedance. The management practices in place at the mine are considered to minimise the potential for ongoing exceedances.

4.2.5 Coal Transport

Coal transportation was observed to be undertaken along the nominated coal transport route to the Whitehaven CHPP.

The coal transport route was generally noted to be free of spilt coal. Loaded trucks observed leaving the site during the audit, and travelling along the coal transport route, had their loads covered (**Plate 3** in **Appendix 5**).

Whitehaven has Road Maintenance Agreements in place with Gunnedah Shire Council and Narrabri Shire Council for the maintenance of local roads used for the transportation of coal to the Whitehaven CHPP. These Road Maintenance Agreements include maintenance of the roads associated with the Tarrawonga operations, including Bluevale Road and Hoad Lane.

Noise monitoring of the road transport operations is being undertaken and to date no exceedances have been recorded. However the monitoring is not being undertaken in accordance with the currently approved Noise Management Plan (NMP). The NMP states that attended road noise monitoring sessions will be undertaken on a quarterly basis for the day and evening time periods however no monitoring was undertaken for the following quarters:

- September 2009;
- September 2010; and
- December 2010.

It was also noted that there have been no attended road noise monitoring sessions during the evening periods in any quarter.

Recommendation

Whitehaven should ensure that procedures are in place to undertake attended road noise monitoring sessions quarterly for the day and evening time periods in accordance with the approved Noise Management Plan.

4.2.6 Waste Management

Waste management on site was generally noted to be undertaken in a manner consistent with the modified Development Consent. Waste bins were sighted at various locations around the site and were observed to be mostly well utilised. In the workshop area, bins were available for oily rags and used filters and waste oils were pumped to the waste oil tank.

4.3 Whitehaven Compliance Management and Review

Evidence was sighted during the audit to indicate that Whitehaven is generally aware of its compliance obligations. Requirements from the modified Development Consent conditions have generally been translated into the various management plans and monitoring programs for the site operations.

It was also observed that Whitehaven is attempting to track its level of compliance. For example, Appendix 3 of the 2009-2010 AEMR provides a compliance review against the Development Consent, EPL and ML.

In terms of assessing its environmental performance, the Whitehaven site Environmental Officer conducts monthly site inspections using a standard checklist and reviews the monthly environmental monitoring data. Using this data, the Group Environmental Manager prepares monthly reports that are provided to senior management to review the environmental performance of the operations.

Where exceedances have been reported, evidence was sighted to indicate that notification of the exceedances to DoP/DP&I and DECCW/OEH has been undertaken. However these notifications are not always provided within the timeframes required by the conditions of the EPL. Notifications of exceedances have not been provided to affected landowners and tenants as required under the modified Development Consent.

Whilst there is evidence of internal compliance assessment and management review, compliance management is identified as an area of concern and an area where improvements could be achieved with a more systematic compliance management process.

5.0 Conclusion

Whitehaven Coal has implemented comprehensive environmental management and monitoring systems at its Tarrawonga Coal Mine, including environmental management controls for both construction and operation. Whitehaven Coal's management team and environmental personnel have shown considerable commitment to environmental performance at the site. This is reflected through the overall positive responses received from government agencies interviewed for the audit and the general compliance with environmental performance found as part of this audit.

The audit found a number of non-compliances with the relevant approvals and licences that apply to the project which generally related to the following issues:

- the lack of an approved Biodiversity Offset Strategy for the site which impacts on the preparation of a Biodiversity Management Plan, Rehabilitation Strategy and Rehabilitation Management Plan for the site;
- exceedance of specific environmental performance criteria relating to noise, air quality, and surface water; and
- secondary requirements for documents or actions required under the modified Development Consent, such as gaining formal approval from (then) DoP or submitting management plans within a required timeframe.

Several of the non-compliances identified during the audit, particularly those related to secondary requirements for documents or actions under the modified Development Consent, are considered unlikely to affect Whitehaven's ability to effectively manage environmental issues in accordance with the relevant approvals and licences that apply to the project. For the non-compliances identified that were associated with exceedances of performance criteria, Whitehaven was found to be addressing the issues that have arisen in a satisfactory manner and reporting exceedances to relevant government agencies as required under the modified Development Consent and EPL, although such notifications are not always undertaken within the required timeframes.

APPENDIX 1

Agency Interview Questions

Tarrawonga Environmental Audit – November 2011
Agency Questions

Agency:		Time:	
Representative(s):		Location:	
Date:			

1.	What is your agency's role in relation to the Tarrawonga mining operations?
	•
2.	What is your specific role within the agency, particularly relating to your involvement with the Tarrawonga mining operations?
	•
3.	What aspects of your agency's statutory role relate to the Tarrawonga mining operations?
	•
4.	In relation to the Tarrawonga mining operations compliance with statutory requirements administered by your agency:
	4.1. Are you satisfied with the Tarrawonga mining operations reporting of compliance status (including monitoring results?)
	•
	4.2. Are you aware of any past or current compliance issues (including fines, notices etc.)? If so please provide details.
	•
	4.3. What actions were taken to resolve these compliance issues (e.g. programs developed, activities modified etc.) and were you satisfied with these actions?
	•
	4.4. Are you aware of any currently outstanding compliance issues or actions?
	•
5.	Are you aware of any outstanding community complaint issues in relation to the Tarrawonga mining operations?
	•
6.	Are you satisfied with the way in which community complaints have been managed by the Tarrawonga mining operations?
	•
7.	Do you have any other specific environmental or community issues in relation to the Tarrawonga mining operations that need to be addressed?
	•

APPENDIX 2

Compliance Assessment DA 88-4-2005 MOD 1

DEVELOPMENT CONSENT NO. 88-4-2005 MOD 1

Effective Date October 2010



Condition	Requirement	Compliance C/NC/O/V/NT	Evidence	Comments
SCHEDULE 2 - ADMINISTRATIVE CONDITIONS				
Obligation to Minimise Harm to the Environment				
1	The Applicant shall implement all reasonable and feasible measures to prevent or minimise any material harm to the environment that may result from the construction, operation or rehabilitation of the development.	NC	The site inspection and audit of compliance documentation found no significant issues relating to environmental management at the site. However several non-compliances have been identified as documented in the compliance checklists and summarised in this report. Environmental Management Plans have been established and evidence was sighted that they have been generally implemented. It was noted that there is a good level of environmental awareness amongst all staff interviewed as part of the audit.	
Terms of Approval				
2	The Applicant shall carry out the development generally in accordance with the:			
	(a) EIS;	C	Generally in accordance with the EIS prepared by R.W. Corkery & Co. Pty Limited dated May 2005.	
	(b) EA; and	C	Generally in accordance with the EA prepared by Resource Strategies dated April 2010.	
	(c) conditions of this consent.	NC	Non-compliances have been identified as documented in the compliance checklists and summarised in this report.	
	<i>Note: The general layout of the development is shown in Appendix 2.</i>			
3	If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.	Noted	Noted	
4	The Applicant shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:			
	(a) any reports, strategies, plans, programs, reviews, audits or correspondence that are submitted in accordance with the conditions of this consent; and	NT	Whitehaven has prepared revised management plans and has submitted these for approval. At the time of the audit, DP&I had not provided and feedback or advised of any specific requirements.	
	(b) the implementation of any actions or measures contained in these documents.	NT		
Limits on Approval				
5	The Applicant may carry out mining operations on the site until 9 November 2017.	C	Project Approval is current.	
6	The Applicant shall not extract more than 2 million tonnes of coal from site in a calendar year.	C	Daily production sheets for 2009 and 2010 calendar years indicate extraction of 1.4 million tonnes and 1.7 million tonnes of ROM coal respectively. Daily production sheets for January 2011 to July 2011 indicate extraction of 0.8 million tonnes of ROM coal. Based on the average monthly extraction for this period the expected annual extraction for the 2011 calendar year would be approximately 1.5 million tonnes of ROM coal.	
Structural Adequacy				
7	The Applicant shall ensure that all new buildings and structures, and any alterations or additions to existing buildings or structures, are constructed in accordance with the relevant requirements of the BCA. <i>Notes:</i> · Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works; and · Part 8 of the EP&A Regulation sets out the requirements for the certification of development.	C	Office extensions were undertaken in August 2010. No construction certificate or occupation certificate was obtained. A handwritten note was sighted on the APB quote for the office extension indicating that Narrabri Shire Council had advised that the extension was covered within the original DA by Roach Mining and no further applications or approval were required. Construction certificates CC 24-2012 and CC24 60-2012 were sighted for relocation and replacement of the dwelling at Lots 32, 45, 46 and 106 DP 754953 Blair Athol Lane, Wean NSW 2382 (Thuin).	
Demolition				
8	The Applicant shall ensure that all demolition work is carried out in accordance with <i>Australian Standard AS 2601-2001: The Demolition of Structures</i> , or its latest version.	C	Construction Certificates CC 24-2012 and CC 60-2012 were approved for relocation and replacement of the Thuin building. Certificates were sighted.	

Condition	Requirement	Compliance C/NC/O/V/NT	Evidence	Comments
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SCHEDULE 3 - ENVIRONMENTAL PERFORMANCE CONDITIONS

ACQUISITION UPON REQUEST

1	Upon receiving a written request for acquisition from an owner of the land listed in Table 1 (Tarrawonga, Ambardo), the Applicant shall acquire the land in accordance with the procedures in Conditions 6 - 7 of Schedule 4.	NT		
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NOISE

Noise Criteria

2	<p>Except for the land referred to in Table 1, the Applicant shall ensure that the noise generated by the development does not exceed the criteria in Table 2 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.</p> <p><i>Table 2: Noise criteria dB(A)</i></p> <table border="1"> <thead> <tr> <th rowspan="2">Location</th> <th>Day</th> <th>Evening</th> <th colspan="2">Night</th> </tr> <tr> <th>L_{Aeq} (15 min)</th> <th>L_{Aeq} (15 min)</th> <th>L_{Aeq} (15 min)</th> <th>L_{A1} (1 min)</th> </tr> </thead> <tbody> <tr> <td>15- Kyalla</td> <td>37</td> <td>37</td> <td>37</td> <td>45</td> </tr> <tr> <td>All privately-owned land</td> <td>35</td> <td>35</td> <td>35</td> <td>45</td> </tr> </tbody> </table> <p><i>Notes:</i></p> <ul style="list-style-type: none"> To identify the locations referred to in Table 2, see the figure in Appendix 3; and Noise generated by the development is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy. 	Location	Day	Evening	Night		L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{A1} (1 min)	15- Kyalla	37	37	37	45	All privately-owned land	35	35	35	45	NC	<p>Attended Monitoring Results from Spectrum Acoustics (as reported in the AEMRs 2008-2011) identified the following exceedances at private residences:</p> <ul style="list-style-type: none"> N4 - LAeq 40 dB(A) on 15-Jun-09 at 8:50pm; N4 - LAeq 40 dB(A) on 16-Jun-09 at 7:25am; Pine Grove - LAeq 41 dB(A) on 16-Jun-09 at 7:00am; Kyalla - LAeq 40 dB(A) on 16-Jun-09 at 7:50am; Blair Athol - LAeq 38 dB(A) on 10-Sep-09 at 7:44am; Crosby - LAeq = 40 dB(A) on 31 August 2010 at 7:54am; <p>The LAeq noise criteria for these locations for Day, Evening and Night time periods is 35 dB(A) as specified in the original DA 88-4-2005 for the operational phase of the project.</p> <p>Exceedances at N4, Pine Grove and Crosby (Kyalla) were attributed to noise from trucks on the private haul road.</p> <p>The exceedance on 31 August 2010 at Crosby was attributed to mine noise from TCM operations.</p>	<p>Elevated noise levels during June 2009 and September 2009 are a non-compliance against Schedule 4 Condition 6 of DA 88-4-2005.</p> <p>The monitoring undertaken at the Crosby property on 31 August 2010 was done at the request of the owner who was considering building a residence at that location. Since there was no residence on the land at the time, under Schedule 4 Condition 6 of the DA 8-4-2005 this is not considered a non-compliance.</p> <p>Private agreements were established during Oct 2009 to Dec 2009 with owners of the properties at N4 (Ambargo), Pine Grove and Kyalla allowing elevated noise levels from trucks on the private haul roads, as specified in each agreement. The private agreements with the owners of properties at N4 (Ambargo), Pine Grove and Kyalla (Crosby) were sighted.</p> <p>The property at Blair Athol was purchased by TCM in June 2010.</p>
Location	Day		Evening	Night																			
	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{A1} (1 min)																			
15- Kyalla	37	37	37	45																			
All privately-owned land	35	35	35	45																			

Noise Acquisition Criteria

3	<p>If the noise generated by the development exceeds the criteria in Table 3 at any residence on privately-owned land or on more than 25 percent of any privately-owned land, then upon receiving a written request for acquisition from the landowner, the Applicant shall acquire the land in accordance with the procedures in Conditions 6 - 7 of Schedule 4.</p> <p><i>Table 3: Land acquisition criteria dB(A) LAeq (15min)</i></p> <table border="1"> <thead> <tr> <th>Location</th> <th>Day</th> <th>Evening</th> <th>Night</th> </tr> </thead> <tbody> <tr> <td>All privately-owned land</td> <td>40</td> <td>40</td> <td>40</td> </tr> </tbody> </table> <p><i>Notes:</i></p> <ul style="list-style-type: none"> Noise generated by the development is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy. For this condition to apply, the exceedances of the criteria must be systemic. 	Location	Day	Evening	Night	All privately-owned land	40	40	40	NT	Whitehaven advised that no written requests for acquisition have been received to date.	
Location	Day	Evening	Night									
All privately-owned land	40	40	40									

Additional Noise Mitigation Measures

4	<p>Upon receiving a written request from the owner of any residence:</p> <p>(a) on the land listed in Table 1; or</p> <p>(b) on privately-owned land where subsequent noise monitoring shows that the noise generated by the project is greater than or equal to L_{Aeq} (15 minutes) 38 dB(A), on a systemic basis,</p> <p>the Applicant shall implement additional noise mitigation measures (such as double glazing, insulation, and/or air conditioning) at the residence in consultation with the owner. These measures must be reasonable and feasible.</p> <p>If within 3 months of receiving this request from the owner, the Applicant and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Director-General for resolution.</p>	NT	Whitehaven advised that no written requests have been received to date.	
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Road Traffic Noise Criteria

5	<p>Except for the land referred to in Table 1, the Applicant shall ensure that the noise generated by the development on public roads does not exceed the criteria in Table 4.</p> <p><i>Table 4: Road Traffic Noise Criteria dB(A) LAeq (1 hour)</i></p> <table border="1"> <thead> <tr> <th>Location</th> <th>Day</th> <th>Evening</th> <th>Night</th> </tr> </thead> <tbody> <tr> <td>Any residence on privately-owned land</td> <td>60</td> <td>60</td> <td>55</td> </tr> </tbody> </table> <p><i>Note: Road traffic noise generated on public roads by the development is to be measured in accordance with the relevant procedures and exemptions of the NSW Environmental Criteria for Road Traffic Noise guideline.</i></p>	Location	Day	Evening	Night	Any residence on privately-owned land	60	60	55	O	<p>Unattended road noise monitoring sessions were undertaken in June 2009, December 2009, March 2010 and the results reported in the 2009-2010 AEMR; June 2010 and March 2011 and the results reported in the 2010-2011 AEMR; and in September 2011. All monitoring sessions were undertaken during the day time period.</p> <p>The results from all unattended road noise monitoring sessions show that no exceedances of the road traffic noise criteria occurred.</p>	Refer to comments on Schedule 2 Condition 12.
Location	Day	Evening	Night									
Any residence on privately-owned land	60	60	55									

Operating Conditions

6	During mining operations, the Applicant shall only carry out mining operations on site between 7 am and midnight Monday to Friday, Midnight to 3.30 am Tuesday to Saturday, and 7 am to 6 pm Saturday, excluding public holidays. However, the Applicant may undertake maintenance activities on site at any time Monday to Sunday.	C	During the on-site audit inspection, the Project Manager confirmed that shift lengths are set and no staff are permitted to work beyond the approved hours.	
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DEVELOPMENT CONSENT NO. 88-4-2005 MOD 1

Effective Date October 2010



Condition	Requirement	Compliance C/NC/O/V/NT	Evidence	Comments
7	The Applicant shall: (a) implement best practice noise management, including all reasonable and feasible noise mitigation measures to minimise the operational, low frequency and road traffic noise generated by the development;	C	The Noise Management Plan (NMP) Section 3.3 states that noise management measures undertaken onsite will include mining only within allowed operating hours, proper training of personnel and contractors regarding noise management and awareness, selection and maintenance of equipment to minimise noise impacts, regular testing of equipment sound power levels in accordance with ISO 6395:1988, management of mining operations during adverse weather conditions and regular monitoring of noise emissions. The AEMR 2009/2010 states that noise control procedures implemented by TCM include the use of noise attenuation equipment, enclosure of fixed items of plant, noise bunding, regular maintenance of equipment, removal or replacement of equipment, scheduling activities to avoid adverse weather conditions and restricting hours of operations.	
	(b) regularly assess the real-time noise monitoring and meteorological forecasting data, and relocate, modify and/or stop operations on site to ensure compliance with the relevant conditions in this consent, and	O	The Noise Management Plan (NMP) Section 3.3 states that personnel and contractors are required to pay attention to adverse weather conditions and make modifications to the work program where necessary.	TCM are in the process of developing and implementing a real-time noise monitoring and meteorological forecasting system. Until the real-time system is implemented it is expected that TCM will continue to follow the NMP procedures which require personnel and contractors to modify operations in response to adverse weather conditions.
	(c) co-ordinate the noise management on site with the noise management of the Boggabri mine, or any other mines in the vicinity of the site, to minimise the cumulative noise impacts of the mines, to the satisfaction of the Director-General.	O	TCM participates in monthly meetings with neighbouring mines Idemitsu Boggabri Coal Pty Ltd and Maules Creek Coal Mine Pty Ltd to discuss the management of cumulative noise impacts.	There is currently no protocol in place for co-ordinating noise management on site with the noise management of neighbouring mines, however cumulative noise impact management planning underway. Regular meetings are being held with neighbouring mines Idemitsu Boggabri Coal Pty Ltd and Maules Creek Coal Mine Pty Ltd to discuss the management of cumulative noise impacts and to develop a cumulative noise management plan.
Noise Management Plan				
8	The Applicant shall prepare and implement a Noise Management Plan for the development to the satisfaction of the Director-General. This plan must:	O	No evidence yet from DG that the plan is satisfactory	
	(a) be prepared in consultation with DECCW, and submitted to the Director-General for approval by the end of March 2011;	C	Letter to DECCW with NMP requesting review, dated 30Mar2011 Letter to DoP with NMP, dated 31Mar2011	
	(b) describe the noise mitigation measures that would be implemented to ensure compliance with the relevant conditions of this consent, including a real-time noise management system that use reactive and proactive mitigation measures; and	C	S3.3.3.4; S4.1, 4.4	TCM are in the process of developing and implementing a real-time noise monitoring and meteorological forecasting system. Until the real-time system is implemented it is expected that TCM will continue to follow the NMP procedures which require personnel and contractors to modify operations in response to adverse weather conditions.
	(c) include a noise monitoring program that:	C	S4	
	· uses a combination of real-time and supplementary attended monitoring measures to evaluate the performance of the development;	O	Section 4 outlines a noise monitoring program that includes real-time monitoring and attended monitoring sessions.	Improvements could be achieved by including a reference to the Road Noise Management Plan which outlines the program for attended road noise monitoring sessions that are required to determine compliance with Schedule 3 Condition 5.
	· includes a protocol for determining exceedances with the relevant conditions of this consent; and · includes a program for validating the accuracy of the tenth percentile methodology used to predict the potential noise impacts of the development.	C	S4.4; S5	There was no specific reference in the NMP on the procedure for validating the predicted noise impacts of the development although the noise monitoring program may be collecting data suitable for this purpose.
(d) include a protocol that has been prepared in consultation with the owners of any nearby mines to minimise the cumulative noise impacts of the mines.	O	TCM participates in monthly meetings with neighbouring mines Idemitsu Boggabri Coal Pty Ltd and Maules Creek Coal Mine Pty Ltd to discuss the management of cumulative noise impacts.	There is currently no protocol included in the NMP for cumulative noise management, however cumulative noise impact management planning is underway. Regular meetings are being held with neighbouring mines Idemitsu Boggabri Coal Pty Ltd and Maules Creek Coal Mine Pty Ltd to discuss the management of cumulative noise impacts and to develop a cumulative noise management plan. The NMP should be updated when a cumulative noise management protocol has been agreed with Boggabri and Maules Ck.	

Condition	Requirement	Compliance C/NC/O/V/NT	Evidence	Comments											
BLASTING															
Blasting Criteria															
9	<p>The Applicant shall ensure that the blasting on site does not cause exceedances of the criteria in Table 5.</p> <p><i>Table 5: Blasting criteria</i></p> <table border="1"> <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 rowspan="2">Residence on privately-owned land</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>120</td> <td>10</td> <td>0%</td> </tr> </tbody> </table> <p>However, these criteria do not apply if the Applicant has a written agreement with the relevant landowner to exceed the criteria, and the Applicant has advised the Department in writing of the terms of this agreement.</p>	Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance	Residence on privately-owned land	115	5	5% of the total number of blasts over a period of 12 months	120	10	0%	C	<p>Blast Monitoring reports indicate that during the audit period the airblast overpressure exceeded 115 dB(Lin Peak) on two occasions - Shot No. 309 at Tarrawonga on 25July2011; Shot No. 320 at Tarrawonga on 16Sep2011. These exceedances represent 1.3% of the total number of blasts for the twelve month period 17Sep2010 and 16Sep2011.</p> <p>There were no blasts during the audit period where the airblast overpressure exceeded 120 dB(Lin Peak).</p> <p>There were no exceedances of ground vibration limits during the audit period.</p>	
Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance												
Residence on privately-owned land	115	5	5% of the total number of blasts over a period of 12 months												
	120	10	0%												
Blasting Hours															
10	The Applicant shall only carry out blasting on 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 Director-General.	C	Blast monitoring results reviewed during the audit indicate that blasting is carried out within the times specified.												
Blasting Frequency															
11	The Applicant shall not carry out more than 1 blast a day on site, unless an additional blast is required following a blast misfire.	NC	Blast Monitoring reports indicate that two blasts occurred on 1 July 2011 at 11:54 am and 12:15 pm. There was no evidence that a misfire occurred on that day.	TCM advised that two blasting areas, one at each end of the pit, were intended to be concurrently detonated however a technical issue resulted in the blast at the southern end of the pit being delayed by approximately 21 minutes.											
Property Inspections and Investigations															
12	If the Applicant receives a written request from the owner of any privately-owned land within 2 kilometres of the approved open cut mining pit on site for a property inspection to establish the baseline condition of any buildings and/or structures on their land, or to have a previous property inspection report updated, then within 2 months of receiving this request the Proponent shall:	NT	Whitehaven advised that no written requests for property inspections have been received to date.												
	(a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to:	NT													
	· establish the baseline condition of the buildings and/or structures on the land or update the previous property inspection report;	NT													
	· identify any measures that should be implemented to minimise the potential blasting impacts of the development on these buildings and/or structures; and	NT													
	(b) give the landowner a copy of the new or updated property inspection report.	NT													
13	If the owner of any privately-owned land claims that the buildings and/or structures on his/her land have been damaged as a result of blasting on site, then within 2 months of receiving this claim the Applicant shall:	NT	Whitehaven advised that no claims have been received to date.												
	(a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to investigate the claim; and	NT													
	(b) give the landowner a copy of the property investigation report.	NT													
	If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Applicant shall repair the damages to the satisfaction of the Director-General.	NT													
	If the Applicant or landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Director-General for resolution.	NT													
Operating Conditions															
14	During mining operations, the Applicant shall														
	(a) implement best blasting management practice on site to:														
	· protect the safety of people and livestock in the surrounding area;	C	Discussions with staff on-site indicate that blast exclusion zones are implemented for each blast; no livestock graze within the vicinity of the blasting areas;												
	· protect public or private property in the surrounding area; and	C	The AEMR 2009/2010 states that flyrock, air vibration, ground vibration and dust from blasting are controlled using a combination of design and operational methods which are detailed in the MOP and/or documented blasting procedures.												
	· minimise the dust and fume emissions from blasting on site;	C	The Blast Management Plan states that blast-generated dust would be minimised through ensuring low stemming column ejection velocities, the use of aggregates for blasthole stemming and the use of electronic detonators that do not require detonating cords on the surface.												
	(b) co-ordinate the blasting on site with the blasting at the Boggabri mine, or any other coal mine in the vicinity of the site, to minimise the cumulative blasting impacts of the mines; and	C	The Blast Management Plan states that personnel from TCM and Boggabri mines have an agreed protocol for staggering their blast times to minimise cumulative impacts and for communicating any changes to blast times.												

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	(c) operate a suitable system to enable the public to get up-to-date information on the proposed blasting schedule, to the satisfaction of the Director-General.	C	The Blast Management Plan states that notifications are sent by email and/or phone to people who register an interest. The Blast notifications register was sighted. A blast notification sign was sighted at the entrance to the mine site. Blast dates and times are posted on the board on the morning of the blast.																
Blast Management Plan																			
15	The Applicant shall prepare and implement a Blast Management Plan for the development to the satisfaction of the Director-General. This program must:	O	No evidence yet from DG that the plan is satisfactory																
	(a) be prepared in consultation with DECCW, and be submitted to the Director-General for approval by the end of March 2011;	C	Letter to DECCW with BMP requesting review, dated 30Mar2011 Letter to DoP with NMP, dated 31Mar2011																
	(b) describe the blast mitigation measures that would be implemented to ensure compliance with the relevant conditions of this consent;	C	S3; S4.2;																
	(c) include a protocol that has been prepared in consultation with the owners of the Boggabri mine, and any other mines in the vicinity of the site, to minimise the cumulative blasting impacts of the mines;	C	S4.2.2																
	(d) describe the measures that would be implemented to ensure the public can get up-to-date information of the proposed blasting schedule; and	C	S4.2.1																
	(e) include a blast monitoring program to evaluate the performance of the development.	C	S5																
AIR QUALITY AND GREENHOUSE GAS																			
Odour																			
16	The Applicant shall ensure that no offensive odours are emitted from the site, as defined under the POEO Act.	C	Inspection of Complaints register showed one complaint regarding odour: 13/10/2010 - yellow plume and odour following blasting There was no evidence of any offensive odours during the on-site audit inspection.	The complaint was registered six weeks after the event, from a property 10km to the north east of TCM. There was no evidence that the odour was the result of TCM operations.															
Greenhouse Gas Emissions																			
17	The Applicant shall implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site to the satisfaction of the Director-General.	C	There is no GHG management section included in the Air Quality and GHG Management Plan developed for this consent. The 2010-2011 AEMR states that TCM employs a number of methods on site to maximise efficiency from the mining fleet, including regular maintenance scheduling, where possible, minimising the gradient and length of loaded haul runs for the operating dump trucks and the use of electric drive Terex dump trucks.																
Air Quality Assessment Criteria																			
18	The Applicant shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that the particulate emissions generated by the project do not exceed the criteria listed in Tables 6, 7 and 8 at any residence on privately-owned land or on more than 25 percent of any privately-owned land. <i>Table 6: Long term criteria for particulate matter</i> <table border="1" data-bbox="215 1091 864 1174"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>^d Criterion</th> </tr> </thead> <tbody> <tr> <td>Total suspended particulate (TSP) matter</td> <td>Annual</td> <td>^a90 µg/m³</td> </tr> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>Annual</td> <td>^a30 µg/m³</td> </tr> </tbody> </table> <i>Table 7: Short term criterion for particulate matter</i> <table border="1" data-bbox="215 1219 864 1275"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>^d Criterion</th> </tr> </thead> <tbody> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>24 hour</td> <td>^a50 µg/m³</td> </tr> </tbody> </table> <i>Table 8: Long term criteria for deposited dust</i>	Pollutant	Averaging period	^d Criterion	Total suspended particulate (TSP) matter	Annual	^a 90 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³	Pollutant	Averaging period	^d Criterion	Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³	C	TSP emissions are not being measured by TCM. A letter from DoPI dated 5 Aug 2011 was sighted, confirming that it is acceptable for TCM to determine TSP emissions by multiplying the PM10 emissions by a factor of two. Based on this calculation there were no exceedances of annual average TSP emissions during the audit period.	
Pollutant	Averaging period	^d Criterion																	
Total suspended particulate (TSP) matter	Annual	^a 90 µg/m ³																	
Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³																	
Pollutant	Averaging period	^d Criterion																	
Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³																	
		C	Templemore PM10 HVAS monitoring results were sighted for 6Apr2009 to 30Aug2011. There were no exceedances of annual average PM10 levels at Templemore during the audit period. Merriown PM10 HVAS monitoring results were sighted for 1May2009 to 27Apr2011. There were no exceedances of annual average PM10 emissions at Merriown during the audit period.																

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Condition	Requirement	Compliance C/NC/O/V/NT	Evidence	Comments								
	<table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>Maximum increase in deposited dust level</th> <th>Maximum total deposited dust level</th> </tr> </thead> <tbody> <tr> <td>Deposited dust</td> <td>Annual</td> <td>^b2 g/m²/month</td> <td>^a4 g/m²/month</td> </tr> </tbody> </table> <p>Notes for Tables 8-8:</p> <ul style="list-style-type: none"> ^a Total impact (i.e. incremental increase in concentrations due to the project plus background concentrations due to other sources); ^b Incremental impact (i.e. incremental increase in concentrations due to the project on its own); ^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003; Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method; and ^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agree to by the Director-General in consultation with DECCW. 	Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level	Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month	NC	<p>Templemore PM10 HVAS monitoring results indicate the following exceedances of 24hr average PM10 levels:</p> <p>27Sep2009 - 54; 20Nov2009 - 54; 8Dec2009 - 97; 14Dec2009 - 68; 26Mar2010 - 91</p> <p>There were no exceedances of 24hr average PM10 emissions at Merriown during the audit period.</p>	<p>Exceedance of 24hr average PM10 in September 2009 was attributed to a severe dust storm; exceedances in December 2009 were due to bushfires in the area. These exceedances were not considered by Whitehaven to be a non-compliance. However, exceedances on the other dates were considered to be a non-compliance.</p> <p>Letters notifying DoP and DECCW of exceedance were sent on: 28Oct09 for 27Sep09, 17May2010 for 26Mar10</p>
Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level									
Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month									
		O	<p>The deposited dust monitoring results show a number of exceedances of maximum total deposited dust levels. Analysis of the results and associated comments indicates that the following events may be considered exceedances: EB-14 on 21Oct2010, EB-10 on 22Nov2010, EB-10 on 22Dec2010, EB-13 on 22Dec2010, EB-4 on 2May2011.</p> <p>There was no evidence to indicate whether these exceedances were the result of mining-related operations at TCM.</p>	<p>The deposited dust monitoring results indicate a number of events that may represent exceedances of the maximum total deposited dust level criteria however there is no evidence to indicate whether these exceedances were the result of mining-related operations at TCM.</p> <p>The EIS states that an annual average of 1.3g per m² per month is a conservative estimate of pre-development background levels of deposited dust for the area surrounding TCM. This figure should be included in the AQ Monitoring Program with the AQ criteria in order to allow TCM to appropriately assess the maximum increase in deposited dust levels as required by this consent.</p>								

Air Quality Acquisition Criteria

19	<p>If the dust emissions generated by the development exceed the criteria in Tables 9, 10, and 11 at any residence on privately-owned land or on more than 25 percent of any privately owned land, then upon receiving a written request for acquisition from the landowner, the Applicant shall acquire the land in accordance with the procedures in Conditions 6 - 7 of Schedule 4.</p> <p><i>Table 9: Long term acquisition criteria for particulate matter</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>^d Criterion</th> </tr> </thead> <tbody> <tr> <td>Total suspended particulate (TSP) matter</td> <td>Annual</td> <td>^b90 µg/m³</td> </tr> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>Annual</td> <td>^a30 µg/m³</td> </tr> </tbody> </table> <p><i>Table 10: Short term acquisition criteria for particulate matter</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>^d Criterion</th> </tr> </thead> <tbody> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>24 hour</td> <td>^a150 µg/m³</td> </tr> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>24 hour</td> <td>^a50 µg/m³</td> </tr> </tbody> </table> <p><i>Table 11: Long term acquisition criteria for deposited dust</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>Maximum increase in deposited dust level</th> <th>Maximum total deposited dust level</th> </tr> </thead> <tbody> <tr> <td>^c Deposited dust</td> <td>Annual</td> <td>^b2 g/m²/month</td> <td>^a4 g/m²/month</td> </tr> </tbody> </table> <p>Notes:</p> <ul style="list-style-type: none"> ^a Total impact (i.e. incremental increase in concentrations due to the project plus background concentrations due to other sources); ^b Incremental impact (i.e. incremental increase in concentrations due to the project on its own); ^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003; Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method; and ^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agree to by the Director General in consultation with DECCW. 	Pollutant	Averaging period	^d Criterion	Total suspended particulate (TSP) matter	Annual	^b 90 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³	Pollutant	Averaging period	^d Criterion	Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 150 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³	Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level	^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month	NT	<p>Whitehaven advised that no written requests had been received to date.</p>	
Pollutant	Averaging period	^d Criterion																												
Total suspended particulate (TSP) matter	Annual	^b 90 µg/m ³																												
Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³																												
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Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level																											
^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month																											

Operating Conditions

20	<p>The Applicant shall:</p> <p>(a) implement best practice air quality management on site, including all reasonable and feasible measures to minimise the off-site odour, fume and dust emissions generated by the project, including any spontaneous combustion emissions,</p>	C	<p>The AEMR states that TCM employ a range of air pollution control measures including no burning of material on site, management of groundcover removal to minimise exposure, management of soil stripping activities to minimise dust lift-off, scheduling soil stripping and coal processing activities to avoid periods of high winds and hot/dry conditions, use of water injection on drilling rigs, use of aggregates for blast hole stemming, use of water sprays on ROM coal, conveyor discharge points and exposed surfaces, speed limits for vehicles and equipment on site and use of covers on coal haulage trucks.</p> <p>Discussions with staff on site confirmed the implementation of these control measures.</p>	
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	(b) minimise any visible air pollution generated by the development;	C	The AEMR states that aggregates are used for blast hole stemming to minimise dust generation during blasting.	
	(c) regularly assess the real-time air quality monitoring and meteorological forecasting data and relocate, modify and/or stop operations on site to ensure compliance with the relevant conditions of this consent; and	NC		Real-time air quality and meteorological data is not yet available. TCM are currently in the process of developing and implementing a real-time system. Note that the condition also requires TCM to assess real-time meteorological forecasting data. TCM should check whether the real-time system is able to provide meteorological forecasting data and clarify the requirements with DoP.
	(d) co-ordinate the air quality management on site with the air quality management of the Boggabri mine, and any other mines in the vicinity of the site, to minimise the cumulative air quality impacts of the mines,	O	Boggabri and TCM operate a shared High Volume Air Sampler at the Merrirown property and the monitoring results are provided in the AEMR.	Boggabri and TCM are in the process of finalising a cumulative air quality management plan and strategy. The strategy will include the implementation of a shared real-time air quality and meteorological monitoring system which is currently being developed.
	to the satisfaction of the Director-General.			

Air Quality and Greenhouse Gas Management Plan

21	The Applicant shall prepare and implement a detailed Air Quality & Greenhouse Gas Management Plan for the project to the satisfaction of the Director-General. This program must:	O	No evidence yet from DG that the plan is satisfactory	
	(a) be prepared in consultation with DECCW, and submitted to the Director-General for approval by the end of March 2011;	NC	Letter to DECCW with AQ & GHG MP requesting review, dated 30Mar2011 Letter to DoP with AQ & GHG MP, dated 31Mar2011	Note current plan does not include any section on GHG management. Whitehaven have sought permission from DoP to provide a revised AQ&GHG MP containing the GHG Management documentation by 31 Dec 2011. This request is in accordance with Schedule 2 Condition 11, however there was no evidence that permission has been granted.
	(b) describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval, including a real-time air quality management system; and	O	S4.1.2 mentions future availability of real-time AQ monitoring results for proactive management of AQ impacts.	Boggabri and TCM are in the process of finalising a cumulative air quality management plan and strategy. The strategy will include the implementation of a shared real-time air quality and meteorological monitoring system which is currently being developed.
	(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 project, and	O	S4.1 describes the use of high volume samplers and dust deposition gauges for monitoring air quality impacts from the mining operation. Real-time air quality monitoring is not yet implemented on-site.	Boggabri and TCM are in the process of finalising a cumulative air quality management plan and strategy. The strategy will include the implementation of a shared real-time air quality and meteorological monitoring system which is currently being developed.
	· includes a protocol for determining exceedances with the relevant conditions of this consent; and	C	S4.1, 4.2	
	(d) include a protocol that has been prepared in consultation with the owners of the nearby mines to minimise the cumulative air quality impacts of the mines	O	AQ&GHGMP foreword states that TCM & Boggabri operate shared AQ monitors and that monthly meetings are being held with Boggabri and Maules Ck mines to discuss cumulative air quality impact management.	No protocol for cumulative air quality impact management is included in the Air Quality and Greenhouse Gas Management Plan however monthly meetings are being held with Boggabri and Maules Ck mines to discuss cumulative air quality impact management. The AQ&GHG MP should be updated when a cumulative air quality management protocol has been agreed with Boggabri and Maules Ck.

METEOROLOGICAL MONITORING

22	While development is being carried out on site, the Applicant shall ensure that there is a suitable meteorological station operating in the vicinity of the site that:			
	(a) complies with the requirements in the <i>Approved Methods for Sampling of Air Pollutants in New South Wales</i> guideline; and	C	The weather monitor was sighted during the on-site audit inspection and appeared to be appropriately located in accordance with NSW guidelines.	
	(b) is capable of continuous real-time measurement of temperature lapse rate in accordance with the <i>NSW Industrial Noise Policy</i> .	NC	Meteorological data is reported in AEMR 2009/2010, AEMR 2010/2011. There is no evidence that the meteorological station is measuring temperature over a 50m height interval as required by the INP to measure temperature lapse rate.	Measurement of temperature lapse rate in accordance with the INP requires measuring the temperature at two elevated levels over a 50-m height interval (1.5 to 10 m and 50 to 60m) to determine the temperature difference. This requires a tower greater than 50m in height. TCM should follow-up with DoP to clarify whether this is the intent of the requirement and discuss any implementation issues.

SOIL AND WATER

Water Licences

23	The Applicant shall obtain the necessary water licences for the development on site under the <i>Water Act 1912</i> or <i>Water Management Act 2000</i> .	C	The following water licences are listed in the AEMRs: 90BL253276, 90BL253278, 90BL253279, 90BL253280, 90BL254253, 90BL254254, 90BL254255, 90BL254221, 90BL254214 - monitoring bores 90BL254692 - extraction, 50ML/year	
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Condition	Requirement	Compliance C/NC/O/V/NT	Evidence	Comments
Compensatory Water Supply				
24	The Applicant shall provide compensatory water supply to any landowner of privately-owned land whose water entitlements are impacted (other than an impact that is negligible) as a result of the development, in consultation with NOW and to the satisfaction of the Director-General.	NT	Whitehaven advised that no impacts have been identified to date.	
	The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent to the loss attributed to the development. Equivalent water supply must be provided (at least on an interim basis) within 24 hours of the loss being identified.	NT		
	If the Applicant and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Director-General for resolution.	NT		
	If the Applicant is unable to provide an alternative long-term supply of water, then the Applicant shall provide alternative compensation to the satisfaction of the Director-General.	NT		
Water Discharges				
25	The Applicant shall ensure that all surface water discharges from the site comply with the relevant discharge limits (both volume and quality) in any EPL.	NC	<p>EPL limits for oil & grease, TSS and pH apply to any discharges from the following EPL licensed discharge points: SD17 (EPL#1), SD9 (EPL#2), SB14 (EPL#3), SD20 (EPL#4), SD16 (EPL#24)</p> <p>The following exceedances were noted in the AEMRs for 2009-2010 and 2010-2011:</p> <p>SB14: 10 discharges, 8 TSS exceedances (80%) SD16: 9 discharges, 4 TSS exceedances (44%), 2 pH SD17: 2 discharges, 2 TSS exceedances (100%) SD9: 5 discharges, 3 TSS exceedances (60%)</p> <p>The AEMR notes that these exceedances occurred after periods of heavy rainfall where insufficient storage capacity was available to capture run-off and to provide an adequate solids settling period prior to discharge.</p> <p>Analysis of the monitoring results also indicates that the 50th percentile and 90th percentile TSS concentration limits were exceeded during the audit period at all discharge points.</p>	<p>Management of rainfall runoff appears to be an issue during rainfall events equal to the design rainfall event for the sediment control dams i.e. 5 day 90th percentile design criteria. This issue was also raised during the previous audit. TCM has been addressing this issue through the following mitigation measures:</p> <ul style="list-style-type: none"> - use of a liquid flocculant to lower TSS levels - installation of gauge boards in water storages to allow easy identification of available storage capacity - pumping to upstream storages, as soon as available in order to reduce discharge potential - spraying water onto unused roads to evaporate - plans for installation of a standpipe in SD?? on the southern end of the southern emplacement area to allow water from the dam to be used for dust suppression. <p>A review of the current TCM surface water and erosion control structures was completed in July 2009 by the Department of Lands Soil Conservation Service. The review concluded that the site has sufficient storage capacity if managed efficiently.</p> <p>As a result of the audit inspection and analysis of available material, it is recommended that TCM undertake a review of the management procedures for sediment control dams and storage dam onsite, in order to achieve a balance between operational requirements for stored water and sediment control requirements for available storage capacity.</p>
Water Management Plan				
26	The Applicant shall prepare and implement a Water Management Plan for the development to the satisfaction of the Director-General. This plan must:	O	No evidence yet from DG that the plan is satisfactory	See plan and submission letter
	(a) be prepared in consultation with NOW & DECCW;	C	Letter to DECCW with WMP requesting review, dated 30Mar2011 Similar letter to NOW dated 30Mar2011.	
	(b) be submitted to the Director-General for approval by the end of March 2011; and	C	Letter to DoP with WMP, dated 31Mar2011	
	(c) include:			
	- a Site Water Balance;	C	SWB sighted	
	- an Erosion and Sediment Control Plan;	NC	ESCP has not yet been completed for this project approval.	TCM will continue to operate under the currently approved ESCP until the new ESCP has been developed.
	- a Surface Water Monitoring Program;	NC	SWMP has not yet been completed for this project approval.	TCM will continue to operate under the currently approved SWMP until the new SWMP has been developed.
- a Groundwater Monitoring Program; and	NC	GWMP has not yet been completed for this project approval.	TCM will continue to operate under the currently approved GWMP until the new GWMP has been developed.	
- a Surface & Ground Water Response Plan.	NC	The Surface & Ground Water Response Plan has not yet been completed for this project approval.	TCM will continue to operate under the currently approved Groundwater Contingency Plan (GCP) until the Surface & Ground Water Response Plan has been developed.	
27	The Site Water Balance must:			
	(a) include			
	- sources and security of water supply;	C	S6, S8	
	- water use on site;	C	S7	
	- water management on site; and	C	S5, S7.1	
	- reporting procedures;	O	S9	The document could be improved by clearly specifying the information that will be reported.
(b) describe what measures would be implemented to minimise water use on site; and	C	S7.1		
(c) reviewed each year, with the results being included in the annual review (see Condition 3 of Schedule 5).	C	S2 protocol		
28	The Erosion and Sediment Control Plan shall:	NC	The ESCP for this project approval has not been completed.	TCM is operating under the ESCP approved for the development phase, until new ESCP is completed.
	(a) be consistent with the requirements of the Managing Urban Stormwater: Soils and Construction Manual (Landcom 2004, or its latest version);	Not assessed		This requirement is covered in the currently approved ESCP.

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	(b) identify activities that could cause soil erosion and generate sediment;	Not assessed		This requirement is covered in Section 5.2 of the currently approved ESCP.
	(c) describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters;	Not assessed		This requirement is covered in Section 5.4 of the currently approved ESCP.
	(d) describe the location, function, and capacity of erosion and sediment control structures; and	Not assessed		
	(e) describe what measures would be implemented to maintain the structures over time.	Not assessed		This requirement is covered in Section 5.4 of the currently approved ESCP.
29	The Surface Water Monitoring Program shall include:	NC	The SWMP for this project approval has not been completed.	TCM is operating under the SWMP approved for the development phase, until new SWMP is completed.
	(a) detailed baseline data on surface water flows and quality in creeks and other water bodies that could be affected by the project;	Not assessed		Baseline data was not required in the currently approved SWMP but will need to be compiled and included in the new SWMP.
	(b) surface water quality and stream health assessment criteria, including trigger levels for investigating any potentially adverse surface water impacts; and	Not assessed		Assessment criteria are included in the currently approved SWMP however no trigger levels have been specified for investigating potential issues. This should be addressed in the new SWMP.
	(c) a program to monitor: <ul style="list-style-type: none"> - surface water flows, quality, and impacts on water users; - stream health; and - channel stability, in the creeks and other water bodies that could be affected by the development on site, including the Bollol and Driggie Draggie Creeks in the vicinity of the road crossing works.	Not assessed		The currently approved SWMP does not include programs to monitor surface water flows, stream health or channel stability. This requirement should be addressed in the new SWMP.
30	The Groundwater Monitoring Program must include a program to:	NC	The GWMP for this project approval has not been completed.	TCM is operating under the GWMP approved for the development phase, until new GWMP is completed.
	(a) detailed baseline data of groundwater levels, yield and quality in the region, and particularly any groundwater bores, springs and seeps (including spring and seep fed dams) that may be affected by mining operations on site;	Not assessed		Baseline data was not required in the currently approved GWMP but will need to be compiled and included in the new GWMP.
	(b) a program to augment the baseline data over the life of the project;	Not assessed		
	(c) groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts;	Not assessed		In the currently approved GWMP trigger levels (except for lead) are expressed as percentage variance from baseline levels, but baseline levels had not yet been established when document was written. The new GWMP should include properly expressed trigger levels that can be used for assessing the gw monitoring results and identifying potential impacts.
	(d) a program to monitor and/or validate: <ul style="list-style-type: none"> - groundwater inflows to the open cut mining operations; - the impacts of the project on: <ul style="list-style-type: none"> - the surrounding aquifers; and - any groundwater bores, springs and seeps on privately-owned land; 	Not Assessed		Under the currently approved GWMP the volume of water pumped from the open cut sump(s) is recorded. This water comprises a combination of groundwater inflows as well as surface flows from within the open cut void.
	(e) a program to validate the groundwater model for the project, and calibrate it to site specific conditions.	Not Assessed		The currently approved GWMP does not specifically address this requirement. This needs to be addressed in the new GWMP.
31	The Surface and Ground Water Response Plan must describe what measures and/or procedures would be implemented to:	NC	The SW and GW Response Plan for this project approval has not been completed.	TCM is currently operating under currently approved GW Contingency Plan until the new SWGWRP is completed.
	(a) respond to any exceedances of the surface water, stream health, and groundwater assessment criteria;	Not Assessed		The currently approved GCP does not include procedures for handling exceedances of surface water or stream health criteria. This needs to be addressed in the new SWGWRP.
	(b) compensate landowners of privately-owned land whose water supply is adversely affected by the project; and	Not Assessed		Compensation for adverse effects on groundwater supply is covered in Section 4.2 of the currently approved GCP.
	(c) mitigate and/or offset any adverse impacts on riparian vegetation.	Not Assessed		This is not specifically covered in the currently approved GCP but needs to be addressed in the new SWGWRP.
BIODIVERSITY				
Biodiversity Offset				
32	By the end of March 2011, the Applicant shall prepare a revised Biodiversity Offset Strategy for the development as a whole to the satisfaction of the Director-General. This strategy must:	A	Letter to DoP dated 31Mar2011 was sighted.	Whitehaven advised that the Biodiversity Offset Strategy, in its current form, is likely to be rejected by department since the offsets nominated within the strategy are located within areas that will be disturbed by the proposed TCM Life of Mine project.
	(a) be prepared in consultation with DECCW;	C	Letter to DECCW dated 30Mar2011	
	(b) offset all the vegetation clearing associated with the approved development on site;	C	Section 2 discusses the biodiversity impacts of the development and Table 5 provides detail of the total number of hectares of native vegetation that will be impacted by the development as a whole, including this modification (130.3 hectares). Table 6 in Section 3 provides detail of the on-site offset areas showing a total of 675.7 hectares.	

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	(c) maintain or improve biodiversity conservation values in the region in the medium to long term.	C	Section 3 provides details of the "Improve or maintain" calculations required.	
Long Term Security of Offset				
33	Within 6 months of the approval of the Biodiversity Offset Strategy, the Applicant shall make suitable arrangements to provide appropriate long-term security for the offset areas in the strategy to the satisfaction of the Director-General.	NT	Whitehaven advised that the Biodiversity Offset Strategy has not yet been approved.	
Biodiversity Management Plan				
34	The Applicant shall prepare and implement a Biodiversity Management Plan for the development to the satisfaction of the Director-General. This plan must:	NT	Whitehaven advised that the Biodiversity Offset Strategy has not yet been approved.	
	(a) be prepared in consultation with DECCW,	NT		
	(b) be submitted to the Director-General within 6 months of the approval of the Biodiversity Offset Strategy;	NT		
	(c) describe how the implementation of the Biodiversity Offset Strategy would be integrated with the overall rehabilitation of the site (see below);	NT		
	(d) include:	NT		
	- detailed performance and completion criteria for the implementation of the Biodiversity Offset Strategy;	NT		
	- a detailed description of the measures that would be implemented over the next 3 years for:	NT		
	- implementing revegetation and regeneration within the offset areas, including establishment of canopy, sub-canopy (if relevant), understorey and ground strata;	NT		
	- protecting vegetation and soil outside the disturbance areas;	NT		
	- conserving and reusing topsoil;	NT		
	- undertaking pre-clearance surveys;	NT		
	- managing impacts on fauna;	NT		
	- salvaging and reusing material from the site for habitat enhancement;	NT		
	- propagating threatened flora and native grassland;	NT		
	- controlling weeds and feral pests;	NT		
	- managing grazing and agriculture on site;	NT		
	- controlling access; and	NT		
	- bushfire management.	NT		
	- a program to monitor the effectiveness of these measures, and evaluate progress against the detailed performance and completion criteria; and	NT		
	- details of who would be responsible for monitoring, reviewing and implementing the plan.	NT		
Conservation Bond				
35	Within 6 months of the approval of the Biodiversity Management Plan, the Applicant shall lodge a conservation bond with the Department to ensure that the Biodiversity Offset Strategy is implemented in accordance with the performance and completion criteria of the Biodiversity Management Plan. The sum of the bond shall be determined by:	NT	Whitehaven advised that the Biodiversity Management Plan has not yet been prepared or approved.	
	(a) calculating the full cost of implementing the offset strategy; and	NT		
	(b) employing a suitably qualified quantity surveyor to verify the calculated costs,	NT		
	to the satisfaction of the Director-General.	NT		
	If the Biodiversity Offset Strategy is completed to the satisfaction of the Director-General, the Director-General will release the conservation bond.	NT		
	If the Biodiversity Offset Strategy is not completed to the satisfaction of the Director-General, the Director-General will call in all or part of the conservation bond, and arrange for the satisfactory completion of the relevant works.	NT		
	With the agreement of the Director-General, this bond may be combined with the rehabilitation securities administered by the Minister for Mineral Resources.	NT		
ABORIGINAL HERITAGE				
Aboriginal Heritage Management Plan				
36	The Applicant shall prepare and implement an Aboriginal Heritage Management Plan for the development to the satisfaction of the Director-General. This plan must:	O	The Aboriginal Heritage and Management Plan was sighted but has not yet been approved and therefore has not yet been implemented.	Aboriginal Heritage will continue to be managed under the Archaeology and Cultural Heritage Management Plan approved under DA 88-4-2005 until the Aboriginal Heritage and Management Plan is approved. This is in accordance with Schedule 2 Condition 12 of this consent. No further action required.
	(a) be prepared in consultation with DECCW and the Aboriginal community;	C	Letters to the following organisations dated 10May2011 were sighted: Aboriginal Native Title Consultants, Bigundi Biame Trad People, Bullen Bullen Cosultants, Cacatua Culture Consultants, Gunida Gunya boriginal Corp, Red Chief LALC, Min-Min Aboriginal Corp, Minnga Consultants for Heritage and Culture. Letter to DECCW dated 30 Mar2011 was sighted.	
	(b) be submitted to the Director-General for approval by the end of March 2011; and	C	Letter to DoP dated 31Mar2011 was sighted.	
	(c) describe the program/procedures that would be implemented for:			
	- recording, salvaging, and/or managing the Aboriginal sites and potential archaeological deposits within the approved disturbance area;	C	S4.1, S4.2, S3	
	- conserving, managing and monitoring the Aboriginal sites outside the approved disturbance area;	O	S4.4	No real distinction has been made between Aboriginal sites outside and Aboriginal sites within the disturbance area.
	- responding to the discovery of any new Aboriginal objects or skeletal remains during the development;	C	S4.4	

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	<ul style="list-style-type: none"> enabling the Aboriginal community to get access to archaeological sites on site; and involving the Aboriginal community in the conservation and management of Aboriginal cultural heritage on site. 	C	S5	
		C	S5	
TRANSPORT				
Coal Transport				
37	The Applicant shall only dispatch coal from the site by road between the hours of:	C	TCM contracts with Toll to haul coal from TCM to the Whitehaven Siding coal handling and preparation plant during these hours.	
	(a) 7 am to 9.15 pm Monday to Friday;			
	(b) 7 am to 5.15 pm Saturday; and			
	(c) at no time on public holidays.			
Transport Route				
38	The Applicant shall ensure that:			
	(a) coal from the mine site is only transported along the private sections of the transport route, Rangari Road, Hoard Lane, Blue Vale Road, and the Kamilaroi Highway to the Whitehaven Siding coal handling and preparation plant;	C	TCM contracts with Toll to haul coal along this route. During the on-site audit inspection, coal trucks were seen travelling the nominated haul route between TCM and the Whitehaven Siding coal handling and preparation plant.	
	(b) trucks travelling to and from the mine site do not exceed 40 kilometres per hour in the vicinity of the school bus when it is operating on Hoard Lane; and	V	The school bus was not operating on Hoard Lane during the on-site audit inspection. Therefore implementation of this condition could not be assessed.	
	(c) spillage from coal haulage vehicles is minimised; and	C	The coal haul route appeared clean and tidy; no coal dust or coal spills were seen on or alongside the haul road.	
	(d) any spillage is promptly managed to avoid harm to the environment.	NT		
Road Maintenance				
39	During mining operations, the Applicant shall continue to implement its existing road maintenance agreements with NSC and GSC for the maintenance of the public roads affected by the development to the satisfaction of the respective Council.	C	Whitehaven Coal Mining Pty Ltd has an agreement with Gunnedah SC dated 5Aug2009 to provide monthly contributions to routine road maintenance costs and an annual contribution of \$69,403.21 to road re-sealing costs. Whitehaven Coal Mining Pty Ltd has an agreement with Narrabri SC dated 6Dec2005	
Monitoring				
40	The Applicant shall:			
	(a) keep accurate records of the:			
	· amount of coal transported from the site in a calendar year (on a monthly basis); and	C	Daily Production records sighted.	
	· number of coal haulage truck movements generated by the development (on a daily basis); and	C	Records are kept by Toll and provided to TCM for publication on the TCM website at the end of each calendar year.	
	(b) make these records publicly-available on its website at the end of each calendar year.	C	This is a new requirement under MOD1 and was first triggered in December 2010. Coal transport records for October to December 2010 are available on the TCM website. The records show both the nett weight of coal transported and the number of truck movements on a daily and a monthly basis.	
VISUAL				
Operating Conditions				
41	The Applicant shall minimise the visual impacts of the development, including:			
	(a) minimises the visual contrasts of the development on site;	O	As a result of delays in rehabilitation, some areas of the site contrast visually from the surrounding landscape. The AEMR 2010-2011 states that the continued progression of the southern waste emplacement and the increased height of the emplacement have resulted in increased visibility from non-mining related properties.	
	(b) progressively rehabilitating the disturbed areas on site;	O	Delays in rehabilitation of the northern emplacement area have occurred due to the Tarrawonga extension modification and the Life of Mine project. The northern batter has been reshaped but not topsoiled or revegetated. The rehabilitated western batter of the northern emplacement was observed to be well advanced with little maintenance appearing to be required.	
	(c) taking all practicable measures to mitigate lighting impacts from the mine site;	O	The AEMR 2010-2011 indicates that lighting impacts from the sight are minimised through the sympathetic positioning and direction of lights to avoid impacting on local residences. However, a number of lighting related issues were noted in the CCC minutes and the complaints register. The AEMR 2010-2011 indicates that TCM have addressed this with the Open Cut Examiners and encourage community members to contact the mine when lighting issues arise.	All practicable measures are taken to minimise impacts on surrounding landholders, whilst ensuring safe operations at the mine site. TCM have procedures in place to enable them to address any issues or concerns which raised by landholders. Improvements could be achieved in this area by including a section on lighting management in the Environmental Management Strategy (EMS) similar to the section included in the Rocglen EMS.
	(d) minimising lighting impacts within the <i>Siding Spring Observatory Dark Skies Region</i> ; and	O	There is no lighting management section in the Environmental Management Strategy (EMS) addressing this requirement however during the onsite audit inspection lights appeared to set below the horizontal.	Improvements could be achieved in this area by including a section on lighting management in the Environmental Management Strategy (EMS) that addresses this requirement.

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	(e) ensuring that all external lighting associated with the development complies with <i>Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting</i> , to the satisfaction of the Director-General.	O	There is no lighting management section in the Environmental Management Strategy (EMS) addressing this requirement however during the onsite audit inspection lights appeared to set below the horizontal.	Improvements could be achieved in this area by including a section on lighting management in the Environmental Management Strategy (EMS) that addresses this requirement.
Additional Visual Mitigation Measures				
42	Upon receiving a written request from the owner of any residence on privately-owned land which has significant direct views of the mining operations on site, the Applicant shall implement additional visual mitigation measures (such as landscaping treatments or vegetation screens) on the land in consultation with the owner. These measures must be reasonable and feasible, and directed towards minimising the visibility of the mining operations from the residence. If within 3 months of receiving this request from the owner, the Applicant and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Director-General for resolution.	NT	Neighbouring residences are generally screened from visual impacts of the mine by the placement of trees on their property. Whitehaven advised that no written requests for additional visual mitigation measures have been received to date.	
WASTE				
43	The Applicant shall: (a) minimise the waste (including coal reject) generated by the development; (b) ensure that the waste generated by the development is appropriately stored, handled and disposed of, to the satisfaction of the Director-General.	C	The Waste Management Plan states that the following methods will be used to minimise waste production (other than coal reject): • The ordering of stock will be regularly reviewed to ensure efficient stock control and to avoid wastage; and • Alternate products or bulk storages will be considered in an effort to reduce the volume of packaging. Overburden is the major waste generated by the activity. This was observed to be dumped in designated waste emplacement areas (northern and southern waste emplacements) in accordance with the activities described in the EIS and EA. TCM have an onsite sewage system that requires a licence from Narrabri Shire Council to operate. There was no evidence that TCM had a current license to operate the onsite sewage system. It was noted that the system is maintained regularly by a licensed contractor. The field service report from Peter Brien Roofing and Plumbing, Boggabri, dated 30Oct2011, was sighted.	Narrabri Shire Council requires the owner of an on-site sewage management system to register the system and obtain approval to operate. Owners are required to apply to council to renew the approval every 2, 4, or 6 years depending on the risk category assigned to the system. Council may issue penalties or take proceeding against the owner for failing to renew. TCM should check the risk category of their onsite sewage system with the council and renew their approval to operate if necessary.
44	The Applicant shall prepare and implement a Waste Management Plan for the project to the satisfaction of the Director-General. This plan must be submitted to the Director-General for approval by the end of March 2011.	C	Waste Management Plan and submission letter to DoP dated 31Mar2011 was sighted.	
BUSHFIRE MANAGEMENT				
45	The Applicant shall: (a) ensure that the development is suitably equipped to respond to any fires on-site; and (b) assist the emergency services as much as possible if there is a fire on-site during the development. <i>Note: Local emergency services involved in fire control are the Boggabri No.1 and Nandewar Rural Fire Brigades.</i>	C	Fire-fighting equipment available onsite includes water carts and earth moving equipment	
46	Within 6 months of the date of this consent, the Applicant shall prepare and implement a Bushfire Management Plan for the site, to the satisfaction of the NSC in consultation with the Boggabri No.1 and Nandewar Rural Fire Brigades.	O	Evidence was sighted during the audit to indicate that the Plan was prepared within 6 months of the date of the consent (letters to NSC and RFS dated 15 April 2011), however it was not finalised until the responses were received from NSC (June 2011) and RFS (Sept 2011). It was noted, that although not required by the condition, Whitehaven submitted a copy of the Bushfire Management Plan to DP&I for their records.	
REHABILITATION				
Rehabilitation				
47	The Applicant shall rehabilitate the site to the satisfaction of the Director-General of I&I NSW. To the extent that mining operations permit, this rehabilitation must be carried out progressively, that is, as soon as reasonably practicable following disturbance.	O	Delays in rehabilitation of the northern emplacement area have occurred due to the Tarrawonga extension modification and the Life of Mine project. The northern batter has been reshaped but not topsoiled or revegetated.	
Restoration of Agricultural Land				
48	The Applicant shall ensure that at least 100 hectares within the proposed Native Vegetation (Rehabilitation) or Proposed Offset areas depicted in the figure in Appendix 4 are rehabilitated or retained to comply with the specifications for Class 3 agricultural land suitability.	O	A revised Biodiversity Offset strategy is being prepared that provides an alternative offset area outside of the disturbance footprint for the proposed TCM Life of Mine project.	
Rehabilitation Strategy				
49	By the end of March 2011, the Applicant shall prepare a Rehabilitation Strategy for the site to the satisfaction of the Director-General. This strategy must: (a) be prepared in consultation with I&I NSW and the owners of the Boggabri coal mine; (b) investigate the opportunities for improving the integration between the proposed final landform of the development on site with the proposed landform on the adjoining Boggabri coal mine; (c) identify the land on site that will be rehabilitated to Class 3 agricultural land suitability;	NC	On 31 March 2011 TCM requested an extension of time for completion of the Rehabilitation Strategy for the site. The extension was not granted and TCM were advised to submit a draft strategy as soon as possible. The draft strategy document was submitted to DoP on 17 August 2011. Letter to DoP with submission dated 17Aug2011 was sighted.	The Draft Rehabilitation Strategy was submitted on 17th August 2011 and TCM are waiting on a response from DoP. No further action required.
		C	Letter to Boggabri Coal Mine dated 2 August 2011	
		C	S1, S6.1	
		C	S4.4, Figure 3	

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(d)	describe how the rehabilitation of the site will be integrated with the Biodiversity Offset Strategy (see above);	O	A revised Biodiversity Offset strategy is being prepared that provides an alternative offset area outside of the disturbance footprint for the proposed TCM Life of Mine project.	When the revised Biodiversity Offset Strategy is approved, the Rehabilitation Strategy should be updated.
(e)	define the rehabilitation objectives for the site; and	C	S1.2	
(f)	include detailed plans of the proposed rehabilitation of the site, including suitable cross sections.	C	Section 4 discusses rehabilitation practices including vegetation clearing and soil management; decommissioning activities for each infrastructure component; and establishment of final landforms including shaping, soil replacement, drainage installation, cover crop establishment and native vegetation establishment. Vertical cross sections are provided for the final landform.	
Rehabilitation Management Plan				
50	The Applicant shall prepare and implement a Rehabilitation Management Plan for the development on site to the satisfaction of the Director-General of I&I NSW. This plan must:	NT	Whitehaven advised that although the Rehabilitation Strategy has been submitted to DP&I for approval, it has not yet been approved, hence the Rehabilitation Management Plan has not yet been prepared.	
	(a) be prepared in consultation with the Department, DECCW, NOW, Council and the CCC;	NT		
	(b) be prepared in accordance with any relevant I&I NSW guidelines;	NT		
	(c) be submitted to the Director-General of I&I NSW for approval within 6 months of the approval of the Rehabilitation Strategy (see above); and	NT		
	(d) build, to the maximum extent practicable, on the other management plans required under this consent.	NT		
SCHEDULE 4 - ADDITIONAL PROCEDURES				
Notification of Landowners				
1	By the end of November 2010, the Applicant shall notify in writing the owners of:			
	(a) the land listed in Table 1 of Schedule 3 that they have the right to require the Applicant to acquire their land at any stage during the development; and	C	A letter to the owners of the Tarrawonga property (listed in Schedule 3 Table 1) dated 13 January 2011 was sighted in which they were advised of these rights. The letter also states that a copy of the full Consent was issued to the owner on the 12th November 2010.	
	(b) any residence on the land listed in Table 1 that they are entitled to ask for additional noise mitigation measures to be installed at their residence at any stage during the development.	C	The Ambargo property (listed in Schedule 3 Table 1) was purchased by Whitehaven prior to the date of this consent and notification is not required.	
2	Within 2 weeks of obtaining results showing:			
	(a) an exceedance of the relevant criteria in Schedule 3, the Proponent shall notify the affected landowners and tenants in writing of the exceedance, and provide regular monitoring results to each of these parties until the development is complying with the relevant criteria;	NC	Notification regarding a noise exceedance which occurred on 10 September 2009 was sent to the landowner on 13 Oct 2009, which is outside the required timeframe for notification. However it was noted that the noise exceedance occurred during a temperature inversion and was not considered an exceedance of the noise criteria. No other evidence of exceedance notification to landowners and tenants was sighted.	Discussions with TCM confirm that DoP and OEH are being notified following any exceedances but notifications are not being provided to landowners and tenants. Since notifications to landowner and tenants are required following any exceedance, procedures should be changed to facilitate this. TCM should also note the requirement to provide regular monitoring results to landowners and tenants until the relevant criteria is being met.
	(b) an exceedance of the relevant criteria in Condition 4(b) of Schedule 3, that they are entitled to ask for additional noise mitigation measures to be installed at their residence; and	NC	No evidence of exceedance notification to landowners and tenants was sighted.	See above comment
	(c) an exceedance of the relevant air quality criteria in Schedule 3, send the affected landowners and tenants (including the tenants of any mine-owned land) a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time).	NC	No evidence of exceedance notification to landowners and tenants was sighted.	See above comment
Independent Review				
3	If an owner of privately-owned land considers the development on site to be exceeding the relevant criteria in Schedule 3, then he/she may ask the Director-General in writing for an independent review of the impacts of the development on his/her land.	NT	Whitehaven advised that no independent reviews have been requested to date.	
	If the Director-General is satisfied that an independent review is warranted, then within 2 months of the Director-General's decision the Applicant shall:	NT		
	(a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to:	NT		
	- consult with the landowner to determine his/her concerns;	NT		
	- conduct monitoring to determine whether the development on site is complying with the relevant criteria in Schedule 3; and	NT		
	- if the development on site is not complying with these criteria then:	NT		
	- determine if more than one mine is responsible for the exceedance, and if so the relative share of each mine towards the impact on the land;	NT		
	- identify the measures that could be implemented to ensure compliance with the relevant criteria; and	NT		
	(b) give the Director-General and landowner a copy of the independent review.	NT		
4	If the independent review determines that the development on site is complying with the relevant criteria in Schedule 3, then the Applicant may discontinue the independent review with the approval of the Director-General.	NT		
	If the independent review determines that the development on site is not complying with the relevant criteria in Schedule 3, and that the development on site is primarily responsible for this non-compliance, then the Applicant shall:	NT		
	(a) implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent person, and conduct further monitoring until the project complies with the relevant criteria; or	NT		

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	(b) secure a written agreement with the landowner to allow exceedances of the relevant criteria, to the satisfaction of the Director-General.	NT		
	If the independent review determines that the development on site is not complying with the relevant acquisition criteria in Schedule 3, and that the development on site is primarily responsible for this non-compliance, then upon receiving a written request from the landowner, the Applicant shall acquire all or part of the landowner's land in accordance with the procedures in Conditions 6-7 below.	NT		
5	If the independent review determines that the relevant criteria in Schedule 3 are being exceeded, but that more than one mine is responsible for this exceedance, then together with the relevant mine/s the Applicant shall:	NT		
	(a) implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent person, and conduct further monitoring until there is compliance with the relevant criteria; or	NT		
	(b) secure a written agreement with the landowner and other relevant mines to allow exceedances of the relevant criteria in Schedule 3, to the satisfaction of the Director-General.	NT		
	If the independent review determines that the relevant acquisition criteria in Schedule 3 are being exceeded, but that more than one mine is responsible for this exceedance, then upon receiving a written request from the landowner, the Applicant shall acquire all or part of the landowner's land on as equitable a basis as possible with the relevant mine/s in accordance with the procedures in Conditions 6-7 below.	NT		
Land Acquisition				
6	Within 3 months of receiving a written request from a landowner with acquisition rights, the Applicant shall make a binding written offer to the landowner based on:	NT	Whitehaven advised that no written requests for acquisition have been received to date.	
	(a) the current market value of the landowner's interest in the land at the date of this written request, as if the property was unaffected by the land, having regard to the:	NT		
	· existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and	NT		
	· presence of improvements on the land and/or any approved building or structure which has been physically commenced on the land at the date of the landowner's written request, and is due to be completed subsequent to that date, but excluding any improvements that have resulted from the implementation of any additional noise mitigation measures under Condition 4 of Schedule 3;	NT		
	(b) the reasonable costs associated with:	NT		
	· relocating within the Gunnedah or Narrabri local government areas, or to any other local government area determined by the Director-General; and	NT		
	· obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is to be acquired; and	NT		
	(c) reasonable compensation for any disturbance caused by the land acquisition process.	NT		
	However, if at the end of this period, the Applicant and landowner cannot agree on the acquisition price of the land and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Director-General for resolution.	NT		
	Upon receiving such a request, the Director-General will request the President of the NSW Division of the Australian Property Institute to appoint a qualified independent valuer to:	NT		
	· consider submissions from both parties;	NT		
	· determine a fair and reasonable acquisition price for the land and/or the terms upon which the land is to be acquired, having regard to the matters referred to in paragraphs (a)-(c) above;	NT		
	· prepare a detailed report setting out the reasons for any determination; and	NT		
	· provide a copy of the report to both parties.	NT		
	Within 14 days of receiving the independent valuer's report, the Applicant shall make a binding written offer to the landowner to purchase the land at a price not less than the independent valuer's determination.	NT		
	However, if either party disputes the independent valuer's determination, then within 14 days of receiving the independent valuer's report, they may refer the matter to the Director-General for review. Any request for a review must be accompanied by a detailed report setting out the reasons why the party disputes the independent valuer's determination. Following consultation with the independent valuer and both parties, the Director-General will determine a fair and reasonable acquisition price for the land, having regard to the matters referred to in paragraphs (a)-(c) above, the independent valuer's report, the detailed report disputing the independent valuer's determination, and any other relevant submissions.	NT		
	Within 14 days of this determination, the Applicant shall make a binding written offer to the landowner to purchase the land at a price not less than the Director-General's determination.	NT		
	If the landowner refuses to accept the Applicant's binding written offer under this condition within 6 months of the offer being made, then the Applicant's obligations to acquire the land shall cease, unless the Director-General determines otherwise.	NT		
7	The Applicant shall pay all reasonable costs associated with the land acquisition process described in Condition 6 above, including the costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of this plan at the Office of the Registrar-General.	NT		

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SCHEDULE 5 - ENVIRONMENTAL MANAGEMENT REPORTING AND AUDITING				
ENVIRONMENTAL MANAGEMENT				
Environmental Management Strategy				
1	The Applicant shall prepare and implement an Environmental Management Strategy for the development to the satisfaction of the Director-General. This strategy must:			
	(a) be submitted to the Director-General for approval by the end of March 2011;	NC	Letter with submission to DoP dated 25 July 2011 was sighted. It was noted that in March 2011 (letter sighted) Whitehaven had requested an extension of time from (then) DoP to prepare the required Plan, however advice from DoP was not subsequently received until 25 May 2011.	The Environmental Management Strategy was submitted on 25 July 2011 outside the timeframe in this condition. No further action required.
	(b) provide the strategic framework for environmental management of the development;	C	S1.2, etc	
	(c) identify the statutory consents and approvals that apply to the development;	C	S1.1, S3.1	
	(d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	C	S4.1	
	(e) describe the procedures that would be implemented to:			
	- keep the local community and relevant agencies informed about the operation and environmental performance of the development;	C	S4.7.1	
	- receive, handle, respond to, and record complaints;	C	S4.7.2	
	- resolve any disputes that may arise during the course of the development;	C	S4.7.4	
	- respond to any non-compliance;	C	S4.8	
	- respond to emergencies; and	C	S4.9	
	(f) include:			
	- copies of any strategies, plans and programs approved under the conditions of this consent; and	C	Table 3	
	- a clear plan depicting all the monitoring required to be carried out under this consent.	C	Figures 2 & 3	
Management Plan Requirements				
2	The Applicant shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:			
	(a) detailed baseline data;	C	The following management plans were sighted: NMP, BMP, AQ&GHG, WMP, WasteMP, BushfireMP.	Baseline data has not been included in the Water Management Plan however the WMP does not yet include new versions of the SWMP or GWMP in which the baseline data is required.
	(b) a description of:			
	- the relevant statutory requirements (including any relevant approval, licence or lease conditions);	C	NMP, BMP, AQ&GHG, WMP, WasteMP, BushfireMP	
	- any relevant limits or performance measures/criteria;	C	NMP, BMP, AQ&GHG, WMP	Not applicable for WasteMP or BushfireMP
	- the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;	C	NMP, BMP, AQ&GHG, WMP, WasteMP, BushfireMP	
	(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;	C	NMP, BMP, AQ&GHG, WMP, WasteMP, BushfireMP	
	(d) a program to monitor and report on the:			
	- impacts and environmental performance of the development;	C	NMP, BMP, AQ&GHG, WMP, WasteMP, BushfireMP	
	- effectiveness of any management measures (see c above);	C	NMP, BMP, AQ&GHG, WMP, WasteMP, BushfireMP	
	(e) a contingency plan to manage any unpredicted impacts and their consequences;	C	NMP, BMP, AQ&GHG, WMP, WasteMP, BushfireMP	
	(f) a program to investigate and implement ways to improve the environmental performance of the development over time;	C	NMP, BMP, AQ&GHG, WMP, WasteMP, BushfireMP	
	(g) a protocol for managing and reporting any:			
	- incidents;	C	NMP, BMP, AQ&GHG, WMP, WasteMP, BushfireMP	
	- complaints;	C	NMP, BMP, AQ&GHG, WMP, WasteMP, BushfireMP	
	- non-compliances with statutory requirements; and	C	NMP, BMP, AQ&GHG, WMP, WasteMP, BushfireMP	
	- exceedances of the impact assessment criteria and/or performance criteria; and	C	NMP, BMP, AQ&GHG, WMP, WasteMP, BushfireMP	Not applicable for WasteMP or BushfireMP
	(h) a protocol for periodic review of the plan.	C	NMP, BMP, AQ&GHG, WMP, WasteMP, BushfireMP	
	<i>Note: The Director-General may waive some of these requirements if they are unnecessary or unwarranted.</i>			
Annual Review				
3	By the end of March 2012, and annually thereafter, the Applicant shall review the environmental performance of the development to the satisfaction of the Director-General. This review must:	NT	The Annual Review is not due until March 2012.	
	(a) describe the development (including any rehabilitation) that was carried out in the past year, and the development that is proposed to be carried out over the next year;	NT		
	(b) include a comprehensive review of the monitoring results and complaints records of the development over the past year, which includes a comparison of these results against:	NT		
	- the relevant statutory requirements, limits or performance measures/criteria;	NT		
	- the monitoring results of previous years; and	NT		
	- the relevant predictions in any EIS or EA for the development;	NT		
	(c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;	NT		

DEVELOPMENT CONSENT NO. 88-4-2005 MOD 1

Effective Date October 2010



Condition	Requirement	Compliance C/NC/O/V/NT	Evidence	Comments
	(d) identify any trends in the monitoring data over the life of the development;	NT		
	(e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and	NT		
	(f) describe what measures will be implemented over the next year to improve the environmental performance of the development.	NT		
Revision of Strategies, Plan and Programs				
4	Within 3 months of:			
	(a) the submission of an annual review under Condition 3 above;	NT		
	(b) the submission of an incident report under Condition 6 below;	O	Whilst evidence was sighted that management plans are regularly reviewed, there was no specific evidence to indicate that they are reviewed following the notification of an incident (such as an exceedance of the relevant criteria specified in Schedule 3)	
	(c) the submission of an audit report under Condition 8 below; and	C	Evidence was sighted to indicate that plans were updated and re-submitted for approval in 2009, following the March 2009 Audit.	
	(d) any modification to the conditions of this consent (unless the conditions require otherwise),	NT		
	the Applicant shall review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Director-General.			
	<i>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.</i>			
Community Consultative Committee				
5	The Applicant shall establish and operate a Community Consultative Committee (CCC) for the development to the satisfaction of the Director-General. This CCC must be established and operated in general accordance with the <i>Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects</i> (Department of Planning, 2007, or its latest version).	C	Minutes were sighted for CCC meetings held from May2006 to July 2011, indicating that the CCC has been established and is meeting regularly.	
	<i>Notes:</i> · The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this approval. · In accordance with the Guideline, the Committee should comprise an independent chair and appropriate representation from the Applicant, affected councils, recognised environmental groups, and the local community.			
REPORTING				
Incident Reporting				
6	The Applicant shall notify the Director-General and any other relevant agencies of any incident associated with the development as soon as practicable after the Applicant becomes aware of the incident. Within 7 days of the date of the incident, the Applicant shall provide the Director-General and any relevant agencies with a detailed report on the incident.	NC	Exceedances have been reported, however not within the required timeframe. Copies of exceedance/incident notifications sighted.	
Regular Reporting				
7	The Applicant shall provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting requirements under the conditions of this consent or any plans or programs approved under the conditions of this consent, and to the satisfaction of the Director-General.	C	Env Monitoring Reports Nov2006 to Jul2011 as provided on website: http://www.whitehavencoal.com.au/operations/tarrawonga_mine_environmental_management.cfm	Quarterly environmental monitoring reports are available on the website from Nov2006 to Jul2011
INDEPENDENT ENVIRONMENTAL AUDIT				
8	By the end of December 2011, and every 3 years thereafter, unless the Director-General directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:	C	Umwelt were commissioned in September 2011 to undertake the independent environmental audit.	
	(a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General;	C	Umwelt audit team was led by a RABQSA registered Lead Environmental Auditor with the team being approved by DP&I by letter dated 29/8/2011.	
	(b) include consultation with the relevant agencies;	C	Consultation with agencies was undertaken by the Lead Auditor and reported in Section 3.2 of the Audit Report.	
	(c) assess the environmental performance of the development and whether it is complying with the requirements in this consent and any relevant EPL or Mining Lease (including any assessment, plan or program required under these licences or leases);	C	Addressed in Sections 3.4, 4.1 and 4.2 of the Audit Report.	
	(d) review the adequacy of any approved strategies, plans or programs required under these approvals; and	C	Addressed in Section 3.5 of the Audit Report.	
	(e) recommend appropriate measures or actions to improve the environmental performance of the development, and/or any strategy, plan or program required under these approvals.	C	Recommendations are provided in the Audit Report.	
	<i>Note: This audit team must be led by a suitably qualified auditor and include experts in noise, biodiversity and rehabilitation, and any other fields specified by the Director-General.</i>			
9	Within 6 weeks of the completion of this audit, or as otherwise agreed by the Director-General, the Applicant shall submit a copy of the audit report to the Director-General, together with its response to any recommendations contained in the audit report.	NT		
ACCESS TO INFORMATION				
10	From the end of December 2010, the Applicant shall:			
	(a) make copies of the following publicly available on its website:			
	· the documents referred to in Condition 2 of Schedule 2;	C	The EIS, EA and conditions of this consent are available on the TCM website.	
	· the current statutory approvals for the development;	C	Approvals DA 88-4-2005 and DA 88-4-2005 MOD1 are available on the website	
	· all approved strategies, plans and programs required under the conditions of this consent;	C	No strategies, plans or programs for DA 88-4-2005 MOD1 are available on the website since they have not yet been approved. All approved strategies, plans and programs for DA 88-4-2005 are available on the website.	

DEVELOPMENT CONSENT NO. 88-4-2005 MOD 1

Effective Date October 2010



Condition	Requirement	Compliance C/NC/O/V/NT	Evidence	Comments
	the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any plans or programs approved under the conditions of this consent;	C	Environmental Monitoring Reports for each quarter are available under the Community Consultative Committee area of the website. AEMR's for 2009-2010 and 2010-2011 are available on the website.	
	a complaints register, updated on a monthly basis;	C	Complaints registers for 2006, 2007, 2008, 2009, 2010 and 2011 are available on the website.	
	minutes of CCC meetings;	C	Minutes of CCC meetings from May2006 to July 2011 are available on the website.	
	the annual reviews of the development;	C	The AEMRs are available on the website. Letters were sighted from DoPI (6Sep2011) and DRE (30Aug2011) indicating that an Annual Review is not required if the AEMR addresses all the requirements of the Annual Review.	
	any independent environmental audit of the development, and the Proponent's response to the recommendations in any audit; and	NC	The independent environmental audit undertaken in March 2009 is not available on the website.	Required under DA 88-4-2005 Schedule 6 Condition 10.
	any other matter required by the Director-General.	NT	Whitehaven indicated that they have not been advised of any other requirements.	
	(b) keep this information up-to-date,	C	The information on the website appears to be current. The page was last updated on 11Oct2011 and contains the most recent AEMR and CCC minutes.	
	to the satisfaction of the Director-General:			

APPENDIX 3

Compliance Assessment EPL 12365

Environment Protection Licence No. 12365

Anniversary Date: 9 January



Condition No.	Requirement	Compliance C/NC/OV/NT	Evidence	Comments												
Administrative conditions:																
A 1.1	N/A															
A 1.2	<p>This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.</p> <p>Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.</p> <table border="1"> <tr> <td colspan="2">Scheduled Activity</td> </tr> <tr> <td>Mining for coal</td> <td></td> </tr> <tr> <td>Coal works</td> <td></td> </tr> <tr> <td colspan="2">Fee Based Activity</td> </tr> <tr> <td>Mining for coal</td> <td>Scale > 500000 - 2000000 T produced</td> </tr> <tr> <td>Coal works</td> <td>0 - 2000000 T loaded</td> </tr> </table>	Scheduled Activity		Mining for coal		Coal works		Fee Based Activity		Mining for coal	Scale > 500000 - 2000000 T produced	Coal works	0 - 2000000 T loaded	C	Noted	
Scheduled Activity																
Mining for coal																
Coal works																
Fee Based Activity																
Mining for coal	Scale > 500000 - 2000000 T produced															
Coal works	0 - 2000000 T loaded															
A 1.3	N/A															
A 2 Premises to which this Licence applies	<p>The licence applies to the following premises:</p> <table border="1"> <tr> <td> Premises Details Tarrawonga Coal Mine 469 Goonbri Road BOGGABRI NSW 2382 LOTS 10, 15, 16, 29 & 31 DP 754940; PART LOTS 11, 24 & 25 DP754940; PART LOT 83 DP 754953; </td> <td> Premises Details PART LOT 1 DP 970060; Private haul road between Goonbri and Rangari Rd on properties "Thuin" and "Tarrawonga"; Private haul road between Rangari Rd and Hoard Lane on properties "Kyalla" and "Bungalow"; Private Haul Road between Hoard Lane and the boundary of Whitehaven Coal Mine premises. </td> </tr> </table>	Premises Details Tarrawonga Coal Mine 469 Goonbri Road BOGGABRI NSW 2382 LOTS 10, 15, 16, 29 & 31 DP 754940; PART LOTS 11, 24 & 25 DP754940; PART LOT 83 DP 754953;	Premises Details PART LOT 1 DP 970060; Private haul road between Goonbri and Rangari Rd on properties "Thuin" and "Tarrawonga"; Private haul road between Rangari Rd and Hoard Lane on properties "Kyalla" and "Bungalow"; Private Haul Road between Hoard Lane and the boundary of Whitehaven Coal Mine premises.	C	Figure 1.4 of East Boggabri Coal Mine EIS and Figure 1.5a of S75W Modification EA. Comparison of cadastral map with recent aerial photos shows operations are being carried out within approved boundary. Site inspection confirmed that road haulage was within nominated properties.											
Premises Details Tarrawonga Coal Mine 469 Goonbri Road BOGGABRI NSW 2382 LOTS 10, 15, 16, 29 & 31 DP 754940; PART LOTS 11, 24 & 25 DP754940; PART LOT 83 DP 754953;	Premises Details PART LOT 1 DP 970060; Private haul road between Goonbri and Rangari Rd on properties "Thuin" and "Tarrawonga"; Private haul road between Rangari Rd and Hoard Lane on properties "Kyalla" and "Bungalow"; Private Haul Road between Hoard Lane and the boundary of Whitehaven Coal Mine premises.															
A 3.1	N/A															
A 4.1 Information supplied to the EPA	<p>Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence. In this condition the reference to "the licence application" includes a reference to:</p> <p>(a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and</p> <p>(b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.</p>	C														
Discharges to air and water and applications to land:																
P 1.1 Location of monitoring/discharge points and areas	The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.															

Condition No.	Requirement	Compliance C/NC/OV/NT	Evidence	Comments																								
	<table border="1"> <thead> <tr> <th data-bbox="387 220 465 268">EPA Identification no.</th> <th data-bbox="465 220 629 268">Type of Monitoring Point</th> <th data-bbox="629 220 792 268">Type of Discharge Point</th> <th data-bbox="792 220 1093 268">Description of Location</th> </tr> </thead> <tbody> <tr> <td data-bbox="387 276 465 419">15</td> <td data-bbox="465 276 629 419">Ambient air quality monitoring</td> <td data-bbox="629 276 792 419"></td> <td data-bbox="792 276 1093 419">Within 100m of the residence on the property "Merriown" labelled EBA-1(D7) in Figure 4.1. Air Quality Monitoring Locations identified in report "Air Quality Monitoring Program, East Boggabri Coal Pty. Ltd, Report No. 643/11, Dec 2005.</td> </tr> <tr> <td data-bbox="387 427 465 571">16</td> <td data-bbox="465 427 629 571">Ambient air monitoring</td> <td data-bbox="629 427 792 571"></td> <td data-bbox="792 427 1093 571">Within 100m of the residence on the property "Nagero" labelled EBA-2(D2) in Figure 4.1. Air Quality Monitoring Locations identified in report "Air Quality Monitoring Program, East Boggabri Coal Pty. Ltd, Report No. 643/11, Dec 2005.</td> </tr> <tr> <td data-bbox="387 579 465 699">17</td> <td data-bbox="465 579 629 699">Ambient Air Monitoring</td> <td data-bbox="629 579 792 699"></td> <td data-bbox="792 579 1093 699">Air quality monitoring site located 1.25km south west of EB-11 labelled EB-10 as shown on map titled "Figure B - Proposed Air Quality Monitoring Locations" dated 10 December 2007 and on DECC file 251464A1/03.</td> </tr> <tr> <td data-bbox="387 707 465 850">18</td> <td data-bbox="465 707 629 850">Ambient Air Monitoring</td> <td data-bbox="629 707 792 850"></td> <td data-bbox="792 707 1093 850">Within 100m of the residence on the property "Templemore" labelled EBA-4 in Figure 4.1. Air Quality Monitoring Locations identified in report "Air Quality Monitoring Program, East Boggabri Coal Pty. Ltd, Report No. 643/11, Dec 2005.</td> </tr> <tr> <td data-bbox="387 858 465 1002">19</td> <td data-bbox="465 858 629 1002">Ambient Air Monitoring</td> <td data-bbox="629 858 792 1002"></td> <td data-bbox="792 858 1093 1002">Within 100m of the residence on the property "Bollol Creek Station" labelled EBA-5 in Figure 4.1. Air Quality Monitoring Locations identified in report "Air Quality Monitoring Program, East Boggabri Coal Pty. Ltd, Report No. 643/11, Dec 2005.</td> </tr> </tbody> </table>	EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Description of Location	15	Ambient air quality monitoring		Within 100m of the residence on the property "Merriown" labelled EBA-1(D7) in Figure 4.1. Air Quality Monitoring Locations identified in report "Air Quality Monitoring Program, East Boggabri Coal Pty. Ltd, Report No. 643/11, Dec 2005.	16	Ambient air monitoring		Within 100m of the residence on the property "Nagero" labelled EBA-2(D2) in Figure 4.1. Air Quality Monitoring Locations identified in report "Air Quality Monitoring Program, East Boggabri Coal Pty. Ltd, Report No. 643/11, Dec 2005.	17	Ambient Air Monitoring		Air quality monitoring site located 1.25km south west of EB-11 labelled EB-10 as shown on map titled "Figure B - Proposed Air Quality Monitoring Locations" dated 10 December 2007 and on DECC file 251464A1/03.	18	Ambient Air Monitoring		Within 100m of the residence on the property "Templemore" labelled EBA-4 in Figure 4.1. Air Quality Monitoring Locations identified in report "Air Quality Monitoring Program, East Boggabri Coal Pty. Ltd, Report No. 643/11, Dec 2005.	19	Ambient Air Monitoring		Within 100m of the residence on the property "Bollol Creek Station" labelled EBA-5 in Figure 4.1. Air Quality Monitoring Locations identified in report "Air Quality Monitoring Program, East Boggabri Coal Pty. Ltd, Report No. 643/11, Dec 2005.	C	Monitoring results reviewed indicate that monitoring is being undertaken at the nominated points.	
EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Description of Location																									
15	Ambient air quality monitoring		Within 100m of the residence on the property "Merriown" labelled EBA-1(D7) in Figure 4.1. Air Quality Monitoring Locations identified in report "Air Quality Monitoring Program, East Boggabri Coal Pty. Ltd, Report No. 643/11, Dec 2005.																									
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19	Ambient Air Monitoring		Within 100m of the residence on the property "Bollol Creek Station" labelled EBA-5 in Figure 4.1. Air Quality Monitoring Locations identified in report "Air Quality Monitoring Program, East Boggabri Coal Pty. Ltd, Report No. 643/11, Dec 2005.																									

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P 1.2	The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.	Noted																						
P 1.3	The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.																							
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EPA identification no.	Type of monitoring point	Type of discharge point	Description of location																					
1	Wet weather discharge Discharge water quality monitoring	Wet weather discharge Discharge water quality monitoring	Discharge point located on the western boundary and labelled "SD17" on Figure 4: Proposed Water Discharge Points and Weather Station submitted with licence variation application form 13 October 2008.																					
2	Wet weather discharge Discharge water quality monitoring	Wet weather discharge Discharge water quality monitoring	Spillway on Storage Dam 9 located on southern boundary of premises labelled "SD9" on Figure 4: Proposed Water Discharge Points and Weather Station submitted with licence variation application form 13 October 2008.																					
3	Wet weather discharge Discharge water quality	Wet weather discharge Discharge water quality	Spillway on Sediment Basin 14 located east of Thuin house on southern boundary labelled "SD14" on Figure 4: Proposed Water																					

Condition No.	Requirement			Compliance C/NC/OV/NT	Evidence	Comments
	Discharge water quality monitoring	Discharge water quality monitoring	Discharge Points and Weather Station submitted with licence variation application form 13 October 2008.			
4	Wet weather discharge	Wet weather discharge	Spillway on Storage Dam 20 located on northern boundary of premises labelled "SD20" on Figure 4; Proposed Water Discharge Points and Weather Station submitted with licence variation application form 13 October 2008.			
5	Discharge water quality monitoring	Discharge water quality monitoring	Discharge Points and Weather Station submitted with licence variation application form 13 October 2008.			
6	Ambient water quality monitoring		Bollol Creek upstream of discharge from premises labelled "BC-U" on Figure 4; Proposed Water Discharge Points and Weather Station submitted with licence variation application form 13 October 2008.			
6	Ambient water quality monitoring		Bollol Creek downstream of discharge from premises labelled "BC-D" on Figure 4; Proposed Water Discharge Points and Weather Station submitted with licence variation application form 13 October 2008.			
	EPA identification no.	Type of monitoring point	Type of discharge point			
7	Ambient water quality monitoring					
8	Ambient water quality monitoring					
9	Groundwater monitoring					
10	Groundwater monitoring					
11	Groundwater monitoring					
EPA identification no.	Type of monitoring point	Type of discharge point	Description of location			
24	Wet weather discharge	Wet weather discharge	Spillway on Storage Dam 18 located on the			

Condition No.	Requirement	Compliance C/NC/OV/NT	Evidence	Comments																														
	<p>Discharge water quality monitoring</p> <p>Discharge water quality monitoring</p> <p>southern side of the premises labelled "SD16" on "Figure 1: Existing and Proposed Water Discharge Monitoring Points" submitted with licence variation application form dated 14-5-09</p> <p>licence application 17 November 2005</p>																																	
P2 Weather Monitoring	<p>The following point(s) in the table are identified in this licence for the purpose of the monitoring of weather parameters at the point.</p> <table border="1"> <thead> <tr> <th>EPA identification number</th> <th>Type of Monitoring Point</th> <th>Description of Location</th> </tr> </thead> <tbody> <tr> <td>W1</td> <td>Weather analysis</td> <td>Weather station located on the Tarrawonga Mine Site adjacent to site office labelled as 'W1' on Figure 4: Proposed Water Discharge Points and Weather Station submitted with licence variation application form 13 October 2008.</td> </tr> </tbody> </table>	EPA identification number	Type of Monitoring Point	Description of Location	W1	Weather analysis	Weather station located on the Tarrawonga Mine Site adjacent to site office labelled as 'W1' on Figure 4: Proposed Water Discharge Points and Weather Station submitted with licence variation application form 13 October 2008.	C	Weather station was sighted during the audit site inspection at the location nominated on the Plan referred to in the condition.																									
EPA identification number	Type of Monitoring Point	Description of Location																																
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Limit Conditions:																																		
L1.1 Pollution of waters	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	NC	Exceedances of the water quality criteria have been reported.																															
L2 Load Limits	N/A																																	
L3.1 Concentration Limits	<p>For each monitoring/discharge point or utilisation area specified in the table(s) below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.</p> <p style="text-align: center;"><i>Water and Land</i></p> <table border="1"> <thead> <tr> <th colspan="6">POINTS 1,2,3,4,24</th> </tr> <tr> <th>Pollutant</th> <th>Units of Measure</th> <th>50 percentile concentration limit</th> <th>90 percentile concentration limit</th> <th>30GM concentration limit</th> <th>100 percentile Concentration Limit</th> </tr> </thead> <tbody> <tr> <td>Oil and Grease</td> <td>milligrams per litre</td> <td></td> <td></td> <td></td> <td>10</td> </tr> <tr> <td>pH</td> <td>pH</td> <td></td> <td></td> <td></td> <td>8.5 - 8.5</td> </tr> <tr> <td>Total suspended solids</td> <td>milligrams per litre</td> <td>20</td> <td>35</td> <td></td> <td>50</td> </tr> </tbody> </table>	POINTS 1,2,3,4,24						Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	30GM concentration limit	100 percentile Concentration Limit	Oil and Grease	milligrams per litre				10	pH	pH				8.5 - 8.5	Total suspended solids	milligrams per litre	20	35		50	NC	<p>The following exceedances were noted in the AEMRs for 2009-2010 and 2010-2011:</p> <p>SB14: 10 discharges, 8 TSS exceedances (80%)</p> <p>SD16: 9 discharges, 4 TSS exceedances (44%), 2 pH</p> <p>SD17: 2 discharges, 2 TSS exceedances (100%)</p> <p>SD9: 5 discharges, 3 TSS exceedances (60%)</p> <p>Analysis of the monitoring results also indicates that the 50th percentile and 90th percentile TSS concentration limits were exceeded during the audit period at all discharge points.</p>	
POINTS 1,2,3,4,24																																		
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L3.2	Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.	NC	Exceedances of pH were identified in the monitoring results.																															
L3.3	To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table(s).	Noted																																
L4 Volume and Mass Limits	N/A																																	
L5.1 Waste	The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.	C	During the audit site inspection, no wastes generated outside of the premises were observed on site with the exception of coarse reject which is disposed of in accordance with Condition L5.3 below.																															
L5.2	This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.	NT																																
L5.3	Reject material from the Whitehaven CHPP can be disposed of at the premises in accordance with the disposal method outlined in the Environmental Impact Statement titled "East Boggabri Joint Venture, Environmental Impact Statement for the Proposed East Boggabri Coal Mine, May 2005" prepared by R.W. Corkery & Co. Pty. Limited dated May 2005, or as otherwise approved by the EPA.	C	Reject material from the CHPP is disposed of at the Tarrawonga site in accordance with the requirements outlined in the EIS.																															

Condition No.	Requirement	Compliance C/NC/OV/NT	Evidence	Comments
L6.1 Noise Limits	Noise from the premises must not exceed: (a) an LAeq (15 minute) noise emission criterion of 40 dB(A) during initial construction period;	NA	Construction has been completed and this requirement was assessed at the last audit in 2009.	
	(b) an LAeq (15 minute) noise emission criterion of 35 dB(A) during the operational stages of the mine; and	NC	Attended Monitoring Results from Spectrum Acoustics (as reported in the AEMRs 2008-2011) identified the following exceedances at private residences: N4 - LAeq 40 dB(A) on 15-Jun-09 at 8:50pm; N4 - LAeq 40 dB(A) on 16-Jun-09 at 7:25am; Pine Grove - LAeq 41 dB(A) on 16-Jun-09 at 7:00am; Kyalla - LAeq 40 dB(A) on 16-Jun-09 at 7:50am; Blair Athol - LAeq 38 dB(A) on 10-Sep-09 at 7:44am;	
	(b) an LA1(1 minute) noise emission criterion of 45 dB(A) at night			
L6.2 Definitions	Noise from the premises is to be measured at any residence not on the premises to determine compliance with this condition.....	Noted		
L6.3	The noise emission limits identified in this licence apply under all meteorological conditions except: (a) during rain and wind speeds (at 10m height) greater than 3m/s; and	Noted		
	(b) under "non-significant weather conditions". Note: Field meteorological indicators for non-significant weather conditions are described in the NSW Industrial Noise Policy, Chapter 5 and Appendix E in relation to wind and temperature inversions.	Noted		
L6.4	Noise impacts where wind speed exceeds 3 metres per second at 10 metres above the ground must be addressed by: (a) documenting noise complaints received to identify any higher level of impacts or wind patterns;			
	where levels of noise complaints indicate a higher level of impact then actions to quantify and ameliorate any enhanced impacts where wind speed exceeds 3 metres per second at 10 metres above the ground should be developed and implemented.			
L6.5	The noise limits set by condition L6.1 of the licence do not apply where a current legally binding agreement exists between the licensee and the occupant of a residential property that: a) agrees to an alternative noise limit for that property; or b) provides an alternative means of compensation to address noise impacts from the premises.		Private agreements for Ambardo, Pine Grove and Kyalla were sighted during the audit.	
	A copy of any agreement must be provided to the EPA before the licensee can take advantage of the agreement.	C	Private agreements for Ambardo, Pine Grove and Kyalla were sighted during the audit.	
L6.6	The noise limits set by condition L6.1 of this licence apply to noise generated solely from the premises. Where the limits are exceeded solely due to cumulative noise impacts from the premises and off premise operations (not under control of the licensee), the licensee must: (a) Identify significant contributing noise sources and/or meteorological conditions on the premises contribution to the cumulative noise impacts;		Tarrawonga liaison with Boggabri Coal in relation to noise complaints and is currently developing a cumulative noise management plan with BC and Aston Resources - Maules Creek.	
	(b) Liaise with the occupier(s) of all off premise operations contributing to the cumulative noise impact to identify the source(s) and/or causes(s) of cumulative noise impacts causing the exceedance;			
	(c) Develop a joint noise reduction strategy in conjunction with all off site contributors to the cumulative noise impacts; and			
	(d) Implement all noise mitigation measures that relate solely to the premises identified in the joint noise reduction strategy.			

Condition No.	Requirement	Compliance C/NC/OV/NT	Evidence	Comments
L7.1 Blasting Limits	The overpressure level from blasting operations at the premises must not exceed 120dB (Lin Peak) at any time and at any point within 30 metres of any non project related residential building or other sensitive location. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.	C	Monitoring data reviewed during the audit showed no exceedances of the overpressure criteria.	
L7.2	The overpressure level from blasting operations at the premises must not exceed 115dB (Lin Peak) for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.	C	There have been three blasts with overpressure levels above 115 dB, however these exceedances represent less than 5% of blasts in the 12 month reporting period.	
L7.3	Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 10mm/sec at any time and at any point within 3.5 metres of any non project related residential building or other noise sensitive location. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.	C	Monitoring data reviewed during the audit showed no exceedances of the ground vibration criteria.	
L7.4	Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 5mm/sec for more than five per cent of the total number of blasts over each reporting period at any point within 3.5 metres of any non project related residential building or other noise sensitive location. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.	C	Monitoring data reviewed during the audit showed no exceedances of the ground vibration criteria.	
L7.5	Blasting operations on the premises must only be carried out between the hours 9am to 5pm, Monday to Friday.	C	Blast monitoring results reviewed during the audit indicate that blasting has been carried out within the times specified.	
L7.6	The hours of operation for blasting operations specified in condition L7.5 may be varied if the EPA, having regard to the effect that the proposed variation would have on the amenity of the residents in the locality, gives written consent to the variation.	C	Blast monitoring results reviewed during the audit indicate that blasting has been carried out within the times specified.	
L7.7	Blasting at the premises is limited to 1 blast on each day on which blasting is permitted. Note: Additional blasts are permitted where it is demonstrated to be necessary for safety reasons and the EPA and neighbours have been notified of the intended blast prior to the additional blast being fired.	NC	Blast Monitoring reports indicate that two blasts occurred on 1 July 2011 - 11:54 am and 12:15 pm. No evidence was sighted during the audit to indicate that the EPA and neighbours had been notified prior to the additional blast being undertaken.	Whitehaven advised that these two blasts were intended to be blasted as one blast but a timing/delay issue resulted in the blasts not being concurrent.
Operating Conditions:				
O1.1 Activities must be carried out in a competent manner	Licensed activities must be carried out in a competent manner. This includes: (a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and	C	During the on-site audit inspection, activities were observed to be carried out in a competent manner. Hazardous substances were observed to be stored in banded facilities, overburden haulage was carried out along designated haul roads, and coal crushing and truck loading operations were observed to be undertaken in accordance with the approvals granted.	
	(b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	C	Overburden is the major waste generated by the activity. This was observed to be dumped in designated waste emplacement areas (northern and southern waste emplacements) in accordance with the activities described in the EIS and EA.	

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Condition No.	Requirement	Compliance C/NC/OV/NT	Evidence	Comments
O2.1 Maintenance of Plant and Equipment	All plant and equipment installed at the premises or used in connection with the licensed activity: (a) must be maintained in a proper and efficient condition; and	O	Tarrawonga maintains a comprehensive plant and equipment service schedule (Service Schedule Tarrawonga NEW.xls viewed during the audit). Plant operators undertake a Pre-Start Check for all plant and equipment (for example Heavy Earthmoving Pre-Start Check No. 36930 dated 2/11/11 which was sighted during the audit). Service records are maintained for each piece of plant and equipment (for example 19,000 hour service record for Truck RDT578 which was sighted during the audit). However, it was noted during the audit that there does not appear to be an effective process in place to ensure that defects are closed out in a timely manner.	Where defects are recorded on the daily pre-Start Checklists, or where defects are reported by other means, these are recorded in the PULSE database system Defects Register. The Defects Register is printed on a regular basis and maintained in the workshop. As defects are rectified by the mechanics, they are closed out on the hard copy of the defects register. However, there does not appear to be mechanism in place to print out a defects list for each plant item to attach to their service sheet to identify the defects that need repair at the next service. The records reviewed during the audit and the interviews with the workshop supervisor would indicate that there is not an efficient close out loop which ensures that defects are rectified in a timely manner.
	(b) must be operated in a proper and efficient manner.	C	Whitehaven has a comprehensive training and competency assessment system in place at Tarrawonga. Staff undertake a competency assessment but are then put under the direction of a competent operator for a 'training' period before they are deemed competent to operate machinery under minimal supervision. For example, training records reviewed during the audit indicated that staff member Ian Murray had completed Excavator competency on 18/7/11, Grader competency on 25/9/10, Safe Operation of an Excavator on 18/7/11 and Safe Operation of a Grader on 15/6/11.	
O3.1 Dust	All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.	C	Whitehaven has prepared and implemented an Air Quality Management Plan. Water carts were observed in use on site. No significant dust was observed on site during the audit site inspection.	
O3.2	Trucks transporting coal from the premises must be covered immediately after loading to prevent wind blown emissions and spillage. The covering must be maintained until immediately before unloading the trucks.	C	Truck loading operations were observed on site during the site inspection. In addition, trucks were observed travelling along the coal transport route to the Whitehaven CHPP. All trucks travelling to the CHPP were observed to have loads covered.	It was observed during the truck loading operations that trucks do not always immediately activate covers following loading to enable the load to settle but that all loads were covered before leaving the premises. It was noted that there is a sign prior to the exit point to remind drivers that all loads must be covered prior to leaving site.
O4.1	Effluent must only be applied to the following areas: Point 14 defined in condition P1.3 of this licence. Note: monitoring of land and receiving waters to determine the impact of wastewater application may be required by the EPA.	O	Effluent is applied to the property Thuin as described in the EIS.	It was noted that Point 14 does not appear in the table associated with Condition P1.3.
O4.2	The quantity of effluent applied to the utilisation area(s) must not exceed the capacity of the utilisation area(s) to effectively utilise the effluent. For the purpose of this condition, "effectively utilise" includes the ability of the soil to absorb the nutrient, salt and hydraulic loads and the applied organic material without causing harm to the environment.	C	System appeared to be operating satisfactorily during the audit site inspection. Evidence was sighted that it is regularly maintained (eg Field Service Report from Peter Brien Roofing and Plumbing dated 3/1/2011).	
O4.3	Effluent application to the utilisation area(s) must not occur in a manner that causes surface run-off from the utilisation area(s)	C	No surface runoff was observed during the audit site inspection.	
O4.4	Spray from effluent application to the utilisation area(s) must not drift beyond the boundary of the utilisation area(s) to which it has been applied.	C	The effluent irrigation area was observed to be within lands owned by Whitehaven.	

Condition No.	Requirement	Compliance C/NC/OV/NT	Evidence	Comments																																																																																				
Monitoring and Recording Conditions																																																																																								
M1.1 Monitoring Records	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	C	Monitoring results are retained and recorded.																																																																																					
M1.2	All records required to be kept by this licence must be: (a) in a legible form, or in a form that can readily be reduced to a legible form;	C	Copies of monitoring reports and summaries available in legible form, primarily using excel spreadsheets.																																																																																					
	(b) kept for at least 4 years after the monitoring or event to which they relate took place; and	C	All monitoring data undertaken to date is available on the Whitehaven server and web page.																																																																																					
	(c) produced in a legible form to any authorised officer of the EPA who asks to see them.	NT	Whitehaven advised that no authorised officers have asked to see them.																																																																																					
M1.3	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: (a) the date(s) on which the sample was taken;	C	Field notes recorded on field sheets for each sample. Monitoring spreadsheets contain the date samples are taken.																																																																																					
	(b) the time(s) at which the sample was collected;	C	Field notes recorded on field sheets for each sample. Monitoring spreadsheets contain the time samples are taken.																																																																																					
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	(d) the name of the person who collected the sample.	C	Field notes recorded on field sheets for each sample. The name of the person collecting the sample is recorded.																																																																																					
M2.1 Requirement to monitor concentration of pollutants discharged	For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns: POINTS 1,2,3,4,24 <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of measure</th> <th>Frequency</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>Conductivity</td> <td>microsiemens per centimetre</td> <td>Special Frequency 1</td> <td>Grab sample</td> </tr> <tr> <td>Oil and Grease</td> <td>milligrams per litre</td> <td>Special Frequency 1</td> <td>Grab sample</td> </tr> <tr> <td>Total suspended solids</td> <td>milligrams per litre</td> <td>Special Frequency 1</td> <td>Grab sample</td> </tr> <tr> <td>pH</td> <td>pH</td> <td>Special Frequency 1</td> <td>Grab sample</td> </tr> </tbody> </table> POINTS 5,6,7,8 <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of measure</th> <th>Frequency</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>Conductivity</td> <td>microsiemens per centimetre</td> <td>Special Frequency 1</td> <td>Grab sample</td> </tr> <tr> <td>Oil and Grease</td> <td>milligrams per litre</td> <td>Special Frequency 1</td> <td>Grab sample</td> </tr> <tr> <td>Total suspended solids</td> <td>milligrams per litre</td> <td>Special Frequency 1</td> <td>Grab sample</td> </tr> <tr> <td>pH</td> <td>pH</td> <td>Special Frequency 1</td> <td>Grab sample</td> </tr> </tbody> </table> POINTS 9,10,11,12 <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of measure</th> <th>Frequency</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>Conductivity</td> <td>microsiemens per centimetre</td> <td>Every 6 months</td> <td>Grab sample</td> </tr> <tr> <td>Lead</td> <td>milligrams per litre</td> <td>Every 6 months</td> <td>Grab sample</td> </tr> <tr> <td>Standing Water Level</td> <td>metres</td> <td>Every 6 months</td> <td>In situ</td> </tr> <tr> <td>pH</td> <td>pH</td> <td>Every 6 months</td> <td>Grab sample</td> </tr> </tbody> </table> POINT 13 <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of measure</th> <th>Frequency</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>Conductivity</td> <td>microsiemens per centimetre</td> <td>Quarterly</td> <td>Grab sample</td> </tr> <tr> <td>Oil and Grease</td> <td>milligrams per litre</td> <td>Quarterly</td> <td>Grab sample</td> </tr> <tr> <td>Total suspended solids</td> <td>milligrams per litre</td> <td>Quarterly</td> <td>Grab sample</td> </tr> <tr> <td>pH</td> <td>pH</td> <td>Quarterly</td> <td>Grab sample</td> </tr> </tbody> </table> POINT 15 <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of measure</th> <th>Frequency</th> <th>Sampling Method</th> </tr> </thead> <tbody> </tbody> </table>	Pollutant	Units of measure	Frequency	Sampling Method	Conductivity	microsiemens per centimetre	Special Frequency 1	Grab sample	Oil and Grease	milligrams per litre	Special Frequency 1	Grab sample	Total suspended solids	milligrams per litre	Special Frequency 1	Grab sample	pH	pH	Special Frequency 1	Grab sample	Pollutant	Units of measure	Frequency	Sampling Method	Conductivity	microsiemens per centimetre	Special Frequency 1	Grab sample	Oil and Grease	milligrams per litre	Special Frequency 1	Grab sample	Total suspended solids	milligrams per litre	Special Frequency 1	Grab sample	pH	pH	Special Frequency 1	Grab sample	Pollutant	Units of measure	Frequency	Sampling Method	Conductivity	microsiemens per centimetre	Every 6 months	Grab sample	Lead	milligrams per litre	Every 6 months	Grab sample	Standing Water Level	metres	Every 6 months	In situ	pH	pH	Every 6 months	Grab sample	Pollutant	Units of measure	Frequency	Sampling Method	Conductivity	microsiemens per centimetre	Quarterly	Grab sample	Oil and Grease	milligrams per litre	Quarterly	Grab sample	Total suspended solids	milligrams per litre	Quarterly	Grab sample	pH	pH	Quarterly	Grab sample	Pollutant	Units of measure	Frequency	Sampling Method	C	Monitoring results and reports reviewed during the audit indicate that monitoring is being undertaken at the nominated points, with sampling, analysis and reporting addressing the required methods and frequencies.	
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Pollutant	Units of measure	Frequency	Sampling Method																									
PM10	micrograms per cubic metre	Every 6 days	AM-18																									
	<p>For the purposes of the table(s) above Special Frequency 1 means the collection of samples as soon as practicable after a discharge from points 1,2,3,4 or 24 commences and in any case not more than 12 hours after a discharge commences. For the purposes of condition M2.1, this licence acknowledges that points 15, 16, 20 and 21 are established, maintained and monitored by the licensee who holds Environment Protection Licence number 12407. The holder of environment protection licence 12365 obtains monitoring data from Licensee 12407 for these points to meet their obligations under this licence. The licensee is deemed to have not breached condition M2.1 of this licence where the licensee is unable to obtain the monitoring data to meet this condition.</p>	C	Monitoring data reviewed shows that samples are being collected during wet weather discharge events.																									
M3.1 Testing Methods - concentration limits	<p>Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:</p> <p>(a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or</p> <p>(b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or</p> <p>(c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.</p> <p>Note: The Protection of the Environment Operations (Clean Air) Regulation 2002 requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".</p>	C	Monitoring data shows that air quality is being measured using approved methods using PM10 monitors and a network of dust deposition gauges.																									
M3.2	<p>Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.</p>	C	Monitoring data reviewed during the audit indicates that sampling and analysis for discharges to water are undertaken in accordance with the approved methods publication.																									
M4.1 Recording of pollution complaints	<p>The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.</p>	C	Complaints records recorded in complaints register and updated on website.																									
M4.2	<p>The record must include details of the following:</p> <p>(a) the date and time of the complaint;</p> <p>(b) the method by which the complaint was made;</p>	C	Complaints register reviewed, date and time of complaint are recorded. Example sighted was 2011 Complaints Register, first entry recorded time and date of complaint at 9.30am on 17/01/2011).																									

Environment Protection Licence No. 12365

Anniversary Date: 9 January



Condition No.	Requirement	Compliance C/NC/OV/NT	Evidence	Comments
	(c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;	C	The personal details of the complainant are not recorded on the complaints register which is publicly available on the website, however these details are recorded by Whitehaven on the individual complaint records (for example Complaint Record 1 for 2011).	
	(d) the nature of the complaint;	C	Complaints register reviewed, date and time of complaint are recorded. For example the first entry on the 2011 Complaints Register involved a complaint about excess rubbish along the haul route to Whitehaven CHPP.	
	(e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and	C	Complaints register reviewed, date and time of complaint are recorded. For example for the complaint about rubbish along the haul route on 17/1/11, Whitehaven raised the issue with staff and Toll contractors and advised that rubbish was not to be thrown out the windows of trucks. Whitehaven also undertook to make arrangements to have the haul route cleaned of rubbish on a regular basis.	
	(f) if no action was taken by the licensee, the reasons why no action was taken.	C	Complaints register reviewed, each complaint recorded details action taken or reasons why no action was required.	
M4.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	C	Complaints register available from the commencement of operations in 2006.	
M4.4	The record must be produced to any authorised officer of the EPA who asks to see them.	C	All records available, EPA has not requested to sight them as yet.	
M5.1 Telephone complaints line	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	C	Complaints line operating and advertised in local paper	
M5.2	The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	C	Evidence sighted included advertisements in Namoi Valley Independent dated 29/10/2009 and 5/5/2011.	
M5.3	Conditions M5.1 and M5.2 do not apply until 3 months after: (a) the date of the issue of this licence or	NT	Licence was issued more than 3 months ago.	
	(b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.	NT	Whitehaven advised that this is not a replacement licence.	
M6 Requirement to monitor volume or mass	N/A			
M7.1 Requirement to monitor weather	For each monitoring point specified in the table below, the licensee must monitor (by sampling and obtaining results by analysis) or obtain the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns. POINT W1	C	Weather station viewed during site inspection. Monitoring data reviewed during the audit showed that the weather station is monitoring the required parameters at the appropriate frequencies.	

Condition No.	Requirement	Compliance C/NC/OV/NT	Evidence	Comments																																																		
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<p>M8.1 Noise and Blast Monitoring</p>	<p>For each monitoring point specified below, the Licensee must monitor the noise or vibration parameter specified in Column 1. The Licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns.</p> <p>POINTS: N3, N4</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Units of measure</th> <th>Frequency</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>Ambient Noise</td> <td>L_{Aeq} (15 minute)</td> <td>Frequency of monitoring as detailed in the documents "Noise Management Plan Program for the East Boggabri Coal Mine, Report No. 643/05, Spectrum Acoustics Pty. Ltd., Dec 05" and "Road Noise Management Plan Program for the East Boggabri Coal Mine, Report No. 643/15, Spectrum Acoustics Pty. Ltd. Dec 05"</td> <td>Type 1 Noise Meter – Attended Monitoring as detailed in the documents "Noise Management Plan Program for the East Boggabri Coal Mine, Report No. 643/05, Spectrum Acoustics Pty. Ltd., Dec 05" and "Road Noise Management Plan Program for the East Boggabri Coal Mine, Report No. 643/15, Spectrum Acoustics Pty. Ltd. Dec 05"</td> </tr> <tr> <td></td> <td>L_{Amax}</td> <td></td> <td></td> </tr> <tr> <td></td> <td>L_{A1}</td> <td></td> <td></td> </tr> <tr> <td></td> <td>L_{A10}</td> <td></td> <td></td> </tr> <tr> <td></td> <td>L_{A90}</td> <td></td> <td></td> </tr> <tr> <td></td> <td>L_{Amin}</td> <td></td> <td></td> </tr> </tbody> </table> <p>POINTS: N1, N3</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Units of measure</th> <th>Frequency</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>Blast Noise</td> <td>DB(Lin Peak)</td> <td>Every Blast</td> <td>Type 1 Noise Blast Logger</td> </tr> <tr> <td>Blast Vibration</td> <td>mm/s</td> <td>Every Blast</td> <td>Geophone Logger or Similar</td> </tr> </tbody> </table>	Parameter	Units of measure	Frequency	Sampling Method	Ambient Noise	L _{Aeq} (15 minute)	Frequency of monitoring as detailed in the documents "Noise Management Plan Program for the East Boggabri Coal Mine, Report No. 643/05, Spectrum Acoustics Pty. Ltd., Dec 05" and "Road Noise Management Plan Program for the East Boggabri Coal Mine, Report No. 643/15, Spectrum Acoustics Pty. Ltd. Dec 05"	Type 1 Noise Meter – Attended Monitoring as detailed in the documents "Noise Management Plan Program for the East Boggabri Coal Mine, Report No. 643/05, Spectrum Acoustics Pty. Ltd., Dec 05" and "Road Noise Management Plan Program for the East Boggabri Coal Mine, Report No. 643/15, Spectrum Acoustics Pty. Ltd. Dec 05"		L _{Amax}				L _{A1}				L _{A10}				L _{A90}				L _{Amin}			Parameter	Units of measure	Frequency	Sampling Method	Blast Noise	DB(Lin Peak)	Every Blast	Type 1 Noise Blast Logger	Blast Vibration	mm/s	Every Blast	Geophone Logger or Similar		<p>See AEMR, monitoring reports and management plan</p>											
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Environment Protection Licence No. 12365

Anniversary Date: 9 January



Condition No.	Requirement	Compliance C/NC/OV/NT	Evidence	Comments
Reporting Conditions:				
R1.1 Annual return documents	The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: (a) a Statement of Compliance; and (b) a Monitoring and Complaints Summary. A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.	C	Annual returns for 2009-2010 and 2010-2011 reviewed during audit. Each return reviewed include a Statement of Compliance and a Monitoring and Complaints Summary as required.	It was noted that non-compliances had been reported in each of the returns reviewed during the audit.
R1.2 Period Covered by Annual Return	An Annual Return must be prepared in respect of each reporting period, except as provided below. Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.	C	Annual returns for 2009-2010 and 2010-2011 reviewed during audit. Each return reviewed identified the reporting period it covered.	
R1.3	Where this licence is transferred from the licensee to a new licensee: (a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and (b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period. Note: An application to transfer a licence must be made in the approved form for this purpose.	NT	The licence has not been transferred within the audit period.	
R1.4	Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on: (a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or (b) in relation to the revocation of the licence - the date from which notice revoking the licence operates	NT	The licence has not been revoked or surrendered.	
R1.5 Deadline for Annual Return	The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').	C	Annual returns for 2009-2010 and 2010-2011 reviewed during audit. Evidence was sighted that both returns were submitted before the 10 March each year which is the due date identified on the returns. For example, for 2009-2010 return - sighted letter dated 19/2/10 to DECCW submitting return, verified that DECCW received return 25/2/10 (as stated on DECCW Public Register).	
R1.6 Notification where actual load can not be calculated	N/A			
R1.7 Licensee must retain copy of annual return	The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	C	Annual returns for 2009-2010 and 2010-2011 reviewed during audit. It was noted that returns for earlier years were also available to the auditor if required.	
R1.8 Certifying of statement of Compliance and signing of Monitoring and Complaints Summary	Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by: (a) the licence holder; or (b) by a person approved in writing by the EPA to sign on behalf of the licence holder.	C	Both annual returns reviewed were observed to be signed by two representatives of the licenceholder (for example 2010-2011 Annual Return was signed by both Executive Director and the Company Secretary).	
R1.9	A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.	NT	Returns are signed by the licenceholder.	
Notification of environmental harm	Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.			

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Anniversary Date: 9 January



Condition No.	Requirement	Compliance C/NC/OV/NT	Evidence	Comments
R2.1	Notifications must be made by telephoning the Environment Line service on 131 555.	NC		
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.	NC		
R3 Written report	Where an authorised officer of the EPA suspects on reasonable grounds that: (a) where this licence applies to premises, an event has occurred at the premises; or (b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.	NT	Whitehaven advised that no such reports have been requested.	
R3.2	The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.	NT	Whitehaven advised that no such reports have been requested.	
R3.3	The request may require a report which includes any or all of the following information: (a) the cause, time and duration of the event; (b) the type, volume and concentration of every pollutant discharged as a result of the event; (c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; (d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort; (e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants; (f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and (g) any other relevant matters.	NT	Whitehaven advised that no such reports have been requested.	
R3.4	The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.	NT	Whitehaven advised that no such requests have been made.	
General Conditions				
G1.1	A copy of this licence must be kept at the premises to which the licence applies.	C	A copy of the licence was sighted on site and a copy was made available to the auditors.	
G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.	C	Whitehaven advised that no authorised officer has	
G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises.	C	A copy of the licence was available to the auditors.	

APPENDIX 4

Compliance Assessment ML 1579

Condition No.	Requirement	Compliance C/NC/OV/NT	Evidence	Comments
1. Notice to Landholders	Within a period of three months from the date of the grant/renewal of this lease or within such further time as the minister may allow, the lease holder must serve on each landholder of the land a notice in writing indicating that this lease has been granted/renewed and whether the lease includes the surface. An adequate plan and description of the lease area must accompany the notice. If there are ten or more landholders affected, the lease holder may serve the notice by publication in a newspaper circulating in the region where the lease area is situated. The notice must indicate that this lease has been granted/renewed; state whether the lease includes the surface and must contain an adequate plan and description of the lease area.	NT	The lease area is wholly within land owned by Whitehaven or Boggabri Coal (joint venture partners in Tarawonga) as evidenced by the land ownership maps in the EA.	
2. Mining Operations Plan	(1) Mining operations, including mining purposes, must be conducted in accordance with a Mining Operations Plan (the Plan) satisfactory to the Director-General. The Plan together with environmental conditions of development consent and other approvals will form the basis for: (a) ongoing mining operations and environmental management; and (b) ongoing monitoring of the project	C	Original MOP approved 9 May 2006. 2010 MOP amendment for Section 75W works approved 12 October 2010.	
	(2) The Plan must be prepared in accordance with the Director-General's guidelines current at the time of lodgement.	C	Review of the amended MOP (prepared since last audit) shows that it has generally been prepared in accordance with relevant Department Guidelines.	
	(3) A Plan must be lodged with the Director-General: (a) prior to the commencement of mining operations (including mining purposes);	C	Original MOP was approved prior to commencement of operations as verified by URS during 2009 audit. Amended MOP to reflect S75W mine extension approval was approved on 12 October 2010 which was prior to the extension works commencing.	
	(b) subsequently as appropriate prior to the expiry of any current Plan; and	C	MOP Amendment was prepared and submitted following the Section 75W mine modification approval.	
	(c) in accordance with any direction issued by the Director-General.	NT	Whitehaven advised that no directions have been issued by the Director-General.	
	(4) The Plan must present a schedule of proposed mine development for a period of up to seven (7) years and contain diagrams and documentation which identify: (a) areas(s) proposed to be disturbed under the Plan;	C		
	(b) mining and rehabilitation method(s) to be used and their sequence;	C	Section 3.2 of MOP and Plan 3	
	(c) areas to be used for disposal of tailings/waste;	C	Section 3.4 of MOP	
	(d) existing and proposed surface infrastructure;	C	Section 3.7 of MOP	
	(e) existing flora and fauna on the site;	C	Section 3.3 of MOP	
	(f) progressive rehabilitation schedules;	C	Section 5 and Plan 5 of MOP	
	(g) areas of particular environmental, ecological and cultural sensitivity and measures to protect these areas;	C	Sections 2.2 and 2.3 of MOP	
	(h) water management systems (including erosion and sediment controls)	C	Section 3.8 of MOP	
	(i) proposed resource recovery; and	C	Section 1.5.3 of MOP	
	(j) where the mine will cease extraction during the term of the Plan, a closure plan including final rehabilitation objectives/methods and post mining landuse/vegetation	NT	Mine is not proposed to cease extraction during the period of the MOP.	
	(5) The Plan when lodged will be reviewed by the Department.	C	The MOP was lodged with DTIRIS for review and approval.	
(6) The Director-General may within two (2) months of the lodgement of a Plan, require modification and re-lodgement.	NT	Whitehaven advised that the Director-General has not made any such requests.		
(7) If a requirement in accordance with clause (6) is not issued within two (2) months of lodgement of a Plan, the lease holder may proceed with implementation of the Plan	C	As no requests for modification were received, Whitehaven has commenced implementation of the approved MOP.		
(8) During the life of the Mining Operations Plan, proposed modifications to the Plan must be lodged with the Director-General and will be subject to the review process outlined in clauses (5) - (7) above.	C	Original MOP approved 9 May 2006. 2010 MOP amendment for Section 75W works approved 12 October 2010		
3. Annual Environmental Management Report	(1) Within 12 months of the commencement of mining operations and thereafter annually or, at such other times as may be allowed by the Director-General, the lease holder must lodge an Annual Environmental Management Report (AEMR) with the Director-General.	C	AEMR's for 2009/2010 and 2010/2011 were reviewed during the audit.	
	(2) The AEMR must be prepared in accordance with the Director-General's guidelines current at the time of reporting and contain a review and forecast of performance for the preceding and ensuing 12 months in terms of:	C	The AEMRs were noted to have been prepared in accordance with the Director-General's guidelines.	

Condition No.	Requirement	Compliance C/NC/O/V/NT	Evidence	Comments
	(a) the accepted Mining Operations Plan;	O	AEMR contains a review and forecast of performance with the Development Consent, EPL and Mining Lease, but the auditor could not find evidence in either the 2009/2010 AEMR or the 2010/2011 AEMR that specifically addressed a review against the MOP, particularly in regards to rehabilitation. A review of the MOP undertaken during the audit identified that rehabilitation has not proceeded according to the timeframe	There is reference in the 2010/2011 AEMR that rehabilitation has been delayed but there is no discussion of progress against the plans and timeframes identified in the MOP.
	(b) development consent requirements and conditions;	C	Compliance assessment provided in Schedule 3 of the AEMRs	
	(c) Department of Environment and Conservation and Department of Planning licences and approvals;	C	Compliance assessment provided in Schedule 3 of the AEMRs	
	(d) any other statutory environmental requirements;	O	Whilst the AEMR Section 1.2.2 identifies the water licences that apply to the Tarrawonga operations, there does not appear to a review or forecast of performance of the operations against the requirements of the licences.	
	(e) details of any variations to environmental approvals applicable to the lease area; and	C	Section 1.2.2 of AEMR	
	(f) where relevant, progress towards final rehabilitation objectives.	NT	Whitehaven advised that final rehabilitation is yet to be undertaken.	
	(3) After considering an AEMR the Director-General may, by notice in writing, direct the lease holder to undertake operations, remedial actions or supplementary studies in the manner and within the period specified in the notice to ensure that operations on the lease area are conducted in accordance with sound mining and environmental practice.	C	Following DII review of the 2009/2010 AEMR, DII identified issues that would need to be addressed and reported in the next AEMR. A review of the 2010/2011 AEMR undertaken during the audit showed that Whitehaven had addressed the required issues (Section 1.3)	It was also noted that OEH had also identified issues that needed to be addressed following the annual AEMR inspection that was undertaken in July 2010. The auditor noted that the issues raised by OEH had also been addressed in the 2010/2011 AEMR (Section 1.3).
	(4) The lease holder shall, as and when directed by the Minister, co-operate with the Director-General to conduct and facilitate review of the AEMR involving other government agencies and the local council.	C	2009/2010 AEMR inspection undertaken in July 2010 as evidenced by letter dated 20/9/10 from DECCW to Whitehaven identifying issues to be addressed	
4. Subsidence Management	(a) The lease holder shall prepare a Subsidence Management Plan prior to commencing any underground mining operations which will potentially lead to subsidence of the land surface.	NT	No underground mining currently undertaken or proposed for Tarrawonga.	
	(b) Underground mining operations which will potentially lead to subsidence include secondary extraction panels such as longwalls or miniwalls, associated first workings (gateroads, installation roads, associated main headings, etc), and pillar extractions, and are otherwise defined by the <i>Applications for Subsidence Management Approvals guidelines</i> (FDG17).	NT	No underground mining currently undertaken or proposed for Tarrawonga.	
	(c) The lease holder must not commence or undertake underground mining operations that will potentially lead to subsidence other than in accordance with a Subsidence Management Plan approved by the Director-General, an approval under the <i>Coal Mines Regulation Act 1982</i> , or the document <i>New Subsidence Management Plan Approval Process - Transitional Provisions</i> (FDP09)	NT	No underground mining currently undertaken or proposed for Tarrawonga.	
	(d) Subsidence Management Plans are to be prepared in accordance with the Guideline for <i>Applications for Subsidence Management Approvals</i> .	NT	No underground mining currently undertaken or proposed for Tarrawonga.	
	(e) Subsidence Management Plans as approved shall form part of the Mining Operations Plan required under Condition 2 and will be subject to the Annual Environmental Management Report process as set out under Condition 3. The SMP is also subject to the requirements for subsidence monitoring and reporting set out in the document <i>New Approval Process for Management of Coal Mining Subsidence - Policy</i>	NT	No underground mining currently undertaken or proposed for Tarrawonga.	
11. Blasting	(a) <u>Ground Vibration</u> - The lease holder must ensure that the ground vibration peak particle velocity generated by any blasting within the lease area does not exceed 10mm/second and does not exceed 5mm/second in more than 5% of the total number of blasts over a period of 12 months at any dwelling or occupied premises as the case may be, unless determined otherwise by the Department of Environment and Conservation	C	Blast monitoring data reviewed during the audit showed no exceedances of the ground vibration criteria for the audit period.	

Condition No.	Requirement	Compliance C/NC/OV/NT	Evidence	Comments
	(b) <u>Blast Overpressure</u> - The lease holder must ensure that the blast overpressure noise level generated by any blasting within the lease area does not exceed 120 dB (linear) and does not exceed 115 dB (liner) in more than 5% of the total number of blasts over a period of 12 months, at any dwelling or occupied premises, as the case may be, unless determined otherwise by the Department of Environment and Conservation.	C	Blast monitoring data reviewed during the audit showed no exceedances of the blast overpressure criteria for the audit period.	
13. Rehabilitation	(a) Land disturbed must be rehabilitated to a stable and permanent form suitable for a subsequent land use acceptable to the Director-General and in accordance with the Mining Operations Plan so that:	O	Delays in rehabilitation of the northern emplacement area have occurred due to the Tarrawonga extension modification and the Life of Mine project. The northern batter has been reshaped but not topsoiled or revegetated.	
	* there is no adverse environmental effect outside the disturbed area and that the land is properly drained and protected from soil erosion.	O	Whilst there was observed to be no adverse environmental effect outside of the disturbed area, it was noted during the site inspection that the northern batter of the emplacement had been shaped but not seeded. Therefore, there is potential for erosion to occur and some minor rilling was observed during the site inspection.	
	* the state of the land is compatible with the surrounding land and land use requirements.	C	The rehabilitated western batter of the northern emplacement area was viewed during the audit site inspection. It was observed that the rehabilitation had generally been undertaken in manner consistent with that described in the MOP.	
	* the landforms, soils, hydrology and flora require no greater maintenance than that in the surrounding land.	O	The rehabilitated western batter of the northern emplacement was observed to be well advanced with little maintenance appearing to be required. However, the northern batter has only been reshaped and has not been topsoiled or seeded. This area is likely to require more maintenance than the surrounding land.	
	* in cases where revegetation is required and native vegetation has been removed or damaged, the original species must be re-established with close reference to the flora survey included in the Mining Operations Plan. If the original vegetation was not native, any re-established vegetation must be appropriate to the area and an acceptable density.	C	Site inspection indicated that species planted are consistent with those listed in the EIS/EA and the MOP.	
	* the land does not pose a threat to public safety.	C	Land is not publicly accessible and therefore does not pose a threat to public safety.	
	(b) Any topsoil that is removed must be stored and maintained in a manner acceptable to the Director-General.	C	During the site inspection it was observed that topsoil stockpiles are currently being moved from the eastern side of the site to the western side of the site. Inspection showed that stockpiles were of low height (typically less than 3 m) and had been seeded with a cover crop.	
14	The lease holder must comply with any direction given by the Director-General regarding the stabilisation and revegetation of any mine residues, tailings or overburden dumps situated on the lease area.	NT	No specific directions have been given.	
15. Exploratory Drilling	(1) At least twenty eight days prior to commencement of drilling operations the lease holder must notify the relevant Department of Natural Resources regional hydrogeologist of the intention to drill exploratory drill holes together with information on the location of the proposed holes.	C	Sighted letter to Regional Hydrogeologist, NSW Water and Energy, Tamworth dated 20/4/11 providing notification of intention to drill exploratory holes.	
	(2) If the lease holder drills exploratory drill holes he must satisfy the Director-General that: (a) all cored holes are accurately surveyed and permanently marked in accordance with Departmental guidelines so that their location can be easily established;	C	Drilling records reviewed during audit. Surveyors are engaged to survey and mark holes drilled.	It was noted that although survey co-ordinates are captured for each borehole, these co-ordinates are only entered on the drilling data spreadsheet and are not recorded on the drilling record sheets (eg. Drill hole cementing record for hole number TA63C).

Condition No.	Requirement	Compliance C/NC/OV/NT	Evidence	Comments
	(b) all holes cored or otherwise are sealed to prevent the collapse of the surrounding surface; (c) all drill holes are permanently sealed with cement plugs to prevent surface discharge of groundwater; (d) if any drill hole meets natural or noxious gases it is plugged or sealed to prevent their escape; (e) if any drill hole meets an artesian or sub-artesian flow it is effectively sealed to prevent contamination of aquifers. (f) once any drill hole ceases to be used the hole must be sealed in accordance with Departmental guidelines. Alternatively, the hole must be sealed as instructed by the Director-General. (g) once any drill hole ceases to be used the land and its immediate vicinity is left in a clean, tidy and stable condition.	C	Drilling record sheets indicate that holes are sealed upon completion (eg Drillhole Cementing Record for hole TA68C which shows that cementing of the hole was completed on 6/10/10, the HWT casing was removed and all hole grouted).	
		V	Whitehaven has procedures in place for the conduct of drilling operations which identify that all exploration holes are to be left in a clean and tidy condition. However, the implementation of this was not checked on site at the time of the audit as no exploration activities were in progress.	
16. Prevention of Soil Erosion and Pollution	Operations must be carried out in a manner that does not cause or aggravate air pollution, water pollution (including sedimentation) or soil contamination or erosion, unless otherwise authorised by a relevant approval, and in accordance with an accepted Mining Operations Plan. For the purpose of this condition, water shall be taken to include any watercourse, waterbody or groundwaters. The lease holder must observe and perform any instructions given by the Director-General in this regard.	O	Whilst there was observed to be no adverse environmental effect outside of the disturbed area, it was noted during the site inspection that the northern batter of the emplacement had been shaped but not seeded. Therefore, there is potential for erosion to occur and some minor rilling was observed during the site inspection.	
17. Transmission lines, Communication lines and Pipelines	Operations must not interfere with or impair the stability or efficiency of any transmission line, communication line, pipeline or any other utility on the lease area without prior written approval of the Director-General and subject to any conditions he may stipulate.	C	Whitehaven advised that there has been no interference with any transmission lines since the last audit and no evidence was observed during the audit site inspection to indicate that transmission lines are affected by mining operations.	
18. Fences, Gates	(a) Activities on the lease must not interfere with or damage fences without the prior written approval of the owner thereof or the Minister and subject to any conditions the Minister may stipulate. (b) Gates within the lease area must be closed or left open in accordance with the requirements of the landholder.	NT	Whitehaven or its joint venture partner Boggabri Coal own the land comprising the mining lease, therefore this condition is not applicable as the mine is the owner of the land.	
19. Roads and Tracks	(a) Operations must not affect any road unless in accordance with an accepted Mining Operations Plan or with the prior written approval of the Director-General and subject to any conditions he may stipulate. (b) The lease holder must pay to the designated authority in control of the road (generally the local council or the Roads and Traffic Authority) the cost incurred in fixing any damage to roads caused by operations carried out under the lease, less any amount paid or payable from the Mine Subsidence Compensation Fund.	C	Roads affected by the operations were observed to be within the context of the approved Mining Operations Plan.	
		C	Whitehaven has road maintenance agreements in place with both Gunnedah and Narrabri Shire Councils for the maintenance of roads affected by Whitehaven's operations (eg Road Maintenance Agreement with Gunnedah Shire Council dated 5/8/2009, and Haulage Route East Boggabri Coal Mine Maintenance Agreement with Gunnedah Council dated 2/6/2009).	
20	Access tracks must be kept to a minimum and be positioned so that they do not cause any unnecessary damage to the land. Temporary access tracks must be ripped, topsoiled and revegetated as soon as possible after they are no longer required for mining operations. The design and construction of access tracks must be in accordance with specifications fixed by the Department of Natural Resources.	C	The main site access road is bitumen sealed and was observed to be in good condition. During the site inspection, it was noted that access tracks are provided to areas when required and all tracks sighted were observed to have been appropriately positioned so as not to cause unnecessary damage.	
21. Trees and Timber	(a) The lease holder must not fell trees, strip bark or cut timber on the lease without the consent of the landholder who is entitled to the use of the timber, or if such a landholder refuses consent or attaches unreasonable conditions to the consent, without the approval of a warden.	NT	Land within the lease area is owned by either Whitehaven or Boggabri Coal (both joint venture partners in Tarrawonga), therefore this condition is not applicable as the mine owns the land.	

Condition No.	Requirement	Compliance C/NC/OV/NT	Evidence	Comments
	(b) The lease holder must not cut, destroy, ringbark or remove any timber or other vegetative cover on the lease area except such as directly obstructs or prevents the carrying on of operations. Any clearing not authorised under the Mining Act 1992 must comply with the provisions of the Native Vegetation Act 2003.	C	The site inspection and a review of the EA undertaken during the audit indicates that clearing has generally occurred in accordance with the relevant approvals.	
	(c) The lease holder must obtain all necessary approvals or licences before using timber from any Crown land within the lease area.	NT	There is no Crown land within the lease area as evidenced by land ownership maps included in the EA.	

APPENDIX 5

Photographic Plates



PLATE 1
Hydrocarbon Storage and Spill Kits



PLATE 2
Open Cut Pit Areas



PLATE 3
Truck Loading Facility



PLATE 4
Water Sprays on the Conveyor at the Crusher/Load Out Facility



PLATE 5
Water cart in operation on the Hardstand Area



PLATE 6
Rehabilitation Area on the western side of the Northern Waste Emplacement

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