



Report

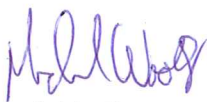
Clarence Colliery Independent Environmental Audit

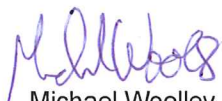
MARCH 2011

Prepared for
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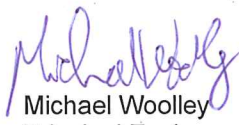
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URS

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Appendix A Compliance Matrix

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Abbreviations

Abbreviation	Description
AQMP	Air Quality Management Plan
AEMR	Annual Environmental Management Report
BCA	Building Code of Australia
CCC	Community Consultative Committee
CoA	Condition of Approval
Council	Lake Macquarie City Council
CHPP	Coal Handling and Preparation Plant
DA	Development Application
DECCW	Department of Environment, Climate Change and Water
Department	Department of Planning
Director-General	Director-General of Department of Planning, or delegate
DoP	Department of Planning
DPI	Department of Primary Industries
DWE	Department of Water and Energy
EIS	Environmental Impact Statement
EC	Electrical Conductivity
EEC	Endangered Ecological Community as defined under the NSW <i>Threatened Species Conservation Act 1995</i>
Environmental consequences	Environmental consequences of Subsidence Impacts, including: damage to infrastructure, buildings and residential dwellings; loss of surface flows to the subsurface; loss of standing pools; adverse water quality impacts; development of iron bacterial mats; cliff falls; rock falls; damage to Aboriginal heritage sites; impacts on aquatic ecology, ponding etc.
EMP	Environmental Management Plan
EMS	Environmental Management System
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence
ESCP	Erosion and Sediment Control Plan
IINSW	Industry and Investment NSW
INP	Industrial Noise Policy
Land	Land means the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this approval
LCC	Lithgow City Council
LW	Longwall
Mine Water	Water that accumulates within active mining areas, coal rejects emplacement areas, tailings dams and infrastructure areas, synonymous with dirty water
Mining Operations	Includes all coal extraction, processing, and transportation activities carried out on site
Minister	Minister for Planning, or delegate
Mtpa	Million tonnes per annum
NMP	Noise Monitoring Program
NOW	NSW Office of Water (adopted certain responsibilities of DWE from July 2009)
Privately owned land	Land that is not owned by a public agency, or a mining company (or its subsidiary).
Project	The development as described in the EA
Proponent	Centennial Coal Company

Abbreviation	Description
REF	Review of Environmental Factors
ROM	Run of Mine
RTA	Roads and Traffic Authority
SEE	Statement of Environmental Effects
Site	Lands described in Schedule 1 of the Development Consents of DA 504-00
SOC	Statement of Commitments
Subsidence or Subsidence effects	Deformation of the ground mass due to mining, being all mining induced ground movements, including both vertical and horizontal displacement, tilt, strain and curvature
Subsidence impacts	Physical changes to the ground and its surface caused by Subsidence Effects, including tensile and shear cracking of the rock mass, localised buckling of strata caused by valley closure and upsidence and surface disturbance or troughs
SMP	Subsidence Management Plan
TARP	Trigger Action Response Plan
TSS	Total Suspended Solids

Executive Summary

URS Australia Pty Ltd (URS) was engaged by Clarence Colliery to carry out an Independent Environmental Audit of the Clarence Colliery (Clarence Colliery) located in the Blue Mountains near the village of Clarence, New South Wales (NSW).

A condition of the Development Consent Approval of DA 504-00 (dated 19 December 2005) requires Clarence Colliery to commission an independent environmental audit prior to 31 December 2010 and every three years thereafter.

This is the first independent audit to be carried out at Clarence Colliery as required by the Development Consent. For the purpose of this audit however, the audit period has generally been defined as being from the 19 December 2005 (date of approval) to 31 December 2010 (date of requirement to commission the audit), with the focus being on activities over the last year. This report presents the findings of this audit.

The audit was completed in accordance with the Schedule 5, Condition of Approval (CoA) Numbers 6, 7 and 8 and the project brief (dated February 2010) as detailed in URS' proposal (dated 11 March 2010). The audit methodology comprised the following activities:

- Initial discussions with Clarence Colliery to organise the audit, including the provision of documentation, the site visit and timing;
- Discussions with the DoP to discuss any concerns and areas for particular focus during the audit;
- Review of site compliance register and other documentation provided by Clarence Colliery;
- A four-day site inspection and interviews with key site personnel, on 11 January to 14 January 2011;
- Consultation with key government agencies;
- Review of additional documentation provided by Clarence Colliery after the site inspection; and
- Submission of this Draft Report to Clarence Colliery Coal outlining the audit findings.

Consultation with key government agencies was sought and is presented as part of the report.

The independent environmental audit assessed compliance with relevant approvals, licences and other management plans applicable to Clarence Colliery. The detailed compliance assessment, including comments and recommendations, is presented in **Appendix A**. Non-compliance with relevant approvals is discussed in Section 9. The overall compliance status was found to be good and is summarised in Table 1.

Executive Summary

Table 1 Overall Compliance Assessment and Audit Score

<i>Relevant Approval</i>	<i>Percent Compliant (%)</i>	<i>Number of Conditions Non Compliant or Indeterminate</i>
<i>Development Consent Clarence Colliery Mine DA 504-00</i>	<i>78</i>	<i>11</i>
<i>1976 Development Consent Clarence Colliery Mine DA</i>	<i>58</i>	<i>3</i>
<i>1993 Development Consent Clarence Colliery Mine DA</i>	<i>50</i>	<i>5</i>
<i>1994 Development Consent Clarence Colliery Mine DA</i>	<i>84</i>	<i>2</i>
<i>Environmental Protection Licence No. 000726</i>	<i>81</i>	<i>5</i>
<i>Mining Lease 1583</i>	<i>81</i>	<i>2</i>
<i>Consolidated Coal Lease 705</i>	<i>83</i>	<i>5</i>
<i>Surface Licence Main Dam 10SL039344</i>	<i>65</i>	<i>6</i>
<i>Bore Licence 82 cut through mine dewatering 10BL 165053 (revised licence to be formally approved)</i>	<i>75</i>	<i>3</i>
<i>Groundwater Monitoring Bore Licence Clarence Colliery 10BL604098 (located near Dam 2, Lithgow – covers monitoring bores CLRP 15 and 16).</i>	<i>100</i>	<i>0</i>
<i>Subsidence Management Plan (SMP) Approval Eastern Area</i>	<i>92</i>	<i>2</i>
<i>Subsidence Management Plan (SMP) Outbye Areas</i>	<i>100</i>	<i>0</i>
<i>SMP Approval 700 Area</i>	<i>100</i>	<i>0</i>
<i>Subsidence Management Plan 314-316 Area</i>	<i>100</i>	<i>0</i>

In addition the scope of the audit included a review of the adequacy of the strategies, plans and programs required under the Development Consent. The findings of the adequacy review are presented in Section 6.

Management plans were found to be generally adequate, however, some have been prepared for original approvals purposes. A number of continuous improvement opportunities were identified and presented.

A summary of recommended actions to improve compliance status are presented in Section 9.

Introduction

1.1 Background

URS Australia Pty Ltd (URS) was engaged by Clarence Colliery to carry out an Independent Environmental Audit of the Clarence Colliery (Clarence Colliery) located in the Blue Mountains near the village of Clarence, New South Wales (NSW).

A condition of the Development Consent Approval of DA 504-00 (dated 19 December 2005) requires Clarence Colliery to commission an independent environmental audit prior to 31 December 2010 and every three years thereafter. Accordingly, the audit was commissioned in December 2010 and completed during January - February 2011 in accordance with Schedule 5, Conditions 6 and 7 of the Approval. The report of the audit and Clarence's response to its recommendations are required to be submitted to the Department of Planning (DoP) by 19 March 2011.

In association with this requirement, Centennial Coal's project brief (dated February 2010) required that the audit provide appropriate information to Clarence Colliery and Centennial Coal on environmental compliance to enable site management to identify opportunities for improvement.

This is the first independent audit to be carried out at Clarence Colliery as required by the Development Consent. For the purpose of this audit, the audit period has generally been defined as from 19 December 2005 (date of approval) to 31 December 2010 (date of requirement to commission the audit) with the focus being on activities in 2010. This report presents the findings of this audit.

1.2 Scope of Work

The audit was conducted in accordance with the requirements set out in the Development Consent of DA 504-00, Schedule 5, Condition numbers 6 and 7, which required that the following scope of works be carried out.

6. Within 5 years of the date of this consent, and every 5 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:

(a) be conducted by a suitably qualified, experienced, and independent person whose appointment has been endorsed by the Director-General;

(b) be consistent with ISO 19011:2002 – Guidelines for Quality and/or Environmental Systems Auditing, or updated versions of this guideline;

(c) assess the environmental performance of the development, and its effects on the surrounding environment;

(d) assess whether the development is complying with the relevant standards, performance measures, and statutory requirements;

(e) review the adequacy of the Applicant's Environmental Management Strategy and Environmental Monitoring Program; and, if necessary,

(f) recommend measures or actions to improve the environmental performance of the development, and/or the environmental management and monitoring systems

1 Introduction

7. The Independent Environmental Audit shall include a detailed audit of the subsidence, surface water, and ground water impacts of the development. The audit shall:

- (a) review the monitoring data for the development;*
- (b) identify any trends in the monitoring data;*
- (c) examine the subsidence, surface water, and ground water impacts of the development;*
- (d) compare these impacts against the relevant impact assessment criteria; and, if necessary,*
- (e) recommend measures to reduce, mitigate, or remediate these impacts*

If the independent audit determines that the subsidence, surface water, and/or ground water impacts resulting from the underground mining operations are greater than those predicted in the EIS/Supplementary Report or the relevant impact assessment criteria, the Applicant shall:

- (a) assess the significance of these impacts;*
- (b) investigate measures to minimise these impacts, including modifying subsequent mine plans; and*
- (c) describe what measures would be implemented to reduce, minimise, mitigate or remediate these impacts in the future;*

to the satisfaction of the Director-General.

1.3 Audit Methodology

The purpose of this Independent Environmental Audit was to assess compliance with Conditions of Approval (CoA), licences and approvals that apply to the development and review the adequacy of strategies, plans or programs required under the Development Consent. It was undertaken in accordance with Centennial Coal's Project Brief (dated February 2010) and the method described in URS' Proposal (dated 11 March 2010) with input from subsequent pre-audit meetings with NSW DoP on 27 May 2010.

A site-based environmental compliance checklist was supplied by Clarence Colliery. The compliance checklist formed the basis of the audit protocol. The checklist had been generated from an Environmental Compliance Register held by the site with relevant amendments made by URS. It included a list of conditions and commitments to be assessed for compliance, including Development Consents, mining leases (CCL and MLs), water licences and the site's Environmental Protection Licence (EPL).

The auditors did not assess compliance with all approvals issued for the project over its lifetime but instead chose representative approvals relevant to the works being undertaken at the time of the audit site inspection. For example, Clarence Colliery has been issued with numerous Exploration Licences, Consolidated Coal Leases, Mining Leases and Groundwater Monitoring Borehole Licences. The requirements of each of these licences / leases are similar and as such selected and representative

1 Introduction

Mining Leases, Consolidated Coal Lease and Groundwater Monitoring Borehole Licences were chosen to be audited. A summary of approvals assessed is outlined in Table 1-1.

Table 1-1 List of approvals audited

Approval	Authority
<i>Development Consent Clarence Colliery Mine DA 504-00</i>	<i>DoP</i>
<i>1976 Development Consent Clarence Colliery Mine DA</i>	<i>Lithgow City Council</i>
<i>1993 Development Consent Clarence Colliery Mine DA</i>	<i>Lithgow City Council</i>
<i>1994 Development Consent Clarence Colliery Mine DA</i>	<i>Lithgow City Council</i>
<i>Environmental Protection Licence No. 000726</i>	<i>NSW Department of Environment, Climate Change and Water (DECCW)</i>
<i>Mining Lease 1583</i>	<i>Industry and Investment NSW (IINSW)</i>
<i>Consolidated Coal Lease 705</i>	<i>Industry and Investment NSW (IINSW)</i>
<i>Surface Licence Main Dam 10SL039344</i>	<i>NSW Office of Water within DECCW</i>
<i>Bore Licence 82 cut through mine dewatering 10BL 165053 (revised licence to be formally approved)</i>	<i>NSW Office of Water within DECCW</i>
<i>Bore Licence 79 cut through mine dewatering 10BL 165054 (revised licence to be formally approved)</i>	<i>NSW Office of Water within DECCW</i>
<i>Groundwater Monitoring Bore Licence Clarence Colliery 10BL604098 (located near Dam 2, Lithgow – covers monitoring bores CLRP 15 and 16).</i>	<i>NSW Office of Water within DECCW</i>
<i>Subsidence Management Plan (SMP) Approval Eastern Area</i>	<i>Industry and Investment NSW (IINSW)</i>
<i>Subsidence Management Plan (SMP) Outbye Areas</i>	<i>Industry and Investment NSW (IINSW)</i>
<i>SMP Approval 700 Area</i>	<i>Industry and Investment NSW (IINSW)</i>
<i>Subsidence Management Plan 314-316 Area</i>	<i>Industry and Investment NSW (IINSW)</i>

A summary of the strategies, plans and programs that were reviewed for adequacy is provided in Table 1-2.

Table 1-2 List of Strategies, Plans and Programs reviewed for adequacy

Strategy / Plan / Program	Approval Date
<i>Environmental Management Strategy</i>	<i>25 July 2007</i>
<i>Environmental Management System</i>	<i>Not required to be approved</i>
<i>Water Management Plan</i>	<i>25 July 2007</i>
<i>Environmental Noise Management Plan</i>	<i>19 September 2006</i>
<i>Environmental Air Quality Monitoring Program</i>	<i>20 August 2007</i>
<i>Environmental Monitoring Program</i>	<i>25 July 2007</i>

In accordance with CoA Schedule 5, Condition 7, the audit was required to include a detailed audit of subsidence, surface water, and ground water impacts of the development. This is addressed in section 8 of the report, and has been undertaken by Dr Neil Mattes, Geotechnical Engineer (URS) approved by DoP as an appropriate subsidence expert.

1 Introduction

The Audit was carried out in accordance with ISO 19011:2003 Guidelines for quality and/or environmental management systems auditing (ISO, 2002), which superseded the ISO 14000 series.

The audit methodology comprised:

- Initial discussions with Clarence Colliery to organise the audit, including the provision of documentation, the site visit and timing;
- Discussions with the DoP to discuss any concerns and areas for particular focus during the audit;
- Review of site compliance checklist and other documentation provided by Clarence Colliery;
- A four-day site inspection and interviews with key site personnel, on 11 January to 14 January 2011. Tasks undertaken during the audit site inspection included:
 - Opening meeting;
 - Site inspections with the Clarence Colliery Environmental Coordinator and others;
 - Review of relevant documentation provided by the Clarence Colliery Environmental Coordinator;
 - Interviews with key personnel including the Environmental Coordinator; Mine Manager; Production Manager; Manager – Mechanical Engineering and Contractor involved in Subsidence Monitoring;
 - Close out meeting.
- Consultation with key government agencies;
- Review of additional documentation provided by Clarence Colliery after the site inspection; and
- Submission of this Draft Report to Clarence Colliery Coal outlining the audit findings.

This report presents a summary of findings including details of non-compliances identified in the audit, an audit score (percentage compliant) and recommended actions to improve compliance status as required by Centennial Coal's Project Brief (dated February 2010).

1.3.1 Documents reviewed

The following information was reviewed during the audit process:

- Regulatory approvals as listed in Table 1-1;
- Management Plans as listed in Table 1-2;
- Environmental Protection Licence (EPL) No. 000726 (EPL000726) (NSW DECCW, 2010);
- Environmental Compliance checklist supplied by Clarence Colliery;
- Site environmental procedures and checklists;
- Selected correspondence with relevant government agencies and stakeholders (as provided and as relevant to the audit);
- Selected records of competency, induction and training;
- Selected meeting minutes;
- Selected reports; and
- Evidence of monitoring and review.

Documents used as part of the audit are referenced as part of the text and Appendix A discussing compliance status.

1 Introduction

1.4 Personnel and Timing

The Independent Environmental Audit was conducted by suitably qualified, independent and experienced audit team approved by the DoP. The team comprised:

- Michael Woolley, URS, lead auditor;
- Neil Mattes, URS, subsidence expert; and
- Ashley Lang, URS, auditor.

Michael Woolley is registered by RABQSA as a Certified Lead Auditor for Environmental Management, Site Contamination Assessment and Compliance Auditing. Ashley Lang is a Senior Principal Auditor with URS with over 16 years experience in environmental management and auditing.

The site visit for the audit was conducted by the team listed above between 11 January and 14 January 2011. During much the site visit conditions were cloudy with regular showers on most days.

Personnel interviewed during the site visit included the following people:

- Alanna Howard, Clarence Colliery Environmental Coordinator;
- Gregory Shields, Mine Manager;
- Kyle Egan, Production Manager;
- Justin Ryan, Manager – Mechanical Engineering;
- Nigel Campbell, Contractor - Subsidence Monitoring; and
- Gavin Slade, Geologist.

1.5 Sensitive Information

It is understood that information collected during the audit may be sensitive. All documents used during the audit to verify compliance are kept secure and not distributed outside the relevant personnel involved in the audit.

1.6 Format of Report

The format of this report is as follows:

- Section 1 is introductory and defines the scope and nature of the audit;
- Section 2 describes the Clarence Colliery operations as observed during the site inspection;
- Section 3 summarises the consultation with key regulatory agencies
- Section 4 provides an assessment of the environmental performance of the development and its effects on the surrounding environment;
- Section 5 describes the approach to the assessment against the relevant standards, performance measures and statutory requirements.
- Section 6 presents the findings of the review of the adequacy of the Environmental Management Strategy and environmental management and monitoring plans.
- Section 7 provides an overview of Clarence Colliery's approach to subsidence management and reviews the adequacy of subsidence management.
- Section 8 provides an audit of subsidence, groundwater and surface water impacts.
- Section 9 summarises the non compliances and recommendations made throughout the report.

Appendix A is a tabulated review of the results of the assessment against the Conditions of Approval, EPL conditions, Mining Lease conditions, Consolidated Coal Lease conditions, Groundwater

1 Introduction

extraction licence conditions, groundwater monitoring borehole licence conditions and Subsidence Management Plan approval conditions.

Appendix B includes a selection of photographs from the audit site inspection.

Site Description

This section provides a brief overview of the development of Clarence Colliery and operations carried out on site.

2.1 Site Location and History

The Clarence site is located on the eastern extremity of the Western Coal Field, off Bells Line of Road approximately 10 km east of Lithgow, New South Wales. Clarence Colliery's Coal Lease abuts the Blue Mountains National Park boundary to the east, Newnes State Forest to the north and State land to the west. It is situated on the Newnes Plateau near the catchment divide between the Wollangambe River and Farmers Creek/Coxs River system.

The Colliery extracts coal from the Katoomba Coal Seam and first commenced operations in 1979, initially operating as a bord and pillar mine and then switching to longwall mining in 1993. Centennial Coal purchased the facility in 1998 and reintroduced bord and pillar mining techniques using partial extraction to minimise surface subsidence and aquifer impacts, whilst maximising resource recovery and mine productivity.

2.2 Development Consents and Licences

Mining at Clarence is undertaken within Consolidated Coal Lease 705 (CCL 705), Mining Lease 1353 (ML 1353), Mining Lease 1354 (ML 1354) and Mining Lease 1584 (ML 1584) and in accordance with Environmental Protection Licence (EPL) 000726.

The site is operating under a number of development approvals, the most recent of which is Development Consent DA 504-00 granted in 2005 for the conversion of exploration tenements into mining leases for expansion to the east and west (refer Section 1.3). Approval to commence mining was originally granted in 1976 by the Blaxland Shire Council, now known as Lithgow City Council (LCC).

The approval area partially encompassed CCL 705. A variation to this approval was granted by the Greater Lithgow County Council (GLCC), now known as LCC in 1993. The approval amended the reject emplacement facilities and expanded the mining area to include all of CCL 705.

In 1994, another variation to this approval was granted by the GLCC to extend mining activities to the north encompassing ML 1353 and ML 1354 including extension of surface reject disposal areas, water management and ancillary structures with the pit top. The approval was granted on 15 February 1994 and consented to the development outlined in the EIS prepared in 1993.

In 2005 Clarence received approval from the Department of Infrastructure, Planning and Natural Resources now known as the Department of Planning (DoP) for Development Consent DA 504-00. ML 1583 is wholly within the DA 504-00 area.

An EIS was submitted by Centennial Coal in 2009 to DoP for a modification to DA 504-00 to increase road haulage from 200,000 tonnes to annum to 500,000 tonnes per annum to meet forecast increase in niche domestic demand. The application was subsequently withdrawn following a reassessment by Centennial Coal of the requirement for additional domestic supply.

Clarence EPL 000726 was amended in September 2009 following consultation with DECCW. The primary amendments to the licence included a change to the Scale of the activity to reflect the development consent approval production levels, and a change to the defined premises to include the extent of ML 1353. The licence was amended in accordance with Clarence's development consents

2 Site Description

which allow production levels of up to three million tonnes per annum. Accordingly, the EPL is now enabled for fee based activity of mining for coal up to three million five hundred thousand tonnes per annum, and a fee based activity licencing coal works up to five million tonnes per annum. ML 1353 was included within Condition A2.1. The requirement to monitor daily flow at Licence Discharge Points 003 and 004 was replaced with only during discharge.

In summary, a total of thirteen (13) non-administrative variations have been made to EPL 726 since 2001 pursuant to the Protection of the Environment Operations Act 1997 (NSW). Three (3) of these variations occurred during 2009-2010 and related to a change in water discharge flow method (Notice No. 1122407 Condition M-6.1 10-Dec-10), increase in filterable manganese water discharge limit (Notice No. 1115584 Condition L3 5-Jul-10) and clarification of Scheduled Activities/scale and boundary of licensed premise (Notice No. 1102926 Conditions A1-2 and A2-1 9-Sep-09).

Clarence's current Mining Operations Plan (MOP) 2007-2013 was approved in February 2007. An amendment request was forwarded to the DII on 30 September 2009 for the number of headings in 704 panel, of the 700 Area Subsidence Management Plan (SMP). The headings were reduced to five, from seven as approved in the 700 Area SMP.

Approval was granted for the 700 SMP Area and Outbye SMP Area in 2009. The 700 Area was approved on 8 May 2009, and Outbye Approval (only 302, 305, 306, 307, 400, 403 and 406) on 8 May 2009. The Outbye Approval (only 602) was granted on 30 January 2009, and Outbye Approval (only 402) on 27 March 2009. Variations were made to the Outbye SMP Area in August 2009, approved by the DII.

A referral was made to the Commonwealth Department of Environment, Water, Heritage and Arts (now known as the Department of Sustainability, Environment, Water, Population and Communities (SEWPAC)) for partial extraction mining in the 700 Area (the action) in 2009. A referral was submitted due to the potential for the action to impact on a Matter of National Environmental Significance. Determination was made on 24 July 2009 by DEWHA that the activity was not a controlled action and no further approvals were required.

Subsidence Management Plan Application for the 314-316 Area was submitted to II NSW on 9 December 2009. The Application was publically exhibited for a period of thirty days from the 11 December 2009. The document was available at Lithgow City Council, Clarence Colliery and the Centennial Coal website. The SMP application was approved in December 2010.

Proposed approvals to be sought in 2011 (and not included in this audit) include:

- Amendment of Dewatering Bore Licence to remove reference to Farmers Creek monitoring and reporting
- Amendment to Clarence Mining Operations Plan to include Reject Emplacement Area 4, FCT Shed and potable water storage tanks (this was approved following the site inspection for the audit).
- Submission of a referral over the remainder of ML 1583
- SMP application for 700W/800 Area
- S100 approval for REA IV.

2 Site Description

2.3 Description of Site Operations

A full description of the site and operations is provided in Annual Environmental Management Reports (AEMR) found on the site's website. In summary, Clarence Colliery consists of the following:

- Surface infrastructure including bathhouse and administration buildings, store warehouse, diesel refuelling station and storage shed, machinery washdown bay and workshop, equipment and materials storage areas;
- Coal Handling and Preparation Plant (CHPP);
- Reject Emplacement Areas (REA's) for reject from the CHPP;
- Mine ventilation fans and intake shafts;
- A rail loop and associated train loading infrastructure;
- A water management system including sediment ponds and other structures, a water treatment plant (WTP), a dam on the Wollongambe River as well as significant pumping and reticulation networks. These include storage tanks for Lithgow City Council (LCC) and an associated water pump; and
- Underground workings (partial extraction) - bord and pillar method that are extensive in nature that exist to the north and north west of pit top facilities under the Newnes Plateau and State Forest.

Adjacent third-party operations include Hanson (sand mining), an abandoned Rocla (sand mine) and Newnes Kaolin. Hanson operate a large sand mining operation immediately adjacent and to the west of the pit top area. An abandoned Rocla quarry is located to the east of Newnes Junction.

The nearest residential neighbours to the site are located at Newnes Junction approximately 1 km south of the Colliery pit top and adjacent to the Main Western Railway. The main landowner in the mining lease areas is NSW State Forests.

The majority of coal produced leaves via rail. Linking the pit top to Bells Line of Road is a sealed, 8.4 m wide access road (Clarence Colliery Road) which is also used by Hanson to transport extracted sand to Sydney and local markets.

2 Site Description

2.4 Activities Occurring During the Site Audit Inspection

At the time of the audit site visit, the following activities were occurring:

- Underground partial extraction of panel 708 (700 area – ML1583); Underground development of panel 712 (700 area – ML1583) and panel 316 (Outbye Area – CCL705)
- general associated mining activities including coal washing; water treatment and emplacement at the REA's.

Recently a belt press has been installed at the CHPP to dewater tailings to enable co-disposal of fines with oversize rejects. Prior to this, tailings were deposited within reject areas within the REA's (REA I and II were completed prior to the current approval and REA III has been used since the 1994 approval). There is a campaign to process previously deposited fines in the REA to direct them to production coal and to access more storage capacity in the REA's.

Not with standing this, capacity in REA III is low and Clarence requires additional capacity for reject emplacement. At the time of the audit Clarence was in the process of obtaining approvals with II NSW for the construction of REA IV. REA IV was detailed in the November 1993 and 2000 EIS and hence Clarence considers DoP approval exists for REA IV (to the north east of the Rail Loop) and an additional REA V (inside the Rail Loop). Since the audit inspection, approval was sought by Angus Place for a revised MOP (letter dated 23 December 2010). The approval was provided by II NSW in a letter dated 27 January 2011 and includes REA IV.

Appendix B provides photos of various aspects of the operation as taken during the site inspection in January 2011.

Consultation

3.1 Consultation with Key Government Agencies

As part of the audit process, URS contacted key government agencies to seek their views on the environmental performance of Clarence Colliery.

3.1.1 NSW Department of Planning

Discussions were held with a NSW DoP Environmental Planning Officer just prior to the audit on 10 January 2011. DoP did not note specific issues related to Clarence Colliery in respect of the audit.

3.1.2 Industry and Investment NSW

The II NSW Environmental Inspector responsible for the mine was contacted on 10 February 2011. II NSW indicated that in general, environmental performance at the mine was satisfactory. The following was noted:

- A modification to the Mine Operations Plan (MOP) had recently been approved (January 2011). This includes Reject Emplacement Area (REA) IV. Compliance with the MOP requirements will be an ongoing responsibility of Clarence as will the requirement to obtain any other approvals required. The MOP does not include an approval for REA V.
- That there are environmental impacts associated with clearing of land for REA IV. Clarence committed to developing a Rehabilitation Management Plan during 2010 (this is understood to be in draft format) and have a condition of the Development Consent which requires 'a detailed rehabilitation plan for Reject Emplacement Area IV and V respectively within 6 months of the commencement of operations'. Key aspects of the REA Rehabilitation Plan(s) will be ensuring a stable final landform and provision of adequate cover & topsoil material.
- That water management and water discharge quality has improved over the years with various initiatives such as the Water Treatment Plant. Ongoing water management will be important to ensure compliance with discharge limits.
- Subsidence management was satisfactory and that there are no real concerns regarding subsidence given the partial extraction bord and pillar mining approach.

3.1.3 NSW Department of Environment, Climate Change and Water

The auditors contacted DECCW following the audit. It was indicated that during the 2010 AEMR, DECCW carried out a compliance inspection of the premises and identified issues surrounding:

- Pit Top management of contaminated water; and
- Hazardous Chemical storage.

These issues and documentation received regarding these issues are discussed in more detail in Section 4.3.

3.1.4 NSW Office of Water (NOW)

NOW was contacted during the site inspections and indicated that it had transferred the requirements relating to Farmers Creek as detailed in the Water Licences held by Clarence Colliery to Lithgow City Council (LCC) who manages water once it is pumped from the holding tanks at Clarence. The new water licences cannot be formalised until they have been finalised with LCC.

NOW indicated that they had no other concerns at Clarence and were positive regarding water management at Clarence from the water licence perspective.

Environmental Performance

This Section addresses the requirement of the scope of works to “assess the environmental performance of the project”.

Clarence has developed the following management plans and monitoring programs to mitigate its effects on the surrounding environment and monitor the environmental performance of the Project:

- Water Management Plan, incorporating:
 - Erosion and Sediment Control Plan
 - Surface Water Monitoring Program
 - Groundwater Monitoring Program
 - Surface and Groundwater Response Plan
- Environmental Noise Management Plan
- Environmental Air Quality Monitoring Program
- Environmental Monitoring Program
- Subsidence Management Plans

URS based its assessment of Project environmental performance on the assessment of implementation of the above management plans and monitoring programs as well as the assessment of compliance with the CoA, EPL, Mining Leases, Water Licences and SMP approvals. The findings of this assessment are provided in the Compliance Matrix presented in Appendix A with the identified non-compliances and associated recommendations summarised in Section 9.

In addition, to further gauge the Project’s environmental performance, URS reviewed the environmental incidents, complaints and regulatory interactions recorded during the audit period. Discussion of these items is provided below.

4.1 Incident Management

Centennial Coal has developed Minimum Environmental Performance Standards for incident reporting (ECMS 03) and accompanying Guidance Notes. These documents summarise reporting obligations and outline the management process for different incident categories. Centennial Coal classifies incidents using the following categories:

- Category 1: Prosecution (Major) – major actual or potential material harm, major remediation required.
- Category 2: Offence (Significant) – significant potential or actual material harm, significant remediation required.
- Category 3: Reportable (Moderate) – reportable incident of actual or potential material harm to the environment, recurrent licence / approval exceedance or non compliance, multiple / recurrent complaint
- Category 4: Technical (Minor) – licence / approval / standard exceedance or non compliance, minor matter with no ecological damage evident, one off complaint, spill emission incident exceeding control system limits
- Category 5 Incident (Low) – on site only within limits of approved control systems, no environmental harm with little need for remediation.

URS reviewed records of incidents recorded by the site during the period 2006 – 2010, as documented in *Centennial Coal Site All Incidents Report - Incidents Summary for Clarence 2006 - 2010*. Table 4-1 summarises the number of incidents recorded by category.

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Table 4-1 Summary of incidents recorded by category for the period 1 November 2006 - 31 December 2010

<i>Category</i>	<i>No. of incidents</i>
1: Prosecution (Major)	0
2. Offence (Significant)	0
3. Reportable (Moderate)	11
4. Technical (Minor)	38
5. Incident (Low)	7

Clarence has not recorded any major (Category 1 - Prosecution) or significant (Category 2 – Significant) incidents.

The majority of Category 3 incidents (11) related to exceedances of Environment Protection Licence (EPL) discharge limits (filterable manganese) during the period 2006 – 2007. Following application by Clarence, a variation to the site's EPL (Notice No. 1079419) was subsequently granted by DECCW on 30 October 2007 to vary the filterable manganese discharge limit (100th percentile) from 0.05 mg/L to 0.1 mg/L.

The majority of the Category 4 incidents (38) also related to exceedances of EPL discharge limits (filterable manganese, pH and total suspended solids) during the period 2006 – 2010 (refer to assessment of EPL Conditions L3.1 and L3.2 in Appendix A and Section 9). Based on the 2009 – 2010 discharge monitoring data reviewed by URS, all exceedances were reported in the site's 2009 EPL Annual Return and Community Consultative Committee (CCC) meetings. At the time of writing this report, Clarence Colliery was yet to submit its 2010 EPL Annual Return. A further variation to the site's EPL (Notice No. 1115584) was granted by DECCW on 5 July 2010 to vary the filterable manganese discharge limit (100th percentile) from 0.1 mg/L to 0.5 mg/L and remove the previous 50th percentile limit of 0.05 mg/L. It is understood that in varying the filterable manganese discharge limit, DECCW considered performance of the site wastewater treatment plant, relevant aquatic ecosystem guidelines (ANZECC 2000) and drinking water guidelines on the basis that there is downstream beneficial reuse of site water as a drinking water supply for Lithgow township.

The Category 5 incidents related to minor spills, an exceedance of DA 504-00 depositional dust criteria following a significant regional dust storm and on-site waste segregation.

A review of select incident reports indicated that incidents were generally responded to appropriately, with follow up actions recorded and implemented (refer to assessment of EPL Condition R2.1 in Appendix A and Section 9 for further discussion).

4.1.1 Reported Incidents

DECCW has been notified of two (2) incidents at the site involving potential environmental harm during the period 2005 - 2010. The first incident related to a loss of 1.3 ML of underground minewater to the main dam which occurred on 12-Mar-08, as reported to the Environment Line (ref. 1054160) and subsequently described in Clarence Colliery's letter to DECCW Clarence Colliery - Pipeline Waste Discharge on 12 March 2008 Environment Protection Licence 726 dated 30 April 2008. The second incident related to a loss of 1.3 ML of leachate to the main dam which occurred on 7-Dec-10, as reported to the Environment Line (ref. 125402) and subsequently described in Clarence Colliery's

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letter to DECCW Clarence Colliery - Pipeline Rupture - Environment Line Reference Number: 125402 dated 14 December 2010.

A third incident occurred on 13-Sep-09 involving the loss to ground of an estimated 45 kL of diesel from a bowser at the CHPP, as described in Investigation Report CHPP Diesel Leak Incident at Clarence Colliery on 13 September 2009. On the basis that the diesel was prevented from exiting the site via its water discharge system through containment within the Primary Arrestor, Clarence Coal considered the incident did not represent potential material harm to the environment and therefore did not notify DECCW. Impacted soils were reportedly excavated and land-farmed following the event, however, it is understood that no validation sampling was undertaken at the time to confirm analytically that all hydrocarbons had been removed. An independent validation of soil and groundwater conditions in this area has been commissioned by Clarence Coal and will be undertaken in 2011.

Further discussion of this is provided in the assessment of EPL Condition R2.1 in Appendix A and Section 9.

4.2 Complaint Management

Clarence has prepared a Stakeholder Engagement Plan which details at a high level the process for managing community complaints.

As required under its EPL, Clarence maintains community contact information lines (business hours and after hours). All calls coming through the after hours information line are directed to the Control Room which is staffed 24 hours a day, seven days per week. All community complaints are logged on in Clarence Community Concern Report and raised as incidents. Following investigation, the Environmental Coordinator or Underground Mine Manager responds to the complainant within 24 hours.

Logged complaints include a reference number, complainant details, complaint type, date and time of occurrence, complaint details, investigation / cause, remediation details, implementation process, implementation date and details of consultation.

URS reviewed records of community complaints received by the site during the period 2006 – 2010, as documented in *Centennial Coal Site All Incidents Report - Incidents Summary for Clarence 2006 - 2010*. A total of three (3) community complaints are documented as having been received by the site during this period. A complaint was received by the site on 4 August 2010 relating to a piece of coal which fell off the back of a coal truck on a public roadway (Bells Line of Road), striking an oncoming vehicle - this complaint and the results of incident investigation were reported at the Clarence Colliery CCC meeting of 8 November 2010. Two separate complaints were received by the site in 2006 - 2007 relating to the discharge of sediment run-off during heavy rainfall and dust.

The Environmental Coordinator discusses any complaints received at CCC meetings. The 2006, 2007, 2008 and 2009 Annual Environmental Management Reports (AEMRs) were reviewed and noted in most cases to include a summary and discussion of the complaints received during the respective reporting years (if any). The community complaint recorded 16 May 2007 (discharge of sediment run-off during heavy rainfall) was not reported in 2007 AEMR.

On the basis of information reviewed, it is considered that complaints were managed satisfactorily. The complaints reviewed appeared to be investigated and mitigation measures considered and

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implemented where practical and feasible. Complainants were responded to in a timely manner and details were documented in Clarence's Incident and Complaints database.

4.3 Regulatory Interactions

Clarence engages in both formal and information interactions with relevant regulatory authorities. In addition to approval variations, incident notifications and AEMR, EPL Annual Return and management plan submission/review, the following formal exchanges were reported as having occurred during the audit period. The discussion presented below is not exhaustive of all regulatory interactions (eg. SMP submissions).

4.3.1 NSW Department of Planning (DoP)

The NSW Department of Planning (DoP) conducted an inspection of the site on 15 June 2007, the findings of which are detailed in DoP's letter to Clarence Colliery, *Clarence Coal Mine: Inspection of 15 June 2007 Ref S07/00207* dated 2 July 2007 and accompanying *Notice to Provide Information and/or Records pursuant to the Environmental Planning and Assessment Act 1979 (NSW)*. Two non-compliances were identified by DoP during its inspection, relating to required greenhouse gas emissions and groundwater monitoring data omitted from the site's 2006 Annual Environmental Management Report (DA 504/00 Schedule 3 condition 23, Schedule 5 conditions 5(e) and (f)) and an uncovered truck leaving the site and indicating to turn right on Bells Line of Road in contravention of DA 504/00 Schedule 3 condition 18 and Schedule 2 condition 7. Clarence Coal subsequently provided requested information in its letter to DoP *Clarence Colliery Response to DoP Notice Dated 3.7.07* dated 16 July 2007, as sighted by URS.

In its letter to the site *Clarence Colliery 2009 Annual Environmental Management Report (AMER) Ref S04/01067-8* dated 24 March 2010, the DoP requested clarifications to the reporting of community complaints in subsequent AMERs. These clarifications have been reflected in the site's draft 2010 AMER, as sighted by URS.

4.3.2 Department of Environment, Climate Change and Water (DECCW)

DECCW conducted a field inspection of the site during the 2009 AEMR presentation of 2010, the findings of which are detailed in DECCW's letter to Clarence Colliery, *DECCW AEMR Meeting* dated 31 May 2010. In its letter DECCW requested sealing of the pit tip diesel bowser drain and construction of impervious pad, improvement to bunding arrangements of the pit top chemical/oil store and further information in relation to proposed improvement actions for pit top water management.

Clarence subsequently provided requested information in its letter to DECCW of 16 July 2007 *DECCW AEMR Meeting dated 31 May 2010*, as sighted by URS. A reinspection of the site was subsequently undertaken by DECCW on 29 June 2010, during which all items were assessed by the Department as closed-out, with the exception of requested improvements to the chemical/oil store. Improvements to bunding arrangements of the pit top chemical/oil store were made by Clarence in August 2010 and were observed by URS during its site visit. Clarence has advised DECCW and URS that the existing pit top diesel underground petroleum storage system is scheduled to be decommissioned in Q1 2011.

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4.3.3 NSW Industry and Investment (II NSW)

Clarence has had ongoing interaction with II NSW over the audit period. Two recent site inspections are detailed below:

AEMR Site Inspection 2010

Environmental personnel from the Department of Industry and Investment (I&I) conducted a field inspection of the site during the 2009 AEMR presentation of 2010, the findings of which are detailed in I&I's letter to Clarence Colliery, Clarence and Blue Mountains Collieries - 2009 Annual Environmental Management Report dated 4 June 2010. In its letter, I&I requested further review and improvement of site water management (in particular measures to minimise dirty water generally and at the pit top), progress in consideration of future reject disposal options and planning for final rehabilitation of completed reject emplacement areas, control of observed weeds (pampas grass) and improvement to pit top refuelling and chemical/oil store bunding arrangements. A number of improvements to future AEMRs were also requested by II NSW, including the provision of more detail on weed control, aboriginal heritage, spontaneous combustion, bushfire, outburst and rehabilitation.

Actions to address these issues consisted of:

- Sediment capture was installed at the pit top grit trap in late 2010 and further work is continuing on the site's water management strategy.
- Improvements to bunding arrangements of the pit top chemical/oil store were made by Clarence in August 2010 and were observed by URS during its site visit, as detailed above.
- Clarence's Rehabilitation Management Plan has yet to be finalised and implementation of a weed management program was yet to be developed (refer commentary in Appendix A and URS recommendations in Sections 6.5 and 8).

It is understood that while measures have been implemented, the requirement to minimise dirty water at the pit top remains, and site have in place a regular meeting of key personnel to continue to identify and implement water management improvement processes.

Clarence's 2010 AEMR has yet to be issued, however, Clarence reported that the issues raised by I&I NSW are to be addressed in the 2010 AEMR.

Reject Emplacement Area Assessment 2010

Safety personnel from II NSW conducted an assessment of the Reject Emplacement Area on 19 October 2010. The findings of the assessment were provided to Clarence in a letter dated 22 October 2010 and concluded that "overall this review has confirmed that Clarence was managing the emplacement areas in accordance with the 1993 approval. However, the audit and field inspection has identified several non-conformances and other opportunities for improvement....".

A detailed table of "Improvements Recommended" was provided with the letter. URS reviewed a response to II NSW with planned actions to close out non-conformances and due dates. Not all responses were assessed by URS as part of this audit.

A key recommendation relating to the environment was to prepare a detailed rehabilitation plan (discussed in the 1993 Development Consent compliance section of this report and Appendix D). This was outstanding at the time of the audit and was planned for completion in March 2011. Other

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operational requirements were noted as part of the II NSW assessment, however are not considered to be directly relevant to this audit.

4.4 Department of Sustainability, Environment, Water, Population and Communities (SEWPAC)

In October 2009, Clarence referred the installation of 4 piezometers on the Newnes Plateau to DEWHA (Australian Federal Government) (now SEWPAC) under the EPBC Act. In a letter dated 18 November 2009, DEHWA indicated that the installation of the piezometers was not considered a controlled action, and hence did not require approval by the minister.

Compliance with Relevant Statutory Requirements

This Section fulfils the requirement to assess whether the project is complying with the relevant requirements in its Development Consent and any relevant mining lease and EPL. Table 5-1 identifies the major approvals, licences and leases in place for the Clarence Colliery and provides relevant information were applicable.

Table 5-1 Summary of major approvals and licences

<i>Issuing / Responsible Authority</i>	<i>Type of Lease, Licence, Approval</i>	<i>Expiry</i>
Minister for Planning (DoP)	Development Consent (DA 504-00) (1998)	21 years from the grant of the mining lease
Lithgow City Council	Development Consent DAM 08.76 Development Consent 1993 Development Consent 1994	(Date of Approval) 15/06/1976 01/07/1993 15/02/1994
Department of Environment Climate Change and Water (DECCW)	Environmental Protection Licence (EPL) No.000726 (22 November 2010)	Review date: 10/09/2014
Industry and Investment NSW (IINSW)	Mining Lease 1353 Mining Lease 1354 Mining Lease 1583	1 August 2020 27 May 2019 25 November 2024
IINSW	Consolidated Coal Lease 705	20/12/2027
NSW Office of Water within DECCW	Surface Main Dam 10SL039344	25/01/2013
NSW Office of Water within DECCW	Bore licence 79 cut through mine Dewatering 10BL165054 Bore licence 82 cut through mine Dewatering 10BL165053	21/09/2011 21/09/2011
NSW Office of Water within DECCW	Groundwater Monitoring Borehole Licences 10BL602819 10BL602820 10BL161964 10BL161965 10BL602213 10BL161962 10BL602211 10BL602212 10BL603337	Perpetuity
IINSW	Subsidence Management Plan (SMP) Approvals Eastern Area Outbye Area (402) Outbye Area (602) Outbye Area (302, 305, 306, 307, 400, 403 & 406) 700 Area 314/316 Area	N/A

5 Compliance with Relevant Statutory Requirements

<i>Issuing / Responsible Authority</i>	<i>Type of Lease, Licence, Approval</i>	<i>Expiry</i>
IINSW	Section 100 Reject Emplacement Area II	24/05/1976 (Approval 19/06/1992)
	Section 100 Reject Emplacement Area III	21/02/1990 (Approval 07/10/1993)
State Forest	Occupation Permit	Renewed Annually

The status of Clarence Colliery's performance during the audit, in respect of each of the Conditions of Approval (CoA), EPL conditions, Mining Lease conditions, Consolidated Coal Lease conditions, Groundwater Monitoring Borehole Licence conditions, and Subsidence Management Plan Approval conditions is presented in Appendix A. Conditions considered to be not complied with, or indeterminate, have been listed in Section 9 of this report.

Performance categories in respect of compliance are defined as follows:

- Compliant currently in compliance;
- Non-compliant currently not in compliance;
- Not applicable condition of consent not applicable at time of audit;
- Not Triggered requirement of Condition not yet triggered;
- Indeterminate it has not been possible to determine whether compliance exists; and
- Not Assessed the condition has not been assessed as part of the scope of this audit.

Comments are listed beside each condition to explain aspects of the audit review. Where considered relevant, observations have been made regarding specific compliance issues.

Where compliance with a condition had not been achieved during the audit period, but the site could demonstrate current compliance, this has been recorded as such.

In general, no specific or rigorous assessment of documents required as part of meeting the CoA has been undertaken during the assessment, particularly where they have been signed off by other parties (for example, DoP). There are numerous Subsidence Management Plans relevant to Clarence Colliery. Given the often similar conditions across some of these Plans, some conditions of selected Plans have not been assessed where they have been assessed in other plans.

Review of Environmental Management System

This Section fulfils the requirement to assess the adequacy of strategies, plans or programs required under the Development Consent. The implementation of the management plans / programs is discussed in Appendix A.

6.1 Environmental Management Overview

Clarence operates under Centennial Coal's Environmental Policy, Environmental Management Strategy and Centennial Environmental Management System (EMS). In addition, Centennial Coal has developed a number of Environment and Community Standards to provide guidance to Centennial's sites for the development of their own Environmental Management Systems.

Clarence has adopted the following Centennial Coal Standards:

- Environmental Risk Assessment Protocol (ECMG 02)
- Environmental Incident Reporting (ECMG 03)
- Minimum Standards Newsletter (ECMS 05)
- Audit and Inspection (ECMG 06)
- Site Environment Induction Employees and Contractors (ECMS 09)
- Site Environment Induction Visitors (ECMS 10)
- Site Environment Induction New Staff (ECMS 11)
- Site Environment Induction New Mineworker (ECMS 12)
- Environmental Assessment Standard (ECMS 14)

Clarence has developed an Environmental Management Strategy, an EMS and a number of environmental management plans and monitoring programs. These are discussed in more detail in Sections 6.2, 6.3 and 6.5 below.

In addition, Clarence is in the process of developing and implementing an Environmental Compliance Register which is aimed at being the primary tool for tracking compliance with Conditions of Consent, Licences and Leases. The Register lists Conditions of Consent, EPL conditions, Mining Lease conditions, Consolidated Coal Lease conditions and Water Licence conditions. It was reported that the Register is monitored by the site Environmental Coordinator and updated on an as needs basis, for example when approvals are varied or new approvals issued. An excel spreadsheet extracted from the register forms the basis of the checklist used by URS to assist in the conduct this audit as presented in Appendix A.

6.2 Environmental Management Strategy (the Strategy)

An Environmental Management Strategy was prepared in 2007 to satisfy the requirements of DA 504-00 S5-1 and describe the strategic framework within which site environmental management is undertaken. The Strategy was approved by the DoP on 25 July 2007 and has not been revised since its original endorsement.

6.3 Environmental Management System (EMS)

In 2010, Clarence developed an EMS incorporating the following elements:

- EMS Framework (Centennial Environmental Policy, Centennial EMS Framework, Environmental Management Strategy and Environmental Management Plans)
- Risks and Opportunities (Environmental Risk Assessment)

6 Review of Environmental Management System

- Legal and Other Requirements
- Objectives and Targets
- Training
- Inspections
- Communication
- Measurement and Evaluation
- Review and Continual Improvement
- Stakeholder Engagement
- Research and Development
- EMS Development
- Roles and Responsibilities

The EMS provides an overview of Clarence's processes for managing the environmental interactions of its operations. Implementation of the EMS is still in its infancy and procedures and work instructions that describe the 'how, what, when and who' for each system element have yet to be developed and implemented. It was reported that the development of system procedures is proposed during 2011.

The EMS was reported by Clarence to have been developed to be generally consistent with the International Standard for Environmental Management Systems ISO 14001, which URS found to be the case. A key element of any EMS is 'Operational Control', which provides a documented basis for the management of significant environmental interactions (eg. water, air, dust, chemicals and waste management). Clarence's EMS does not currently incorporate the site's operational controls, some of which are existence in the form of management plans. Clarence's Environment and Community Risk Assessment (RA-2171 2010) provides a robust framework for systematically identifying priority environmental interactions for which operational controls should be developed.

It is recommended that Clarence continues with implementation and further development of its EMS as proposed, such that this becomes the principal environmental management framework for the site. The development of system procedures and further risk-based development and incorporation of operational controls will be key to achieving this outcome.

6.4 Environmental Business Plan

Clarence participates in the Centennial annual (calendar year) environmental business planning process. Clarence's 2011 Environmental Business Plan was reviewed by URS and includes the following components:

- Business Risk Assessment – outputs from annual corporate risk assessment coordinated by Centennial Coal's Chief Risk Officer and annual site-level risk assessment coordinated by Clarence Environment and Community Coordinator
- Environment and Community Policy (Centennial)
- Corporate Objectives and Targets
- Compliance Requirements (cross-referenced to the Environmental Compliance Register)
- Approvals (newly obtained/pending)
- Beyond-compliance activities
- Community engagement and development activities

6 Review of Environmental Management System

Activities reported as having been completed in the second half (H2) of 2010 include:

- Installation of a truck wash bay for trucks exiting the site (soon to be commissioned following some minor additional civil works)
- Installation of sediment capture at the pit top grit trap
- Audits against the Australian Standards for the storage and handling of flammable and combustible liquids (AS1940) and control of obtrusive effects of outdoor lighting (AS4282)
- Establishment of dialogue with community members
- Development of a Community Assets Database to facilitate the prioritisation of community funding
- Implementation of Area of Responsibility Standard and Site Operating Procedures for the management of site environmental interactions
- Undertaking of the 700 West and 800 Area stakeholder meetings and risk assessment

A number of these initiatives were observed by URS as having been implemented.

Key environmental improvement activities identified in Clarence's 2011 Environmental Business Plan include an initial landscaping scoping study (for budgeting in 2011/2012) and further work on the site's water management strategy.

Some 83 action items arising from the site's most recent Environment and Community Risk Assessment are also incorporated for action, some of which have already been completed (eg. development of weekly environmental inspection program, completion of AS1940 compliance audit). Prioritisation of remaining action items will serve to focus management effort on those items with the most significant risk-mitigation value.

6.5 Management Programs and Plans

The following documents (as required by the Conditions of Consent for the 2005 Development Approval) were reviewed by URS:

- Water Management Plan, incorporating:
 - Erosion and Sediment Control Plan
 - Surface Water Monitoring Program
 - Groundwater Monitoring Program
 - Surface and Groundwater Response Plan
- Environmental Noise Management Plan
- Environmental Air Quality Monitoring Program
- Environmental Monitoring Program
- Subsidence Management Plans (SMP)

Subsidence management and the processes associated with the development of Subsidence Management Plans (SMPs) as well as an assessment of the adequacy of these processes is discussed separately in Sections 8 and 9.

The following general points are made regarding the adequacy of the management plans and monitoring programs:

- A number of management plans and monitoring programs were developed in 2007 and have not been updated by Clarence since that time. There is significant overlap amongst many of these documents, on the basis that they were developed in response to specific Development Consent requirements. There is an opportunity to consolidate/integrate and revise (where appropriate)

6 Review of Environmental Management System

existing management plans and monitoring programs to better reflect current operations, eliminate overlap and reduce the administrative burden associated with implementation, review and update. This should be done following discussions and obtaining input from the DoP regarding the ongoing use of the Plans for approval purposes.

- As development of the EMS occurred following that of the management plans and monitoring program, there is an opportunity to better integrate the former with the latter. Each plan should outline its strategic context in line with Clarence's EMS and Centennial Coal's Standards.
- The structure of the Plans is not very user friendly. The requirements and mitigation measures are often embedded or lost in volumes of text making the plans hard to implement and audit. The Plans could be greatly improved by having a table listing all of the management/mitigation measures required as part of the Plan. This could then be the basis of site's internal and external audit/review process for implementation of the Plans.
- The EMS framework document states that objectives will be set and performance indicators established through the development of the site's business plan. Objectives and targets of individual management plans and monitoring programs should be aligned with those articulated in the business plan.
- Centennial Coal's incident reporting requirements (as outlined in the Minimum Environmental Performance Standards for incident reporting (ECMS 03) and accompanying Guidance Notes) should be consistently referenced within Clarence's management plans. There is currently some inconsistency in incident notification requirements as prescribed in various plans.
- All management plans and monitoring programs include a commitment to annual review. Whilst it is understood that an informal review occurs annually during AEMR preparation, it is recommended that these reviews be formalised and documented, including rationale as to why plans/programs do not require updating.
- On the basis that native flora and fauna management and weed control are key environmental issues for the site and surrounds, it is considered appropriate that formal management plans/monitoring programs exist for these aspects. Clarence does not currently have a flora and fauna management plan for the pit top facilities area (it is noted that flora and fauna management is covered in detail in SMP processes above mining areas) or a weed management plan, although it is recognised that weed control activities are conducted. This also applies to rehabilitation, particularly of the Reject Emplacement Areas. Separate recommendations have been made elsewhere with respect to rehabilitation.

The findings of the review of the adequacy of the management plans / monitoring programs and subsequent recommendations are provided in Table 6-1.

6 Review of Environmental Management System

Table 6-1 Adequacy review of management plans / monitoring programs and recommendations

Management Plan / Monitoring Program	Adequacy Review and Recommendations
Water Management Plan (2007)	<ul style="list-style-type: none"> Clarence commenced investigations during 2008 of a long term water management strategy for the site. Investigations have continued through 2009 and 2010 via a Water Strategy group which includes cross-functional site representatives and external stakeholders. A number of improvement initiatives have already been implemented by the site including diversion of Polishing Lagoon water to a leachate borehole releasing only water treatment plant water through LDP002. Clarence Plan to continue the operation of the Water Strategy Group with an aim of continuous improvement in water management at the site. It is recommended that this process continue with regular review of the site's Water Management Plan as planned to reflect outcomes of the 2010 Environmental and Community Risk Assessment and water management strategy. It is recommended that Clarence obtain regular third party support/review of initiatives in this area to ensure ongoing continuous improvements leading to reduced non-compliances and improved water management is achieved. Further to this, improvements should continue to be reported regularly to government agencies through existing reporting structures (e.g. AEMR reporting and visits etc). Adopted surface water impact assessment criteria are aligned with EPL discharge limits, which URS considers appropriate in the absence of risk-based criteria derived on the basis of receiving waters monitoring and assessment. Two variations to the site's EPL discharge limit for filterable manganese have occurred since the plan was developed in 2007. It is recommended that the Water Management Plan (which is currently being reviewed by NOW) include the current EPL discharge limit for filterable manganese. On the basis that there has been long-term site discharge of treated water to the Wollangambe River system, it is considered appropriate that the existing surface water monitoring program be expanded to those water quality parameters as relevant in the Main Dam for comparison against relevant ecosystem protection guidelines. The frequency of monitoring would require further consideration. The site should consider derivation of risk-based criteria established on the basis of receiving waters monitoring, as described in the existing Water Management Plan. On the basis that a significant proportion of the site's treated water is utilised (via Farmers Creek) by Lithgow City Council for further treatment and potable water supply, it is recommended that Clarence consult with stakeholders (e.g. NOW, LCC) to develop a water quality monitoring programme for the water leaving site. This programme requires identification of relevant criteria, action levels, and associated corrective actions. URS notes that other mines in the region that have ongoing and significant water discharges to the environment have either been required by DECCW under pollution reduction programs or have self-initiated broader water quality and ecological assessment of waterways in catchments surrounding their operations. It is recommended that Clarence consider the implementation of additional water quality and ecological monitoring in downstream water ways to provide baseline data from which to assess potential changes to discharges that may occur in the future discharge volumes. It is noted that there is no licence with NOW for discharges from the surface to the mine workings. Clarence indicated that since the audit they have commenced the process to obtain such a licence. Once obtained, details for of this licence should be reflected in the Water Management Plan.
Environmental Noise Management Plan (March 2007)	<ul style="list-style-type: none"> Historic monitoring data and complaints history presented in the plan dates back to 2006. It is recommended that data since this time and other data as available be used to update the Plan. Noise mitigation measures prescribed in the plan date back to 2006. It is recommended that these measures be formally reviewed and updated as environmental controls supporting the site's EMS (refer Section 6.3).

6 Review of Environmental Management System

<i>Management Plan / Monitoring Program</i>	<i>Adequacy Review and Recommendations</i>
<i>Air Quality Monitoring Program (2007)</i>	<ul style="list-style-type: none"> • On the basis that the program is intended only to document and describe the site's air quality (dust) monitoring arrangements, it is considered to be generally adequate. • As appropriate, Clarence should consider inclusion in the program previous monitoring data and other contextual data as may exist. • All dust sampling and analysis is undertaken on behalf of the site by third-party analytical laboratory Australian Laboratory Services (ALS). It is recommended that the program include a description of respective roles, responsibilities and obligations of Clarence and ALS in relation to the site achieving and maintaining EPL and broader environmental regulatory compliance in the conduct of monitoring. • Depositional dust monitoring location DPG3 is intended to measure potential incremental off-site impact attributable to Clarence Colliery operations. As DPG3 appears to be influenced by adjacent third-party dust generating activities, the site proposes to relocate DPG3 to a sensitive receptor in Clarence Village after feedback is received from the DoP which URS considers appropriate. The plan should be updated to reflect any change in monitoring, as approved by DoP.
<i>Environmental Monitoring Program (2007)</i>	<ul style="list-style-type: none"> • On the basis that the program is intended only to document and describe the site's environmental monitoring arrangements, it is considered to be generally adequate. • Refer recommendations made for other plans/programs in relation to monitoring above.

Subsidence Management

7.1 Background

Subsidence is currently being managed under several Subsidence Management Plan (SMP) Approvals relating to the various areas of underground operations at Clarence, including:

- Panels 314 & 316 (February 2010)
- 700 Area (May 2009)
- Partial Extraction of CCL705 Outbye Areas (May 2009)
- Eastern Extraction Area (July 2006)

The subsidence management plans are all based on the following key elements:

- Subsidence prediction specific to the particular site and infrastructure or features
- Risk assessment – damage impacts, likelihood, consequences
- Partial extraction system designed to limit subsidence to a value well within that considered to be characteristic of ‘elastic’ overburden behaviour (i.e. no caving to surface) thereby protecting surface features
- Trigger Action Response Plans (TARPs) for each element of interest
- Subsidence monitoring to assess performance against prediction and action triggers

The SMPs have been prepared in accordance with the *Guidelines for Subsidence Management Approvals, December 2003* published by the then NSW Department of Mineral Resources (generally referred to as the *SMP Guidelines*), with each SMP Application including the following key elements:

- **SMP Written Report** (Volume 1 of the SMP Application), which provides the technical detail for the application, including mining systems, site conditions, prediction of subsidence and assessment of subsidence effects
- **Subsidence Management Plan** (the SMP, Volume 2 of the application), which provides the implementation and administrative framework for subsidence management, including general monitoring requirements for key aspects including coal pillar stability, surface subsidence deformations, surface water, groundwater, flora, fauna, aboriginal archaeology and heritage, firetrails, powerlines and telecommunications lines, and private property.
- **SMP Approved Plan**, and other SMP Plans to support Volumes 1 and 2.

Under the SMP, details of the monitoring of subsidence effects are managed via the applicable

- **Environmental Monitoring Program** (typically for groundwater, surface water, flora, fauna (including swamps) and archaeology)
- **Subsidence and Underground Monitoring Program** (for pillar performance, subsidence surveys, pagoda and cliff condition, general surface inspection).

7.2 Plan Development

7.2.1 Partial Extraction Layout Design and Subsidence Prediction

After operating as a bord and pillar mine from 1979, for several years from 1993 Clarence Colliery carried out longwall extraction. This was not successful due to unfavourable geological and geotechnical conditions, and since its acquisition by Centennial Coal in 1998, mining at Clarence has involved partial extraction using bord and pillar techniques. The basis of the extraction method is to

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keep roof spans sufficiently short to restrict any caving effects to the immediate roof strata, and for the remnant coal pillars and barriers to be permanently stable. Under these conditions, strata conditions from seam floor to surface are intended to remain “elastic”, and as a consequence surface subsidence can be considered to be approximated by the “elastic” compression of the pillars and their immediate roof and floor strata. As part of the design study for the 700 area SMP, numerical modelling was carried out using a three-dimensional displacement discontinuity code “Lamodel” to verify that the simplified analysis method provides a reasonable assessment of surface subsidence movements for the adopted partial extraction system.

The DoP development approval conditions typically require that subsidence generated by the development does not exceed 20mm for first workings, and 100mm for partial extraction, with tilt limits of 1 mm/m and 3 mm/m respectively, and strain limits of 1 mm/m and 2 mm/m respectively (it is noted that the approvals for Partial extraction is part of the SMP process).

Consequently, the design of the underground workings to achieve satisfactory subsidence performance consists of two main steps:

- Design of the partially extracted workings layout to result in pillars which have adequate long-term stability
- Assessment of expected subsidence due to the elastic compression of the pillars and their immediate roof and floor strata as a consequence of the stress increases due to the partial extraction, to confirm that subsidence effects are likely to be within the approval limits noted above.

Most of the partial extraction at Clarence has involved bord and pillar panels incorporating 7 headings, and consequently there is extensive experience and performance data available on the design of suitable layouts for both stability and subsidence. For the 700 area, detailed design has also been carried out for 5- and 3-heading layouts intended to achieve similar stability and subsidence outcomes to the 7 heading layout. (Both 7-heading and 5-heading panels are in fact being worked in the 700 area, but we understand that at present it is unlikely that a 3-heading layout will be carried out in the future). For some of the CCL705 Outbye areas, the existing bord and pillar first workings do not follow the 5 or 7 heading layouts, and for these areas each such panel was considered individually in detail as part of the stability and subsidence assessment.

The design of the partial extraction arrangements for stability and subsidence has been carried out by Strata Engineering (Australia) P/L, a Newcastle-based consultancy with specialist expertise in coal mine strata control and subsidence. For the 700 Area study, an independent review of Strata Engineering’s report was carried out by Professor Bruce Hebblewhite in September 2008, in his private capacity as an independent consultant. Professor Hebblewhite previously carried out a similar review of Clarence Colliery partial extraction stability design assessment in 2002, which dealt specifically with the 7 heading layout. Professor Hebblewhite’s 2008 review supported the 7 and 5 heading layouts; in the case of the 3 heading layout, the design assessment was supported at least for the first panel, in conjunction with recommendations for extensive monitoring and back-analysis for validation of the design.

An important aspect of the underground design and subsidence management process at Clarence is the requirement that each panel or sub-panel proposed for partial extraction (i.e. beyond first workings) is geologically mapped and assessed by the design consultant following completion of first workings. Detailed requirements for pillar stripping are developed based on the underground

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assessment, together with any requirements for non-routine placement or provision of monitoring instrumentation. The underground assessment includes audit of pillar conditions and dimensions, working heights, and roof and floor conditions, so that any variation from the norms adopted for the original design assessments can be taken into account.

7.2.2 Trigger Action Response Plans

Based on the pillar stability and subsidence design assessments, and on the results from a risk assessment, a Trigger Action Response Plan (TARP) has been developed for each SMP, addressing the broad areas of

- Pillar stability (including pillar size, roadway height, rib spall and deformation, roof falls, geological structure)
- Subsidence (after-mining measured subsidence)
- Environment/Public Safety (including piezometric head change, water quality change, surface cracking, cliffline/pagoda instability, underground water make)

The TARPs are consistent across the various SMP areas, and hence there is effectively a common TARP applicable to the entire area of partial extraction operations for Clarence Colliery.

7.2.3 Subsidence Monitoring

Extensive subsidence monitoring by conventional survey methods along panel centrelines and crosslines has been and is being carried out within the various areas of partial extraction. Monitoring frequencies vary depending on the locations of the subsidence lines in relation to the partial extraction panels which could influence them, but the intent is that as a minimum there will be pre-extraction and post-extraction surveys. Because of the rugged terrain particularly associated with gorges and cliff-lines within and bordering the Newnes Plateau, some subsidence monitoring is being carried out on individual rock marks rather than conventional close-spaced pegs, and photographic monitoring of cliffs and pagodas is also an important element of the subsidence monitoring program for some areas.

The monitoring requirements are set out in the various Subsidence and Underground Monitoring Programs (approved by the Principal Subsidence Engineer), and are managed via a "SMP compliance task list" spreadsheet. On a four-monthly basis a Subsidence Management Status Report is provided to various regulatory authorities.

7.2.4 End of Year Report

The various SMP approvals include the requirement to prepare an end of year report (within the first 3 months of the subsequent year) which includes a summary of subsidence and associated environmental monitoring for the year, analysis of these results against the relevant impact assessment criteria, identification of any trends in monitoring results, and description of any actions taken to manage potential subsidence impacts due to mining. The report incorporates all SMP areas, and is publicly available via the Centennial website.

7.2.5 Calibration and Updating of Subsidence Procedures

The post-extraction audits of underground conditions by Strata Engineering (Australia) P/L, which include confirmation of actual final pillar dimensions and general condition, pillar stripping depths and

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working heights, floor heave checks, and review of underground instrumentation data, allow Strata Engineering to calibrate and, if necessary, progressively update their design assessments of pillar and roof stability. There is ongoing review of surface subsidence effects (survey, surface inspections, photographic records) for the Subsidence Management Status Reports and the End of Year Reports, and in the event of significant differences to predicted behaviour, Strata Engineering carry out a more detailed assessment (for example, the review of H and I lines subsidence, Strata Engineering report 04-001-CLA 82, November 2009).

7.2.6 Public Safety Management Plans

Because the partial extraction at Clarence produces only very minor surface effects which would not be expected to create any risk to the public, the public safety management plans are incorporated within the Subsidence and Underground Monitoring Programs, with TARPs associated with surface cracking, cliffline damage or instability, and pagoda damage or instability. Subsidence sufficiently great to cause surface effects with potential for public risk would necessarily be a consequence of significantly anomalous underground behaviour, which would most likely become apparent before being observed on the surface, and hence the underground monitoring program is in fact a key feature of public safety management.

7.3 Adequacy Assessment and Recommendations

It is considered that subsidence effects are being adequately managed via the various SMPs and their key operational elements, the Subsidence and Underground Monitoring Programs, and the Subsidence Management Status reports and End of Year Reports.

While there are at least four key SMPs, and several other SMPs relating to individual panels, their structure and requirements are consistent across all partial extraction areas at Clarence, and for practical operational purposes they can be considered as “the” SMP.

Subsidence management at Clarence is really driven by creating long-term stable pillars and ribs, roof and floor, and hence the key aspect of the subsidence management system is designing suitable underground layouts, and confirming their effectiveness via underground observation and monitoring. The system of pre- and post-extraction audit of each panel is considered to be a satisfactory way of managing underground stability for long-term subsidence control.

The main practical purpose of the surface survey monitoring of subsidence lines and points is to provide readily understood evidence that the subsidence control criteria are being achieved.

However, with the vertical subsidence movements being so small (typically less than 50mm), it is considered that conventional interpretation of strain and tilt via the differential levels and distances between close-spaced surface pegs is of limited benefit. The practical reality is that with such minor vertical subsidence, it is almost certain that strains and tilt will be well within the approval criteria.

There is therefore a good case to be made for further reduction in the use of conventional subsidence lines of close-spaced pegs, and more reliance being placed in monitoring for vertical subsidence only, at wider spaced pegs and individual points.

Audit of Subsidence, Groundwater and Surface Water Impacts

8.1 Introduction

Under Schedule 5 of the Development Consent DA504-00, the 5-yearly independent environmental audit is to include a detailed audit of the subsidence, surface water and groundwater impacts of the development, which shall

- a) *Review the monitoring data for the development*
- b) *Identify any trends in the monitoring data*
- c) *Examine the subsidence, surface water and groundwater impacts of the development*
- d) *Compare these impacts against the relevant impact assessment criteria; and, if necessary*
- e) *Recommend measures to reduce, mitigate or remediate these impacts.*

Dr Neil Mattes, Senior Principal Geotechnical Engineer at URS, undertook the review. The following section of the report details the approach taken and the findings of the review. The review only deals with subsidence related impacts for the period from the DOP (2005) approval.

The primary source of information for the present audit has been the following reports prepared by Clarence Colliery Pty Ltd:

- 2009 End of Year Subsidence Management Report, dated 30 March 2010
- Subsidence Management Status Report – Four Monthly Update – 1 November 2009 to 28 February 2010, dated 30 March 2010
- Subsidence Management Status Report – Four Monthly Update – 1 July 2010 to 31 October 2010, dated 24 November 2010

URS has not conducted any independent measurements or sought to verify data contained in the above reports.

8.2 Subsidence

8.2.1 Impact Assessment Criteria

The key subsidence impact criteria for the partial extraction areas at Clarence are:

- Subsidence not to exceed 100mm
- Tilt not to exceed 3mm/m
- Strains not to exceed 2mm/m

These criteria are representative of very small to negligible subsidence impacts, and this needs to be kept in mind when reviewing monitoring data, as the subsidence survey provisions and techniques which are accepted good practice have generally been developed to deal with surface movements an order of magnitude greater than those typically expected and experienced at Clarence. With the much smaller movements at Clarence, the inherent accuracy of the survey methods is often of the same order as the actual movements, and consequently plotted data, which at first glance might suggest substantial changes in subsidence effects, may really just be showing the inherent “noise” in the monitoring methods.

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8.2.2 Subsidence Data Review, Trend Identification

Subsidence data for 15 survey peg lines is presented in the three reports reviewed. In the vast majority of cases, the maximum measured subsidences are typically less than 40mm, and any increases in subsidence between surveys over the monitoring periods (which in some cases extend over 5 years or more) are associated with further extraction within their zone of influence. There is no trend in the monitoring data to date which would suggest that there is significant time-related increase in subsidence in areas where mining has ceased.

In only one area, involving several adjacent points along the “I” line above the spine pillars of 612 panel, has the subsidence limit of 100mm been exceeded (102mm in the October 2010 survey). The anomalous performance in this area has been reviewed in detail by Strata Engineering (Australia) P/L, and it has been assessed that bottom coaling in the adjacent 610 panel is likely to have influenced the result: this practice has long since ceased at Clarence, and has not occurred since the date of the 2005 approval. Panel 612 is not located within the lease extension areas covered under Development Consent DA 504-00.

Strains and tilts have been consistently below the acceptance criteria, and usually less than 50% of the limits. Moreover, the plots of tilt and strain typically show a “sawtooth” picture of reversal of strain/tilt direction between adjacent survey stakes which indicate that survey accuracy limits (for level and/or measured distance between pegs) and/or climatic moisture-related movements of the surface soils in which the pegs are embedded are dominating the very small “true” strains and tilts associated with the small vertical subsidence movements. Particularly to put these sawtooth plots into a more realistic overall perspective, consideration could be given to scaling the movement axes on the graphs such that the acceptance criterion limit (subsidence, strain or tilt) is included in each plot (i.e., for tilt plots the vertical axis would extend to $\pm 3\text{mm/m}$, for strain plots the vertical axis would extend to $\pm 2\text{mm/m}$).

There have been no observations during site inspections by the Colliery or by the auditors of surface cracking, or of visible effects on cliff lines and pagodas.

8.2.3 Subsidence Impacts

The survey monitoring results, photographic records, and general surface observations on the Newnes Plateau all support the assessments made by Clarence Colliery, that to date the surface impacts of subsidence due to the partial extraction operations have been negligible. While in one small area above the spine pillars of 612 panel the vertical subsidence has reached the specified acceptance criterion of 100mm vertical movement, the practical impact of such movement is still negligible, and URS does not consider there is a need to take any measures to reduce, mitigate or remediate this impact.

8.3 Groundwater

8.3.1 Impact Assessment Criteria

The key groundwater impact criteria for the partial extraction areas at Clarence (as based on Development Approval Consent Conditions) are:

- No significant inflows to mine workings

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- No reduction in pumping yields in privately-owned groundwater bores
- No reduction in surface flows and groundwater baseflow to upland swamps and wetlands
- No reduction in flows and groundwater baseflow to waterbodies (excluding reduction in flows associated with the water transfer scheme)

Comprehensive studies by several different Consultants over the life of Clarence Colliery to date have all concluded that the aquifers which affect groundwater bores in Clarence village and its surroundings (the only private groundwater bores in the area), and which provide base flow to swamps and major watercourses in the area, are all within the upper major rock stratum, the Banks Wall Sandstone (110 to 250m thick), with the relatively thin Mount York Claystone which underlies it forming an aquiclude that prevents groundwater travelling between the overlying stratum and the underlying strata, which include the Katoomba Coal Seam.

Consequently, the key element of the groundwater monitoring program is the measurement of piezometric head at various levels within the Banks Wall Sandstone, and assessing whether there is any causal relationship between changes in piezometric conditions and underground mining activities. The Clarence Colliery Water Management Plan (document CL-EWP-P-040) includes a comprehensive description of the groundwater monitoring provisions and groundwater behaviour up to the end of 2006.

8.3.2 Groundwater Data Review and Trend Identification

Groundwater conditions above the partial extraction areas at Clarence Colliery are monitored via piezometer-equipped boreholes distributed as follows:

<i>CLRP1, 2, 3</i>	<i>Eastern Area SMP</i>
<i>CLRP4</i>	<i>South of mining areas, near Clarence village</i>
<i>CLRP8</i>	<i>In Clarence village</i>
<i>CLRP5, 6, 7, 10, CC113</i>	<i>700 Area SMP</i>
<i>CC114, CC115</i>	<i>Future 800 Area</i>
<i>HV1, 2 and HVU1, 2</i>	<i>Shallow piezometers at Happy Valley swamps</i>

CLRP1, 2, 3, 4 and 6 involve multiple piezometers at various levels above and below the Mount York Claystone. HV1, 2 and HVU1, 2 are shallow piezometers at the Happy Valley swamps. The remaining locations involve single piezometers in the Banks Wall Sandstone within the main aquifer zone typically at about 60m depth.

The most recent comprehensive presentation of groundwater piezometric monitoring data available at the time of the audit is provided in the 2009 End of Year Report and the February 2010 Status report. In those reports the results are mostly plotted as change in piezometric level against time, which allows relatively small changes in piezometric level to be shown. Furthermore, in their several assessments of the potential groundwater effects of Clarence mining, Aurecon (Connell Wagner) have plotted the piezometric data in terms of “true scale” Reduced Levels, which gives a better overall picture of piezometric conditions. The most recent Aurecon plots available for this review (September 2008) are reproduced in Figures 1, 2 and 3 for the key groundwater monitoring installations CLRP1, 2

8 Audit of Subsidence, Groundwater and Surface Water Impacts

and 3 in the eastern SMP area, together with the corresponding data plots from the 2009 End of Panel report, which extends the plotted data coverage to the end of 2009.

The 2009 End of Year report also includes a plot of piezometric levels (as Reduced Levels) for seven piezometers located within the main aquifer of the Banks Wall Sandstone (at about 60m depth) above the 700 area on the western side of the lease, for the period January-December 2009. These piezometers typically showed stable, or slightly rising, piezometric levels over the year, indicating a lack of impact from mining activities; the first panel in this area was extracted over the period August-December 2009.

The groundwater monitoring data up to late 2008 has been subjected to extensive interpretation and discussion in the Aurecon/Connell Wagner report 23063-002 (2008), expanding on previous detailed consideration in a Connell Wagner report on potential impacts of mining on the local hydrogeology (2005) and a report by ERM on Clarence Colliery groundwater investigation in 2003.

Overall, there are no obvious trends in the groundwater monitoring data for piezometers above the Mount York claystone which appear to be potentially mining-related. The detailed review of groundwater monitoring data provided in the 2008 Connell Wagner report indicates that the piezometers above the Mount York Claystone respond to rainfall conditions (i.e., they showed a slow decline during an extended dry period between mid 2005 and mid 2007, and a rise following a major rainfall event in June 2007, with these changes showing no correlation with mining activities). We consider that this is a realistic interpretation of the available data, and the 2009 monitoring of the piezometers in the Mount Banks Sandstone aquifer above the 700 area further supports this assessment.

8.3.3 Subsidence Impacts on Groundwater

All private groundwater bores in the area are located within the Banks Wall Sandstone, and the aquifers which contribute base flow to the Newnes Plateau swamps are in the Banks Wall Sandstone.

The groundwater piezometric monitoring has not revealed any adverse impact on the aquifers in the Banks Wall Sandstone which can be attributed to or correlated with the mining being carried out by Clarence Colliery. This is in accordance with the assessments of the various hydrogeological studies which have been carried out in relation to the area, which have concluded that the Mount York Claystone which immediately underlies the Banks Wall Sandstone is an aquiclude, and that the small movements and strains associated with the partial extraction mining would not be expected to significantly change its hydrological behaviour. Consequently, drainage from the aquifers through the claystone and potentially into the Katoomba Seam workings has been assessed to be very unlikely.

The only apparent mining-related impact on the Banks Wall Sandstone detected to date has been a step rise in piezometric pressure of up to 10m in the three piezometers above the Mount York Claystone in monitoring bore CLR P2 in August 2006, before the borehole was undermined but while pillar extraction was being carried out in the adjacent panel. The assessment was that this behaviour was most likely due to stress changes in the overburden strata caused by the mining resulting in porewater pressure increases in confined, low permeability strata in the vicinity of the piezometers. It was assessed that even though the piezometers were indicating an increase in pore-pressure, it was unlikely that there would have been a significant rise in the actual groundwater level in the upper unconfined aquifer from which most groundwater bores draw their supplies.

8 Audit of Subsidence, Groundwater and Surface Water Impacts

As would be expected, the piezometric monitoring has confirmed that mining of the Katoomba Seam in their vicinity can result in a rapid loss of piezometric head due to drainage into the workings. As no groundwater bores draw from this stratum, there is no impact on bore pumping yields.

The piezometric monitoring at location CLR P1 indicates there was some temporary mining-related reduction in piezometric level in the aquifer immediately above the Katoomba Coal Seam, with a 23m loss which had recovered 2 months after mining had been completed. As no groundwater bores draw from this stratum, there is no impact on bore pumping yields.

(While in the earlier history of Clarence Colliery there was longwall mining and associated subsidence-related impacts, as noted previously the present audit has only dealt with the period post the 2005 DOP approval.)

8.4 Subsidence Impacts on Surface Water

The key subsidence-related surface water impact criteria as indicated in the Development Consent for the partial extraction areas at Clarence are:

- No reduction in surface flows and groundwater baseflow to upland swamps and wetlands
- No reduction in flows and groundwater baseflow to waterbodies (excluding reduction in flows associated with the pumping of mine water to the surface)

The potential impacts of subsidence on surface water and swamp hydrology are most readily and clearly identified via the groundwater piezometric monitoring of the shallow aquifers which provide their base flows, as discussed in detail in Section 3 above.

Potential changes in surface flow due to ground level changes caused by mine subsidence will be negligible unless the surface settlements greatly exceed the nominated 100mm criterion for Clarence. As detailed in Section 2, subsidence to date has been typically significantly less than 100mm, and there would have been no impact on surface water flows.

Potential changes in surface flow due to subsidence-related cracking will be negligible unless the surface strains greatly exceed the nominated 2mm/m criterion for Clarence. As detailed in Section 2, strains to date have been typically significantly less than 2mm/m, and there has been no surface cracking observed during inspections and monitoring activities, and consequently it is considered there would have been no cracking-related impact on surface water flows.

8.5 Conclusions

The monitoring data relating to subsidence, groundwater and surface water has been reviewed for the period August 2004 to October 2010.

This review supports the assessments by Clarence Colliery and its various Consultants that subsidence-related impacts of the partial extraction are minimal, and are within the impact assessment criteria nominated for the development.

As the impacts are minimal, there are no recommendations to reduce, mitigate or remediate them.

Summary of Non Compliances and Recommendations

Some non compliances have been identified with the Development Consent Conditions, EPL conditions and Mining Lease conditions. These non compliances as well as the requirements assessed as indeterminate and the associated recommendations have been consolidated and are summarised in Table 9-1 below. For a number of requirements that were assessed as compliant or not applicable, recommendations were made where continuous improvements were identified. These requirements and recommendations are summarised in Table 9-2. Recommendations relating to the adequacy of the various plans / programs are included in Table 6-1 and have not been reproduced in this Section.

9 Summary of Non Compliances and Recommendations

Table 9-1 Summary of conditions / requirements assessed as non compliant or indeterminate and recommendations

Condition / Requirement.	No.	Summary of Condition / Requirement	Comment	Compliance Status and Recommendation
DA 504-00 Development Consent	S2- 8	<p>The Applicant shall ensure that all new buildings, structures, and any alterations to existing buildings and structures are constructed in accordance with the relevant requirements of the BCS.</p> <p>Notes:</p> <ul style="list-style-type: none"> -Under Part 4A of the EP&A Act, the Application is required to obtain construction and occupation certificates for any building works. -Part 8 of the EP&A Regulation sets out the requirements for the certification of development. 	<p>The site advised that two (2) new sheds have been erected at the site since 2005 - Flexible conveyor train (FCT) shed (2010) and one additional shed. URS sighted specifications and drawings for these sheds (G&S Sheds Design and Drawings) which have been signed-off by a registered engineer, but for which BCA compliance statements have not been provided.</p> <p>The site understands that the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 [2007-65] provides a basis for exempting its requirements to obtain construction and occupation certificates. URS considered that legal opinion would need to be sought in relation the applicability of these provisions and hence have defined compliance with this condition as Indeterminate.</p>	Indeterminate
DA 504-00 Development Consent	S3- 3	<p>Pollution of Waters</p> <p>Except as may be expressly provided by an Environment Protection Licence, the Applicant shall comply with section 120 of the Protection of the Environment Operations Act 1997 during the carrying out of the development.</p>	<p>s120 of the POEO Act relates to the prohibition of pollution of waters, and provides:</p> <p>(1) A person who pollutes any waters is guilty of an offence.</p> <p>(2) In this section:</p> <p>"pollute" waters includes cause or permit any waters to be polluted</p> <p>URS interprets this provision to mean non-compliance with EPL discharge limits, amongst other potential actions. A number of non-compliances with the site's EPL have occurred, as described under EPL L3 below.</p>	Non-Compliant (refer L3.1 and L3.2 below)
DA 504-00 Development Consent	S3- 6	<p>Commitments articulated in the endorsed Water Management Plan include:</p> <ul style="list-style-type: none"> □ Site surface water management arrangements, including separation of clean and dirty water, sediment control structures and treatment □ Site groundwater management arrangements, including 	<p><u>Implementation</u></p> <p>Commitments of the endorsed Water Management Plan appear to have been generally implemented, with a number of water management improvements made in recent years. The following exceptions are noted:</p> <ul style="list-style-type: none"> ▪ The Trigger Action Response Plan (TARP) for Surface Water described in the Plan (s7.7) prescribes immediate 	<p>Non-Compliant (Implementation)</p> <p>Recommendation:</p> <p>It is recommended that Clarence Colliery prepare a local amendment to its adopted Centennial Coal</p>

9 Summary of Non Compliances and Recommendations

Condition / Requirement.	No.	Summary of Condition / Requirement	Comment	Compliance Status and Recommendation
		extraction, dewatering and treatment <input type="checkbox"/> Implementation of surface water and groundwater monitoring as described in the separate Environmental Monitoring Program <input type="checkbox"/> Meteorological monitoring <input type="checkbox"/> Reporting of monitoring results through the AEMR (as per DA 504-00 S5-5) <input type="checkbox"/> Audit and review	notification to DEC [sic] and DoP in the event of a one-off or recurrent exceedance of EPL discharge conditions. This has historically not occurred (refer DA 504-00 S4-1 above), however, is now being undertaken with the first notification of a TSS exceedance occurring in Dec-10. <ul style="list-style-type: none"> A lack of daily volumetric for discharge LDP002 for a period during 2009 due to equipment failure (EPL Condition M6.1). A detailed assessment of the presence and operation of site erosion and sediment control structures was not undertaken by URS. However, some areas of washouts were observed after heavy rainfall prior to the audit inspections. These occurred at road batters on access roads to the main dam (see photos). 	Incident Reporting procedure reflecting its commitment to routinely report all non-compliances to DoP and DECCW or else obtain re-endorsement of a revised Water Management Plan It is recommended Clarence implement measures to address localised erosion issues near access roads to the main dam.
DA 504-00 Development Consent	S3- 14	Commitments articulated in the endorsed Air Quality Monitoring Program relate to the implementation of particulate and deposited dust monitoring (with nominated frequency, duration and method), notification in the event of an exceedance of adopted performance criteria and the annual internal audit and update (as required) of the Program	<u>Implementation</u> A review of primary and secondary dust monitoring records from 2009 and 2010 as documented by the site in <u>2009 Clarence - Centennial.xls</u> and <u>2010 Clarence - Centennial.xls</u> indicates the implementation of nominated deposited dust monitoring. Notifications described in the Plan have yet to be triggered. An informal annual review of the Plan is undertaken by the Environmental Coordinator during preparation of the site's AEMR. Nominated total solid particulate (TSP) and particulate matter less than 10 micron (PM ₁₀) monitoring occurred during 2007 and was not re-implemented until December 2009 – select monitoring data was sighted by URS. On the basis that the Department of Planning does not allow for an assessment of 'partial compliance', implementation of the Air Quality Monitoring Plan has been assessed as non-compliant	Non-Compliant (Implementation 2007 - December 2009) Recommendation: It is recommended that TSP and PM ₁₀ monitoring arrangements as described in the endorsed Air Quality Monitoring Program continue to be implemented.
DA 504-00 Development Consent	S3- 16	Commitments articulated in the endorsed Environmental Noise Management Plan relate to the implementation of noise monitoring (with nominated frequency, duration and method), train loading and rail operations noise mitigation measures, notification	<u>Implementation</u> A review of noise monitoring records from 2007 and 2009 indicates the implementation of nominated noise monitoring for 2007 - 2008, however, no noise monitoring was	Non-Compliant (Implementation) Recommendation: It is recommended that

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		in the event of an exceedance of adopted performance criteria and the annual internal audit and update (as required) of the Program	undertaken during 2009. Noise monitoring has not consistently been undertaken in the month of March (eg. 2008) as prescribed in the endorsed Plan. URS is not aware that these deviations from endorsed monitoring arrangements has been agreed with DoP Implementation of noise minimisation commitments were unable to be assessed. Notifications described in the Plan have not been triggered during the audit period. An informal annual review of the Plan is undertaken by the Environmental Coordinator during preparation of the site's AEMR	noise monitoring be consistently undertaken in accordance with the endorsed Environmental Noise Management Plan.
DA 504-00 Development Consent	S3- 17	Meteorological Monitoring Within 6 months of the date of this consent, the Applicant shall establish and subsequently maintain a suitable meteorological station operating in the vicinity of the development in accordance with the requirements in Approved Methods for Sampling of Air Pollutants in New South Wales, and to the satisfaction of the DEC and the Director-General.	The site has developed a Meteorological Conditions Monitoring Program contained within the <u>Clarence Colliery Environmental Monitoring Program (CL-EWP-P-050 Rev1)</u> , as reviewed by URS. The site's arrangements for meteorological monitoring have been approved by the DoP Director General as described in the Department's letters <u>Clarence Colliery - Meteorological Station dated 26 March 2007</u> and <u>Clarence Colliery - Environmental Management Approvals (DA 504-00) RefS02/02820 dated 25 July 2007</u> . An independent review of compliance with the NSW EPA Approved Methods for Sampling of Air Pollutants in New South Wales has not been undertaken by URS. Meteorological monitoring was not undertaken for periods during 2009 and 2010 as a result of equipment failure. Site indicated that met station was not operating for a period of at least 16 weeks in 2010. Clarence advised the DoP of the failure of the equipment in a letter dated 9 September 2010 and sought approval to install a new meteorological station. No response was received from the DoP. A new Met Station was installed in Sept 2010.	Compliant at time of audit Non-Compliant (2009 - September 2010)
DA 504-00 Development Consent	S3- 26	Dangerous Goods The Applicant shall ensure that the storage, handling, and transport of dangerous goods is done in accordance with the relevant Australian Standards, particularly AS 1940 and AS1596,	The site commissioned an external compliance assessment as documented in <u>Centennial Coal Company Ltd Clarence Colliery Pty Ltd AS1940:2004 Audit Report (GHD Oct-10)</u> , which assessed the site's fuel facilities. The audit identified	Non-Compliant Recommendation: Implementation of corrective actions

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		and the Dangerous Goods Code.	<p>several improvement actions to bring site fuel and oil storages into compliance with AS1940. In general, identified non-compliances were minor in nature (housekeeping or procedural), however, several issues considered by GHD to be critical were identified which require immediate action:</p> <ul style="list-style-type: none"> installing (or identifying) emergency shut-off/circuit breaker devices for dispensers installing appropriate signs at each facility, including emergency shut-off reconciling inventories of diesel delivered, stored and dispensed re-instating assess to the pit top waste oil underground tank (obscured by a skip) reviewing emergency procedures and ensuring these documents are reviewed as scheduled implementing or updating maintenance procedures to over regular testing, inspection and monitoring of tanks, pipelines, valves, hoses and pumps 	recommended by GHD in its AS1940:2004 compliance audit should continue, with a focus on those non-compliances assessed as critical and those items previously unable to be assessed.
DA 504-00 Development Consent	S5- 1	<p>Commitments articulated in the endorsed Environmental Management Strategy include:</p> <ul style="list-style-type: none"> Identification and evaluation of environmental aspects, potential impacts and subsequent development of mitigation measures Implementation of an inspection and monitoring program to assess the effectiveness of environmental management measures Annual review of the site's Water Management Plan, Air Quality Monitoring Plan and Environmental Noise Monitoring Plan Implementation of the site's Environmental Monitoring Program, including cumulative impact monitoring Non-compliance and emergency procedures, including notification of EPL/DC discharge criteria and notification of potential or actual material environmental harm 	<p><u>Implementation</u></p> <p>Generally the Strategy was being implemented.</p> <p>However, some deficiencies in the implementation of elements of the Environmental Management Strategy commitments during the audit period have been identified as described under DA 504-00 S3-14 (lack of TSP and PM₁₀ monitoring the period 2008 through Dec-09), DA 504-00 S3-16 (lack of noise monitoring in 2009), DA 504-00 S3-17 (lack of meteorological monitoring during 2009 and 2010 due to equipment failure),</p> <p>The site's endorsed EMS (s5.4) prescribes that "should the (site's environmental) monitoring program detect an exceedance in licence or DC criteria but there is no actual or potential material harm to the environment, then the DEC [sic] and/or DoP as relevant will be informed in writing. This has</p>	<p>Non-Compliant (Implementation)</p> <p>Recommendation:</p> <p>Refer DA 504-00 S3-14, DA 504-00 S3-16, DA 504-00 S3-17, EPL Condition R2.</p> <p>It is recommended that Clarence Colliery prepare a local amendment to its adopted Centennial Coal Incident Reporting procedure reflecting its commitment to routinely report all non-compliances to DoP and</p>

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Condition / Requirement.	No.	Summary of Condition / Requirement	Comment	Compliance Status and Recommendation
		<ul style="list-style-type: none"> Community consultation Management review of EMS within 3 months of Independent Environmental Audit 	historically not occurred (refer S4-1 above), however, is now being undertaken with the first notification of a TSS exceedance and depositional dust exceedances occurring in Dec-10. Other commitments of the EMS appear to have been implemented.	DECCW or else obtain re-endorsement of a revised Environmental Management Strategy
DA 504-00 Development Consent	S5- 3	Commitments articulated in the endorsed Environmental Monitoring Plan include: <ul style="list-style-type: none"> Implementation of the Air Quality Monitoring Program Implementation of the Environmental Noise Management Plan monitoring requirements Implementation of surface water and groundwater monitoring Meteorological monitoring Reporting of monitoring results through the AEMR (as per DA 504-00 S5-5) Audit and review 	<u>Implementation</u> Monitoring as required by the Plan has generally been implemented. Some deficiencies in the implementation of elements of the Environmental Monitoring Program commitments during the audit period have been identified as described under DA 504-00 S3-14 (lack of TSP and PM ₁₀ monitoring during the period 2008 through Dec-09), DA 504-00 S3-16 (lack of noise monitoring in 2009), DA 504-00 S3-17 (lack of meteorological monitoring during 2009 and 2010 due to equipment failure), EPL Condition M6.1 (lack of daily volumetric for discharge LDP002 for a period during 2009 due to equipment failure). Other commitments of the EMS appear to have been implemented. On the basis that the Department of Planning does not allow for an assessment of 'partial compliance', implementation of the Environmental Monitoring Program has been assessed as non-compliant	Non-Compliant (Implementation) Recommendation: Refer DA 504-00 S3-14, DA 504-00 S3-16, DA 504-00 S3-17, EPL Condition M6.1.
DA 504-00 Development Consent	S5- 5	Annual Reporting The Applicant shall prepare and submit an AEMR to the Director-General and the relevant agencies. This report must: (a) identify the standards and performance measures that apply to the development; (b) describe the works carried out in the last 12 months; (c) describe the works that will be carried out in the next 12 months; (d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous	The site's AMERs to date have not included items: (e) water discharge monitoring - pH, TSS, filterable manganese and oil & grease monitoring results have been report, however, monitoring of other parameters required under the EPL have not been reported (f) water discharge monitoring - not all monitored parameters have been analysed against the relevant requirements as listed in the condition g) AEMRs do not generally report trending of data over the life of the project e.g. water data. The site has advised that the above items will be included in	Non-Compliant Recommendation: It is recommended that the site expand the content of its 2010 AEMR as proposed to include the previously omitted items.

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		<p>years;</p> <p>(e) include a summary of the monitoring results for the development during the past year,</p> <p>(f) include an analysis of these monitoring results against the relevant:</p> <ul style="list-style-type: none"> — impact assessment criteria; — monitoring results from previous years; and — predictions in the EIS; <p>(g) identify any trends in the monitoring results over the life of the development;</p> <p>(h) identify any non-compliance during the previous year; and</p> <p>(i) describe what actions were, or are being taken to ensure compliance.</p>	its AMER for the 2010 reporting period.	
DA 504-00 Development Consent	S5- 12	<p>During the life of the development, the Applicant shall:</p> <p>(a) make a summary of the results of all monitoring required under this consent publicly available both at the mine and on the Applicant's website; and</p> <p>(b) update these results on a regular basis (at least every 3 months), to the satisfaction of the Director-General,</p> <p>Note: The Applicant's environmental management plans/protocols should specify the reporting provisions for each environmental aspect.</p>	<p>Monitoring results from the previous 12 months (January - June 2010 and January to September 2010) were available at the mine and on Centennial Coal's website at http://www.centennialcoal.com.au/index.php?option=com_content&view=article&id=601&Itemid=48 at the time of the audit.</p> <p>Results were last updated in September 2010 and are regularly updated. However, the requirement to update the web site at least every 3 months did not appear to be met.</p> <p>On the basis that DoP does not allow for an assessment of 'partially compliant', this item has been assessed as non-compliant.</p>	<p>Non-Compliant</p> <p>Recommendation:</p> <p>It is recommended that environmental monitoring results be updated on the site's website every 3 months as prescribed</p>
1976 Development Consent	5	Collection dam to be constructed before actual Mine workings begin	Underground water make is dewatered to the site wastewater treatment plant prior to holding and subsequent off-site discharge. The pre-1979 timing of construction of site water storage structures and leachate dams has not been independently confirmed by URS.	Indeterminate

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1976 Development Consent	7	Potable water to be of a standard as prescribed by the Health Commission of NSW	Site potable water supply (filtered rainwater) is tested monthly for pH and electrical conductivity (EC). Select monitoring data from 2009 - 2001 was reviewed as documented in <u>2009 Clarence - Centennial.xls</u> , <u>2010 Clarence - Centennial.xls</u> . The <u>Australian Drinking Water Guidelines - NHMRC/NRMMC 2004</u> (as adopted in NSW) do not prescribe health-based guideline values for pH and EC. Monitoring data for a broader range of guideline parameters was not available for review, and as such, a full assessment of compliance with this requirement was unable to be performed.	Indeterminate
1993 Modified Development Consent	1	The applicant shall carry out the development generally in accordance with the 1975 Environmental Impact Statement, prepared by Dames & Moore, except as amended in the Statement of Environmental Effects prepared by R.W. Corkery & Co. dated April, 1993.	<p>A comparison against the scope of works and environmental controls described in the Environmental Impact Statement Proposed Clarence Colliery for Coalex Pty Ltd (October 1975) indicate general consistency with URS' site observations and documentation reviewed (as detailed throughout this appendix). Copy of 1993 Statement of Environmental Effects not provided for review and as such, this condition cannot be fully assessed.</p> <p>Some operational process improvements have occurred. It is noted that the EIS describes total on-site water reuse during normal operating conditions (process water, surface operational and underground supply). URS considers that subsequent regulatory approvals for off-site discharge supersede this requirement. The 1975 EIS describes proposed REA maximum height (35 m above existing RL) and rehabilitation (eg. 15 cm impervious material, 50 cm suitable rockfill and 30 cm of topsoil) - both of which have been unable to be assessed.</p> <p>The site advised that it is not aware of any non-compliances with the intent of the EIS and Amendment</p>	Indeterminate

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Condition / Requirement.	No.	Summary of Condition / Requirement	Comment	Compliance Status and Recommendation
1993 Modified Development Consent	4	The applicant shall prepare, prior to the commencement of site works for Reject Emplacement Area III, a sediment and erosion control plan. The plan shall incorporate measures for the management of surface runoff, control of water discharge points and the conservation and protection of soil stockpiles. The plan shall be submitted to the Department of Conservation and Land Management for its approval and to Council for its information. All works shall be carried out in accordance with the approved plan and in consultation with the Department of Conservation and Land Management.	The site has developed an Erosion and Sediment Control Plan contained within the <u>Clarence Colliery Water Management Plan (CL-EWP-P-040 Rev1)</u> which is a requirement of DA 504-00. The plan has been approved by the DoP Director General as described in the Department's letter <u>Clarence Colliery - Environmental Management Approvals (DA 504-00) RefS02/02820 dated 25 July 2007</u> . It is unclear whether a separate, earlier Plan was prepared as required by the 1993 Modified Development Consent.	Indeterminate Current Plan exists that is considered to supersede this requirement for the period of the audit.
1993 Modified Development Consent	5	The applicant shall prepare, within Six (6) months of the commencement of operations for REA III, a detailed rehabilitation plan. This plan is to be submitted to the Department of Mineral Resources, Department of Conservation and Land Management and Council for approval.	No detailed rehabilitation plan specific to REA III was available for review. II NSW also indicated that they had not received a detailed rehabilitation plan. As part of the 2010 AEMR site inspection, II NSW made comments on the rehabilitation area. This required Clarence to develop and implement a Rehabilitation Plan for the Emplacement Area. A generic Rehabilitation Plan for the whole site was sighted at the audit, however, had not been issued to agencies for review. The letter required completion of the Plan by 2010. No plan was provided within this date. Some specifications for REA III dated mid 90s were sighted, but do not fully address the requirement.	Non Compliant Recommendation It is recommended that a detailed rehabilitation plan is developed and implemented for the REAs.
1994 Northern Lease Extension Area Development Consent	10	The applicant shall consult with the Soil Conservation Service prior to the construction of runoff diversion and erosion and sediment control works. Such works are to be constructed to the satisfaction of the Soil Conservation Service.	The site has developed an Erosion and Sediment Control Plan contained within the <u>Clarence Colliery Water Management Plan (CL-EWP-P-040 Rev1)</u> which is a requirement of DA 504-00. The plan has been approved by the DoP Director General as described in the Department's letter <u>Clarence Colliery - Environmental Management Approvals (DA 504-00) RefS02/02820 dated 25 July 2007</u> . It is unclear whether separate, earlier consultation with the Soil Conservation Service occurred as required by the 1994 Northern Lease Extension Area Development Consent	Indeterminate
Environment Protection Licence 726	A4.1	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	The site does not hold a copy of its original EPL Application. Copies of Licence Variation applications nos. 146357 (22-Nov-10) and 144013 (28 Feb 06) were sighted by URS.	Indeterminate Recommendation: Obtain a copy of the

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Condition / Requirement.	No.	Summary of Condition / Requirement	Comment	Compliance Status and Recommendation
		<p>licence.</p> <p>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>		Original EPL Application and ensure compliance with the application.
Environment Protection Licence 726	L1.1	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.	<p>Section 120 of the POEO Act relates to the prohibition of pollution of waters, and provides:</p> <p>(1) A person who pollutes any waters is guilty of an offence.</p> <p>(2) In this section:</p> <p>"pollute" waters includes cause or permit any waters to be polluted</p> <p>URS interprets this provision to mean non-compliance with EPL discharge limits, amongst other potential actions</p>	Non-Compliant (refer L3.1 and L3.2)

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Condition / Requirement.	No.	Summary of Condition / Requirement	Comment	Compliance Status and Recommendation
Environment Protection Licence 726	R2.1	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.	<p>DECCW has been notified of two (2) incidents at the site involving potential environmental harm during the period 2005 - 2010. The first incident related to a loss of 1.3 ML of underground minewater to the main dam which occurred on 12-Mar-08, as reported to the Environment Line (ref. 1054160) and subsequently described in Clarence Colliery's letter to DECCW <u>Clarence Colliery - Pipeline Waste Discharge on 12 March 2008 Environment Protection Licence 726 dated 30 April 2008</u>. The second incident related to a loss of 1.3 ML of leachate to the main dam which occurred on 7-Dec-10, as reported to the Environment Line (ref. 125402) and subsequently described in Clarence Colliery's letter to DECCW <u>Clarence Colliery - Pipeline Rupture - Environment Line Reference Number: 125402 dated 14 December 2010</u>.</p> <p>A third incident occurred on 13-Sep-09 involving the loss to ground of an estimated 45 kL of diesel from a bowser at the CHPP, as described in Investigation Report CHPP Diesel Leak Incident at Clarence Colliery on 13 September 2009. On the basis that the diesel was prevented from exiting the site via its water discharge system through containment within the Primary Arrestor, Clarence Coal considered the incident did not represent potential material harm to the environment and therefore did not notify DECCW. Impacted soils were reportedly excavated and land-farmed following the event, however, it is understood that no validation sampling was undertaken to confirm analytically that all hydrocarbons had been removed. Given the approx. 70 m travelled by the diesel across the unpaved reject base prior to entering the Primary Arrestor drainage system and the potential for infiltration to underlying groundwater prior to excavation of impacted surface soils, URS considers that the incident represented the potential (threat) for environmental harm, and as such, should have been reported to DECCW</p>	<p>Non-Compliant (for one incident in 2009) Otherwise, Compliant 2008 and 2010</p> <p>Recommendation: It is recommended that all incidents with the potential for on-site or off-site environmental harm be reported to DECCW in the prescribed manner in accordance with Centennial Coal Guidance Notes ECMG 03 - Environmental Incident Reporting as has occurred.</p>

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			<p>It is noted that part 5.7 of the POEO Act provides that notification is required regardless of whether potential harm to the environment is caused only in the premises where the pollution incident occurs (s147(2)).</p> <p>The requirement and site's process for notifying EPA of incidents resulting in potential or actual material harm to the environment (pursuant to the POEO Act) is described in Centennial Coal Guidance Notes ECMG 03 - Environmental Incident Reporting, as reviewed by URS.</p>	
Environment Protection Licence 726	L3.1	For each monitoring/discharge point or utilisation area specified in the table 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>URS reviewed primary and secondary discharge water quality monitoring records from 2009 and 2010 as documented by the site in 2009 Clarence - Centennial.xls, 2010 Clarence - Centennial.xls, November 2010 Clarence.xls, Clarence Annual Return EPL 726 2100210.xls, Clarence Annual Return EPL 726 20101215.xls and other MS Excel workbooks. Data reviewed identifies the following exceedances of prescribed discharge limits at licence discharge point 2 (LD002):</p> <p>2009</p> <p>One (1) exceedance for total suspended solids (TSS) and four (4) exceedance for filterable manganese - all exceedances reported in the site's 2009 EPL Annual Return, as sighted by URS</p> <p>2010</p> <p>One (1) exceedance for pH (4-Jan-10), two (2) exceedances for filterable manganese (5-Mar-10 and 4-May-10) and one (1) exceedance for TSS (2-Dec-10) - The pH and filterable manganese exceedances were reported to the Clarence Colliery Community Consultative Committee (CCC) as documented in meeting minutes of 1-Feb-10, 10-May-10, 8-Nov-10. A CCC meeting has yet to occur since the Dec-10 TSS exceedance.</p> <p>There appears to be consistency between primary and secondary data records and results reported in the site's 2009 EPA Annual Return. A full reconciliation of all data reported in</p>	<p>Non-Compliant (2009 and 2010)</p> <p>Recommendation:</p> <p>It is recommended that Clarence Colliery require its third-party water discharge sample collection and analysis contractor (ALS) to provide full chain-of-custody documentation for all samples (including sample collection date/time and analysis date/time). ALS should also be requested to confirm and document in its analytical reports that all samples are analysed within laboratory holding times.</p>

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			<p>the site's 2009 Annual Return against primary and secondary data records has not been performed by URS.</p> <p>All water discharge sampling and analysis is undertaken on behalf of the site by third-party analytical laboratory Australian Laboratory Services (ALS). The site is not currently provided with documentation from ALS confirming sample chain of custody and handling. In addition to confirming appropriate sample collection and preservation, such documentation is necessary for Clarence Colliery to confirm samples are analysed within laboratory holding times and therefore measured pollutant concentrations are reflective of actual concentrations. The analytical holding time for hexavalent chromium is particularly short at 6 hrs (meaning samples need to be analysed within 6 hours of collection).</p>	
Environment Protection Licence 726	L3.2	Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.	URS reviewed primary and secondary discharge water quality monitoring records from 2009 and 2010 (described above under L3.1) which indicates recorded pH measurements to be within the prescribed range, with the exception of the sample taken for LD002 on 4-Jan-10 for which measured pH to be 8.71 (outside the prescribed range of 6.5 - 8.5). Some pH excursions have occurred in previous years which have been reported by the site in respective EPL Annual Returns as sighted by URS	Non-Compliant (2010)
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	5	The Licensee Shall Not Allow Any Discharge Of Mine Waters Into Any Creek, River, Watercourse Or Aquifer Without Written Support From NSW Office Of Water	One pipeline failure occurred of the pipeline from the underground borehole relevant to this licence. The water was discharged to the main dam. This is discussed in the main body of the report and occurred on 12/3/2008. Other discharges from other sources have occurred as discussed under the EPL conditions.	Non Compliant Recommendation: Implement effective systems to ensure no further pipeline ruptures occur from the two extraction boreholes.
Bore License Certificate - 10BL165053 (Dewatering bore -	6	The Licensee Shall Develop A Monitoring Program Within Six Months Of The Commencement Of Discharges Into The Wollongambe River To The Satisfaction Of NSW Office Of Water To Evaluate Potential Long Term Impacts, Including Those On Farmers Creek. The Monitoring Program Shall Record At A	Site Management consider that the Water Management Plan addresses this requirement. NOW have reviewed the Water Management Plan 2006, and are awaiting feedback on the 2010 Plan.	Indeterminate

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Reviewed Licence, still to be approved).		Minimum:		
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	6	<p>The Quantity And Quality Of Groundwater Extracted From The Bores Prior To Treatment For Discharge</p> <p>(A) The Quantity Of Groundwater Extracted Shall Be Recorded By A Method Approved By NSW Office Of Water.</p> <p>(B) The Quality Of The Pre-Treated Groundwater Shall Be Analysed Every 3 Months For A Suite Of Analytes Including Electrical Conductivity, Total Dissolved Solids, Ph, Alkalinity, Total Suspended Solids, Dissolved Oxygen%, Temperature, Iron And Manganese. Tests Should Be Conducted By A Laboratory With Appropriate Quality Standard Certification.</p>	<p>a) Groundwater is pumped out from two boreholes that access the mine workings.</p> <p>A SCADA system was put in place in 2010 to monitor the discharges.</p> <p>Also, a back up exists to use data from the Water Treatment Plant, although this information is not collected for daily amounts.</p> <p>There is no approval from NOW for the method used to measure the quantity of water being extracted from the boreholes.</p> <p>b) the quality of pre-treated water is monitored monthly (sighted monthly data).</p>	<p>Non Compliant</p> <p>Recommendation:</p> <p>Obtain approval from the NOW for the method used to monitor quantities of water pumped.</p>
Consolidated Coal Lease 705	7	<p>Reports</p> <p>The lease holder must provide an exploration report within a period of twenty - eight days after each anniversary of the date this lease has effect or at such other date as the Director - General may stipulate of each year. The report must be to the satisfaction of the Director - General and contain the following</p> <p>a- Full particulars, including results, interpretation and conclusions, of all exploration conducted during the twelve months period</p> <p>b- Details of expenditure incurred in conducting that exploration</p> <p>c- A summary of all geological findings acquired through mining or development evaluation activities</p> <p>d- Particulars of exploration proposed to be conducted in the next twelve months period</p> <p>e- All plans, maps, sections and other data necessary to satisfactorily interpret the report</p>	<p>A report was sighted for EL5072 for period 2/10/2008 to 30/9/2009 dated 12/10/2009. This did have some information on the drilling program, indicating one borehole was drilled, however, it did not detailed the requirements of:</p> <p>a- Full particulars, including results, interpretation and conclusions, of all exploration conducted during the twelve months period</p> <p>c- A summary of all geological findings acquired through mining or development evaluation activities</p> <p>d- Particulars of exploration proposed to be conducted in the next twelve months period</p> <p>e- All plans, maps, sections and other data necessary to satisfactorily interpret the report.</p> <p>Other letters were sighted for the area indicating that no exploration drill holes were drilled during the period of the reporting.</p>	<p>Non Compliant</p> <p>Recommendation</p> <p>It is recommended that Exploration reports are prepared and issued that provide:</p> <p>a -Full particulars, including results, interpretation and conclusions, of all exploration conducted during the twelve months period</p> <p>b- Details of expenditure</p> <p>c- A summary of all geological findings</p> <p>d- Particulars of exploration proposed</p>

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Condition / Requirement.	No.	Summary of Condition / Requirement	Comment	Compliance Status and Recommendation
				e- All plans, maps, sections and other data
Consolidated Coal Lease 705	13	<p>Rehabilitation</p> <p>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:</p> <ul style="list-style-type: none"> there is no adverse environmental effect outside the disturbed area and that the land is properly drained and protected from soil erosion. the state of the land is compatible with the surrounding land and land use requirements. the landforms, soils, hydrology and flora require no greater maintenance than that in 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 at an acceptable density, the land does not pose a threat to public safety <p>b- Any topsoil that is removed must be stored and maintained in a manner acceptable to the Director General</p>	<p>Historic rehabilitation has occurred, prior to 2005. Much of the rehabilitation was conducted in REA's 1 and 2, which now adjoin REA 3.</p> <p>This was conducted in the mid 1990's and appeared to have good species diversity and provided an apparently stable cover. More recent rehabilitation, conducted since 2000, shows a high number of acacia species, with limited other plant species widely evident (this areas was not accessed as part of the audit for detailed review).</p> <p>There has been no rehabilitation, or formal monitoring of rehabilitation conducted on site since the 2005 Approval. Hence, the success or otherwise of the rehabilitation conducted has not been assessed.</p> <p>REA 3 is nearing its capacity and other areas are planned for reject emplacement and approvals currently sought. There is no topsoil stockpiled for use in the rehabilitation of REA 3. Hence, there is a shortfall of topsoil and site indicated that topsoil would be used from proposed REA 4 for this purpose. Site also indicated that due to scheduling arrangements, topsoil would have to be stockpiled after clearing of REA 4 and prior to rehabilitation of REA3 (ie REA 3 and 4 would be open at the same time). As such, a large area will be cleared and not rehabilitated, and topsoil stockpiling may have an impact on the viability of seeds and soil quality, as compared to direct placement.</p>	<p>Indeterminate</p> <p>Recommendations:</p> <p>It is recommended that solutions are identified to address the lack of stored topsoil for REA III and that if material from REA IV is to be used, scheduling arrangements can be made to directly used material from REA IV to REA III rehabilitation.</p> <p>It is recommended that ecological surveys are conducted routinely on existing rehabilitation with close reference to the original MOP or subsequently approved surveys. Such surveys should assess all aspects of rehabilitation practices, and comment on effective methods to address issues identified.</p> <p>mine.</p>

9 Summary of Non Compliances and Recommendations

Condition / Requirement.	No.	Summary of Condition / Requirement	Comment	Compliance Status and Recommendation
Consolidated Coal Lease 705	13	Rehabilitation cont'd	<p>Key inadequacy's related to this requirement are:</p> <ul style="list-style-type: none"> the absence of topsoil stored for use in REA 3; lack of monitoring as referenced against the flora survey included in the original MOP. <p>As the requirement relates to a stable landform to be achieved, and that it is not possible to ascertain at this time if such a landform is stable, it is judged that the condition is indeterminate. It is noted that a Rehabilitation Plan has recently been developed (not finalised or issued to relevant agencies for approval) and further works are planned to further develop the plan. This includes a programme of monitoring.</p>	It is recommended that third parties independently review rehabilitation plans generated by Clarence and actions conducted with a view to best practice rehabilitation as appropriate given the sensitivity around the bushland location of the mine.
Consolidated Coal Lease 705	14	The lease holder must comply with any direction given by the Director- General regarding the stabilisation and revegetation at any mine residues tailings or overburden dumps situated on the lease area	As part of the 2010 AEMR site inspection, II NSW made comments on the rehabilitation area. This required Clarence to develop and implement a Rehabilitation Plan for the Emplacement Area. A generic Rehabilitation Plan was sighted at the audit, however had not been issued to agencies for review. The letter required completion of the Plan by 2010. No plan was provided within this date, hence this condition is deemed Indeterminate. In addition, works required on water management are potentially outstanding. This is further discussed in Section 4.3.3 of the main report.	Indeterminate. Recommendation: Finalise the Rehabilitation Plan as specific to the Reject Emplacement Areas and submit to relevant agencies for approval as required of the AEMR site inspection conducted in 2010.
Consolidated Coal Lease 705	1	<p>Notice to Landholders</p> <p>Within a period of three months from the date of 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.</p> <p>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</p>	No evidence was available to demonstrate notification. Site personnel indicated that their expectation was that notice to land owners was provided through newspapers however it was not known what method was used.	Indeterminate

9 Summary of Non Compliances and Recommendations

Condition / Requirement.	No.	Summary of Condition / Requirement	Comment	Compliance Status and Recommendation
		includes the surface and must contain an adequate plan and description of the lease area.		
Mining Lease 1583 (Application No's 208 and 209)	1	<p>Notice to Landholders</p> <p>Within a period of three months from the date of grant 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 and whether the lease includes the surface, An adequate plan and description of the lease area must accompany the notice.</p> <p>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 state whether the lease includes the surface and must contain an adequate plan and description of the lease area.</p>	No evidence was available to demonstrate notification. Site personnel indicted that their expectation was that notice to land owners was provided through newspapers however it was not known what method was used.	Indeterminate
Mining Lease 1583 (Application No's 208 and 209)	7	<p>Reports</p> <p>The lease holder must provide an exploration report, within a period of twenty-eight days after each anniversary of the date this lease has effect or at such other date as the Director-General may stipulate, of each year. The report must be to the satisfaction of the Director-General and contain the following</p> <ul style="list-style-type: none"> a) Full particulars, including results, interpretation and conclusions, of all exploration conducted during the twelve months period b) Details of expenditure incurred in conducting that exploration c) A summary of all geological findings acquired through mining or development evaluation activities d) Particulars of exploration proposed to be conducted in the next twelve months period e) All plans, maps, sections and other data necessary to satisfactorily interpret the report 	<p>A report was sighted for EL5072 (which covers ML 1583) for period 2/10/2008 to 30/9/2009 dated 12/10/2009. This did have some information on the drilling program, indicating one borehole was drilled, however, it did not detailed the requirements of:</p> <ul style="list-style-type: none"> a- Full particulars, including results, interpretation and conclusions, of all exploration conducted during the twelve months period c- A summary of all geological findings acquired through mining or development evaluation activities d- Particulars of exploration proposed to be conducted in the next twelve months period e- All plans, maps, sections and other data necessary to satisfactorily interpret the report. <p>Other letters were sighted for the area indicating that no exploration drill holes were drilled during the period of the reporting.</p>	<p>Non Compliant</p> <p>Recommendation</p> <p>It is recommended that Clarence ensure Exploration reports are developed to meet the requirements of the Condition. (As per CCL705)</p>
Subsidence	19	Miscellaneous Conditions	No management plan as described was made available	Non Compliant

9 Summary of Non Compliances and Recommendations

Condition / Requirement.	No.	Summary of Condition / Requirement	Comment	Compliance Status and Recommendation
Management Plan Eastern Area		Roads (all types) - The Leaseholder shall implement a management plan to ensure the safety of road users and the serviceability of any roads and/or 4WD trails within the application area. This plan shall be implemented to the satisfaction of the owners/operators of the infrastructure	during the audit.	Recommendation Prepare and implement a management plan to ensure the safety of road users and the serviceability of any roads and/or 4WD trails within the application area.
Subsidence Management Plan Eastern Area	21	Land Management - The Leaseholder shall implement a management plan to ensure adequate management of any potential impacts associated with surface cracking, erosion, soil slumping and land degradation caused by mine subsidence and/or activities associated with monitoring or other management activities in the application area. The management plan shall be developed and implemented to the satisfaction of the NSW State Forests	No management plan as indicated was available during the audit.	Non Compliant Recommendation Develop and Implement a management plan to ensure adequate management of any potential impacts associated with surface cracking, erosion, soil slumping and land degradation caused by mine subsidence and/or activities associated with monitoring or other management activities in the application area. The management plan shall be developed and implemented to the satisfaction of the NSW State Forests

9 Summary of Non Compliances and Recommendations

Condition / Requirement.	No.	Summary of Condition / Requirement	Comment	Compliance Status and Recommendation
Surface Licence Main Dam - 10SL039344	1	The holder of the license shall within three months of being called upon by the Department of Natural Resources to do so, install to the satisfaction of the department in respect of location from type and construction and appliance or appliances for the measurement of the quantity of water diverted or taken by means of the licensed work such appliance or appliances to consist of either a measuring weir or weirs with automatic recorder or meter or meters of the dethridge type or such other class of meter or means of measurement as may be approved by the department and shall continuously maintain such appliance or appliances in good working order and condition and shall after the installation of such appliance or appliances record the measurements of all water diverted or taken by means of the licensed work and supply particulars of such measurements to the department at such intervals as shall be directed by the department. Wherever called upon to do so a test certificate furnished either by manufacturer concerned or by some person of authority duly qualified shall be supplied by the holder of the licence as to the accuracy of the appliance or appliances installed.	<p>General Note regarding the Main Dam Water licence: The site and auditor were not clear on the detail of the water licence - specifically, what discharges were licenced and at what point on the mine the licence related to. Infrastructure and site activities have changed and the licence detail is minimal, such that interpretation of the licence as it relates to current site activities remains unclear.</p> <p>A flow monitor is located at LD2. It is proposed that a new metering system be installed for more accurate and real time flow monitoring. A variation of the EPL has been approved to consider this change in flow monitoring.</p> <p>In 2009 the meter did not work for the period 5-8-09 to 23-8-09, and 29-8-09 to 6-8-09. As such, site were non-compliant with the requirement for this period.</p> <p>Site indicate that proxy volume data is available from the figures provided by the Water Treatment Plant operators (Contractors).</p>	<p>Non Compliant</p> <p>General Recommendation:</p> <p>It is recommended that Clarence re-negotiate the terms of the Main Dam Water licence with NOW such that the requirements are clearly understood and that the licence conditions relate to current operations.</p> <p>1. Non Compliant as no monitoring data for period 5-8-09 to 23-8-09, and 29-8-09 to 6-8-09.</p> <p>Recommendation:</p> <p>Implement as planned the monitoring device for LD2. Ensure all monitoring as required by NOW and the licence in place after finalising the licence with them as per above Recommendation.</p>
Surface Licence Main Dam - 10SL039344	2	<p>The Licensee shall not allow any tail water drainage to discharge into or onto</p> <ul style="list-style-type: none"> Any adjoining public or crown road Any other persons land Any crown land Any river creek or watercourse Any ground water aquifer Any native vegetation as described under the native vegetation conservation act 1997 Wetlands of environmental significance 	Two pipeline failures have occurred that discharged water to the main dam. These are discussed in the main body of the report and occurred on 14/12/2010 and 12/3/2008.	<p>Non Compliant</p> <p>Recommendation:</p> <p>Implement effective systems to ensure no further pipeline ruptures occur from the two extraction boreholes.</p>

9 Summary of Non Compliances and Recommendations

Condition / Requirement.	No.	Summary of Condition / Requirement	Comment	Compliance Status and Recommendation
Surface Licence Main Dam - 10SL039344	11	The licensee shall provide pipe or pipe syphons or other approved means for passing flows through the storage of the dam referred to in condition 10. The pipe or pipe syphons shall be of sufficient capacity and of such nature as to allow its operation in accordance with condition 12	There are no pipe systems or syphons in place as required by the condition. Clarence have noted this, and obtained quotes (sighted) to put such a system in place. In addition, a purchase order for the system was observed and the site was awaiting the delivery of the unit. The system will provide for the pumping of flows over the dam wall, largely to ensure capacity to provide for environmental flows if water is not flowing over the spillway. Currently there is no capacity to monitor flows to the Wollongambe River from the main dam.	Non Compliant Recommendation: Install pipe or pipe syphon as required. It is understood that site have ordered the pipe system and once it arrives it will be installed.
Surface Licence Main Dam - 10SL039344	12	When a natural flow is entering the storage of the dam referred to in condition 11 the pipe syphons referred to in condition 12 shall be so operated as to maintain a flow in the Wollongambe River downstream of the dam equivalent to the natural flow entering the storage for the time being or a quantity of 0.05 megalitres per day. Whichever is the lesser	There is currently no system in place for siphoned flow to the river, however, it was reported that typically flows do occur to the river well in excess of that required by the condition. During the site inspection flows were evident from the main dam to the river that were estimated to have been well in excess of the requirement. It is understood that site have ordered the pipe system and once it arrives it will be installed.	Non Compliant Recommendation: Install pipe or pipe syphon as required. It is understood that site have ordered the pipe system and once it arrives it will be installed. Clarence should install flow monitoring at the main dam to quantify flows from this point to the Wollongambe River and be able to demonstrate compliance with this requirement.
Surface Licence Main Dam - 10SL039344	14	The level of the crest of the bay wash of the dam shown as No2 on the plan referred to in condition 16 shall be fixed at not higher than 2.25 metres below the level of a bench mark established on a gum tree on the left bank of the watercourse near the work and particulars of which are retained in the office of the Department of Natural Resources	It is thought by site that this requirement relates to the Polishing Dam. There has not been adjustment of the crest level of this dam. This condition should be reviewed as part of the overall review of the licence as stated above. As site are not sure exactly on the location of this requirement, it is considered indeterminate.	Indeterminate
Surface Licence Main Dam -	15	The level of the crests of the by washes of the dams shown as No 3 and 5 on the plan referred to in condition 15 shall be fixed at not higher than 8.0 meters above the bed of the unnamed	No. 3 dam is thought to be the Polishing Dam and No. 5 dam the leachate dam. There has not been adjustment of the crest level of this dam. This condition should be reviewed as	Indeterminate

9 Summary of Non Compliances and Recommendations

Condition / Requirement.	No.	Summary of Condition / Requirement	Comment	Compliance Status and Recommendation
10SL039344		watercourses at the sites of these works	part of the overall review of the licence as stated above. As site are not sure exactly on the location of this requirement, it is considered indeterminate.	

9 Summary of Non Compliances and Recommendations

The following table has been reproduced from Appendix A. For details on the requirement, and for further discussion of the issue, please refer directly to the table in Appendix A. Many recommendations are based around continuous improvement opportunities identified during the audit and do not necessarily represent immediate potential non-compliance issues.

Table 9-2 Summary of additional recommendations from Independent Environmental Audit (not related to non compliances)

Condition / Requirement	No.	Recommendation
DA 504-00 Development Consent	S2- 11	<i>It is recommended that the site's planned review of its Mechanical Engineering Management Plan be undertaken/finalised</i>
DA 504-00 Development Consent	S3- 6	<i>Refer DA 504-00 S3-6. It is recommended that the Water Management Plan include the current EPL discharge limit for filterable manganese. It is recommended that Clarence Colliery prepare a local amendment to its adopted Centennial Coal Incident Reporting procedure reflecting its commitment to routinely report all non-compliances to DoP and DECCW or else obtain re-endorsement of a revised Water Management Plan It is recommended that the site's Water Management Plan reflect outcomes of the 2010 Environmental and Community Risk Assessment and water management strategy. It is noted that ongoing continuous improvement actions will be required to be defined in the Water Management Plan to ensure sustained compliance with discharge limits as defined in the EPL.</i>
DA 504-00 Development Consent	S3- 7	<i>It is recommended that the site recalculate its water balance following implementation of its water management strategy.</i>
DA 504-00 Development Consent	S3- 20	<i>It is recommended that in order to minimise visual impacts of the mine, that REA III be remediated promptly and effectively with local native vegetation (and in accordance with an approved rehabilitation plan) once the area becomes available.</i>
DA 504-00 Development Consent	S3- 23	<i>It is recommended that a procedure or work instruction be developed that details GHG tracking input data sources and persons responsible for providing such data, to ensure consistency of emissions estimation and continuity in the event that key personnel move on.</i>
DA 504-00 Development Consent	S3- 24	<i>It is recommended that Clarence include in the Waste Management Plan processes to set waste minimisation goals, and measure and report performance against these goals. Strategies to minimise wastes would be expected to be developed and implemented as part of meeting the set goals. The minimisation of waste at the site is required to be conducted to the satisfaction of the Director General.</i>
DA 504-00 Development Consent	S3- 25	<i>It is recommended that the site's planned review of its Monitoring Arrangements Including Spontaneous Combustion and Outburst Management be undertaken/finalised.</i>
Environment Protection Licence 726	M1.2	<i>It is recommended that water discharge monitoring data be consistently recorded in a single controlled location to minimise potential data transcription errors.</i>
Environment Protection Licence 726	M3.2	<i>It is recommended that Clarence Colliery require its third-party water discharge sample analysis contractor (ALS) to provide clarification in relation to variations between its analytical methods and those prescribed by NSW EPA.</i>
Environment Protection Licence 726	O2.1	<i>It is recommended that Clarence Colliery establish a performance-based arrangement with its WTP operator (EGL) which articulates respective roles, responsibilities and reporting requirements in relation to the site achieving and maintaining EPL and broader environmental regulatory compliance.</i>

9 Summary of Non Compliances and Recommendations

Condition / Requirement	No.	Recommendation
General – Water Licences		<i>It is recommended that Clarence obtain a licence from NOW for the discharge of leachate and other water via the borehole to the mine workings. (It is understood that this process has commenced since the date of the site inspection for the audit).</i>
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	1	<i>Ensure that the Bore Licence is formally updated once this can be achieved as indicated by NOW.</i>
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	6	<i>Obtain approval for the metering on the dewatering bore from NOW.</i>
Consolidated Coal Lease 705 and Surface Licence Main Dam - 10SL039344	16	<i>It is recommended that a review is conducted of the ongoing stability of batters and drainage related to roads in the Pit Top area and that areas of erosion and sedimentation are addressed.</i>
Consolidated Coal Lease 705	20	<i>As Clarence are currently seeking to do, it is recommended that site minimise the use of monitoring lines so as to reduce the footprint of impact on the surface of the lease areas.</i>
Consolidated Coal Lease 705	3	<i>Continue to implement requirements of II NSW as stated in the AEMR review letter including:</i> <ul style="list-style-type: none"> <i>- completion of the Rehabilitation Plan that includes the proposed rehabilitation of Reject Emplacement Areas;</i> <i>- continued measures to minimise the volume of dirty water.</i> <i>As is planned by site, ensure future AEMRs include requirements as stated in the 2009 AEMR review.</i>
Consolidated Coal Lease 705 (Condition 20) and Mining Lease 1583 (Application No's 208 and 209)	19	<i>It was noted that some roads used by Clarence were not well maintained and impacted by erosion. It is recommended that Clarence enter a dialogue with State Forests as to how the condition of roads may be improved.</i>
Surface Licence Main Dam - 10SL039344	17	<i>It is recommended that site commence an inspection programme on the dam to demonstrate it is maintained in a safe manner. Use could be made of Dam Safety Committee checklists to assist this process.</i>

Limitations

URS Australia Pty Ltd (URS) has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of Centennial Coal Pty Ltd and only those third parties who have been authorised in writing by URS to rely on the report. It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this report. It is prepared in accordance with the scope of work and for the purpose outlined in the Proposal dated 11 March 2010.

The methodology adopted and sources of information used by URS are outlined in this report. URS has made no independent verification of this information beyond the agreed scope of works and URS assumes no responsibility for any inaccuracies or omissions. No indications were found during our investigations that information contained in this report as provided to URS was false.

This report was prepared between 17 January and 17 March 2011 and is based on the conditions encountered and information reviewed at the time of preparation. URS disclaims responsibility for any changes that may have occurred after this time.

This report should be read in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties. This report does not purport to give legal advice. Legal advice can only be given by qualified legal practitioners.

Appendix A Compliance Matrix

Appendix A – Compliance Matrix

Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
DA 504-00 Development Consent	S2- 1	The Applicant shall implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the development.	The site maintains a hierarchy of environmental controls which are detailed under individual items throughout this appendix and Section 6 of the main report (including details of evidence sighted).	<u>Compliant</u> Recommendations: A number of recommendations relating to specific aspects of site environmental management are provided under individual items below
DA 504-00 Development Consent	S2- 2	The Applicant shall carry out the development generally in accordance with the: (a) DA 504/00; (b) EIS title Clarence Colliery - Lease Extension Environmental Impact Statement, dated October 2000; (c) Supplementary Report titled Variation to Development Application no.504-00 and Supplementary Information, dated May 2005; and (d) Conditions of this consent.	Compliance against individual provisions of DA 504/00 has been assessed by URS with commentary provided against specific items as detailed below. A comparison against the scope of works and environmental controls described in the <u>Clarence Colliery - Lease Extension Environmental Impact Statement (October 2000)</u> and <u>Variation to Development Application No. 504/00 and Supplementary Information</u> (undated) indicate general consistency with URS' site observations and documentation reviewed (as detailed throughout this appendix). It is noted that the Variation related to a reduction in the scale of proposed development (proposed mining area, levels of extraction and volumes of coal transportation). The proposed diversion of site water discharged to the then State Water's expanded Water Transfer Scheme has yet to occur and the use by Lithgow Council of site discharge water remains in place. Some operational process improvements have occurred. The site advised that it is not aware of any non-compliances with the intent of the EIS and Variation. The site has been assessed as generally in compliance with the DA. Some non-compliances have been observed (refer S3-3, S3-4, S3-16, S3-17, S3-19, S3-26, S4-1, S5-1, S5-5, S5-12 below).	<u>Compliant</u> (subject to non compliances for S3-3, S3-4, S3-16, S3-17, S3-19, S3-26, S4-1, S5-1, S5-5, S5-12 below)
DA 504-00 Development Consent	S2- 3	If there is any inconsistency between the above, the most recent document or the conditions of this consent shall prevail to the extent of the inconsistency.	Noted	Noted
DA 504-00 Development Consent	S2- 4	The Applicant shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of: (a) any reports, plans or correspondence that are submitted in accordance with this consent; and (b) the implementation of any actions or measures contained in these reports, plans or correspondence.	The NSW Department of Planning (DoP) conducted an inspection of the site on 15 June 2007, the findings of which are detailed in DoP's letter to Clarence Colliery, <u>Clarence Coal Mine: Inspection of 15 June 2007 Ref S07/00207 dated 2 July 2007</u> and accompanying Notice to Provide Information and/or Records pursuant to the <i>Environmental Planning and Assessment Act 1979</i> (NSW). Two non-compliances were identified during the inspection, relating to required greenhouse gas emissions and groundwater monitoring data omitted from the site's 2006 Annual Environmental Management Report (DA 504/00 Schedule 3 condition 23, Schedule 5 conditions 5(e) and (f)) and an uncovered truck leaving the site and indicating to turn right on Bells Line of Road in contravention of DA 504/00 Schedule 3 condition 18 and Schedule 2 condition 7. Clarence Coal subsequently provided requested information in its letter to DoP <u>Clarence Colliery Response to DoP Notice Dated 3.7.07 dated</u>	Compliant

Appendix A – Compliance Matrix

Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
			<p><u>16 July 2007</u>, as sighted by URS.</p> <p>In its letter to the site <u>Clarence Colliery 2009 Annual Environmental Management Report (AMER) Ref S04/01067-8 dated 24 March 2010</u>, the DoP requested clarifications to the reporting of community complaints in subsequent AMERs. These clarifications have been reflected in the site's draft 2010 AMER, as sighted by URS</p>	
DA 504-00 Development Consent	S2- 5	This consent shall lapse of 31 December 2026. Note: Conditions of this consent may require activities to be carried out by the Applicant beyond the period of the approval.	Noted	Noted
DA 504-00 Development Consent	S2- 6	The Applicant shall not extract more than 3 million tonnes of ROM coal per year from the Mine.	The site maintains daily operational monitoring, including coal extraction volumes. URS reviewed monitoring data from 2010-11 as documented in Clarence Colliery - Production Statistics 2010/2011 and Coal Stocks 2010/2011, which indicates total annual extraction of <2MT	Compliant
DA 504-00 Development Consent	S2- 7	The Applicant may transport up to 200,000 tonnes of coal per year by road. The Applicant shall not cause any truck movements through the city of Lithgow without the prior approval of the Council, to the satisfaction of the Director-General.	The site maintains daily operational monitoring, including weighbridge records for road haulage servicing the domestic market. URS reviewed select weighbridge dockets and domestic sales data as documented in Clarence Colliery - Domestic Sales (Road) CY2010, which indicates total annual road haulage of 146 kT for 2010. The site advised that there has been nil truck movements through Lithgow since 2007 (refer above S2-4)	Compliant
DA 504-00 Development Consent	S2- 8	The Applicant shall ensure that all new buildings, structures, and any alterations to existing buildings and structures are constructed in accordance with the relevant requirements of the BCS. Notes: -Under Part 4A of the EP&A Act, the Application is required to obtain construction and occupation certificates for any building works. -Part 8 of the EP&A Regulation sets out the requirements for the certification of development.	The site advised that two (2) new sheds have been erected at the site since 2005 - Flexible conveyor train (FCT) shed (2010) and one additional shed. URS sighted specifications and drawings for these sheds (G&S Sheds Design and Drawings) which have been signed-off by a registered engineer, but for which BCA compliance statements have not been provided. The site understands that the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 [2007-65] provides a basis for exempting its requirements to obtain construction and occupation certificates. URS considered that legal opinion would need to be sought in relation the applicability of these provisions and hence have defined compliance with this condition as Indeterminate.	Indeterminate
DA 504-00 Development Consent	S2- 9	The Application shall ensure that all demolition work is carried out in accordance with AS 2601-2001: The Demolition of Structures, or its latest version.	The site advised that no demolition works have occurred at the site since 2005 and none were observed by URS during inspection of select areas of the site.	Not applicable
DA 504-00 Development Consent	S2- 10	The Application shall: (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and (b) relocate, or pay the full costs associated with relocating any public infrastructure that needs to be relocated as a result of the development.	Public infrastructure that traverses the site includes transmission lines and tracks. The main Western Railway, historic Zig Zag Railway and public roads are off-site but proximal to site boundaries. The site advised that no damage to public infrastructure has occurred in association with site development and operation.	Not applicable
DA 504-00 Development	S2- 11	The Applicant shall ensure that all plant and equipment at the site, or used in connection with the development, are:	Examples of Maintenance Work Orders generated from the Centennial Coal Pulse Maintenance System were sighted by URS. The site	Compliant

Appendix A – Compliance Matrix

Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
Consent		(a) maintained in a proper and efficient condition; and (b) operated in as proper and efficient manager.	maintains an Electrical Engineering Management Plan (MP-1913, Rev2, 30-Aug-10) and Mechanical Engineering Management Plan (CL-MS-001-P-017 Rev0 21-Jun-06). The site's Mechanical Engineering Management Plan indicates a planned review date of June 2008. It appears that this planned review has yet to occur or be finalised. Commentary in relation to the operation and maintenance of the site's water treatment plant is provided under EPL O2.1 below. A full site operational and maintenance review has not been undertaken by URS	Recommendation: It is recommended that the site's planned review of its Mechanical Engineering Management Plan be undertaken/finalised
DA 504-00 Development Consent	S3- 1	Subsidence Impact Assessment Criteria The Applicant shall ensure that surface subsidence generated by the development does not exceed the criteria listed in Table 1. Table 1: Subsidence Impact Assessment Criteria Level of Extraction Subsidence Tilt Horizontal Strain (compressive and tensile) First Workings 20 mm 1.0mm/m 1.0mm/m Partial Extraction 100mm 3.0mm/m 2.0mm/m Note: The first workings and partial extraction areas refer to those areas shown conceptually on Figure 5.6 (revised) of the Supplementary Report, as reproduced in Appendix 2.	The majority of underground mining has met the criteria as defined. URS reviewed End-of-Year Subsidence Report 2009, Subsidence Management Status Reports to 28 February 2010, and to 31 October 2010. Monitoring data confirms subsidence meets criteria in Table 1, with the exception of three points on the "I" monitoring line above panel 612, showing 102mm settlement at the October 2010 survey. Survey accuracy is ± 3 mm. The subsidence line is outside the mining lease relating to the development consent, hence is not considered as a non-compliance.	Compliant.
DA 504-00 Development Consent	S3- 2	Before carrying out any underground mining operations that will potentially lead to subsidence of the land surface, the Applicant shall prepare a Subsidence Management Plan for those operations in accordance with the following DPI documents (or the most current and updated versions of these documents): (a) New Approval Process for Management of Coal Mining Subsidence- Policy; and (b) Guideline to the Applications for Subsidence Management Approvals, to the satisfaction of the Director-General of the DPI. In addition to the above each Subsidence Management Plan shall: (a) describe how the subsidence impact assessment criteria will be monitored over time; (b) provide for the notification of relevant authorities, including DPI, SCA and the Director-General in the event of any exceedance of the impact assessment criteria; and (c) detail measures to reduce, mitigate and remediate any impacts. During the preparation of each Subsidence Management Plan the Applicant shall consult with the Department, Council, SCA, DEC, DNR and the CCC, and have regard for any comments provided by these agencies/committees.	<u>Development and Approval</u> Subsidence Management Plans for 700 Area, CCL705 Outbye Areas, 314 & 316 Panels sighted. Subsidence Management Approval Application for 700 Area (which includes the Subsidence Management Plan) reviewed in some detail, and is assessed to meet S3-2 requirements. 700 Area documentation is assessed to be typical of documentation for the various areas. Specific compliance review with selected SMPs has been made elsewhere in this spreadsheet.	Compliant
		Implementation of Subsidence Management Plan	<u>Implementation</u> Evidence: End of Year Reports and 4 Monthly Subsidence Management Status Reports. Discussed in detail in Main Report.	

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DA 504-00 Development Consent	S3- 3	Pollution of Waters Except as may be expressly provided by an Environment Protection Licence, the Applicant shall comply with section 120 of the Protection of the Environment Operations Act 1997 during the carrying out of the development.	s120 of the POEO Act relates to the prohibition of pollution of waters, and provides: (1) A person who pollutes any waters is guilty of an offence. (2) In this section: "pollute" waters includes cause or permit any waters to be polluted URS interprets this provision to mean non-compliance with EPL discharge limits, amongst other potential actions. A number of non-compliances with the site's EPL have occurred, as described under EPL L3 below	Non-Compliant (refer L3.1 and L3.2 below)
DA 504-00 Development Consent	S3-4	Except as may be expressly provided by an Environment Protection Licence, the Applicant shall ensure that the discharges from any licensed discharge points comply with the limits in Table 2: pH 6.5 - 9.0 (100 percentile limit) Non-filterable residue 120 mg/L (100 percentile limit)	It is URS's view that this condition has been superseded by Environment Protection Licence 726 which prescribes water discharge limits analogous to, or more stringent than, the DA 504-00 limits. A number of non-compliances with prescribed EPL limits have occurred, as described under EPL L3 below	Not Applicable as superceded by EPL requirements. refer to EPL L3 below
DA 504-00 Development Consent	S3- 5	Water Resource Impact Assessment Criteria The Applicant shall ensure that the development does not result in any: (a) significant inflows to mine workings; (b) reduction in pumping yield in privately owned groundwater bores; (c) reduction in surface flows and groundwater baseflow to upland swamps (Newnes Plateau Shrub Swamps) and wetlands; and (d) reduction in surface flows and groundwater baseflow to waterbodies including Marrangaroo Creek, Farmers Creek, Dargans Creek, Wolgan River, Dumbano Creek, Bungleboori Creek and Wollangambe River (excluding reduction in flows associated with the proposed water transfer scheme), to the satisfaction of the Director-General. Note- Each of these impact assessment criteria must be quantified in the respective sub-plans of the Water Management Plan (See Condition 6 below), to the satisfaction of the Director-General.	A response to this is covered in the Subsidence Audit in the Main Report.	Compliant
DA 504-00 Development Consent	S3- 6	Water Management Plan Within 12 months of the date of this consent, the Applicant shall prepare and subsequently implement a Water Management Plan for the mine in consultation with Council, SCA, DEC, DPI, and to the satisfaction of the Director-General. This plan must be prepared by a qualified hydrogeologist/hydrologist and include: (a) a Water Balance; (b) an Erosion and Sediment Control Plan; (c) Surface Water Monitoring Program; (d) a Ground Water Monitoring Program; and (e) a Surface and Ground Water Response Plan, to address and potential adverse impacts associated with the development. Note: The Water Management Plan may be prepared in a staged	<u>Development and Approval</u> The site has developed its <u>Clarence Colliery Water Management Plan (CL-EWP-P-040 Rev1)</u> which includes the required items, as reviewed by URS. The plan has been approved by the DoP Director General as described in the Department's letter <u>Clarence Colliery - Environmental Management Approvals (DA 504-00) RefS02/02820 dated 25 July 2007</u> . Minor updates to surface water monitoring (additional locations) and groundwater monitoring (changes to groundwater piezometers) to reflect 700 and Outbye Areas SMP Monitoring Programs are current pending review by the NSW Office of Water. Email correspondence between Clarence Colliery and the NSW Office of Water in relation to this matter was sighted by URS.	Compliant (Plan development and approval) Recommendation: It is recommended that the site's Water Management Plan reflect outcomes of the 2010 Environmental and Community Risk Assessment and water management strategy. It is noted that ongoing continuous improvement actions will be required to be defined in the Water Management Plan to ensure

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		manner in accordance with the staging of the development.	<p>The site's Environmental and Community Risk Assessment (RA-2171) undertaken in 2010 identified a number of risks associated with water management for which Clarence Colliery has determined continuous improvement action is relevant (redirect water from pit op grit trap to the Primary Arrestor, investigate installation of oil water separator adjacent to Primary Arrestor).</p> <p>Clarence Colliery commenced investigations during 2008 of a long term water management strategy for the site. Investigations have continued through 2009 and 2010 via a Water Strategy group which includes cross-functional site representatives and external stakeholders. A number of improvement initiatives have already been implemented by the site including diversion of Polishing Lagoon water to a leachate borehole releasing only water treatment plant water through LDP002.</p>	sustained compliance with discharge limits as defined in the EPL.
		<p>Commitments articulated in the endorsed Water Management Plan include:</p> <ul style="list-style-type: none"> Site surface water management arrangements, including separation of clean and dirty water, sediment control structures and treatment Site groundwater management arrangements, including extraction, dewatering and treatment Implementation of surface water and groundwater monitoring as described in the separate Environmental Monitoring Program Meteorological monitoring Reporting of monitoring results through the AEMR (as per DA 504-00 S5-5) Audit and review 	<p>Implementation</p> <p>Commitments of the endorsed Water Management Plan appear to have been generally implemented, with a number of water management improvements made in recent years. The following exceptions are noted:</p> <ul style="list-style-type: none"> The Trigger Action Response Plan (TARP) for Surface Water described in the Plan (s7.7) prescribes immediate notification to DEC [sic] and DoP in the event of a one-off or recurrent exceedance of EPL discharge conditions. This has historically not occurred (refer DA 504-00 S4-1 above), however, is now being undertaken with the first notification of an TSS exceedance occurring in Dec-10. A lack of daily volumetric for discharge LDP002 for a period during 2009 due to equipment failure (EPL Condition M6.1). Surface Water Impact Assessment Criteria have not been updated to reflect variation to the site's filterable manganese discharge limit effected through EPL Variation. <p>A detailed assessment of the presence and operation of site erosion and sediment control structures was not undertaken by URS.</p> <p>However, some areas of washouts were observed after heavy rainfall prior to the audit inspections. These occurred at road batters on access roads to the main dam (see photos).</p> <p>On the basis that the Department of Planning does not allow for an assessment of 'partial compliance', implementation of the Water Management Plan has been assessed as non-compliant</p>	<p>Non-Compliant (Implementation)</p> <p>Recommendation: Refer DA 504-00 S3-6. It is recommended that the Water Management Plan be updated to reflect the current EPL discharge limit for filterable manganese. It is recommended that Clarence Colliery prepare a local amendment to its adopted Centennial Coal Incident Reporting procedure reflecting its commitment to routinely report all non-compliances to DoP and DECCW or else obtain re-endorsement of a revised Water Management Plan It is recommended Clarence implement measures to address localised erosion issues near access roads to the main dam.</p>
DA 504-00 Development Consent	S3- 7	<p>The Water Balance shall:</p> <p>(a) include details of all water extracted, dewatered, transferred, used and/or discharged by the mine; and</p> <p>(b) provide for the annual re-calculation of the water balance and reporting of the review in the AEMR.</p>	<p>The water balance documented within the Clarence Colliery Water Management Plan (CL-EWP-P-040 Rev1) includes the required elements, as reviewed by URS.</p>	<p>Compliant</p> <p>Recommendation: It is recommended that the site recalculate its water balance following implementation of its water management strategy.</p>

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DA 504-00 Development Consent	S3- 8	The Erosion and Sediment Control Plan shall: (a) be consistent with the requirements of the Department of Housing's Managing Urban Stormwater: Soils and Construction manual; (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 main the structures of the mine.	The site has developed an Erosion and Sediment Control Plan contained within the Clarence Colliery Water Management Plan (CL-EWP-P-040 Rev1) which includes the required items, as reviewed by URS. The plan has been approved by the DoP Director General as described in the Department's letter Clarence Colliery - Environmental Management Approvals (DA 504-00) RefS02/02820 dated 25 July 2007. A separate assessment of consistency against the requirements of the Department of Housing's Managing Urban Stormwater: Soils and Construction manual has not been completed by URS.	Compliant (See recommendations regarding management of some washouts on roads at the Pit Top)
DA 504-00 Development Consent	S3- 9	The Surface Water Monitoring Program shall include: (a) detailed baseline data on surface water flows (including ground water baseflows) and quality in waterbodies and wetlands above the mine; (b) surface water impact assessment criteria; (c) a program to monitor surface water flows (including ground water base flows) and quality; and (d) a protocol for the investigation, notification and mitigation of identified exceedances of the surface water impact assessment criteria; and (a) a program to monitor the effectiveness of the Erosion and Sediment Control Plan.	The site has developed a Surface Water Monitoring Program contained within the Clarence Colliery Water Management Plan (CL-EWP-P-040 Rev1) which includes the required items, as reviewed by URS. The plan has been approved by the DoP Director General as described in the Department's letter Clarence Colliery - Environmental Management Approvals (DA 504-00) RefS02/02820 dated 25 July 2007. The site's surface water monitoring arrangements are further described in the Clarence Colliery Environmental Monitoring Program (CL-EWP-P-050 Rev1).	Compliant
DA 504-00 Development Consent	S3-10	The Groundwater Monitoring Program shall include: (a) detailed baseline data on ground water levels and quality, based on statistical analysis, to benchmark the pro-mining natural variation in ground water levels and quality; (b) ground water impact assessment criteria; (c) a program to monitor the volume and quality of ground water seeping into the underground mine workings; and (d) a program to monitor regional ground water levels and quality in the following geologic formations: (i) Banks Wall Sandstone; (ii) Burra-Moko Head Sandstone; (iii) Caley Formation; and (iv) Katoomba Coal Seam. (e) a protocol for the investigation, notification and mitigation of identified exceedances of the ground water impact assessment criteria.	Groundwater Monitoring program is incorporated within the Clarence Colliery Water Management Plan (document No. CL-EWP-P-040). Water Management Plan addresses all of items (a) to (e) of S3-10.	Compliant
DA 504-00 Development Consent	S3- 11	The Surface and Ground Water Response Plan shall include: (a) the procedures that would be followed in the event of any exceedance of the surface or ground water impact assessment criteria, or other identified impact on surface or ground water; and (b) measures to mitigate, remediate and/or compensate any identified impacts.	The site has developed a Surface and Ground Water Response Plan contained within the Clarence Colliery Water Management Plan (CL-EWP-P-040 Rev1) which includes the required items, as reviewed by URS. The plan has been approved by the DoP Director General as described in the Department's letter Clarence Colliery - Environmental Management Approvals (DA 504-00) RefS02/02820 dated 25 July 2007	Compliant

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DA 504-00 Development Consent	S3- 12	Reporting Each year, the Applicant shall: (a) review the Water Management Plan; (b) update each sub-plan; and (c) report the results of this review in the AEMR, including; (d) the results of monitoring; (e) details of the review for each sub-plan; (t) amendments to the subplans; and (g) details of the measures undertaken/proposed to address any identified issues.	A review of the Water Management Plan with minor subsequent amendments was undertaken by the site during 2009 and reported in the Clarence Colliery 2009 Annual Environmental Management Report (AMER) (refer S3- 6 above). Monitoring data reported by the site in its 2009 AMER appears consistent with primary and secondary water quality monitoring records, as reviewed by URS (refer EPL below)	Compliant
DA 504-00 Development Consent	S3- 13	The Applicant shall ensure that the air pollution generated by the development does not exceed the criteria listed in Tables 3, 4, and 5 at any privately-owned land. Table 3: Long term impact assessment criteria for particulate matter Table 5: Long term impact assessment criteria for deposited dust Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, 1991, AS 3580.10.1-1991: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method.	URS reviewed primary and secondary dust monitoring records from 2009 and 2010 as documented by the site in <u>2009 Clarence - Centennial.xls</u> , <u>2010 Clarence - Centennial.xls</u> , <u>November 2010 Clarence.xls</u> and other MS Excel workbooks. Data reviewed identifies the following exceedences of prescribed discharge limits: <u>2009</u> One (1) depositional dust exceedance at each of DPG1, DPG2 and DPG3 (2-Oct-09), attributed to a large dust storm that occurred on 23-Sep-09 - all exceedances were reported in the site's 2009 AMER, as sighted by URS <u>2010</u> Three (3) depositional dust exceedances at DPG3 (2-Aug-10, 2-Sep-10 and 1-Oct-10). The samples were sent for mineralogical analysis which indicated coal particles were trace. No site clearing activities were reported undertaken during the monitoring periods. The depositional dust exceedances were reported to the Clarence Colliery Community Consultative Committee (CCC) as documented in meeting minutes of 8-Nov-10 DPG3 is intended to measure potential incremental off-site impact attributable to Clarence Colliery operations. As DPG3 appears to be influenced by adjacent third-party dust generating activities, the site proposes to relocate DPG3 to a sensitive receptor in Clarence Village which URS considers appropriate	Compliant (on the basis that measured exceedances were identified as associated with non-site sources)
DA 504-00 Development Consent	S3- 14	Air Quality Monitoring Program Within 6 months of the date of this consent, the Applicant shall prepare and subsequently implement an Air Quality Monitoring Program for the development, in consultation with DEC, and to the satisfaction of the Director-General, This program must include an air monitoring protocol for evaluating compliance with the air quality criteria in this consent. Commitments articulated in the endorsed Air Quality Monitoring Program relate to the implementation of particulate and deposited dust monitoring (with nominated frequency, duration and method), notification in the event of an exceedance of adopted performance criteria and the annual internal audit and update (as required) of the Program	<u>Development and Approval</u> The site has developed an Air Quality Monitoring Program contained with the Clarence Colliery Environmental Monitoring Program (CL-EWP-P-050 Rev1), as reviewed by URS. The plan has been approved by the DoP Director General as described in the Department's letter to <u>Clarence Colliery Revised Air Quality Monitoring Program Ref S02/02820</u> dated 20 August 2007. <u>Implementation</u> A review of primary and secondary dust monitoring records from 2009 and 2010 as documented by the site in 2009 Clarence - Centennial.xls and 2010 Clarence - Centennial.xls indicates the implementation of nominated deposited dust monitoring. Notifications described in the Plan have yet to be triggered. An informal annual review of the Plan is undertaken by the Environmental Coordinator during preparation of	Compliant (Program development and approval) Non-Compliant (Implementation 2007 - December 2009) Recommendation: It is recommended that TSP and PM10 monitoring arrangements as described in the endorsed Air Quality

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			<p>the site's AEMR.</p> <p>Nominated total solid particulate (TSP) and particulate matter less than 10 micron (PM10) monitoring occurred during 2007 and was not re-implemented until December 2009 – select monitoring data was sighted by URS.</p> <p>On the basis that the Department of Planning does not allow for an assessment of 'partial compliance', implementation of the Air Quality Monitoring Plan has been assessed as non-compliant</p>	Monitoring Program continue to be implemented
DA 504-00 Development Consent	S3- 15	<p>Noise Impact Assessment Criteria</p> <p>The Applicant shall ensure that the noise generated by the development, excluding train-loading and rail operations, does not exceed the noise impact assessment criteria presented in Table 6 at any residence on privately owned land.</p> <p>(a) For the purpose of these noise criteria, 5dB(A) must be added to the measured level if the noise is substantially tonal or impulsive in character.</p> <p>(b) The noise criteria do not apply where the Applicant and the affected landowner have reached a negotiated agreement in regard to noise, and a copy of the agreement has been forwarded to the Director-General and DEC.</p> <p>(c) 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) when the dwelling is more than 30 metres from the boundary, to determine compliance with the 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.</p> <p>(d) The noise criteria apply under prevailing meteorological conditions (winds up to 3m/s), except under conditions of temperature inversions. Noise impacts that may be enhanced by temperature inversions must be addressed by:</p> <ul style="list-style-type: none"> -documenting noise complaints received to identify any higher level of impacts or patterns of temperature inversions; and -where levels of noise complaints indicate a higher level of impact then actions to quantify and ameliorate any enhanced impacts under temperature inversion conditions shall be developed and implemented. 	<p>Noise monitoring data from 2007 and 2008 indicates compliance with prescribed limits. No noise monitoring was undertaken in 2009.</p> <p>The Clarence Colliery Noise Compliance Assessment March 2010 (Heggies Pty Ltd) indicates that noise from mining operations was audible but <u>estimated</u> to be below consent limits</p>	Complaint
DA 504-00 Development Consent	S3- 16	<p>Noise Management Plan</p> <p>Within 6 months of the date of this consent, the Applicant shall prepare and subsequently implement a Noise Management Plan for the development, in consultation with DEC, and to the satisfaction of the Director-General. The plan shall include:</p> <p>(a) a noise monitoring protocol for evaluating compliance with the noise impact assessment criteria;</p>	<p><u>Development and Approval</u></p> <p>The site has developed an Environmental Noise Management Program (CL-EWP-P-020 Rev0) which includes the required elements, as reviewed by URS. The plan has been approved by the DoP Director General as described in the Department's letter to Centennial Coal Clarence Colliery - Noise and Air Quality Monitoring Program (DA-504-00) dated 19 September 2006</p>	Compliant (Plan development and approval)

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		<p>(b) a plan for the management and minimisation of noise emissions associated with train-loading and rail operations, including consideration of all feasible and reasonable noise mitigation measures; and</p> <p>(c) a protocol for the investigation, notification, and mitigation of identified exceedances of the noise impact assessment criteria.</p>		
		<p>Commitments articulated in the endorsed Environmental Noise Management Plan relate to the implementation of noise monitoring (with nominated frequency, duration and method), train loading and rail operations noise mitigation measures, notification in the event of an exceedance of adopted performance criteria and the annual internal audit and update (as required) of the Program</p>	<p><u>Implementation</u></p> <p>A review of noise monitoring records from 2007 and 2009 indicates the implementation of nominated noise monitoring for 2007 - 2008, however, no noise monitoring was undertaken during 2009. Noise monitoring has not consistently been undertaken in the month of March (eg. 2008) as prescribed in the endorsed Plan. URS is not aware that these deviations from endorsed monitoring arrangements has been agreed with DoP</p> <p>Implementation of noise minimisation commitments were unable to be assessed. Documentation relating to instructions for coal train operators and train loading infrastructure inspection procedure and records were requested but were not available for review.</p> <p>Notifications described in the Plan have not been triggered during the audit period. An informal annual review of the Plan is undertaken by the Environmental Coordinator during preparation of the site's AEMR</p>	<p>Non-Compliant (Implementation)</p> <p>Recommendation:</p> <p>It is recommended that noise monitoring be consistently undertaken in accordance with the endorsed Environmental Noise Management Plan.</p>
DA 504-00 Development Consent	S3- 17	<p>Meteorological Monitoring</p> <p>Within 6 months of the date of this consent, the Applicant shall establish and subsequently maintain a suitable meteorological station operating in the vicinity of the development in accordance with the requirements in Approved Methods for Sampling of Air Pollutants in New South Wales, and to the satisfaction of the DEC and the Director-General.</p>	<p>The site has developed a Meteorological Conditions Monitoring Program contained with the Clarence Colliery Environmental Monitoring Program (CL-EWP-P-050 Rev1), as reviewed by URS. The site's arrangements for meteorological monitoring have been approved by the DoP Director General as described in the Department's letters Clarence Colliery - Meteorological Station dated 26 March 2007 and Clarence Colliery - Environmental Management Approvals (DA 504-00) RefS02/02820 dated 25 July 2007. An independent review of compliance with the NSW EPA Approved Methods for Sampling of Air Pollutants in New South Wales has not been undertaken by URS.</p> <p>Meteorological monitoring was not undertaken for periods during 2009 and 2010 as a result of equipment failure. Site indicated that met station was not operating for a period of at least 16 weeks in 2010. Clarence advised the DoP of the failure of the equipment in a letter dated 9 September 2010 and sought approval to install a new meteorological station. No response was received from the DoP. A new Met Station was installed in Sept 2010.</p>	<p>Compliant at time of audit</p> <p>Non-Compliant (2009 - September 2010)</p>
DA 504-00 Development Consent	S3- 18	<p>Traffic & Transport Road Haulage</p> <p>The Applicant shall ensure that all loaded vehicles entering or leaving the site are covered.</p>	<p>The site maintains a coal hauler induction (written, video and questionnaire of understanding), which describes general rules requiring all loads to be covered prior to leaving site and driver responsibilities to ensure no spillage.</p> <p>No vehicle movements were observed from the site during the time of inspection, and as such, implementation of the above procedural controls was not able to be confirmed</p>	<p>Compliant</p>

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DA 504-00 Development Consent	S3- 19	The Applicant shall ensure all loaded vehicles leaving the site are cleaned of materials that may fall on the road before they are allowed to leave the site.	In 2010, the site installed a truck wash down bay for the cleaning of loaded vehicle prior to exiting the site. The new facility was reported to have been commissioned in February 2011 following completion of additional civil works. Prior to the use of the truckwash, an area near the CHPP has been used to wash trucks.	Compliant
DA 504-00 Development Consent	S3- 20	Visual Impact The Applicant shall minimise the visual impacts of the development to the satisfaction of the Director- General.	The topographic setting of the development serves to minimise visual impact when viewed from off-site locations. All structures and buildings were observed by URS to be constructed of non-reflective materials in green/brown tones. Reject emplacement areas (REA) are key landscape features within the site. REA survey from September 2010 indicate surveyed elevations within approved heights for REA 2 and 3.	Compliant Recommendation: It is recommended that in order to minimise visual impacts of the mine, that REA III be remediated promptly and effectively with local native vegetation (and in accordance with an approved rehabilitation plan) once the area becomes available.
DA 504-00 Development Consent	S3- 21	Lighting Emissions The Applicant shall take all practicable measures to mitigate off-site lighting impacts from the development to the satisfaction of the Director-General.	The topographic setting of the development serves to minimise off-site lighting impacts (refer S3-21 below)	Compliant
DA 504-00 Development Consent	S3- 22	All external lighting associated with the development shall comply with Australian Standard AS4282 (INT) 1995 Control of Obtrusive Effects of Outdoor Lighting.	The site commissioned an external compliance assessment as documented in <u>Centennial Coal Company Ltd Report for Clarence Colliery Pty Ltd AS4282:1997 Audit (GHD Nov-10)</u> . This assessment determined that external luminaries at the site do not appear to be having an obtrusive effect pursuant to AS4383. The assessment made general recommendations for minimising any future impacts associated with any future modifications to lighting locations	Compliant
DA 504-00 Development Consent	S3- 23	Greenhouse Gas The Applicant shall: (a) monitor the greenhouse gas emissions generated by the development; (b) investigate ways to reduce greenhouse gas emissions on site; and (c) report on these investigations in the AMER, to the satisfaction of the Director General.	GHG emissions are tracked across the Centennial business, including Clarence Colliery, as documented in <u>CLA12250 CLA Greenhouse Report 1011.xls</u> . The most recent site energy audit was undertaken in 2006, as described in <u>Country Energy - Centennial Coal Clarence Colliery Energy Savings Action Plan</u> . There has been reported implementation of some of the recommendations arising from this audit, as described in the site's subsequent AMERs. There is currently no procedure/work instruction which describes input data sources and persons responsible for providing such data to the site's annual GHG tracking	Compliant Recommendation: It is recommended that a procedure or work instruction be developed that details GHG tracking input data sources and persons responsible for providing such data, to ensure consistency of emissions estimation and continuity in the event that key personnel move on.
DA 504-00 Development Consent	S3- 24	Waste Minimisation The Applicant shall minimise the amount of waste generated by the development to the satisfaction of the Director-General.	The Clarence Colliery Environmental Management Plan - Waste Management Plan (MP-2060 Rev1) was prepared in 2010 and documents a baseline site waste audit and waste minimisation initiatives. Initial waste minimisation awareness and training has been completed for underground personnel. Site personnel have advised that its periodic site environmental inspections will form a key mechanism for monitoring site waste management. Site waste tracking data for 2010 was sighted by URS	Compliant Recommendation: It is recommended that Clarence include in the Waste Management Plan processes to set waste minimisation goals, and measure and report performance against these

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				goals. Strategies to minimise wastes would be expected to be developed and implemented as part of meeting the set goals. The minimisation of waste at the site is required to be conducted to the satisfaction of the Director General.
DA 504-00 Development Consent	S3- 25	Hazards Management Spontaneous Combustion The Applicant shall take the necessary measures to prevent, as far as is practical, spontaneous combustion on the site.	The site has completed a <u>Stockpile Management Risk Assessment RA-1351 (Risk Assessment No. CLRA0064) 2008</u> in support of stockpile management system development pursuant to NSW occupational, health and safety regulation. The site has advised that no instances of spontaneous combustion have been recorded at the site to date. The site's <u>Coal Handling Preparation Plant Stockpile Management Plan (MP-1368 Rev0 2010)</u> documents hazard identification (linked to the above-described risk assessment), operational procedures and standards (including stockpile inspection, equipment inspection and maintenance), responsibilities, audit and review processes. Monitoring arrangements are detailed in <u>Monitoring Arrangements Including Spontaneous Combustion and Outburst Management (MP-1367 Rev4 2007)</u> . This procedure was due for planned internal review in 2009, which appears yet to have been finalised. Fixed sprinklers were observed as being in place above ROM stockpiles, however, a full assessment of the presence and adequacy of site fire protection equipment has not been undertaken by the auditor.	Compliant Recommendation: It is recommended that the site's planned review of its Monitoring Arrangements Including Spontaneous Combustion and Outburst Management be undertaken/finalised.
DA 504-00 Development Consent	S3- 26	Dangerous Goods The Applicant shall ensure that the storage, handling, and transport of dangerous goods is done in accordance with the relevant Australian Standards, particularly AS 1940 and AS1596, and the Dangerous Goods Code.	The site commissioned an external compliance assessment as documented in <u>Centennial Coal Company Ltd Clarence Colliery Pty Ltd AS1940:2004 Audit Report (GHD Oct-10)</u> , which assessed the site's fuel facilities. The audit identified several improvement actions to bring site fuel and oil storages into compliance with AS1940. In general, identified non-compliances were minor in nature (housekeeping or procedural), however, several issues considered by GHD to be critical were identified which require immediate action: <ul style="list-style-type: none"> - installing (or identifying) emergency shut-off/circuit breaker devices for dispensers - installing appropriate signs at each facility, including emergency shut-off - reconciling inventories of diesel delivered, stored and dispensed - re-instating assess to the pit top waste oil underground tank (obscured by a skip) - reviewing emergency procedures and ensuring these documents are reviewed as scheduled - implementing or updating maintenance procedures to over regular testing, inspection and monitoring of tanks, pipelines, valves, hoses and pumps A significant number of the identified non-compliance are associated with the site's three (3) diesel underground storage tanks (USTs)	Non-Compliant Recommendation: Implementation of corrective actions recommended by GHD in its AS1940:2004 compliance audit should continue, with a focus on those non-compliances assessed as critical and those items previously unable to be assessed.

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			located at the pit top and washery areas. As a positive risk management action, the site is planning to decommission all 3 USTs in Q1 2011 and replace these with self-bunded aboveground storages. Compliance with some requirements of AS9140 were unable to be assessed by GHD and have not been separately assessed by URS	
DA 504-00 Development Consent	S3- 27	Bushfire Management The Applicant shall: (a) ensure that the development is suitably equipped to respond to any fires on-site; and (b) assist the Rural Fire Service and emergency services as much as possible if there is a fire on- site during the development.	The last bushfire to enter the site occurred in 1997, coming from the west and burning bushland around the southern end of the pit top and washery. In 2010, the site prepared a Bushfire Management Plan (MP-2309 Rev0) which is a framework document describing the site's procedural controls. Procedural controls as sighted by URS include: Bushfire Management Procedure (P-2376) Bushfire Preparation Procedure (P-2377) Emergency Management System (CL-MS-002) Fire and Explosion Major Hazard Management Plan (CL-MS-002-P-004) Cutting and Welding Engineering System (MEM-P-CW-5.0) Fire protection and emergency response specialists were not included with the audit team and an assessment of the adequacy of these elements has not been performed by URS.	Not Assessed in detail
DA 504-00 Development Consent	S3- 28	Mine Closure Strategy At least 3 years prior to the cessation of mining, the Applicant shall prepare a Mine Closure Strategy for the development, in consultation with Council, DPI, SCA and DEC, and to the satisfaction of the Director-General, The plan must: (a) define the objectives and criteria for mine closure; (b) investigate options for the future use of the site, including the pit top and surface facilities area; (c) investigate ways to minimise the adverse socio-economic effects associated with mine closure, including reduction in local employment levels; (d) define a strategy for the ongoing management of water inflow to the mine; (a) describe the measures that would be implemented to minimise or manage the ongoing environmental effects of the development; and (f) describe how the performance of these measures would be monitored over time.	Not applicable (requirement has yet to be triggered).	Not Triggered Recommendation: It is good mining practice that a Closure Plan be developed and used in conjunction with mine planning to assist site implement appropriate closure strategies throughout the operational life of the mine. It is recommended that a Conceptual Closure Plan or similar be developed that is commensurate with good mining practices. See also other recommendations regarding rehabilitation and reject emplacement areas.
DA 504-00 Development Consent	S4- 1	Notification of Landowners If the results of monitoring required in schedule 3 identify that impacts generated by the development are greater than the relevant impact assessment criteria in schedule 3, then the Applicant shall notify the Director-General and the affected landowners and/or existing or future tenants (including tenants of mine owned properties) accordingly, and provide quarterly monitoring results to each of these parties until the results show that the development is complying with the criteria in schedule 3.	In general, no recorded exceedances of impact assessment criteria in Schedule 3 have resulted in potential impact to landholders. Also, as State Forests are the main landholder, there are limited landholders and no or limited private residences directly affected by the operation. In one area, involving several adjacent points along the "I" line above the spine pillars of 612 panel, the subsidence limit of 100 mm has been exceeded (102 mm in the October 2010 survey). The anomalous performance in this area has been reviewed in detail by	Generally Not Applicable as there are limited landholders. Recommendation: It is recommended that notification requirements of this and any other relevant condition are entered into subsidence TARP within the SMPs.

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			<p>Strata Engineering (Australia) P/L, and it has been assessed that bottom coaling in the adjacent 610 panel was the likely cause: this practice has long since ceased at Clarence, and has not occurred since the date of the 2005 approval.</p> <p>On the basis that the Schedule 3 subsidence impact criteria was exceeded on this one occasion and State Forests are the affected landholder, URS considers that State Forests should have been notified pursuant to this condition.</p> <p>Notification was made to the Principal Subsidence Engineer of II NSW, however was not made to State Forests or the DoP.</p> <p>It is considered that while the Criteria was marginally exceeded, that no measurable impacts existed relating to the exceedance. On this basis, URS has not judged this to be non-compliant. URS recommend that any further exceedances of the criteria be notified to Landholders and the DoP as required.</p>	It is recommended that all exceedances of subsidence criteria are notified to landholders and the DoP.
DA 504-00 Development Consent	S4- 2	<p>Independent Review</p> <p>If a landowner (excluding mine owned properties) considers that the development is exceeding the impact assessment criteria in schedule 3, then he/she may ask the Applicant in writing for an independent review of the impacts of the development on his/her land.</p> <p>If the Director-General is satisfied that an independent review is warranted, the Applicant shall within 3 months of the Director-General advising that an independent review is warranted:</p> <p>(a) consult with the landowner to determine his/her concerns;</p> <p>(b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to conduct monitoring on the land, to determine whether the development is complying with the relevant criteria in schedule 3, and identify the source(s) and scale of any impact on the land, and the development's contribution to this impact; and</p> <p>(c) give the Director-General and landowner a copy of the independent review.</p>	Not applicable. The site advised that no such request for Independent Review has been made by a landholder pursuant to this condition	Not applicable
DA 504-00 Development Consent	S4- 3	If the independent review determines that the development is complying with the relevant criteria in schedule 3, then the Applicant may discontinue the independent review with the approval of the Director-General.	Not applicable. The site advised that no such request for Independent Review has been made by a landholder pursuant to this condition	Not applicable
DA 504-00 Development Consent	S4- 4	<p>If the independent review determines that the development is not complying with the relevant criteria in schedule 3, and that the mine is primarily responsible for this non-compliance, then the Applicant shall:</p> <p>(a) take all practicable measures, in consultation with the landowner, to ensure that the development complies with the relevant criteria; and</p> <p>(b) conduct further monitoring to determine whether these measures ensure compliance; or</p> <p>(C) secure a written agreement with the landowner to allow</p>	Not applicable. The site advised that no such request for Independent Review has been made by a landholder pursuant to this condition	Not applicable

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		<p>exceedances of the relevant criteria in schedule 3; to the satisfaction of the Director-General.</p> <p>If the additional monitoring referred to above subsequently determines that the development is complying with the relevant criteria in schedule 3, then the Applicant may discontinue the independent review with the approval of the Director-General. If the Applicant is unable to finalise an agreement with the landowner, then the Applicant or landowner may refer the matter to the Director-General for resolution. If the matter cannot be resolved within 21 days, the Director-General shall refer the matter to an Independent Dispute Resolution Process (see Appendix 3).</p>		
DA 504-00 Development Consent	S4- 5	<p>If the independent review determines that the development is not complying with the relevant criteria in schedule 3, but that several mines/extractive industries are responsible for this non-compliance, then the Applicant shall, with the agreement of the landowner and other mines/extractive industries, prepare and implement a Cumulative Impact Management Plan to the satisfaction of the Director-General. This plan must provide details of the joint approach to be adopted by the Applicant and other mines/extractive industries to manage cumulative impacts at the landowner's dwelling.</p> <p>If the Applicant is unable to finalise an agreement with the landowner and/or other mines/extractive industries, and/or prepare a Cumulative Impact Management Plan, then the Applicant or landowner may refer the matter to the Director-General for resolution.</p> <p>If the matter cannot be resolved within 21 days, the Director-General shall refer the matter to an Independent Dispute Resolution Process (see Appendix 3).</p>	No applicable. The site advised that no such request for Independent Review has been made by a landholder pursuant to this condition	Not applicable
DA 504-00 Development Consent	S4- 6	<p>If the landowner disputes the results of the independent review, either the Applicant or the landowner may refer the matter to the Director-General for resolution.</p> <p>If the matter cannot be resolved within 21 days, the Director-General shall refer the matter to an Independent Dispute Resolution Process (see Appendix 3).</p>	No applicable. The site advised that no such request for Independent Review has been made by a landholder pursuant to this condition	Not applicable
DA 504-00 Development Consent	S5- 1	<p>Environmental Management Strategy</p> <p>Within 12 months of the date of this consent, the Applicant shall prepare and implement an Environmental Management Strategy for the development to the satisfaction of the Director-General.</p> <p>This strategy must:</p> <ul style="list-style-type: none"> (a) provide the strategic context for environmental management of the development; (b) identify the statutory requirements that apply to the development; (c) describe in general how the environmental performance of the development would be monitored and managed during the 	<p><u>Development and Approval</u></p> <p>The site has developed an Environmental Management Strategy (CL-EWP-P-010 Rev0) which includes the required items (as applicable), as reviewed by URS. The plan has been approved by the DoP Director General as described in the Department's letter Clarence Colliery - Environmental Management Approvals (DA 504-00) RefS02/02820 dated 25 July 2007</p>	Compliant (Strategy Development and Approval)

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		development; (d) 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; receive, handle, respond to, and record complaints; resolve any disputes that may arise during the course of the development; a respond to any non-compliance; manage cumulative impacts; and respond to emergencies; and (e) describe the role, responsibility, authority, and accountability of all the key personnel involved in environmental management of the development; and (f) be updated within 3 months of the completion of each Independent Environmental Audit.		
		Commitments articulated in the endorsed Environmental Management Strategy include: <ul style="list-style-type: none"> ▪ Identification and evaluation of environmental aspects, potential impacts and subsequent development of mitigation measures ▪ Implementation of an inspection and monitoring program to assess the effectiveness of environmental management measures ▪ Annual review of the site's Water Management Plan, Air Quality Monitoring Plan and Environmental Noise Monitoring Plan ▪ Implementation of the site's Environmental Monitoring Program, including cumulative impact monitoring ▪ Non-compliance and emergency procedures, including notification of EPL/DC discharge criteria and notification of potential or actual material environmental harm ▪ Community consultation ▪ Management review of EMS within 3 months of Independent Environmental Audit 	<u>Implementation</u> Some deficiencies in the implementation of elements of the Environmental Management Strategy commitments during the audit period have been identified as described under DA 504-00 S3-14 (lack of TSP and PM ₁₀ monitoring until Dec-09), DA 504-00 S3-16 (lack of noise monitoring in 2009), DA 504-00 S3-17 (lack of meteorological monitoring during 2009 and 2010 due to equipment failure), EPL Condition R2 (non-reporting of 2009 incident resulting in potential material environmental harm). The site's endorsed EMS (s5.4) prescribes that "should the (site's environmental) monitoring program detect an exceedance in licence or DC criteria but there is no actual or potential material harm to the environment, then the DEC [sic] and/or DoP as relevant will be informed in writing. This has historically not occurred (refer S4-1 above), however, is now being undertaken with the first notification of an TSS exceedance and depositional dust exceedances occurring in Dec-10 Other commitments of the EMS appear to have been implemented. On the basis that the Department of Planning does not allow for an assessment of 'partial compliance', implementation of the Environmental Management Strategy has been assessed as non-compliant	Non-Compliant (Implementation) Recommendation: Refer DA 504-00 S3-14, DA 504-00 S3-16, DA 504-00 S3-17, EPL Condition R2. It is recommended that Clarence Colliery prepare a local amendment to its adopted Centennial Coal Incident Reporting procedure reflecting its commitment to routinely report all non-compliances to DoP and DECCW or else obtain re-endorsement of a revised Environmental Management Strategy
DA 504-00 Development Consent	S5- 2	Within 14 days of the Director-General's approval for the strategy, the Applicant shall: (a) send copies of the approved strategy to the relevant agencies, Council, and the CCC; and (b) ensure the approved strategy is publicly available during the development.	Copies of 31-Jul-07 email transmissions of the EMS (Environmental Management Strategy) to the then DPI, State Forests, DECCW, Lithgow City Council, Sydney Catchment Authority were sighted by URS. A copy of the EMS is available on Centennial Coal's website at http://www.centennialcoal.com.au/index.php?option=com_content&view=article&id=601&Itemid=48	Compliant
DA 504-00 Development Consent	S5- 3	Environmental Monitoring Program Within 12 months of the date of this consent, the Applicant shall prepare an Environmental Monitoring Program for the development in consultation with the relevant agencies, and to	<u>Development and Approval</u> The site has developed an Environmental Monitoring Program (CL-EWP-P-050 Rev1), as reviewed by URS. The plan has been approved by the DoP Director General as described in the	Compliant (Program development and approval)

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		the satisfaction of the Director-General. This program must consolidate the various monitoring requirements in schedule 3 of this consent into a single document.	Department's letter Clarence Colliery - Environmental Management Approvals (DA 504-00) RefS02/02820 dated 25 July 2007.	
		Commitments articulated in the endorsed Environmental Monitoring Plan include: <ul style="list-style-type: none"> Implementation of the Air Quality Monitoring Program Implementation of the Environmental Noise Management Plan monitoring requirements Implementation of surface water and groundwater monitoring Meteorological monitoring Reporting of monitoring results through the AEMR (as per DA 504-00 S5-5) Audit and review 	<u>Implementation</u> Monitoring as required by the Plan has generally been implemented. Some deficiencies in the implementation of elements of the Environmental Monitoring Program commitments during the audit period have been identified as described under DA 504-00 S3-14 (lack of TSP and PM10 monitoring during the period 2008 through Dec-09), DA 504-00 S3-16 (lack of noise monitoring in 2009), DA 504-00 S3-17 (lack of meteorological monitoring during 2009 and 2010 due to equipment failure), EPL Condition M6.1 (lack of daily volumetric for discharge LDP002 for a period during 2009 due to equipment failure). Other commitments of the EMS appear to have been implemented. On the basis that the Department of Planning does not allow for an assessment of 'partial compliance', implementation of the Environmental Monitoring Program has been assessed as non-compliant	Non-Compliant (Implementation) Recommendation: Refer DA 504-00 S3-14, DA 504-00 S3-16, DA 504-00 S3-17, EPL Condition M6.1
DA 504-00 Development Consent	S5- 4	Within 3 months of the completion of each Independent Environmental Audit, the Applicant shall review, and if necessary update, the Environmental Monitoring Program to the satisfaction of the. Director-General.	Not yet applicable	Not Triggered
DA 504-00 Development Consent	S5- 5	Annual Reporting The Applicant shall prepare and submit an AEMR to the Director-General and the relevant agencies. This report must: (a) identify the standards and performance measures that apply to the development; (b) describe the works carried out in the last 12 months; (c) describe the works that will be carried out in the next 12 months; (d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years; (e) include a summary of the monitoring results for the development during the past year, (f) include an analysis of these monitoring results against the relevant: - impact assessment criteria; - monitoring results from previous years; and - predictions in the EIS; (g) identify any trends in the monitoring results over the life of the development; (h) identify any non-compliance during the previous year; and (i) describe what actions were, or are being taken to ensure compliance.	The site's AMERs to date have not included items: (e) water discharge monitoring - pH, TSS, filterable manganese and oil & grease monitoring results have been report, however, monitoring of other parameters required under the EPL have not been reported (f) water discharge monitoring - not all monitored parameters have been analysed against the relevant requirements as listed in the condition g) AEMRs do not generally report trending of data over the life of the project e.g. water data. The site has advised that the above items will be included in its AMER for the 2010 reporting period.	Non-Compliant Recommendation: It is recommended that the site expand the content of its 2010 AEMR as proposed to include the previously omitted items
DA 504-00	S5- 6	Independent Environmental Audit	Clarence Colliery engaged URS to conduct the Independent	Compliant

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Development Consent		<p>Within 5 years of the date of this consent, and every 5 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:</p> <ul style="list-style-type: none"> (a) be conducted by a suitably qualified, experienced, and independent person whose appointment has been endorsed by the Director-General; (b) be consistent with ISO 19011:2002 — Guidelines for Quality and/or Environmental Systems Auditing, or updated versions of this guideline; (c) assess the environmental performance of the development, and its effects on the surrounding environment; (d) assess whether the development is complying with the relevant standards, performance measures, and statutory requirements; (e) review the adequacy of the Applicants Environmental Management Strategy and Environmental Monitoring Program; and, if necessary, (f) recommend measures or actions to improve the environmental performance of the development, and/or the environmental management and monitoring systems. 	<p>Environmental Audit with the prescribed scope under an initial purchase order (CL164391) dated 24-Dec-10</p> <p>Letter from DoP to Centennial Angus Place <u>Clarence Colliery - Independent Compliance Audit dated 9 December 2010 provides</u> DG approval of URS auditors.</p>	
DA 504-00 Development Consent	S5- 7	<p>The Independent Environmental Audit shall include a detailed audit of the subsidence, surface water, and ground water impacts of the development. The audit shall:</p> <ul style="list-style-type: none"> (a) review the monitoring data for the development; (b) identify any trends in the monitoring data; (c) examine the subsidence, surface water, and ground water impacts of the development; (d) compare these impacts against the relevant impact assessment criteria; and, if necessary, (a) recommend measures to reduce, mitigate, or remediate those impacts <p>If the independent audit determines that the subsidence, surface water, and/or ground water impacts resulting from the underground mining operations are greater than those predicted in the EIS/Supplementary Report or the relevant impact assessment criteria, the Applicant shall:</p> <ul style="list-style-type: none"> (a) assess the significance of these impacts; (b) investigate measures to minimise these impacts, including modifying subsequent mine plans; and (c) describe what measures would be implemented to reduce, minimise, mitigate or remediate those impacts in the future; to the satisfaction of the Director-General 	<p>Clarence Colliery engaged URS to conduct the Independent Environmental Audit with the prescribed scope under an initial purchase order (CL164391) dated 24-Dec-10</p> <p>Letter from DoP to Centennial Angus Place <u>Clarence Colliery - Independent Compliance Audit dated 9 December 2010.</u> DG approval of URS auditors.</p>	Compliant
DA 504-00 Development Consent	S5- 8	<p>Within 3 months of commissioning the Independent Environmental Audit, the Applicant shall submit a copy of the audit report to the Director-General, with a response to the recommendations contained in the audit report.</p>	Not yet applicable	Not yet applicable

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DA 504-00 Development Consent	S5- 9	<p>Community Consultative Committee</p> <p>Within 3 months of the date of this consent, the Applicant shall establish a Community Consultative Committee to oversee the environmental performance of the mine. The CCC shall:</p> <ul style="list-style-type: none"> (a) be comprised of: <ul style="list-style-type: none"> • 2 representatives from the Applicant, including the person responsible for environmental management at the mine; • at least 1 representative from Council (if available); and • at least 3 representatives from the local community, whose appointment has been approved by the Director-General in consultation with the Council; (b) be chaired by an independent chairperson, whose appointment has been approved by the Director-General; (c) meet at least twice a year; and (d) review and provide comment on the environmental performance of the development, including any environmental management plans, monitoring results, audit reports, or complaints. 	<p>The site's Community Consultative Committee (CCC) has been established and approved by the DoP as described in it letter to Centennial Coal Company Ltd Clarence Coal Mine Extension (DA-504-00) Community Consultative Committee dated 21 March 2006. The CCC is chaired by Ms Sue Graves, identified as not being connected to the Clarence/Newnes Junction communities. URS reviewed CCC minutes for the period 2009-2010 which indicate adherence to prescribed requirements for the operation of the CCC</p>	Compliant
DA 504-00 Development Consent	S5- 10	<p>The Applicant shall, at its own expense:</p> <ul style="list-style-type: none"> (a) ensure that 2 of its representatives attend the Committee's meetings; (b) provide the Committee with regular information on the environmental performance and management of the development; (c) provide meeting facilities for the Committee; (d) arrange site inspections for the Committee, if necessary; (e) take minutes of the Committee's meetings; (f) make these minutes available to the public; (g) respond to any comments or recommendations the Committee may have in relation to the environmental management or performance of the development; (h) forward a copy of the minutes of each Committee meeting, and any responses to the Committee's recommendations to the Director-General within a month of acceptance of the minutes by the Committee. 	<p>URS reviewed CCC minutes for the period 2009-2010 which indicate adherence to prescribed requirements for the operation of the CCC. An example of the provision of CCC minutes to DoP was reviewed in the form of Clarence Colliery's letter to DoP Clarence Colliery CCC Meeting Minutes dated 18 November 2010</p>	Compliant
DA 504-00 Development Consent	S5- 11	<p>Access to Information</p> <p>Within 1 month of the approval of any management plan/strategy required under this consent (or any subsequent revision of these management plans strategies), the completion of the independent audits required under this consent, or the completion of the AEMR, the Applicant shall:</p> <ul style="list-style-type: none"> (a) provide a copy of the relevant document/s to the Council, relevant agencies and the CCC; (b) ensure that a copy of the relevant documents is made publicly available at the mine; and (c) put a copy of the relevant document/s on the Applicant's website, to the satisfaction of the Director-General. 	<p>Examples of email transmissions of the EMS, Water Management Plan and Environmental Monitoring Plan to the then DPI, State Forests, DECCW, Lithgow City Council, Sydney Catchment Authority were sighted by URS. Copies of endorsed plans and programs are available at the mine and on Centennial Coal's website at http://www.centennialcoal.com.au/index.php?option=com_content&view=article&id=601&Itemid=48</p>	Compliant
DA 504-00 Development	S5- 12	<p>During the life of the development, the Applicant shall:</p> <ul style="list-style-type: none"> (a) make a summary of the results of all monitoring required 	<p>Monitoring results from the previous 12 months (January - June 2010 and January to September 2010) were available at the mine and on</p>	Non-Compliant

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Consent		under this consent publicly available both at the mine and on the Applicant's website; and (b) update these results on a regular basis (at least every 3 months), to the satisfaction of the Director-General, Note: The Applicant's environmental management plans/protocols should specify the reporting provisions for each environmental aspect.	Centennial Coal's website at http://www.centennialcoal.com.au/index.php?option=com_content&view=article&id=601&Itemid=48 at the time of the audit. Results were last updated in September 2010 and are regularly updated. However, the requirement to update the web site at least every 3 months did not appear to be met. On the basis that DoP does not allow for an assessment of 'partially compliant', this item has been assessed as non-compliant.	Recommendation: It is recommended that environmental monitoring results be updated on the site's website every 3 months as prescribed
1976 Development Consent	1	Approval of building plans	Examples of building plan approvals were sighted including <u>The Council of Greater Lithgow Building Permit 255-79 (Clarence Colliery Bathhouse, Administration and Workshop)</u> , <u>Building permit 192-79 (Winder House)</u> , <u>Building Permit 27/80 (Bathhouse and Workshop Extension)</u> . A review of all building plan approvals has not been undertaken by URS	Compliant
1976 Development Consent	2	Properly planned landscaping to be provided	As part of the 2010 AEMR site inspection, II NSW made comments on the rehabilitation area. This required Clarence to develop and implement a Rehabilitation Plan for the Emplacement Area. A generic Rehabilitation Plan was sighted at the audit, however, had not been issued to agencies for review. The letter required completion of the Plan by 2010. No plan was provided within this date and copies of any previously approved rehabilitation plans have not been sighted by URS	Indeterminate
1976 Development Consent	3	All conditions outlined in the Environmental Impact Statement are adhered to	A comparison against the scope of works and environmental controls described in the Environmental Impact Statement Proposed Clarence Colliery for Coalex Pty Ltd (October 1975) indicate general consistency with the URS' site observations and documentation reviewed (as detailed throughout this appendix). Some operational process improvements have occurred. It is noted that the EIS describes total on-site water reuse during normal operating conditions (process water, surface operational and underground supply). URS considers that subsequent regulatory approvals for off-site discharge supersede this requirement. The 1975 EIS describes proposed REA maximum height (35 m above existing RL) and rehabilitation (eg. 15 cm impervious material, 50 cm suitable rockfill and 30 cm of topsoil) - both of which have been unable to be assessed as part of this audit. The site advised that it is not aware of any non-compliances with the intent of the EIS and Amendment	Generally in Compliance Not able to assess for the REA capping and RL requirements. Subject to comments regarding the REA below.
1976 Development Consent	4	External structures for surface facilities to be constructed so as to blend in with the surrounding bush land	All structures and buildings were observed by URS to be constructed of non-reflective materials in green/brown tones.	Compliant
1976 Development Consent	5	Collection dam to be constructed before actual Mine workings begin	Underground water make is dewatered to the site wastewater treatment plant prior to holding and subsequent off-site discharge. The pre-1979 timing of construction of site water storage structures and leachate dams has not been independently confirmed by URS	Indeterminate
1976	6	That all conditions laid down by the National Parks and Wildlife	Some non-compliances with Environment Protection Licence No. 726,	Not Triggered

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Development Consent		Services, State Pollution Control Commission, Soil Conservation Department, Planning and Environmental Commission of NSW and Department of Mines must be complied with.	DA 504-00 Development Consent and other relevant approvals have been identified, as described. As these non-compliances relate more to previous regulatory instruments and are historical, with current non-compliances reported generally throughout the report, it is not considered appropriate to consider this Non-Compliant.	(refer Refer Environment Protection Licence No. 726 and DA 504-00 Development Consent)
1976 Development Consent	7	Potable water to be of a standard as prescribed by the Health Commission of NSW	Site potable water supply (filtered rainwater) is tested monthly for pH and electrical conductivity (EC). Select monitoring data from 2009 - 2001 was reviewed as documented in <u>2009 Clarence - Centennial.xls</u> , <u>2010 Clarence - Centennial.xls</u> . The <u>Australian Drinking Water Guidelines - NHMRC/NRMMC 2004</u> (as adopted in NSW) do not prescribe health-based guideline values for pH and EC. Monitoring data for a broader range of guideline parameters was not available for review, and as such, a full assessment of compliance with this requirement was unable to be performed.	Indeterminate
1993 Modified Development Consent	1	The applicant shall carry out the development generally in accordance with the 1975 Environmental Impact Statement, prepared by Dames & Moore, except as amended in the Statement of Environmental Effects prepared by R.W. Corkery & Co. dated April, 1993.	<p>A comparison against the scope of works and environmental controls described in the Environmental Impact Statement Proposed Clarence Colliery for Coalex Pty Ltd (October 1975) indicate general consistency with URS' site observations and documentation reviewed (as detailed throughout this appendix). Copy of 1993 Statement of Environmental Effects not provided for review and as such, this condition cannot be fully assessed.</p> <p>Some operational process improvements have occurred. It is noted that the EIS describes total on-site water reuse during normal operating conditions (process water, surface operational and underground supply). URS considers that subsequent regulatory approvals for off-site discharge supersede this requirement. The 1975 EIS describes proposed REA maximum height (35 m above existing RL) and rehabilitation (eg. 15 cm impervious material, 50 cm suitable rockfill and 30 cm of topsoil) - both of which have been unable to be assessed.</p> <p>The site advised that it is not aware of any non-compliances with the intent of the EIS and Amendment</p>	Indeterminate
1993 Modified Development Consent	2	Reject emplacement only to be undertaken in the areas referred to as Reject Emplacement Areas I, II and III in the Statement of Environment Effects prepared by R.W. Corkery & Co date April, 1993.	Copy of 1993 Statement of Environmental Effects not provided, hence this requirement could not be assessed.	Indeterminate
1993 Modified Development Consent	3	All Pit Top Structures to be constructed of non reflective materials of a colour which is compatible with surrounding bushland.	All structures and buildings were observed by URS to be constructed of non-reflective materials in green/brown tones.	Compliant
1993 Modified Development Consent	4	The applicant shall prepare, prior to the commencement of site works for Reject Emplacement Area III, a sediment and erosion control plan. The plan shall incorporate measures for the management of surface runoff, control of water discharge points and the conservation and protection of soil stockpiles. The plan shall be submitted to the Department of Conservation and Land Management for its approval and to Council for its information. All	The site has developed an Erosion and Sediment Control Plan contained within the <u>Clarence Colliery Water Management Plan (CL-EWP-P-040 Rev1)</u> which is a requirement of DA 504-00. The plan has been approved by the DoP Director General as described in the Department's letter <u>Clarence Colliery - Environmental Management Approvals (DA 504-00) RefS02/02820 dated 25 July 2007</u> . It is unclear whether a separate, earlier Plan was prepared as required by	<p>Indeterminate</p> <p>Current Plan exists that is considered to supercede this requirement for the period of the audit.</p>

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		works shall be carried out in accordance with the approved plan and in consultation with the Department of Conservation and Land Management.	the 1993 Modified Development Consent	
1993 Modified Development Consent	5	The applicant shall prepare, within Six (6) months of the commencement of operations for REA III, a detailed rehabilitation plan. This plan is to be submitted to the Department of Mineral Resources, Department of Conservation and Land Management and Council for approval.	No detailed rehabilitation plan specific to REA III was available for review. II NSW also indicated that they had not received a detailed rehabilitation plan. As part of the 2010 AEMR site inspection, II NSW made comments on the rehabilitation area. This required Clarence to develop and implement a Rehabilitation Plan for the Emplacement Area. A generic Rehabilitation Plan for the whole site was sighted at the audit, however, had not been issued to agencies for review. The letter required completion of the Plan by 2010. No plan was provided within this date. Some specifications for REA III dated mid 90s were sighted, but do not fully address the requirement.	Non Compliant Recommendation It is recommended that a detailed rehabilitation plan is developed and implemented for the REAs.
1993 Modified Development Consent	6	The applicant shall arrange an annual on site meeting, over the life of the project, to inspect the results of rehabilitation works. Representatives from Council, the Department of Conservation and Land Management, National Parks and Wildlife Service and Department of Mineral Resources shall be invited to attend each meeting and the applicant shall adhere to any recommendations made by these representatives. The first annual site meeting shall be undertaken not more than one (1) year after the commencement of operations for REA III.	The site currently operates an annual AEMR site-based presentation process, which includes site inspection for regulators	Compliant
1993 Modified Development Consent	7	The applicant shall obtain from the Environmental Protection Authority all statutory approvals and licences as may be required under the Clean Air Act, 1961, the Clean Waters Act, 1970, and the Noise Control Act, 1975. Such approvals and licences are to be obtained prior to the commencement of works and the development is to be carried out in accordance with the terms of these approvals and licences.	Environment Protection Licence No. 726 is held by the site, as required	Compliant
1993 Modified Development Consent	8	All water storage structures and leachate dams to be designed and constructed to a standard satisfactory to the Environmental Protection Authority.	Site water management arrangements have been previously inspected by DECCW during annual AEMR site visits. Site personnel have advised that no issues have been raised by DECCW in relation to inadequacy of design and construction of water storage structures and leachate dams	Compliant
1993 Modified Development Consent	9	The applicant shall obtain all the necessary approvals from the Department of Mineral Resources.	Refer commentary on separate approvals below	Refer commentary on separate approvals below
1993 Modified Development Consent	10	At the completion of mining and reject emplacement operations, the applicant shall ensure that the site is completely rehabilitated to a standard reflecting its natural state and to be to the satisfaction of Council, the Department of Mineral Resources and the Department of Conservation and Land Management.	This requirement is relevant to REAs I and II which were rehabilitated during the 1990s. Refer Consolidated Coal Lease 705 condition 13	Refer Consolidated Coal Lease 705 condition 13 Indeterminate
1994 Northern Lease	1	The development is to be carried out in accordance with the Environmental Impact Statement prepared by RW Corkery and	Copy of 1993 Statement of Environmental Effects not provided, hence this requirement could not be assessed.	Indeterminate

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
Extension Area Development Consent		Co Pty Ltd, date November 1993, except as may be specified or amended by the following conditions.		
1994 Northern Lease Extension Area Development Consent	2	The south-eastern section of the Northern Extension is to be limited to "first workings" only. Any appropriate protection zones to safeguard surface features shall be determined when the company applies to the Department of Mineral Resources for approval to extract pillars or mine by longwall method in accordance with Section 138 of the Coal Mines Regulation Act, 1982.	Site indicated that First workings only have occurred in the south-eastern section of Northern Extension. The activity was not conducted within the audit period and hence was not fully verified.	Not Assessed in full during the audit.
1994 Northern Lease Extension Area Development Consent	3	The applicant shall prepare, in consultation with the National Parks and Wildlife Service, a monitoring plan for the four Newnes Plateau Shrub Swamps located within the Northern Extension. The plan will measure the impacts, following subsidence, of changes to water levels, plant presence, abundance, structure and animal presence. Monitoring will include amphibians, reptiles, birds and mammals, with special emphasis on the Blue Mountains Water Skink and rare plants. Monitoring will include any appropriate comparisons with swamp areas not subject to longwall mining and shall be undertaken for a period of at least 5 years.	Not triggered. Site advised that mining by Clarence has not occurred under the scrub swamps of the Newnes Plateau	Not triggered
1994 Northern Lease Extension Area Development Consent	4	The applicant shall prepare a contingency plan to re-establish the rare plant Notochloe microdon, Boronia deanei and Celmisia longifolia prior to longwall mining beneath the Newnes Plateau Shrub Swamps. The plan shall be implemented if existing populations decline. Details of such plan are to be provided to the National Parks and Wildlife Service.	Not triggered. Site advised that longwall mining has not occurred under the Newnes Plateau Shrub Swamps.	Not triggered
1994 Northern Lease Extension Area Development Consent	5	The applicant shall inform the National Parks and Wildlife Service of the results of subsidence monitoring prior to commencement of longwall mining under the Mount Horne Aboriginal sites. The likely impacts of longwall mining on these sites, and any appropriate mitigative measures or protection zones, are to be fully assessed when the applicant applies to the Department of Mineral Resources for approval to extract pillars or mine by longwall method in accordance with Section 138 of the Coal Mines Regulation Act, 1982.	Not triggered. Site advised that longwall mining has not occurred under the Mount Horne Aboriginal sites	Not triggered
1994 Northern Lease Extension Area Development Consent	6	All water storage structures and leachate dams are to be designed and constructed to the satisfaction of the Environment Protection Authority.	Refer 1993 Modified Development Consent condition 8	Compliant
1994 Northern Lease Extension	7	The applicant shall obtain from the Environment Protection Authority all statutory approvals and licences as may be required under the Clean Air Act, 1961, the Clean Waters Act, 1970, and	Refer 1993 Modified Development Consent condition 7	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
Area Development Consent		the Noise Control Act, 1975. Such approvals and licences shall be obtained, or incorporated into existing approvals, prior to the commencement of works or extension to existing facilities.		
1994 Northern Lease Extension Area Development Consent	8	The applicant shall provide to the National Parks and Wildlife Service details of Pit Top water monitoring results as supplied to the Environment Protection Authority under the Clean Water Act.	Pit top water monitoring results are provided to DECCW as the responsible authority through EPL Annual Returns	Compliant
1994 Northern Lease Extension Area Development Consent	9	The applicant shall consult with the Soil Conservation Service during topsoil stripping and stockpiling associated with Reject Emplacement Areas IV and V.	Not triggered. REAs IV and V have yet to be constructed	Not triggered
1994 Northern Lease Extension Area Development Consent	10	The applicant shall consult with the Soil Conservation Service prior to the construction of runoff diversion and erosion and sediment control works. Such works are to be constructed to the satisfaction of the Soil Conservation Service.	The site has developed an Erosion and Sediment Control Plan contained within the <u>Clarence Colliery Water Management Plan (CL-EWP-P-040 Rev1)</u> which is a requirement of DA 504-00. The plan has been approved by the DoP Director General as described in the Department's letter <u>Clarence Colliery - Environmental Management Approvals (DA 504-00) RefS02/02820 dated 25 July 2007</u> . It is unclear whether separate, earlier consultation with the Soil Conservation Service occurred as required by the 1994 Northern Lease Extension Area Development Consent	Indeterminate
1994 Northern Lease Extension Area Development Consent	11	The applicant shall prepare, within 6 months of the commencement of operations for Reject Emplacement Area IV and Reject Emplacement Area V respectively, a detailed rehabilitation plan for each area. This plan is to be submitted to the Department of Mineral Resources, the Soil Conservation Service and Council for approval.	REAs IV and V have yet to be constructed. There is currently no detailed Rehabilitation Plan for REA IV. A Draft Rehabilitation Plan has been prepared and is still to be issued to I&I NSW. Clarence indicated that they are still in excess of 6 months prior to commencement of REA IV. On this basis the condition has not yet been triggered.	Not Triggered Recommendation Develop and submit a detailed Rehabilitation Plan for REA IV to I&I NSW, and appropriate regulatory agencies. Ensure the effective implementation of the Plan.
1994 Northern Lease Extension Area Development Consent	12	The applicant shall consult with the Soil Conservation Service in respect of the progressive and final rehabilitation of Reject Emplacement Areas IV and V. Rehabilitation of these areas is to be undertaken to the satisfaction of the Soil Conservation Service, the Department of Mineral Resources and Council.	Not triggered. REAs IV and V have yet to be constructed	Not triggered
Environment Protection Licence 726	A1.1	Not applicable	Noted	Noted
Environment Protection Licence 726	A1.2	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.	Thirteen (13) non-administrative variations have been made to EPL 726 since 2001 pursuant to the Protection of the Environment Operations Act 1997 (NSW). Three (3) of these variations occurred during 2009-2010 and related to a change in water discharge flow method (Notice No. 1122407 Condition M-6.1 10-Dec-10), increase in	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		<p>Scheduled Activity</p> <ul style="list-style-type: none"> -Mining for coal -Coal works <p>Fee Based Activity Scale</p> <ul style="list-style-type: none"> -Mining for coal > 2000000 - 3500000 T produced -Coal works > 2000000 - 5000000 T loaded 	<p>filterable manganese water discharge limit (Notice No. 1115584 Condition L3 5-Jul-10) and clarification of Scheduled Activities/scale and boundary of licensed premise (Notice No. 1102926 Conditions A1-2 and A2-1 9-Sep-09.</p> <p>The site maintains daily operational monitoring, including coal extraction volumes. URS reviewed monitoring data from 2010-11 as documented in Clarence Colliery - Production Statistics 2010/2011 and Coal Stocks 2010/2011, which indicates total annual extraction of <2MT.</p>	
Environment Protection Licence 726	A1.3	Not applicable.	Noted	Noted
Environment Protection Licence 726	A2.1	<p>The licence applies to the following premises:</p> <p>Premises Details</p> <p>CLARENCE COLLIERY</p> <p>OFF BELLS LINE OF ROAD</p> <p>NEWNES JUNCTION, NSW 2790</p> <p>CCL705, ML 1353 , ML1354 & ML1583</p>	Noted. A Licence Variation of 9-Sep-2009 incorporated ML1583.	Noted
Environment Protection Licence 726	A3.1	Not Applicable.	Noted. No other Scheduled Activities were observed by URS as being undertaken on the site.	Noted
Environment Protection Licence 726	A4.1	<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.</p> <p>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>	<p>The site does not hold a copy of its original EPL Application. Copies of Licence Variation applications nos. 146357 (22-Nov-10) and 144013 (28 Feb 06) were sighted by URS.</p>	<p>Indeterminate</p> <p>Recommendation:</p> <p>Obtain a copy of the Original EPL Application and ensure compliance with the application.</p>
Environment Protection Licence 726	L1.1	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.	<p>s120 of the POEO Act relates to the prohibition of pollution of waters, and provides:</p> <p>(1) A person who pollutes any waters is guilty of an offence.</p> <p>(2) In this section:</p> <p>"pollute" waters includes cause or permit any waters to be polluted</p> <p>URS interprets this provision to mean non-compliance with EPL discharge limits, amongst other potential actions.</p>	Non-Compliant (refer L3.1 and L3.2)
Environment Protection Licence 726	L2.1	Not Applicable.	Noted	Noted
Environment Protection	L2.2	Not Applicable.	Noted	Noted

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Licence 726				
Environment Protection Licence 726	L3.1	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>URS reviewed primary and secondary discharge water quality monitoring records from 2009 and 2010 as documented by the site in <u>2009 Clarence - Centennial.xls</u>, <u>2010 Clarence - Centennial.xls</u>, <u>November 2010 Clarence.xls</u>, <u>Clarence Annual Return EPL 726 2100210.xls</u>, <u>Clarence Annual Return EPL 726 20101215.xls</u> and other MS Excel workbooks. Data reviewed identifies the following exceedances of prescribed discharge limits at licence discharge point 2 (LD002):</p> <p><u>2009</u> One (1) exceedance for total suspended solids (TSS) and four (4) exceedance for filterable manganese - all exceedances reported in the site's 2009 EPL Annual Return, as sighted by URS</p> <p><u>2010</u> One (1) exceedance for pH (4-Jan-10), two (2) exceedances for filterable manganese (5-Mar-10 and 4-May-10) and one (1) exceedance for TSS (2-Dec-10) - The pH and filterable manganese exceedances were reported to the Clarence Colliery Community Consultative Committee (CCC) as documented in meeting minutes of 1-Feb-10, 10-May-10, 8-Nov-10. A CCC meeting has yet to occur since the Dec-10 TSS exceedance</p> <p>There appears to be consistency between primary and secondary data records and results reported in the site's 2009 EPA Annual Return. A full reconciliation of all data reported in the site's 2009 Annual Return against primary and secondary data records has not been performed by URS.</p> <p>All water discharge sampling and analysis is undertaken on behalf of the site by third-party analytical laboratory Australian Laboratory Services (ALS). The site is not currently provided with documentation from ALS confirming sample chain of custody and handling. In addition to confirming appropriate sample collection and preservation, such documentation is necessary for Clarence Colliery to confirm samples are analysed within laboratory holding times and therefore measured pollutant concentrations are reflective of actual concentrations. The analytical holding time for hexavalent chromium is particularly short at 6 hrs (meaning samples need to be analysed within 6 hours of collection).</p>	<p>Non-Compliant (2009 and 2010)</p> <p>Recommendation: It is recommended that Clarence Colliery require its third-party water discharge sample collection and analysis contractor (ALS) to provide full chain-of-custody documentation for all samples (including sample collection date/time and analysis date/time). ALS should also be requested to confirm and document in its analytical reports that all samples are analysed within laboratory holding times.</p>
Environment Protection Licence 726	L3.2	Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.	URS reviewed primary and secondary discharge water quality monitoring records from 2009 and 2010 (described above under L3.1) which indicates recorded pH measurements to be within the prescribed range, with the exception of the sample taken for LD002 on 4-Jan-10 for which measured pH to be 8.71 (outside the prescribed range of 6.5 - 8.5). Some pH excursions have occurred in previous years which have been reported by the site in respective EPL Annual Returns as sighted by URS	Non-Compliant (2010)
Environment Protection	L3.3	To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in	Noted	Noted

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
Licence 726		the table/s.		
Environment Protection Licence 726	L4.1	For each discharge point or utilisation area specified below (by a point number), the volume/mass of: (a) liquids discharged to water; or; (b) solids or liquids applied to the area; must not exceed the volume/mass limit specified for that discharge point or area: Point Unit of measure Volume/Mass Limit Point 2 - kilolitres per day 25000	URS reviewed primary and secondary discharge water quality monitoring records from 2009 and 2010 (described above under L3.1) indicates recorded volumetric flow from discharge point 2 (LD002) to be within the allowable rate.	Compliant
Environment Protection Licence 726	L4.2	Notwithstanding the volume limits specified in condition L4.1, the combined volume discharged from point(s) 2 may exceed 25,000 kL/day on any day that that greater than 10 mm of rainfall is recorded at the premises, for that day.	Noted. No daily volumetric flow greater than the allowable 25,000 kL was identified in data reviewed for 2009 and 2010 (refer above)	Noted
Environment Protection Licence 726	L5.1	Not Applicable.	Noted	Noted
Environment Protection Licence 726	L6.1	Not Applicable.	Noted	Noted
Environment Protection Licence 726	M1.1	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.	The required water quality and volumetric flow monitoring records for 2009 and 2010 (as detailed above) were reviewed by URS and found to be in order	Compliant
Environment Protection Licence 726	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; (b) kept for at least 4 years after the monitoring or event to which they relate took place; and (c) produced in a legible form to any authorised officer of the EPA who asks to see them.	Records of discharge water quality and volumetric flow monitoring undertaken during 2009 and 2010 (described above under L3.1) were reviewed by URS and found to be in order. Examples of required records from the period 2006 - 2008 were also sighted. It is noted that multiple secondary records of individual data are maintained in electronic format. Whilst a sample check of these records indicate general consistency and internal QA/QC is applied, the potential exists for data entry errors to occur	Compliant Recommendation: It is recommended that water discharge monitoring data be consistently recorded in a single controlled location to minimise potential data transcription errors
Environment Protection Licence 726	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; (b) the time(s) at which the sample was collected; (c) the point at which the sample was taken; and (d) the name of the person who collected the sample.	Reviewed primary water quality data records from 2009 and 2010 (described above under L3.1) contains the prescribed details in relation to sample collection	Compliant
Environment Protection Licence 726	M2.1	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: Note: In relation to condition M2.1, "Special Frequency 1" means quarterly during discharge.	Reviewed primary water quality data records from 2009 and 2010 (described above under L3.1) indicates monitoring has occurred in accordance with the prescribed sampling method, units of measure and frequency	Compliant
Environment	M3.1	Not applicable.	Noted	Noted

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
Protection Licence 726				
Environment Protection Licence 726	M3.2	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.	A review by URS of an ALS analytical method for an example parameter required to be monitored by the site (ALS QWI - EN/EP020 oil and grease) indicates a general conformance with that method prescribed by NSW EPA, however, some variations are noted. An example of such variations (non-exhaustive) is provided below: Oil and grease ▪ The ALS method provides for two sample extraction options. Option A utilises a bottle tumbler. Option B utilises a separation funnel based method with 2 minute shake up, closely following the NSW EPA (APHA) reference method. URS considers that the bottle tumbler method may be subject to a lesser extraction efficiency and thus is more likely to under estimate oil and grease content	Compliant Recommendation: It is recommended that Clarence Colliery require its third-party water discharge sample analysis contractor (ALS) to provide clarification in relation to variations between its analytical methods and those prescribed by NSW EPA
Environment Protection Licence 726	M4.1	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.	URS reviewed records of community complaints received by the site during the period 2006 - 2010 as documented in Centennial Coal Site All Incidents Report - Incidents Summary for Clarence 2006 - 2010. A total of three (3) community complaints are documented as having been received by the site during this period. A complaint was received by the site on 4-Aug-10 relating to a piece of coal which fell off the back of a coal truck on a public roadway (Bells Line of Road) on 3-Aug-10, striking on oncoming vehicle - this complaint and the results of incident investigation were reported at the Clarence Colliery Community Consultative Committee (CCC) meeting of 8-Nov-10. Two separate complaints were received by the site in 2007 relating to the discharge of sediment run-off during heavy rainfall and dust.	Compliant
Environment Protection Licence 726	M4.2	The record must include details of the following: (a) the date and time of the complaint; (b) the method by which the complaint was made; (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; (d) the nature of the complaint; (e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and (f) if no action was taken by the licensee, the reasons why no action was taken.	The Clarence Colliery Community Concerns Report dated 4-Aug-10 relating to the incident described in M4.1 above was reviewed by URS and found to include prescribed details	Compliant
Environment Protection Licence 726	M4.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	Refer M4.1 above	Compliant
Environment Protection Licence 726	M4.4	The record must be produced to any authorised officer of the EPA who asks to see them.	Noted. The site has advised that no such request has been made during 2006-2010.	Noted
Environment Protection	M5.1	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from	The site maintains a Community Contact line, as advertised on its website	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
Licence 726		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.	http://www.centennialcoal.com.au/index.php?option=com_content&view=article&id=601&Itemid=48 (accessed 24-Jan-11) and periodically in local print media. URS reviewed examples of such advertisements as appeared in the Lithgow Mercury on Saturday 3-Feb-07 and Tuesday 2-Mar-10	
Environment Protection Licence 726	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.	Refer M5.1 above	Compliant
Environment Protection Licence 726		Conditions M5.1 and M5.2 do not apply until 3 months after: (a) the date of the issue of this licence or (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.	Noted	Noted
Environment Protection Licence 726	M6.1	For each discharge point or utilisation area specified below, the licensee must monitor: (a) the volume of liquids discharged to water or applied to the area; (b) the mass of solids applied to the area; (c) the mass of pollutants emitted to the air; at the frequency and using the method and units of measure, specified: LD002 Daily volumetric measurement in kilolitres using inline bubble metre instrumentation LD003 Daily volumetric estimation <u>during discharge</u> in kilolitres LD004 Daily volumetric estimation <u>during discharge</u> in kilolitres	URS reviewed secondary volumetric discharge monitoring records from 2009 and 2010 as documented by the site in 2009 Clarence - Centennial.xls and 2010 Clarence - Centennial.xls. Data reviewed indicates the completion of prescribed LD002 daily volumetric monitoring during 2010 (no discharge occurred from LD003 or LD004 during 2010). An equipment failure in 2009 resulted in a lack of monitoring during August - September, which was reported as a non-compliance by Clarence Colliery in its 2009 EPL Annual Return. On the basis of no monitoring being undertaken in this period and the result reporting of the non-compliance by Clarence, this has been assessed as non compliant.	Non-Compliant (August to September 2009)
Environment Protection Licence 726	R1.1	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.	URS reviewed the site's 2009 Annual Return and draft 2010 Annual Return and found these to be in order	Compliant
Environment Protection Licence 726	R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided below.	The reviewed <u>2009 Annual Return</u> and <u>draft 2010 Annual Return</u> correspond to the respective reporting periods	Compliant
Environment Protection Licence 726	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	Not applicable. No licence transfer has occurred.	Not applicable

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		the licence is granted and ending on the last day of the reporting period.		
Environment Protection Licence 726	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.	Not applicable. No licence surrender or revocation has occurred.	Not applicable
Environment Protection Licence 726	R1.5	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').	Correspondence accompanying the site's 2009 Annual Return indicates submission within 60 days of the Licence anniversary date. The submission deadline for the site's 2010 Annual Return is 28-Feb-2010 and the draft document has been prepared, as reviewed by URS	Compliant
Environment Protection Licence 726	R1.6	Not applicable (Notification where actual load can not be calculated)	Noted	Noted
Environment Protection Licence 726	R1.7	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.	Copies of Annual Returns for the period 2006 -2009 are held at the site, as sighted by URS	Compliant
Environment Protection Licence 726	R1.8	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.	Copies of Annual Returns for the period 2006 -2009 held at the site, as sighted by URS, are signed by licence holder representatives.	Compliant
Environment Protection Licence 726	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.	Noted	Noted
Environment Protection Licence 726	R2.1	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.	DECCW has been notified of two (2) incidents at the site involving potential environmental harm during the period 2005 - 2010. The first incident related to a loss of 1.3 ML of underground minewater to the main dam which occurred on 12-Mar-08, as reported to the Environment Line (ref. 1054160) and subsequently described in Clarence Colliery's letter to DECCW <u>Clarence Colliery - Pipeline Waste Discharge on 12 March 2008 Environment Protection Licence 726 dated 30 April 2008</u> . The second incident related to a loss of 1.3 ML of leachate to the main dam which occurred on 7-Dec-10, as reported to the Environment Line (ref. 125402) and subsequently described in Clarence Colliery's letter to DECCW <u>Clarence Colliery - Pipeline Rupture - Environment Line Reference Number: 125402 dated 14 December 2010</u> .	Non-Compliant (for one incident in 2009) Otherwise, Compliant 2008 and 2010 Recommendation: It is recommended that all incidents with the potential for on-site or off-site environmental harm be reported to DECCW in the prescribed manner in accordance with Centennial Coal Guidance Notes ECMG 03 - Environmental Incident Reporting as

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			<p>A third incident occurred on 13-Sep-09 involving the loss to ground of an estimated 45 kL of diesel from a bowser at the CHPP, as described in Investigation Report CHPP Diesel Leak Incident at Clarence Colliery on 13 September 2009. On the basis that the diesel was prevented from exiting the site via its water discharge system through containment within the Primary Arrestor, Clarence Coal considered the incident did not represent potential material harm to the environment and therefore did not notify DECCW. Impacted soils were reportedly excavated and land-farmed following the event, however, it is understood that no validation sampling was undertaken to confirm analytically that all hydrocarbons had been removed. Given the approx. 70 m travelled by the diesel across the unpaved reject base prior to entering the Primary Arrestor drainage system and the potential for infiltration to underlying groundwater prior to excavation of impacted surface soils, URS considers that the incident represented the potential for environmental harm, and as such, should have been reported to DECCW.</p> <p>It is noted that part 5.7 of the POEO Act provides that notification is required regardless of whether potential harm to the environment is caused only in the premises where the pollution incident occurs (s147(2)). The requirement and site's process for notifying EPA of incidents resulting in potential or actual material harm to the environment (pursuant to the POEO Act) is described in Centennial Coal Guidance Notes ECMG 03 - Environmental Incident Reporting, as reviewed by URS.</p>	has occurred.
Environment Protection Licence 726	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.	Clarence Colliery's letter to DECCW <u>Clarence Colliery - Pipeline Waste Discharge on 12 March 2008 Environment Protection Licence 726 dated 30 April 2008</u> indicates that an extension was granted by DECCW to the 7 day reporting period. Notification to DECCW of the 7-Dec-10 incident occurred within 7 days (refer R2.1 above)	Compliant
Environment Protection Licence 726	R3.1	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.	Not applicable. The site has advised that no such request has been made during 2006-2010	Not applicable
Environment Protection Licence 726	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.	Not applicable. Refer R3.1 above	Not applicable
Environment Protection	R3.3	The request may require a report which includes any or all of the following information:	Noted	Noted

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Licence 726		(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.		
Environment Protection Licence 726	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.	Noted	Noted
Environment Protection Licence 726	G1.1	A copy of this licence must be kept at the premises to which the licence applies.	A copy of the licence is held at the site, as observed by URS	Compliant
Environment Protection Licence 726	G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.	Noted	Noted
Environment Protection Licence 726	G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises.	The licence is available to employees who may wish to inspect it	Compliant
Environment Protection Licence 726	U1.1	Not applicable (Pollution studies and reduction programs)	Not applicable	Not applicable
Environment Protection Licence 726	E1.1	Not applicable (Special conditions)	Not applicable	Not applicable
Environment Protection Licence 726	O1.1	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 (b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	Observations made by URS of select areas of the site indicate licensed activities as being undertaken in a competent manner. A number of recommendations for improvement were made by GHD in its assessment of compliance against Australia Standard AS1940:2004 The storage and handling of flammable and combustible liquids, a number of which have already been actioned by the site (refer DA 504-00 Development Consent S3-26 above)	Compliant Recommendation: Refer DA 504-00 Development Consent S3-26 above
Environment Protection Licence 726	O2.1	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 (b) must be operated in a proper and efficient manner.	The site's water treatment plant (WTP) is operated and maintained on behalf of the site by third-party service provider Environmental Group (Operations) Pty. Ltd (EGL), who designed and installed the plant upgrade approximately 6 years ago. On the basis of plant inspection	Compliant Recommendation: It is recommended that Clarence

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			and interviews with operational personnel, pollution control equipment appears to be operated and maintained in proper and efficient condition. A full WTP operational and maintenance review has not been undertaken by URS. Examples of reports provided to Clarence Colliery by its WTP operator were reviewed by URS <u>1011 Monthly Report November 10 Part 1.pdf</u> and <u>Monthly Report November 10 Part 2.pdf</u> Clarence Colliery does not currently have a performance-based contract in place with EGL which articulates its role, responsibilities and obligations in relation to the site achieving and maintaining EPL and broader environmental regulatory compliance. Whilst there appears to be a verbal understanding between Clarence Colliery and EGL of respective roles and responsibilities, the absence of a documented (and agreed) expectations reduces the site's operational control.	Colliery establish an performance-based agreement or arrangement with its WTP operator (EGL) which articulates respective roles, responsibilities and reporting requirements in relation to the site achieving and maintaining EPL and broader environmental regulatory compliance.
Environment Protection Licence 726	O3.1	Activities occurring in or on the premises must be carried out in a manner that will minimise the generation, or emission from the premises, of wind-blown or traffic generated dust.	Conditions during the site inspection were generally wet, preventing a visual inspection by URS of potential dust generation. Description of site controls (documentation as reviewed)	Compliant
Environment Protection Licence 726	O3.2	All trafficable areas, coal storage areas and vehicle manoeuvring areas in or on the premises must be maintained, at all times, in a condition that will minimise the generation, or emission from the premises, of wind-blown or traffic generated dust.	Conditions during the site inspection were generally wet, preventing a visual inspection by URS of potential dust generation. Description of site controls (documentation as reviewed)	Compliant
Environment Protection Licence 726	O3.3	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.	The site maintains a coal hauler induction (written, video and questionnaire of understanding), which describes general rules requiring all loads to be covered prior to leaving site and driver responsibilities to ensure no spillage. No vehicle movements were observed from the site during the time of inspection, and as such, implementation of the above procedural controls was not able to be confirmed	Compliant
Environment Protection Licence 726	P1.1	Not Applicable.	Noted	Noted
Environment Protection Licence 726	P1.2	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	Noted
Environment Protection Licence 726	P1.3	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. 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. Discharge to waters Discharge quality monitoring Point identified as "001" on map of premises supplied with the	Noted. Site has advised and reported that discharge is currently occurring from discharge point 2 (LD002) only	Noted

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		Licence Information Form dated 19 January 2000 Point identified as "002" on map of premises supplied with the Licence Information Form dated 19 January 2000 Point identified as "003" on map of premises supplied with the Licence Information Form dated 19 January 2000 Point identified as "004" on map of premises supplied with the Licence Information Form dated 19 January 2000		
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	1	UNDER THE PROVISIONS OF S116 OF THE WATER ACT (1912), THIS LICENCE SHALL BE VALID FOR 5 YEARS FROM THE DATE OF ISSUE, AFTER WHICH IT SHALL BE CONSIDERED FOR RENEWAL PROVIDED A DEMONSTRATED NEED FOR MINE DEWATERING TO PROVIDE A SAFE OPERATING ENVIRONMENT IN THE MINE EXISTS AND MINING OCCURS IN ACCORDANCE WITH A CURRENT MINING CONSENT	<p>General Comments: The existing licence refers to management of water outside of Clarence Mine's responsibility i.e. after water has been transferred to LMC's water infrastructure. As such, Clarence have requested a review of the licence to focus the requirements onto Clarence Mine's area of responsibility. Site requested the review in a letter dated 26/8/2010. The reviewed licence was issued by NOW to Clarence on 23/12/2010. NOW indicated to site that the licence could not be formally changed until LMC's licence for their use of the water was also changed to reflect the Clarence Mine's changes. This had not occurred at the time of the audit.</p> <p>Discussions were held between the URS Lead auditor and John Galea of NOW. John Galea indicated it was appropriate for URS to audit against the updated/reviewed licence conditions. As such, these updated conditions are reflected here.</p>	<p>Compliant</p> <p>Recommendation: Ensure that the Bore Licence is formally updated once this can be achieved as indicated by NOW.</p>
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	2	IF MINE DEWATERING CEASES FOR THE PURPOSE OF PROVIDING A SAFE OPERATING ENVIRONMENT IN THE MINE, OR THE MINE MOVES INTO A "CARE AND MAINTENANCE" PHASE OR IT IS ABANDONED, THE LICENSEE SHALL CONTACT NSW OFFICE OF WATER. AT THIS TIME, A REVIEW OF ANY FUTURE GROUNDWATER EXTRACTION PROPOSALS AT THE SITE WILL BE REQUIRED BEFORE A NEW AUTHORISATION CAN BE GIVEN TO ALLOW THE EXTRACTION OF GROUNDWATER TO CONTINUE	Mine dewatering continues, although some areas of the mine are being allowed to flood.	Not Triggered
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	3	THIS LICENCE, FOR THE SPECIFIC PURPOSE OF MINE DEWATERING, ENTITLES THE LICENSEE TO EXTRACT THE VOLUME OF GROUNDWATER REQUIRED FOR THE MAINTENANCE OF A SAFE OPERATING ENVIRONMENT IN THE MINE USING THE WORKS OUTLINED ON THE LICENCE CERTIFICATE IN THE ATTACHED SCHEDULE	Noted.	Noted.
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	4	ANY DISCHARGE OF THE WATER EXTRACTED FROM THE MINE UNDER THIS LICENCE TO THE WOLLANGAMBE RIVER MUST BE MADE IN ACCORDANCE WITH A VALID ENVIRONMENT PROTECTION LICENCE ISSUED UNDER THE PROTECTION OF THE ENVIRONMENT OPERATIONS ACT (1997) THAT ALLOWS FOR SUCH A DISCHARGE	EPL is valid and in place - see main section of this report.	Compliant

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Licence, still to be approved).				
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	5	THE LICENSEE SHALL NOT ALLOW ANY DISCHARGE OF MINE WATERS INTO ANY CREEK, RIVER, WATERCOURSE OR AQUIFER WITHOUT WRITTEN SUPPORT FROM NSW OFFICE OF WATER	One pipeline failure occurred of the pipeline from the underground borehole relevant to this licence. The water was discharged to the main dam. This is discussed in the main body of the report and occurred on 12/3/2008. Other discharges from other sources have occurred as discussed under the EPL conditions.	Non Compliant Recommendation: Implement effective systems to ensure no further pipeline ruptures occur from the two extraction boreholes.
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	6	THE LICENSEE SHALL DEVELOP A MONITORING PROGRAM WITHIN SIX MONTHS OF THE COMMENCEMENT OF DISCHARGES INTO THE WOLLONGAMBE RIVER TO THE SATISFACTION OF NSW OFFICE OF WATER TO EVALUATE POTENTIAL LONG TERM IMPACTS, INCLUDING THOSE ON FARMERS CREEK. THE MONITORING PROGRAM SHALL RECORD AT A MINIMUM:	Site Management consider that the Water Management Plan addresses this requirement. NOW have reviewed the Water Management Plan 2006, and are awaiting feedback on the 2010 Plan.	Indeterminate
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	6	RAINFALL AND GROUNDWATER LEVEL MEASUREMENTS (A) RAINFALL SHALL BE MONITORED AND RECORDED ON A DAILY BASIS AT AN ONSITE LOCATION. (B) GROUNDWATER MONITORING SITES SHALL BE SELECTED TO PROVIDE INFORMATION ON GROUNDWATER CONDITIONS BEFORE, DURING AND POST MINING. THE LICENSEE WILL INFORM NSW OFFICE OF WATER OF THE LOCATIONS IN THE ANNUAL REPORT OUTLINED IN CONDITION (7). (C) FOR EACH SITE, THE GROUNDWATER MONITORING WORKS SHALL BE INSTALLED INTO THE FOLLOWING RECOGNISED GEOLOGIC FORMATIONS OF THE SYDNEY GEOLOGICAL BASIN (WESTERN COALFIELD) WHERE APPROPRIATE TO ACHIEVE REPRESENTATIVE WATER (PRESSURE) LEVELS: (1) BANKS WALL SANDSTONE (2) BURRA - MOKO HEAD SANDSTONE (3) CALEY FORMATION SANDSTONE (4) KATOOMBA COAL SEAM (D) GROUNDWATER LEVELS SHALL BE MONITORED AND RECORDED ON A DAILY BASIS IN AT LEAST THREE (3) INVESTIGATION/MONITORING BORE SITES (OR AS OTHERWISE AGREED UNDER THE MINE SUBSIDENCE MANAGEMENT PLAN PROCESS)	a) an on site meteorological station exists that records rainfall; b) groundwater monitoring is conducted as part of the Water Management Plan; c) as above; check if this covered all strata d) there are a greater number of boreholes than the 3 required.	Compliant
Bore License Certificate -	6	THE QUANTITY AND QUALITY OF GROUNDWATER EXTRACTED FROM THE BORES PRIOR TO TREATMENT	a) Groundwater is pumped out from two boreholes that access the mine workings.	Non Compliant

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10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).		FOR DISCHARGE (A) THE QUANTITY OF GROUNDWATER EXTRACTED SHALL BE RECORDED BY A METHOD APPROVED BY NSW OFFICE OF WATER. (B) THE QUALITY OF THE PRE-TREATED GROUNDWATER SHALL BE ANALYSED EVERY 3 MONTHS FOR A SUITE OF ANALYTES INCLUDING ELECTRICAL CONDUCTIVITY, TOTAL DISSOLVED SOLIDS, PH, ALKALINITY, TOTAL SUSPENDED SOLIDS, DISSOLVED OXYGEN%, TEMPERATURE, IRON AND MANGANESE. TESTS SHOULD BE CONDUCTED BY A LABORATORY WITH APPROPRIATE QUALITY STANDARD CERTIFICATION.	A SCADA system was put in place in 2010 to monitor the discharges. Also, a back up exists to use data from the Water Treatment Plant, although this information is not collected for daily amounts. There is no approval from NOW for the method used to measure the quantity of water being extracted from the boreholes. b) the quality of pre-treated water is monitored monthly (sighted monthly data).	Recommendation: Obtain approval from the NOW for the method used to monitor quantities of water pumped.
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	6	THE QUANTITY AND QUALITY OF TREATED GROUNDWATER DISCHARGED TO A WATERCOURSE: (A) WATER QUALITY INFORMATION COLLECTED TO SATISFY THE DISCHARGE REQUIREMENTS OF AN ENVIRONMENT PROTECTION LICENCE ISSUED UNDER THE PROTECTION OF THE ENVIRONMENT OPERATION ACT (1997) SHALL BE PROVIDED TO NSW OFFICE OF WATER IN THE YEARLY REPORT OUTLINED IN CONDITION (7). (B) AN APPROPRIATE FLOW METER/S APPROVED BY NSW OFFICE OF WATER SHALL BE INSTALLED TO RECORD THE DAILY VOLUME OF WATER DISCHARGED TO THE WOLLANGAMBE RIVER. WATER QUANTITY INFORMATION COLLECTED TO SATISFY THE REQUIREMENTS OF AN ENVIRONMENT PROTECTION LICENCE ISSUED UNDER THE PROTECTION OF THE ENVIRONMENT OPERATIONS ACT (1997) CAN BE SUBSTITUTED TO SATISFY THIS CONDITION BUT MUST BE RECORDED ON A DAILY BASIS.	a) water quality monitoring is conducted as required by the EPL (see other sections of the main report). B) at the time of the audit water measurement was by ultrasonic means, as written up in the old EPL. A variation to the EPL was approved for a bubble meter by DECCW, however, has not been formally approved by NOW. As NOW is part of DECCW, this requirement is considered to be in compliance.	Compliant Recommendation: Obtain approval for the metering from NOW.
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	7	THE LICENSEE SHALL PROVIDE NSW OFFICE OF WATER WITHIN ONE HUNDRED AND TWENTY (120) DAYS OF THE END OF EACH CALENDAR YEAR AN ANNUAL REPORT CONTAINING: (A) ALL INFORMATION COLLECTED UNDER CONDITION (6) OF THIS LICENCE WITHIN THAT CALENDAR YEAR. (B) AN INTERPRETED REPORT ON MONITORING, DETAILING THE WATER LEVEL DATA AND WATER QUALITY DATA DESCRIBED IN CONDITION (6) OF THIS LICENCE AND DETAILING ANY NEED FOR REMEDIAL ACTION. (C) ANY DISCHARGE VOLUME AND WATER QUALITY INFORMATION COLLECTED FOR AN ANNUAL RETURN REQUIRED BY AN ENVIRONMENT PROTECTION LICENCE ISSUED UNDER THE PROTECTION OF THE ENVIRONMENT OPERATIONS ACT (1997). (D) IDENTIFICATION OF ANY IMPACTS DUE TO DEWATERING ACTIVITIES INCLUDING IMPACTS ON ANY OVERLYING GROUNDWATER DEPENDENT ECOSYSTEMS AND SURFACE WATER ENVIRONMENTS.	The AEMR is sent to the NOW on an annual basis. AEMRs generally cover the requirements as listed.	Compliant

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Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	8	THE LICENSEE SHALL ALLOW NSW OFFICE OF WATER, OR ITS AUTHORISED REPRESENTATIVES, FULL AND FREE ACCESS TO THE LICENSED WORKS, EITHER DURING OR AFTER CONSTRUCTION, FOR THE PURPOSE OF UNDERTAKING INSPECTION OR TEST OF WORKS AND FITTINGS. THE LICENSEE SHALL CARRY OUT ANY WORK OR ALTERATIONS DEEMED NECESSARY BY NSW OFFICE OF WATER TO ENSURE THE PROTECTION AND MAINTENANCE OF THE WORKS, AND THE PROTECTION OF SURFACE AND SUBSURFACE WATER FROM CONTAMINATION	NOW have not visited the site since the approval in 2005.	Not Triggered
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	9	THE LICENSEE WILL ENSURE STRATEGIES ARE ADOPTED TO MINIMISE WATER INFLOWS TO THE MINE WORKINGS. THE LICENSEE SHALL CONTACT NSW OFFICE OF WATER IF WATER OF ABNORMAL QUALITY OR QUANTITY IS ENCOUNTERED, OR IS DEEMED EXCESSIVE BY NSW OFFICE OF WATER. THE LICENSEE MAY THEN BE INSTRUCTED BY NSW OFFICE OF WATER TO SUBMIT A REMEDIATION ACTION PLAN AND/OR CONDUCT REMEDIAL ACTIONS TO ADDRESS ISSUES THAT COULD CAUSE ENVIRONMENTAL HARM TO AN AQUIFER OR A WATERCOURSE.	Previously in the operation of the mine, Long wall mining has contributed to high water inflows to the mine. Longwall mining has not been undertaken during the period since the approval in 2005. As mining during this period has had limited subsidence impacts as compared to longwall mining, there has been reduced inflows resulting from mining operations. Clarence personnel indicated that there have not been recorded situations of abnormal quality or quantity since the 2005 approval.	Compliant
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	10	FOR THE WORKS AND ACTIVITIES APPROVED BY THIS LICENCE, NSW OFFICE OF WATER MAY DIRECT THE LICENSEE TO CONDUCT FURTHER INVESTIGATIONS, EVALUATION OR ANALYSES IN A SPECIFIED MANNER, AND TO REPORT THEM TO NSW OFFICE OF WATER IN A FORMAT AND TIMEFRAME SPECIFIED.	No directions have been given in relation to this condition.	Not Triggered
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	11	THE VOLUME OF GROUNDWATER EXTRACTED FROM THE WORKS AUTHORISED BY THIS LICENCE, AND BY LICENCE(S) N/A, SHALL NOT EXCEED 2523 MEGALITRES (ML) IN ANY 12 MONTH PERIOD COMMENCING 1ST JULY. (THIS IS REFERRED TO AS THE "GROUNDWATER-ONLY ALLOCATION").	Volumes for July 09 to July 2010 were 154 ML, and for the same period in 08 to 09 were 271 ML which were well under the licensed limits. It was noted for licence 165054, this requirement was also compliant.	Compliant
Bore License Certificate - 10BL165053 (Dewatering bore - Reviewed Licence, still to be approved).	12	THIS IS A SPECIAL PURPOSE (MINE DE-WATERING) LICENCE. AS SUCH, THE LICENCE, INCLUDING THE VOLUMETRIC GROUNDWATER ALLOCATION, IS NOT TRANSFERRABLE AND THE LICENCE WILL BE LAPSED AT THE CONCLUSION OF MINING OPERATIONS	Noted	Not Triggered

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to be approved).				
Bore License Certificate - 10BL604098	1	1 THE LICENCE SHALL LAPSE IF THE WORK IS NOT COMMENCED AND COMPLETED WITHIN THREE YEARS OF THE DATE OF THE ISSUE OF THE LICENCE.	This licence relates to bores CLRP 15 and CLRP 16. These bores are located near Lithgow Dam 2, within ML 1583. The bores have been constructed and are complete, and have been rehabilitated.	Compliant
Bore License Certificate - 10BL604098	2	2 THE LICENSEE SHALL WITHIN TWO MONTHS OF COMPLETION OR AFTER THE ISSUE OF THE LICENCE IF THE WORK IS EXISTING, FURNISH TO THE DEPARTMENT OF NATURAL RESOURCES A) DETAILS OF THE WORK SET OUT I THE ATTACHED FORM ' A' MUST BE COMPLETED BY A DRILLER B) A PLAN SHOWING ACCURATELY THE LOCATION OF THE WORK IN RELATION TO PORTION AND PROPERTY BOUNDARIES C) A ONE LITRE WATER SAMPLE FOR ALL LICENCES EITHER THAN THOSE FOR STOCK, DOMESTIC TEST BORES AND FARMING PURPOSES D) DETAILS OF ANY WATER ANALYSIS AND/OR PUMPING TESTS	a) A Plan A form was sighted dated 7/1/2011 for bores CLRP 15 and 16 that was sent to DECCW/NOW. B) GPS, coordinates, but no plan was provided. Site indicated that a Plan was provided in the REF and water licence application. C) No water sample has been taken. While this is non-compliant, the basis for taking a water sample was not fully understood in the context of water monitoring bores and is not considered applicable; d) no water analysis was taken and it is not considered relevant.	Compliant
Bore License Certificate - 10BL604098	3	3 THE LICENSEE SHALL ALLOW THE DEPARTMENT OF NATURAL RESOURCES OR ANY PERSON AUTHORISED BY IT FULL AND FREE ACCESS TO THE WORKS, EITHER DURING OR AFTER CONSTRUCTION, FOR THE PURPOSE OF CARRYING OUT INSPECTION OR TEST OF THE WORKS AND ITS FITTINGS AND SHALL CARRY OUT ANY WORK OR ALTERNATION DEEMED NECESSARY BE THE DEPARTMENT FOR THE PROTECTION AND PROPER MAINTENANCE OF THE WORKS OR THE CONTROL OF THE WATER EXTRACTED AND FOR THE PROTECTION OF THE QUALITY AND THE PREVENTION FROM POLLUTION OR CONTAMINATION OF SUB SURFACE WATER	No visits have been requested, however, such visits would be allowed.	Not Triggered
Bore License Certificate - 10BL604098	4	4 IF DURING THE CONSTRUCTION OF THE WORK SALINE OR POLLUTED WATER IS ENCOUNTERED ABOVE THE REDUCING AQUIFER SUCH WATER SHALL BE SEALED OFF BY A) INSERTING THE APPROPRIATE LENGTH(S) OF CASING TO A DEPTH SUFFICIENT TO EXCLUDE THE SALINE OR POLLUTED WATER FROM THE WORK	No saline water encountered, hence no requirement to seal off triggered.	Not Triggered

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		<p>B) CEMENTING BETWEEN THE CASING(S) AND THE WALLS OF THE BORE HOLE FROM THE BOTTOM OF THE CASING TO GROUND LEVEL.</p> <p>ANY DEPARTURE FROM THESE PROCEDURES MUST BE APPROVED BY THE DEPARTMENT BEFORE UNDERTAKING THE WORK</p>		
Bore License Certificate - 10BL604098	5	<p>5 A) THE LICENSEE SHALL NOTIFY THE DEPARTMENT OF NATURAL RESOURCES IF A FLOWING SUPPLY OF WATER IS OBTAINED. THE BORE SHALL THEN BE LINED WITH CASING AND CEMENTED AND A SUITABLE CLOSING GEAR SHALL BE ATTACHED TO THE BOREHEAD AS SPECIFIED BY THE DEPARTMENT OF NATURAL RESOURCES</p> <p>B) IF A FLOWING SUPPLY OF WATER IS OBTAINED FROM THE WATER THE LICENSEE SHALL ONLY DISTRIBUTE WATER FROM THE BORE HEAD BY A SYSTEM OF PIPELINES AND SHALL NOT DISTRIBUTE IT IN DRAINS NATURAL OR ARTIFICIAL CHANNELS OR DEPRESSIONS</p>	No supply of water obtained.	Not Triggered
Bore License Certificate - 10BL604098	6	<p>6 IF A WORK IS ABANDONED AT ANYTIME THE LICENSEE SHALL NOTIFY THE DEPARTMENT OF NATURAL RESOURCES THAT THE WORK HAS BEEN ABANDONED AND SEAL OFF THE AQUIFER BY</p> <p>A) BACKFILLING THE WORK TO GROUND LEVEL WITH CLAY OR CEMENT AFTER WITHDRAWING THE CASING (LINING) OR</p> <p>B) SUCH METHODS AS AGREED TO OR DIRECTED BY THE DEPARTMENT OF NATURAL RESOURCES</p>	Bores CLRP 15 and 16 did not require abandonment. CLRP 12 did due to drilling difficulty. The same process to seal off the hole was used as for a completed hole.	Compliant
Bore License Certificate - 10BL604098	7	<p>7 THE LICENSEE SHALL NOT ALLOW ANY TAILWATER / DRAINAGE TO DISCHARGE INTO OR ONTO</p> <ul style="list-style-type: none"> - ANY ADJOINING PUBLIC OR CROWN ROAD - ANY OTHER PERSON LAND -ANY CROWN LAND - ANY NATIVE VEGETATION AS DESCRIBED UNDER THE NATIVE VEGETATION CONSERVATION ACT 1997 -ANY WETLANDS OF ENVIRONMENTAL SIGNIFICANCE 	No tail water generated at these two borehole locations.	Not Triggered
Bore License Certificate -	8	8 WORKS USED FOR THE PURPOSE IF CONVEYING DISTRIBUTING OR STORING WATER TAKEN BY MEANS OF	No works required as per condition.	Not Triggered

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
10BL604098		THE LICENSED WORK SHALL NOT BE CONSTRUCTED OR INSTALLED SO AS TO OBSTRUCT THE REASONABLE PASSAGE OF FLOOD WATERS FLOWING INTO OR FROM A RIVER		
Bore License Certificate - 10BL604098	9	9 IF THE BORE AUTHORISED BY THIS LICENSE IS LINED WITH STEEL OR PLASTIC CASING THE INSIDE DIAMETER OF THAT CASING SHALL NOT EXCEED 220MM	The diameter used was 168 mm, hence within the requirements.	Compliant
Bore License Certificate - 10BL604098	10	10 WATER SHALL NOT BE PUMPED FROM THE BORE AUTHORISED BY THIS LICENSE FOR ANY PURPOSE OTHER THAN GROUNDWATER INVESTIGATION	No water pumped.	Not Triggered
Bore License Certificate - 10BL604098	11	11 SUBJECT TO CONDITION (12) THE LICENSEE SHALL WITHIN TWO MONTHS OF THE DATE OF COMPLETION OF THE BORE AUTHORISED BY THE LICENSE 1) BACKFILL IT WITH CLAY OR CEMENT TO GROUND LEVEL AFTER WITHDRAWING ANY CASING (LINING) OR 2) RENDER IT INEFFECTIVE BY ANY OTHER MEANS ACCEPTABLE TO THE DEPARTMENT	Bore holes have been backfilled directly after completion, or a peizometer installed as required.	Compliant
Bore License Certificate - 10BL604098	12	12 CONDITION 11 SHALL HAVE NO FORCE OR EFFECT IF 1) AT THE RELEVANT TIME THERE IS WITH THE DEPARTMENT OF NATURAL RESOURCES AN APPLICATION IN RESPECT OF WHICH THE DEPARTMENT HAS NOT MADE A DECISION TO CONVERT THE GROUNDWATER INVESTIGATION BORE INTO A PRODUCTION BORE OR 2) THE LICENSEE HAD COMPLETED THE BORE FOR THE PURPOSE OF MEASURING WATER LEVELS OR WATER QUALITY BY THE ADDITION OF CASING WITH A DIAMETER NOT EXCEEDING 220MM	Not Triggered	Not Triggered
Consolidated Coal Lease 705	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 b Underground mining operations which will potentially lead to subsidence include secondary extraction panels such as longwalls or minerals, associated first workings (gate roads, installation roads and associated main headings, etc), and pillar extractions, and are otherwise defined by the Guideline for Applications for Subsidence Management Approvals 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	Refer to the main section of the report for detailed discussions on subsidence management and the preparation of SMPs.	Compliant

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		<p>Management Plan approved by the Director-General, an approval under the Coal Mines Regulation Act 1982, or the document New Subsidence Management Plan Approval Process - Transitional Provisions</p> <p>d Subsidence Management Plans are to be prepared in accordance with the Guideline for Applications for subsidence management Approvals</p> <p>e Subsidence Management Plans as approved shall form part of the</p> <p>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 New Approval Process for Management of Coal Mining Subsidence - Policy</p>		
Consolidated Coal Lease 705	5	<p>Working Requirements</p> <p>The lease holder must</p> <p>a ensure that at least 129 competent people are efficiently employed on the lease area on each week day except Saturday or any week day that is a public holiday,</p> <p>or</p> <p>b expend on operations carried out in the course of prospecting or mining the lease area, an amount of not less than \$2, 257,500 per annum whilst the lease is in force</p> <p>The Minister may at any time or times, by instrument in writing served on the lease holder, increase or decrease the expenditure required or the number people to be employed</p>	Both requirements have been met. There are 234 people on site, and an amount greater than stated is spent annually.	Compliant
Consolidated Coal Lease 705	6	<p>Control of Operations</p> <p>a If an Environmental Officer of the Department believes that the lease holder is not complying with any provision of the Act or any condition of this lease relating to the working of the lease, he may direct the lease holder to</p> <p>i) cease working the lease or</p> <p>ii) cease that part of the operation not complying with the Act or conditions</p> <p>until in the opinion of the Environmental Officer the situation is rectified</p>	<p>No directions served on the operation to cease working on the lease area.</p> <p>Direction given as stated above during site AEMR visit undertaken in 2010. Some requirements still outstanding.</p>	Compliant

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		<p>b The lease holder-must comply with any direction given. The Director- General may confirm, vary or revoke any such direction</p> <p>c A direction referred to in this condition may be served on the Mine Manager</p>		
Consolidated Coal Lease 705	7	<p>Reports</p> <p>The lease holder must provide an exploration report within a period of twenty - eight days after each anniversary of the date this lease has effect or at such other date as the Director - General may stipulate of each year. The report must be to the satisfaction of the Director - General and contain the following</p> <p>a- Full particulars, including results, interpretation and conclusions, of all exploration conducted during the twelve months period</p> <p>b- Details of expenditure incurred in conducting that exploration</p> <p>c- A summary of all geological findings acquired through mining or development evaluation activities</p> <p>d- Particulars of exploration proposed to be conducted in the next twelve months period</p> <p>e- All plans, maps, sections and other data necessary to satisfactorily interpret the report</p>	<p>Clarence were unsure of what boreholes were drilled in the area during the audit period. A report was sighted for EL5072 for period 2/10/2008 to 30/9/2009 dated 12/10/2009. This did have some information on the drilling program, indicating one borehole was drilled, however, it did not detailed the requirements of:</p> <p>a- Full particulars, including results, interpretation and conclusions, of all exploration conducted during the twelve months period</p> <p>c- A summary of all geological findings acquired through mining or development evaluation activities</p> <p>d- Particulars of exploration proposed to be conducted in the next twelve months period</p> <p>e- All plans, maps, sections and other data necessary to satisfactorily interpret the report.</p> <p>Other letters were sighted for the area indicating that no exploration drill holes were drilled during the period of the reporting.</p>	<p>Non Compliant</p> <p>Recommendation</p> <p>It is recommended that Exploration reports are prepared and issued that provide:</p> <p>a -Full particulars, including results, interpretation and conclusions, of all exploration conducted during the twelve months period</p> <p>b- Details of expenditure incurred in conducting that exploration</p> <p>c- A summary of all geological findings acquired through mining or development evaluation activities</p> <p>d- Particulars of exploration proposed to be conducted in the next twelve months period</p> <p>e- All plans, maps, sections and other data necessary to satisfactorily interpret the report</p>
Consolidated Coal Lease 705	8	<p>Licence to Use Reports</p> <p>a The lease holder grants to the licence, the right in copyright to all exploration reports lodged in copyright. Minister, by way of a non-exclusive publish, print, adapt and reproduce any form and for the full duration of copyright</p> <p>b The non - exclusion licence will operate as a consent for the purposes of section 365 of the Mining Act 1992</p>	Noted.	Not Triggered
Consolidated Coal Lease 705	9	<p>Confidentiality</p> <p>a All exploration reports submitted in accordance with the conditions of this lease will be kept confidential while the lease is in force, except in cases where:</p> <p>i- the lease holder has agreed that specified reports may be made non - confidential</p> <p>ii- reports deal with exploration conducted exclusively on areas that have ceased to be part of the lease</p>	Noted.	Not Triggered

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		<p>b- Confidentiality will be continued beyond the termination of a lease where an application for a flow-on title was lodged during the currency of the lease. The confidentiality will last until that flow-on title or any subsequent flow-on title, has terminated</p> <p>c- The Director General may extend the period of confidentiality</p>		
Consolidated Coal Lease 705	10	<p>The terms of the non-exclusive copyright licence granted under condition 8 (a) are:</p> <p>(a) The Minister may sub-licence others to publish, print, adapt and reproduce but not on-licence reports.</p> <p>(b) the Minister and any sub-licence will acknowledge the lease holder's and any identifiable consultant's ownership of copyright in any reproduction of the reports, including storage of reports onto an electronic database.</p> <p>(c) the lease holder does not warrant ownership of all copyright works in any report and, the lease holder will use best endeavour to identify those parts of the report for which the lease holder on, the copyright.</p> <p>(d) there is no royalty payable by the Minister for the licence.</p> <p>If the lease holder has reasonable grounds to believe that the Minister has exercised his rights under the non-exclusive copyright licence in a manner which adversely affects the operations of the lease holder, that licence is revocable on the giving of a period of not less than three months notice,</p>	Noted.	Not Triggered
Consolidated Coal Lease 705	11	<p>Blasting</p> <p>a Ground Vibration</p> <p>The lease holder must ensure that the ground vibration peak particle velocity generated by any blasting within the lease area does not exceed 10 mm/second and does not exceed 5 mm/second in more than 50/o 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</p> <p>b Blast Overpressure</p> <p>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 (linear) in more than 5% of the total number of blasts over a period of 12</p>	No blasting conducted.	Not Triggered

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		months, at any dwelling or occupied premises, as the case may be, unless determined otherwise by the Department of Environment and conservation		
Consolidated Coal Lease 705	12	<p>Safety</p> <p>Operations must be carried out in a manner that ensures the safety of persons or stock in the vicinity of the operations. All drill holes shafts and excavations must be appropriately protected, to the satisfaction of the Director-General, to ensure that access to them by persons and stock is restricted. Abandoned shafts and excavations opened up or used by the lease holder must be filled in or otherwise rendered safe to a standard acceptable to the Director-General.</p>	<p>No shafts exist in the area. Drill holes are located in remote areas and are managed by contractors. T</p> <p>This audit did not address safety as part of the audit.</p>	Compliant (subject to comments)
Consolidated Coal Lease 705	13	<p>Rehabilitation</p> <p>a- Land disturbed must be rehabilitated to a stable and permanent form</p> <p>suitable for a subsequent land use acceptable to the Director-General and in accordance with the Mining operations plan so that</p> <ul style="list-style-type: none"> - there is no adverse environmental effect outside the disturbed area and that the land is properly drained and protected from soil erosion. - the state of the land is compatible with the surrounding land and land use requirements. - the landforms, soils, hydrology and flora require no greater maintenance than that in 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 at an acceptable density, - the land does not pose a threat to public safety <p>b- Any topsoil that is removed must be stored and maintained in a manner acceptable to the Director General</p>	<p>Historic rehabilitation has occurred, prior to 2005. Much of the rehabilitation was conducted in REA's 1 and 2, which now adjoin REA 2.</p> <p>This was conducted in the mid 1990's and appeared to have good species diversity and provided an apparently stable cover. More recent rehabilitation, conducted since 2000, shows a high number of acacia species, with limited other plant species widely evident (this areas was not accessed as part of the audit for detailed review).</p> <p>There has been no rehabilitation, or formal monitoring of rehabilitation conducted on site since the 2005 Approval. Hence, the success or otherwise of the rehabilitation conducted has not been assessed. AREA 3 is nearing its capacity and other areas are planned for reject emplacement and approvals currently sought. There is no topsoil stockpiled for use in the rehabilitation of REA 3. Hence, there is a shortfall of topsoil and site indicated that topsoil would be used from proposed REA 4 for this purpose.</p> <p>Site also indicated that due to scheduling arrangements, topsoil would have to be stockpiled after clearing of REA 4 and prior to rehabilitation of REA3 (ie REA 3 and 4 would be open at the same time). As such, a large area will be cleared and not rehabilitated, and topsoil stockpiling may have an impact on the viability of seeds and soil quality, as compared to direct placement.</p> <p>Key inadequacy's related to this requirement are:</p> <ul style="list-style-type: none"> • the absence of topsoil stored for use in REA 3; • lack of monitoring as referenced against the flora survey included in the original MOP. <p>As the requirement relates to a stable landform to be achieved, and that it is not possible to ascertain at this time if such a landform is stable, it is judged that the condition is indeterminate. It is noted that a Rehabilitation Plan has recently been developed (not finalised or issued to relevant agencies for approval) and further works are planned to further develop the plan. This includes a programme of monitoring.</p>	<p>Indeterminate</p> <p>Recommendations:</p> <p>It is recommended that solutions are identified to address the lack of stored topsoil for REA III and that if material from REA IV is to be used, scheduling arrangements can be made to directly used material from REA IV to REA III rehabilitation.</p> <p>It is recommended that ecological surveys are conducted routinely on existing rehabilitation with close reference to the original MOP or subsequently approved surveys. Such surveys should assess all aspects of rehabilitation practices, and comment on effective methods to address issues identified.</p> <p>It is recommended that third parties independently review rehabilitation plans generated by Clarence and actions conducted with a view to best practice rehabilitation as appropriate given the sensitivity around the bushland location of the mine.</p>

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
Consolidated Coal Lease 705	14	The lease holder must comply with any direction given by the Director- General regarding the stabilisation and revegetation at any mine residues tailings or overburden dumps situated on the lease area	As part of the 2010 AEMR site inspection, II NSW made comments on the rehabilitation area. This required Clarence to develop and implement a Rehabilitation Plan for the Emplacement Area. A generic Rehabilitation Plan was sighted at the audit, however had not been issued to agencies for review. The letter required completion of the Plan by 2010. No plan was provided within this date, hence this condition is deemed Indeterminate. In addition, works required on water management are potentially outstanding. This is further discussed in Section 4.3.3 of the main report.	Indeterminate. Recommendations: Finalise the Rehabilitation Plan as specific to the Reject Emplacement Areas and submit to relevant agencies for approval as required of the AEMR site inspection conducted in 2010.
Consolidated Coal Lease 705	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. The purpose of this condition, water shall be taken to include any watercourse, water body or groundwaters. The lease holder must observe and perform any instructions given by the Director-General in this regard	Generally this requirement appeared to have been complied with. Exceptions were selected roads observed both within surface operations on the mine pit top area and on lease areas. Specifically, wash outs associated with pit top surface roads were observed below batters on the road to the main dam, and at the car park near the main dam. On the Mining Lease area, some wash outs were observed on Sate Forest Roads used by Clarence for access to monitoring locations.	Compliant (subject to comments) Recommendations: It is recommended that a review is conducted of the ongoing stability of batters and drainage related to roads in the Pit Top area and that areas of erosion and sedimentation are addressed.
Consolidated Coal Lease 705	17	Transmission lines, communication lines and pipelines Operations must not interfere with or impair that stability or efficiency of any transmission line, communication line, pipeline or any other utility on the lease area without the prior written approval of the Director General and subject to any conditions he may stipulate	No issues reported or observed.	Compliant
Consolidated Coal Lease 705	18	Fences, Gates a - Activities on the lease may 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	No issues reported or observed.	Compliant
Consolidated Coal Lease 705	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	a) Site reported that no interference of roads has occurred. B) Roads are used every week to two weeks by the site for general monitoring, and more for exploration drilling. Site pays a nominal (less than \$3,000 per year) sum to State Forests. Agreements with State Forests were not sighted.	Compliant Recommendation: It was noted that some roads used by Clarence were not well maintained and impacted by erosion. It is recommended that Clarence enter a dialogue with State Forests as to how the condition of roads may be improved.

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		amount paid or payable from the Mine Subsidence Compensation Fund		
Consolidated Coal Lease 705	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 Infrastructure Planning and Natural Resources	Clarence reported that no additional access tracks have been created on CCL 705. Site acknowledged that in selected cases, some monitoring lines can be used by bikers in the area leading to tracks forming. As a reaction to this, Clarence are seeking from II NSW to limit the extent and duration of keeping monitoring lines in place.	Compliant Recommendation: As Clarence are currently seeking to do, it is recommended that site minimise the use of monitoring lines so as to reduce the footprint of impact on the surface of the lease areas.
Consolidated Coal Lease 705	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 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 Conservation Act 1997. c- The lease holder must obtain all necessary approvals or licences before using timber from any crown land within the lease area.	a) Consent is sought form the Landholder (State Forests) in regard to any clearing of trees required as part of drilling operations. B) Clearing activities were observed to be limited in nature, and related to the carrying out of operations. C) Timber located on the lease is not used by Clarence for commercial purposes.	Compliant
Consolidated Coal Lease 705	23	Resource Recovery a- Notwithstanding any description of mining methods and their sequence or of proposed resource recovery contained within the Mining operations Plan, if at any time the Director-General is of the opinion that minerals which the lease entitles the lease holder to mine and which are economically recoverable at the time are not being recovered from the lease area, or that any such minerals which are being recovered are not being recovered to the extent which should be economically possible or which for environmental reasons are necessary to be recovered, he may give notice in writing to the lease holder requiring the holder to recover such minerals b- The notice shall specify the minerals to be recovered and the extent to which they are to be recovered, or the objectives in regard to resource recovery, but shall not specify the processes the lease holder shall use to achieve the specified recovery	No notices as indicated have been received by Clarence. SMP Approvals suggest general approval of approach.	Not Triggered

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		<p>c- The lease holder must, when requested by the Director-General, provide such information as the Director-General may specify about the recovery of the mineral resources of the lease area</p> <p>d- The Director-General shall issue no such notice unless the matter has firstly been thoroughly discussed with and a report to the Director-General has incorporated the views of the lease holder</p> <p>e- The lease holder may object to the requirements of any notice issued under this condition and on receipt of such an objection the Minister shall refer it to a warden for inquiry and report under section 334 of the Mining Act, 1992</p> <p>f- After considering the warden's report the Minister shall decide whether to withdraw, modify or maintain the requirements specified in the original notice and shall give the lease holder written notice of the decision. The lease holder must comply with the requirements of this notice,</p>		
Consolidated Coal Lease 705	24	<p>Indemnity</p> <p>The lease holder must indemnify and keep indemnified the Crown from and against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses which may be brought against the lease holder or which the lease holder may incur in respect of any accident or injury to any person or property which may arise out of the construction, maintenance or working of any workings now existing or to be made by the lease holder within the lease area or in connection with any of the operations notwithstanding that all other conditions of this lease shall in all respects have been observed by the lease holder or that any such accident or injury shall arise from any act or thing which the lease holder may be licensed or compelled to do.</p>	Noted.	Not Triggered
Consolidated Coal Lease 705	26	<p>Single Security (extended)</p> <p>a- The single security of \$1,500,000.00 given and maintained with the Minister by the lease holder for the purpose of ensuring the fulfilment by the lease holder of obligations under Consolidate Coal Lease No. 705 (Act 1973) and Mining Leases No's. 1353 and 1354 (Act 1992) is extended to apply to this renewal of this lease</p> <p>b- If the lease holder fails to fulfil any one or more of the</p>	A spreadsheet of securities held by Clarence was sighted and indicated that the required security was held, with Security Certificate 23081002 held for CCL 705. The amount of security held under this Certificate is \$6,746,000 as issued on 28/6/2010.	Compliant

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		obligations under this lease, then the security held may be applied at the discretion of the Minister towards the cost of fulfilling such obligations. For the purpose of this 'clause the lease holder shall be deemed to have failed to fulfil the obligations of the lease if the lease holder fails to comply with any condition or provision hereof, any provision of the Act or regulations made there under or any condition or direction imposed or given pursuant to a condition or provision hereof or of any provision of the Act or regulations made there under		
Consolidated Coal Lease 705	28	<p>Details Of Lands, Purposes and Additional Conditions</p> <p>The lease holder shall be limited to the following operations and conditions within the specified areas described on the plan annexed hereto and marked 'B'.</p> <p>(See table within original document)</p>	Noted	Not Triggered
Consolidated Coal Lease 705	29	<p>With regard to condition No. 28 and the plan annexed hereto and marked</p> <p>"B", the lease holder:</p> <p>a- unless with the consent of the Minister, and subject to such conditions as he may impose the lease holder shall not .dump on the subject lands any residues derived from the beneficiation of coal</p> <p>b- The lease holder shall provide and maintain to the satisfaction of the Minister efficient means to prevent contaminated waters discharging or escaping from the subject area onto surrounding areas and shall comply with any direction given or which may be given in this regard by the Minister</p> <p>c- The lease holder shall carry out and maintain the works authorized in such a manner as not to cause any danger to person or stock</p> <p>d i) the lease holder shall as far as may be practicable, carry out the works hereby authorised in such a manner as to interfere as little as possible with any track traversing the subject lands</p> <p>ii) The lease holder shall comply with any direction which may be given by the Minister or the Director General regarding use by the public of any such track and if required to do so by the Minister the lease holder shall provide alternate tracks to the satisfaction of the Minister</p>	<p>a) existing REA's have Section 100 approvals.</p> <p>B) water discharges are managed under the Water Management Plan. These are considered in detail under the EPL.</p> <p>C) Safety has not been assessed as part of this audit.</p> <p>D) no correspondence was noted by landowners or council regarding interference with tracks.</p> <p>e) not assessed;</p> <p>f) covered under other conditions;</p> <p>g) not assessed;</p> <p>h) not assessed;</p> <p>i) no polluted water discharges have occurred from the subject lease area (downcast shaft);</p> <p>j) it was reported that no coal has been dumped at the downcast shaft area;</p> <p>l) not assessed;</p> <p>m) not assessed;</p> <p>n) not assessed.</p>	Compliant (subject to clarifications).

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		<p>e- The lease holder shall carry out the works hereby authorised in such a manner as not to interfere with the operations of the holder of Permissive Occupancy No 64 /2 Lithgow and any dispute between the lease holder and the holder of the said permissive occupancy shall be decided by the Minister whose decision shall be final</p> <p>f- The lease holder shall upon abandonment of any drill hole on the subject lands, fill in or suitably plug such a drill hole to the satisfaction of the Minister</p> <p>g- The lease holder shall construct and maintain the railway within the subject area in accordance with the specifications and requirements of Rail Corporation of New South Wales</p> <p>h- The lease holder shall ensure that access over the subject land is available at all times to employees of Rail Corporations of New South Wales whilst in performance of their duties</p> <p>i) The lease holder shall within twenty four (24) hours notify the National Parks and Wildlife Services with laboratory analysis results of waters samples taken at discharge points</p> <p>k) The lease holder shall not dump or deposit any coal bearing material extracted during the construction of any shaft on the subject area. Such material shall be removed to the pit head dump facilities of the Clarence Colliery</p> <p>l) Notwithstanding the preceding conditions the lease holder shall not commence any excavation of works directly related to the construction of any shaft within the subject area until such time as the proposed siltation / setting dams have been constructed</p> <p>m) The lease holder shall ensure that any dam constructed on the subject area is not brought into operation until such time as the District inspector of Coal Mines has certified that</p> <p>i) the walls of any such dam has been compacted</p> <p>ii) the capacity of any such dam conforms to design specifications</p> <p>iii) any such dam is structurally sound and</p> <p>iv) the wall and catch drain of any such dam are so located as to trap all down slope movement of material from the construction site</p> <p>n) All topsoil is to be stockpiled prior to the construction of the proposed dams. Such topsoil is to be replaced on the walls of the completed dams</p> <p>o) The dam batters are to be constructed in such a manner as to ensure the stability of the completed earth structure</p>		
Consolidated Coal Lease 705	30	a- The lease holder shall carry out operations in such a way as to conform strictly to all provisions of the Sydney water catchment Management Act 1998 and the regulation there under applying to the prevention of pollution of the Warragamba Outer Catchment Area or the preservation of the purity of the water supply provided	Not considered relevant as there is no or limited area of CCL 705 in the SCA catchment area.	Not Applicable

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		<p>thereby or derived there from or for the protection of the property of Sydney catchment Authority [hereinafter referred to as the authority] on the Outer Catchment Area and also to alt requirements of the Authority from time to time under the said Act or any of the regulations for the time being in force,</p> <p>b-If the lease holder shall at any_ time be using or about to use any process which in the opinion of the Authority is likely to pollute the outer catchment Area or the water supply or to endanger any property of the Authority on the outer catchment Area the lease holder upon service of a notice in writing under the hand or the Minister to do so shall:</p> <p>i) discontinue the use of such process immediately or</p> <p>ii) there after refrain from adopting such process at any time as the case may require</p> <p>c- the lease holder shall provide and maintain to the satisfaction of the Minister efficient means to prevent the contamination, pollution, erosion or siltation of any stream or watercourse or outer catchment Area and shall observe any instruction given or which may be given by the Minister with a view to preventing or minimising the contamination, pollution or siltation of any stream watercourse or Outer Catchment Area.</p> <p>D- The lease holder hereby covenants with us ours Heirs and successors and as a separate covenant the lease holder hereby covenants with the Authority and its Successors that the lease holder shall at all times hereafter save harmless and keep us and the said Authority and our Heirs and successors and the successors of the said Authority indemnified from payment of compensation and from and against all actions proceedings claims and demands in respect any injury loss of damage arising out of or in any way connected with any interference with or deprivation or loss of access to the land and premises of this authority which may occur by reason of any works or operations undertaken or carried out by the said Authority or arising out of or in any way connected with any discontinuance or alteration of any process consequent upon the service of a notice in pursuance of the provisions of condition 31(b) or arising out of or in any way connected with the operation of any regulations relating to outer catchment Areas in force at the date hereof or made by-the said Authority at any time hereafter and the lease holder hereby agrees that for the purpose of this condition the said Authority shall be deemed to be a party to this authority.</p>		
Consolidated Coal Lease	31	The lease holder shall	a) portalooos are provided for drilling activities and invoices for these were sighted;	Compliant

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705		<p>a- Make such provisions for sanitation as may be directed by the Authority and shall at all times observe and perform' any requirements of the said Authority respecting sanitation.</p> <p>b- not establish any camps or habitations within any area under the control of the Authority unless with the consent of the Authority.</p> <p>c- Not sink any drill hole within the stored waters on the subject area nor within 40 metres of the top water level thereof unless with the consent of the Authority.</p> <p>d- Not sink any drill hole within any watercourse on the Warragamba Outer Catchment area nor within 100 metres thereof unless with the consent of the Authority.</p> <p>e- Not interfere with or impede the use of the Authority tracks of endanger their stability in any way by reason of the operations.</p> <p>f- Not construct any road to the sites of any drill holes unless with the consent of the Authority to the proposed route and type of road construction.</p> <p>g- Not interfere in any way with any fences on or adjacent to the Warragamba Outer Catchment Area unless with the consent in writing of the owner thereof or the Authority</p> <p>h) Give twenty eight days notice to the General Manager, catchment operations and Major Projects, Sydney catchment Authority, Penrith, of its intention to commence drilling operations.</p> <p>i) Not cut or remove any timber except such as directly obstructs or prevents the carrying on of operations and the lease holder shall obtain the consent in writing of the Authority before making use of the timber so cut for other than in connection with operations</p> <p>j) complete work in relation to rehabilitation within the Warragamba Outer Catchment Area before termination of the authority to the satisfaction of the Authority</p>	<p>b) no camps were reported to have been established or were observed;</p> <p>c) no drill holes were located within 40m of the top water level;</p> <p>d) no CLRP 10 was located within this area - approval was sighted dated 9/11/2007 for this location;</p> <p>e) site were not aware of any SCA tracks in the area of the ML;</p> <p>f) CLRP 10 did require an upgrade of the road and this was reported to have been approved as part of the SCA's approval for the borehole. Also, where tracks are required to be widened, this is noted ion REFs completed for the borehole activities. State Forests were also consulted over the roads.</p> <p>g) no SCA fences exist in the ML area;</p> <p>h) see condition 15 - 28 days notice has been provided.</p> <p>i) Timber is not used for other purposes. Timber was reported to have been removed according to the REF completed. and SCA approvals.</p> <p>j) Rehabilitation has occurred in approx. 5 sites in the ML area. These have not been relinquished, as many are being used as peizometers, hence cannot be returned as yet. Clarence indicated that discussions have been held with State Forests who indicated they want to see long term stable growth before relinquishment of the sites. Clarence at the time of the audit were waiting for a response from State Forests on how part relinquishment of boreholes used for monitoring can be provided.</p>	
Consolidated Coal Lease 705	15. 1	<p>Exploratory Drilling</p> <p>1 At least twenty eight days prior to commencement of drilling operations the lease holder must notify the relevant Department of Infrastructure, Planning and Natural Resources regional hydrogeologist of the intention to drill exploratory drill holes</p>	<p>1) Sighted letter to NOW indicating intention to drill.</p>	Compliant

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		together with information on the location of the proposed holes		
Consolidated Coal Lease 705	15. 2	<p>If the lease holder drills exploratory drill holes he must satisfy the Director-General that</p> <p>(a) all cored holes are accurately surveyed and permanently marked in accordance with Departmental guidelines so that their location can be easily established</p> <p>(b) all holes cored or otherwise are sealed to prevent the collapse of the surrounding surface;</p> <p>(c) all drill holes are permanently sealed with cement plugs to prevent surface discharge of groundwater's;</p> <p>(d) if any drill hole meets natural or noxious gases it is plugged or sealed to prevent their escape;</p> <p>(e) if any drill hole meets an artesian or sub-artesian flow it is effectively sealed to prevent contamination of aquifers.</p> <p>(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.</p> <p>(g) once any drill hole ceases to be used the land and its immediate vicinity is left in a clean, tidy and stable condition.</p>	<p>2a) all holes are surveyed using GPS;</p> <p>2b) historical holes were indicated to have been capped (although limited verification of this was possible). Photos of rehabilitated sites were sighted indicating the requirements had been met for these holes;</p> <p>2c) holes are fully grouted with cement as indicated by borehole logs sighted;</p> <p>2d) gas is not generally encountered. At CLRP 11 some gas was noted, monitored and not seen as a concern;</p> <p>2e) no artesian flow was reported to have been observed;</p> <p>2f) holes are grouted as indicated above;</p> <p>2g) photos of selected boreholes were observed (no visits to boreholes were made). The Photos indicated compliance with the requirement.</p>	Compliant
Consolidated Coal Lease 705	1	<p>Notice to Landholders</p> <p>Within a period of three months from the date of 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.</p> <p>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.</p>	No evidence was available to demonstrate notification. Site personnel indicated that their expectation was that notice to land owners was provided through newspapers however it was not known what method was used.	Not Determinate
Consolidated Coal Lease 705	2	Mining, Rehabilitation, Environmental Management Process (MREMP) Mining Operations Plan (MOP)	A MOP exists for the period 2007 - 2013. It was approved by DPI NSW (now II NSW) on 27/2/2007.	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		<p>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</p> <p>a) ongoing mining operations and environmental management and</p> <p>b) ongoing monitoring of the project.</p> <p>2) The Plan must be prepared in accordance with the Director-General's guidelines current at the time of lodgement.</p> <p>3) A Plan must be lodged with the Director-General</p> <p>a) prior to the commencement of mining operations (including mining purposes);</p> <p>b) subsequently as appropriate prior to the expiry of any current Plan; and</p> <p>c) in accordance with any direction issued by the Director-General</p> <p>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</p> <p>a) area(s) proposed to be disturbed under the plan</p> <p>b) mining and rehabilitation method(s) to be used and their sequence</p> <p>c) areas to be used for disposal of tailings/waste</p> <p>d) existing and proposed surface infrastructure</p> <p>e) existing flora and fauna on the site</p> <p>f) progressive rehabilitation schedules</p> <p>g) areas of particular environmental, ecological and cultural sensitivity and measures to protect these areas</p> <p>h) water management systems (including erosion and sediment controls);</p> <p>i) proposed resource recovery and</p>	<p>An amendment to the MOP was sought in a letter dated 29/10/2010 to cover the construction of Reject Emplacement Area 4 and 5. II NSW responded that more information was required to update the MOP. This was provided in a letter dated 23/12/2010.</p> <p>Final Approval of the MOP Amendment is still sought. A Section 100 Approval is also required for the reject emplacement area. An application for this was being prepared at the time of the audit.</p>	

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		<p>j) where the mine will cease extraction during the term of the Plan, a closure plan including final rehabilitation objectives/ methods and post mining land use / vegetation</p> <p>5) The Plan when lodged will be reviewed by the Department</p> <p>6) The Director-General may within two (2) months of the lodgement of a Plan, require modification and re-lodgement</p> <p>7) Of a requirement in accordance with clause 6 is not issued within two months of the lodgement of a plan, the lease holder may proceed with implementation of the plan</p> <p>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.</p>		
Consolidated Coal Lease 705	3	<p>Annual Environmental Management Report (AEMR)</p> <p>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</p> <p>2) The AEMR must be prepared in accordance with the Director-General's guide lines current at the time of reporting and contain a review and forecast of performance for the proceeding and ensuing twelve months in terms of</p> <p>a) the accepted Mining Operations Plan</p> <p>b) development consent requirements and conditions</p> <p>c) Department of Environment and Conservation and Department of Planning licences and approvals</p> <p>d) any other statutory environmental requirements;</p> <p>e) details of any variations to environmental approvals applicable to the lease area; and</p> <p>f) where relevant, progress towards final rehabilitation objectives.</p> <p>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</p>	<p>Annual Environmental Management Reports have been prepared. AEMRs were sighted for period 2005 to 2009. The AEMR for 2010 was being prepared at the time of the audit.</p> <p>Letters to the required agencies were sighted indicating the AEMR was sent to the appropriate agencies.</p> <p>Letters from I&I NSW approving the 2008 and 2009 AEMRs were sighted (4/6/2010 and 17/8/09). The II NSW response in 2010 defined that issues existed that required attention including:</p> <ul style="list-style-type: none"> -further review and improvement of site water management; -Reject emplacement and rehabilitation - another emplacement required and a Rehabilitating Management Plan required to be developed by 2010; - weed controls in place; and hydrocarbon management improved. <p>While some actions have been implemented to address the issues raised, the following actions are still required:</p> <ul style="list-style-type: none"> - completion of the Rehabilitation Plan that includes the proposed rehabilitation of Reject Emplacement Areas; - continued measures to minimise the volume of dirty water. <p>In addition, improvements were required by II NSW for future AEMRs . Site stated that the 2010 AEMR will be written to address the above.</p>	<p>Compliant (on going requirements outstanding)</p> <p>Recommendation: Continue to implement requirements of II NSW as stated in the AEMR review letter including:</p> <ul style="list-style-type: none"> - completion of the Rehabilitation Plan that includes the proposed rehabilitation of Reject Emplacement Areas; - continued measures to minimise the volume of dirty water. <p>Recommendation: As is planned by site, ensure future AEMRs include requirements as stated in the 2009 AEMR review.</p>

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		<p>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.</p> <p>4) The lease holder shall, as and when directed by the Minister, cooperate with the Director-General to conduct and facilitate review of the AEMR involving other government agencies and the local council</p>		
Environmental Monitoring Program	11	<p>The following events will trigger a review and, if necessary, update of the Environmental Monitoring Program:</p> <ul style="list-style-type: none"> • A change in monitoring requirements specified in the EPA Licence issued by the DEC or the Bore License issued by the Department of Natural Resources; • A change in the impact assessment criteria developed in the individual Management Plans that necessitates a modified monitoring program; • Completion of each Independent Environmental Audit as specified in Condition 6 of Schedule 5 of the Consent; or • A significant change in mine plan or surface operations <p>Any changes to the Environmental Monitoring Program will occur to the satisfaction of the Director-General of the Department of Planning.</p>	Not Assessed. Similar conditions assessed under CCL 705 and ML 1583.	Refer to ML 1583 and CCL 705 for comments on related clauses.
Mining Lease 1583 (Application No's 208 and 209)	1	<p>Notice to Landholders</p> <p>Within a period of three months from the date of grant 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 and whether the lease includes the surface, An adequate plan and description of the lease area must accompany the notice.</p> <p>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 state whether the lease includes the surface and must contain an adequate plan and description of the lease area.</p>	No evidence was available to demonstrate notification. Site personnel indicated that their expectation was that notice to land owners was provided through newspapers however it was not known what method was used.	Not Determinate
Mining Lease 1583 (Application No's 208 and 209)	2	<p>Mining, Rehabilitation, Environmental Management Process (MREMP) Mining Operations Plan (MOP)</p> <p>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</p>	<p>A MOP exists for the period 2007 - 2013. It was approved by DPI NSW (now II NSW) on 27/2/2007.</p> <p>An amendment to the MOP was sought in a letter dated 29/10/2010 to cover the construction of Reject Emplacement Area 4 and 5. II NSW responded that more information was required to update the MOP.</p>	Compliant

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		<p>environmental conditions of development consent and other approvals will form the basis for</p> <p>a) ongoing mining operations and environmental management and</p> <p>b) ongoing monitoring of the project.</p> <p>2) The Plan must be prepared in accordance with the Director-General's guidelines current at the time of lodgement.</p> <p>3) A Plan must be lodged with the Director-General</p> <p>a) prior to the commencement of mining operations (including mining purposes);</p> <p>b) subsequently as appropriate prior to the expiry of any current Plan; and</p> <p>c) in accordance with any direction issued by the Director-General</p> <p>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</p> <p>a) area(s) proposed to be disturbed under the plan</p> <p>b) mining and rehabilitation method(s) to be used and their sequence</p> <p>c) areas to be used for disposal of tailings/waste</p> <p>d) existing and proposed surface infrastructure</p> <p>e) existing flora and fauna on the site</p> <p>f) progressive rehabilitation schedules</p> <p>g) areas of particular environmental, ecological and cultural sensitivity and measures to protect these areas</p> <p>h) water management systems (including erosion and sediment controls);</p> <p>i) proposed resource recovery and</p> <p>j) where the mine will cease extraction during the term of the Plan, a closure plan including final rehabilitation objectives/</p>	<p>This was provided in a letter dated 23/12/2010.</p> <p>Final Approval of the MOP Amendment is still sought. A Section 100 Approval is also required for the reject emplacement area. An application for this was being prepared at the time of the audit.</p>	

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		<p>methods and post mining land use / vegetation</p> <p>5) The Plan when lodged will be reviewed by the Department</p> <p>6) The Director-General may within two (2) months of the lodgement of a Plan, require modification and re-lodgement</p> <p>7) Of a requirement in accordance with clause 6 is not issued within two months of the lodgement of a plan, the lease holder may proceed with implementation of the plan</p> <p>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.</p>		
Mining Lease 1583 (Application No's 208 and 209)	3	<p>Annual Environmental Management Report (AEMR)</p> <p>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</p> <p>2) The AEMR must be prepared in accordance with the Director-General's guide lines current at the time of reporting and contain a review and forecast of performance for the proceeding and ensuing twelve months in terms of</p> <p>a) the accepted Mining Operations Plan</p> <p>b) development consent requirements and conditions</p> <p>c) Department of Environment and Conservation and Department of Planning licences and approvals</p> <p>d) any other statutory environmental requirements;</p> <p>e) details of any variations to environmental approvals applicable to the lease area; and</p> <p>f) where relevant, progress towards final rehabilitation objectives.</p> <p>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.</p>	<p>Annual Environmental Management Reports have been prepared. AEMRs were sighted for period 2005 to 2009. The AEMR for 2010 was being prepared at the time of the audit.</p> <p>Letters to the required agencies were sighted indicating the AEMR was sent to the appropriate agencies.</p> <p>Letters from I&I NSW approving the 2008 and 2009 AEMRs were sighted (4/6/2010 and 17/8/09). The II NSW response in 2010 defined that issues existed that required attention including:</p> <ul style="list-style-type: none"> -further review and improvement of site water management; -Reject emplacement and rehabilitation - another emplacement required and a Rehabilitating Management Plan required to be developed by 2010; - weed controls in place; and hydrocarbon management improved. <p>While some actions have been implemented to address the issues raised, the following actions are still required:</p> <ul style="list-style-type: none"> - completion of the Rehabilitation Plan that includes the proposed rehabilitation of Reject Emplacement Areas; - continued measures to minimise the volume of dirty water. <p>In addition, improvements were required by II NSW for future AEMRs . Site stated that the 2010 AEMR will be written to address the above.</p>	<p>Compliant</p> <p>Recommendation: Continue to implement requirements of II NSW as stated in the AEMR review letter including:</p> <ul style="list-style-type: none"> - completion of the Rehabilitation Plan that includes the proposed rehabilitation of Reject Emplacement Areas; - continued measures to minimise the volume of dirty water. <p>Recommendation: As is planned by site, ensure future AEMRs include requirements as stated in the 2009 AEMR review.</p>

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		4) The lease holder shall, as and when directed by the Minister, cooperate with the Director-General to conduct and facilitate review of the AEMR involving other government agencies and the local council		
Mining Lease 1583 (Application No's 208 and 209)	4	<p>Subsidence Management</p> <p>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</p> <p>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 and associated main headings, etc), and pillar extractions, and are otherwise defined by the Guideline for Applications for Subsidence Management Approvals</p> <p>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 coal Mines Regulation Act 1982, or the document New Subsidence Management plan Approval Process - Transitional Provisions</p> <p>d) Subsidence Management Plans are to be prepared in accordance with the Guideline for Applications for subsidence Management Approvals</p> <p>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 New Approval Process for Management of Coal Mining Subsidence - Policy.</p>	See Main Part of the Report for detailed discussion on Subsidence Management	Compliant
Mining Lease 1583 (Application No's 208 and 209)	5	<p>Working Requirement</p> <p>The lease holder must</p> <p>a) ensure that at least 134 competent people are efficiently employed on the lease area on each week day except Saturday or any week day that is a public holiday</p> <p>or</p>	Both requirements have been met. There are 234 people on site, and based on verbal advice, an amount greater than stated is spent annually.	Compliant

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		<p>b) expend on operations carried out in the course of prospecting or mining the lease area, an amount of not less than \$2,345,000.00 per annum whilst the lease is in force</p> <p>The Minister may at any time or times, by instruments in writing served on the lease holder, increase or decrease the expenditure required or the number of people to be employed</p>		
Mining Lease 1583 (Application No's 208 and 209)	6	<p>Control of Operations</p> <p>a) If an Environmental Officer of the Department believes that the lease holder is not complying with any provision of the Act or any condition of this lease relating to the working of the lease, he may direct the lease holder to:</p> <p>i) cease working the lease or</p> <p>ii) cease that part of the operation not complying with the Act or conditions</p> <p>until in the opinion of the Environmental Officer the situation is rectified</p> <p>b) The lease holder must comply with any direction given, The Director- General may confirm vary or revoke any such direction</p> <p>c) A direction refined to in this condition may be served on the Mine Manager</p>	<p>No directions served on the operation to cease working on the lease area.</p> <p>Direction given as stated above during site AEMR visit undertaken in 2010. Some requirements still outstanding.</p>	Compliant
Mining Lease 1583 (Application No's 208 and 209)	7	<p>Reports</p> <p>The lease holder must provide an exploration report, within a period of twenty-eight days after each anniversary of the date this lease has effect or at such other date as the Director-General may stipulate, of each year. The</p> <p>report must be to the satisfaction of the Director-General and contain the following</p> <p>a) Full particulars, including results, interpretation and conclusions, of all exploration conducted during the twelve months period</p> <p>b) Details of expenditure incurred in conducting that exploration</p> <p>c) A summary of all geological findings acquired through mining or development evaluation activities</p> <p>d) Particulars of exploration proposed to be conducted in the next twelve months period</p>	<p>A report was sighted for EL5072 (which covers ML 1583) for period 2/10/2008 to 30/9/2009 dated 12/10/2009. This did have some information on the drilling program, indicating one borehole was drilled, however, it did not detailed the requirements of:</p> <p>a- Full particulars, including results, interpretation and conclusions, of all exploration conducted during the twelve months period</p> <p>c- A summary of all geological findings acquired through mining or development evaluation activities</p> <p>d- Particulars of exploration proposed to be conducted in the next twelve months period</p> <p>e- All plans, maps, sections and other data necessary to satisfactorily interpret the report.</p> <p>Other letters were sighted for the area indicating that no exploration drill holes were drilled during the period of the reporting.</p>	<p>Non Compliant</p> <p>Recommendation - as per CCL705.</p>

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		e) All plans, maps, sections and other data necessary to satisfactorily interpret the report		
Mining Lease 1583 (Application No's 208 and 209)	8	<p>Licence to use Reports</p> <p>a) The lease holder grants to the Minister, by way of a non-exclusive licence, the right in copyright to publish, print, adapt and reproduce all exploration reports lodged in any form and for the full duration of copyright</p> <p>b) The non-exclusive licence will operate as a consent for the purposes of section 365 of the Mining Act 1992</p>	Noted.	Not Triggered
Mining Lease 1583 (Application No's 208 and 209)	9	<p>Confidentiality</p> <p>a) All exploration reports submitted in accordance with the conditions of this lease will be kept confidential while the lease is in force, except in cases where</p> <p>i) the lease holder has agreed that specified reports may be made non-confidential</p> <p>ii) reports deal with exploration conducted exclusively on areas that have ceased to be part of the lease</p> <p>b) Confidentiality will be continued beyond the termination of a lease where an application for a flow-on title was lodged during the currency of the lease. The confidentiality will last until that flow-on title or any subsequent flow-on title, has terminated</p> <p>c) The Director - General may extend the period of confidentiality</p>	Noted.	Not Triggered
Mining Lease 1583 (Application No's 208 and 209)	10	<p>Terms of the non-exclusive licence</p> <p>The terms of the non-exclusive copyright licence granted under condition 8 (a) are</p> <p>a) the Minister may sub-licence others to publish, print, adapt and reproduce by not on-licence reports</p> <p>b) the Minister and any sub- licensee will acknowledge the lease holders and any identifiable consultant's ownership of copyright in any reproduction of the reports, including storage of reports onto an electronic database</p> <p>c) the lease holder does not warrant ownership of all copyright works in any report and, the lease holder will use best endeavours to identify those parts of the report for which the lease holder owns the copyright</p>	Noted.	Not Triggered

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		<p>d) there is no royalty payable by the Minister for the licence</p> <p>e) if the lease holder has reasonable grounds to believe that the Minister has exercised his rights under the non-exclusive copyright licence in a manner which adversely affects the operations of the lease holder, that licence is revocable on the giving of a period of not less than three months notice.</p>		
Mining Lease 1583 (Application No's 208 and 209)	12	<p>Safety</p> <p>Operations must be carried out in a manner that ensures the safety of persons or stock in the vicinity of the operations. All drill holes shafts and excavations must be appropriately protected, to the satisfaction of the Director-General, to ensure that access to them by persons and stock is restricted. Abandoned shafts and excavations opened up or used by the lease holder must be filled in or otherwise rendered safe to a standard acceptable to the Director-General,</p>	<p>Information provided indicated that:</p> <ul style="list-style-type: none"> - there are no stock kept on the lease - and no issues identified with stock; - there are no open shafts, hence no risk of falling into open shafts; - there are no abandoned shafts; - drill holes are located in remote areas and are managed by contractors. . <p>Based on this and visual observations, it considered site have met the requirement, however it is noted that a safety audit was not conducted as part of this audit.</p>	Compliant
Mining Lease 1583 (Application No's 208 and 209)	15	<p>Exploratory Drilling</p> <p>1) At least twenty eight days prior to commencement of drilling operations the lease holder must notify the relevant Department of Planning regional hydrogeologist of the intention to drill exploratory drill holes together with information on the location of the proposed holes</p> <p>2) If the lease holder drills exploratory drill holes he must satisfy the Director-General that</p> <p>a) all cored holes are accurately surveyed and permanently marked in accordance with Departmental guidelines so that their location can be easily established;</p> <p>b) all holes cored or otherwise are sealed to prevent the collapse of the surrounding surface</p> <p>c) all drill holes are permanently sealed with cement plugs to prevent surface discharge of groundwaters</p> <p>d) if any drill hole meets natural or noxious gases it is plugged or sealed to prevent their escape;</p> <p>e) if any drill hole meets an artesian or sub-artesian flow it is effectively sealed to prevent contamination of aquifers</p> <p>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</p>	<p>1) Sighted letter to NOW indicating intention to drill.</p> <p>2a) all holes are surveyed using GPS;</p> <p>2b) historical holes were indicated to have been capped (although limited verification of this was possible). Photos of rehabilitated sites were sighted indicating the requirements had been met for these holes;</p> <p>2c) holes are fully grouted with cement as indicated by borehole logs sighted;</p> <p>2d) gas is not generally encountered. At CLRP 11 some gas was noted, monitored and not seen as a concern;</p> <p>2e) no artesian flow was reported to have been observed;</p> <p>2f) holes are grouted as indicated above;</p> <p>2g) photos of selected boreholes were observed (no visits to boreholes were made). The Photos indicated compliance with the requirement.</p>	Compliant

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		g) once any drill hole ceases to be used the land and its immediate vicinity is left in a clean, tidy and stable condition		
Mining Lease 1583 (Application No's 208 and 209)	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, water body or groundwater's, The lease holder must observe and perform any instructions given by the Director-General in this regard	Operations on the ML were restricted to borehole drilling. CEMP was sighted for boreholes CLRP 15 and 16 which covers requirements for prevention of erosion. Photos of boreholes were sighted and no evidence of erosion was sighted. No incidents of pollution by drilling were reported to have occurred.	Compliant
Mining Lease 1583 (Application No's 208 and 209)	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 the prior written approval of the Director-General and subject to any conditions he may stipulate.	There has been no identified interference with Transmission Lines, Communication Lines and Pipelines.	Compliant
Mining Lease 1583 (Application No's 208 and 209)	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.	a) Site reported that no interference of roads has occurred. B) Roads are used every week to two weeks by the site for general monitoring, and more for exploration drilling. Site pays a nominal (less than \$3,000 per year) sum to State Forests. Agreements with State Forests were not sighted.	Compliant Recommendation: It was noted that some roads used by Clarence were not well maintained and impacted by erosion. It is recommended that Clarence enter a dialogue with State Forests as to how the condition of roads may be improved.
Mining Lease 1583 (Application No's 208 and 209)	23	Resource Recovery a) Notwithstanding any description of mining methods and their sequence or of proposed resource recovery contained within the Mining Operations Plan, if at any time the Director-General is of the opinion that minerals which the lease entitles the lease holder to mine and which are economically recoverable at the time are not being recovered from the lease area, or that any such minerals which are being recovered are not being recovered to the extent which should be economically possible or which for environmental reasons are necessary to be recovered, he may give notice in writing to the lease holder requiring the holder to recover such minerals.	No notices as indicated have been received by Clarence. SMP Approvals suggest general approval of approach.	Not Triggered

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		<p>(b) The notice shall specify the minerals to be recovered and the extent to which they are to be recovered, or the objectives in regard to resource recovery, but shall not specify the processes the lease holder shall use to achieve the specified recovery</p> <p>(c) The lease holder must, when requested by the Director-General, provide such information as the Director-General may specify about the recovery of the mineral resources of the lease area,</p> <p>d) The Director-General shall issue no such notice unless the matter has firstly been thoroughly discussed with and a report to the Director-General has incorporated the views of the lease holder.</p> <p>e) The lease holder may object to the requirements of any notice issued under this condition and on receipt of such an objection the Minister shall refer it to a Warden for inquiry and report under Section 334 of the Mining Act, 1992.</p> <p>f) After considering the Warden's report the Minister shall decide whether to withdraw, modify or maintain the requirements specified in the original notice and shall give the lease holder written notice of the decision. The lease holder must comply with the requirements of this notice</p>		
Mining Lease 1583 (Application No's 208 and 209)	24	<p>Indemnity</p> <p>The lease holder must indemnify and keep indemnity the Crown from and against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses which may be brought against the lease holder or which the lease holder may incur in respect of any accident or injury to any person or property which may arise out of the construction, maintenance or working of any workings now existing or to be made by the lease holder within the lease area or in connection with any of the operations notwithstanding that all other conditions of this lease shall in all respects have been observed by the lease holder or that any such accident or injury shall arise from any act or thing which the lease holder may be licensed or compelled to do</p>	Noted.	Not Triggered
Mining Lease 1583 (Application No's 208 and 209)	25	<p>Security</p> <p>a) A security in the sum of \$50,000.00 must be given and maintained with the Minister by the lease holder for the purpose of ensuring the fulfilment by the lease holder of obligations under this lease. If the lease holder fails to fulfil any one or more of such obligations the said sum may be applied at the discretion of the Minister towards the cost of fulfilling such obligations, For the</p>	A spreadsheet of securities held by Clarence was sighted and indicated that the required security was held, with Security Certificate 300506 held for ML 1583.	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		<p>purpose of this clause the lease holder shall be deemed to have failed to fulfil the obligations of this lease If the lease holder fails to comply with any condition or provision hereof, any provision of the Act or regulations made there under or any condition or direction imposed or given pursuant to a condition or provision hereof or of any provision of the Act or regulations made there under</p> <p>b) The lease holder must provide the security required by sub-clause (a) in one of the following forms</p> <p>i) cash,</p> <p>ii) a security certificate in a form approved by the Minister and issued by an authorised deposit - taking institution</p>		
Mining Lease 1583 (Application No's 208 and 209)	27	<p>Prescribed Dam</p> <p>a) Notwithstanding any Mining Operations Plan, the lease holder must not mine within any part of the lease area which is within the notification area of the Lithgow and Lithgow 2 Dam without the prior written approval of the Minister and subject to any conditions he may stipulate.</p> <p>b) Where the lease holder desires to mine within the notification area he must:</p> <p>(i) at least twelve (12) months before mining is to commence or such lesser time as the Minister may permit, notify the Minister of the desire to do so. A plan of the mining system to be implemented must accompany the notice; and</p> <p>ii) provide such information as the Minister may direct.</p> <p>(C) The Minister must not, except in the circumstances set out in subparagraph (ii), grant approval unless subparagraph (i) of this paragraph has been complied with.</p> <p>(i) This sub-paragraph is complied with if:</p> <p>(a) the Dams Safety Committee as constituted by Section 7 of the Dams Safety Act 1978 and the owner of the dam have been notified in writing of the desire to mine referred to in paragraph (B).</p> <p>(b) the notifications referred to in clause (a) are accompanied by a description or plan of the area to be mined.</p> <p>(c) the Director-General has complied with any</p> <p>reasonable request made by the Dams Safety Committee or the</p>	<p>Currently there are no operations within the notifiable area of Lithgow Dam, however there are plans to enter the area within the next 12 months. As such, a letter has been sent to NSW dated 1/10/2009 to notify of the intent to work in the area and meets the requirement of this clause. In March 2010 an application was made to the Dams Safety Committee. Approval for first workings was given subject to numerous conditions (letter dated 15/7/2010) and approval from NSW was obtained dated 17/8/2010, subject to DCS conditions.</p>	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		<p>owner of the dam for further information in connection with the mining proposal.</p> <p>(d) the Dams Safety Committee has made its recommendations concerning the mining proposal or has informed the Minister in writing that it does not propose to make any such recommendations; and</p> <p>(e) where the Dams Safety Committee has made recommendations the approval is in terms that are:</p> <p>(i) in accordance with those recommendations;</p> <p>or</p> <p>(ii) where the Minister does not accept those recommendations or any of them – in accordance with a determination under subparagraph (ii) of this paragraph</p> <p>ii) Where the Minister does not accept the recommendations of the Dams Safety Committee or where the Dams Safety Committee has failed to make recommendations and has not informed the Minister in writing that it does not propose to make any recommendation, the relations to matters dealing with the safety of the dam :</p> <p>a) as determined by agreement between the Minister and the Minister administering the Dams Safety Act 1978 or</p> <p>b) in the event of failure to reach such agreement - as determined by the Premier</p> <p>d) The Minister, on notice from the Dams Safety Committee, may at any time or times</p> <p>i) cancel any approval given where a notice pursuant to Section 18 of the Dams Safety Act 1978 is given</p> <p>ii) suspend for a period of time, alter, omit from or add to any approval given or conditions impose</p>		
Mining Lease 1583 (Application No's 208 and 209)	28	<p>Catchment Area</p> <p>a) The lease holder shall carry out operations in such a way as to conform strictly to all provisions of the Sydney Water Catchment Management Act 1998 and the regulations there under applying to the prevention of pollution of the Warragamba Outer Catchment Area or the preservation of the purity of the water supply provided thereby or derived there from or for the</p>	<p>The site's Water Management Plan was provided to the SCA, however, no comments were received. Clarence indicated that they had reviewed the Sydney Catchment Management Act and not identified specific requirements for the mine. The only activity in the ML is drilling and monitoring. Drilling notification to the SCA was sighted for CLRP 11 dated 11/6/2010.</p> <p>No notices have been provided by the SCA relevant to this ML Clause.</p>	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		<p>protection of the property of Sydney Catchment Authority (hereinafter referred to as the 'the Authority) on the Outer Catchment Area and also to all requirements of the Authority from time to time under the said Act or any of the regulations for the time being in force</p> <p>b) If the lease holder shall at any time be using or about to use any process which in the opinion of the Authority is likely to pollute the</p> <p>Outer Catchment Area or the water supply or to endanger any property of the Authority on the Outer Catchment Area the lease holder upon service of a notice in writing under the hand of the</p> <p>Minister to do so shall</p> <p>i) discontinue the use of such process immediately, or</p> <p>ii) thereafter refrain from adopting such process at any time, as the case may require</p> <p>c) The lease holder shall provide and maintain to the satisfaction of the</p> <p>Minister efficient means to prevent the contaminable, pollution, erosion or siltation of any stream or watercourse or Outer Catchment Area and shall observe any instruction given or which may be given by the Minister with a view to preventing or minimising the contamination, pollution or siltation of any stream watercourse or Outer Catchment Area</p> <p>d) The lease holder hereby covenants with Us Ours Heirs and</p> <p>Successors and as a separate covenant the lease holder hereby covenants with the Authority and its Successors that the lease holder shall at all times hereafter save harmless and keep Us and the said</p> <p>Authority and Our Heirs and Successors and the Successors of the said Authority indemnified from payment of compensation and from and against all actions proceedings claims and demands in respect of any injury loss of damage arising out of or in any way connected with any interference with or deprivation or loss of access to the land and premises of this authority which may occur by reason of any works or operations undertaken or carried out by the said Authority or arising out of or in any way connected with any discontinuance or alteration of any process consequent upon the service of a notice in pursuance of the provisions of Condition 2S(b) or arising out of or in any way</p>	<p>Site indicated that SCA's biggest concern is subsidence impacts which are managed within Subsidence Management Plans and the Water Management Plan. Consent from drill hole CLR 10 was provided in an SCA letter dated 9/11/07.</p>	

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		connected with the operation of any regulations relating to Outer Catchment Areas in force at the date hereof or made by the said 'Authority at any time hereafter and the lease holder hereby agrees that for the purpose of this condition the said Authority shall be deemed to be a party to this authority		
Mining Lease 1583 (Application No's 208 and 209)	29	<p>The lease holder shall</p> <p>a) Make such provisions for sanitation as may be directed by the Authority and shall at all times observe and perform any requirements of the said Authority respecting sanitation</p> <p>b) not establish any camps or habitations within any area under the control of the Authority unless with the consent of the Authority.</p> <p>(c) Not sink any drill hole within the stored waters on the subject area nor within 40 metres of the top water level thereof unless with the consent of the Authority.</p> <p>(d) Not sink any drill hole within any watercourse on the Warragamba Outer Catchment Area nor within 100 metres thereof unless with the consent of the Authority.</p> <p>(e) Not interfere with or impede the use of the Authority tracks of endanger their stability in any way by reason of the operations,</p> <p>(f) Not construct any road to the sites of any drill holes unless with the consent of the Authority to the proposed route and type of road construction.</p> <p>g) Not interfere in any way with any fences on or adjacent to the Warragamba Outer Catchment Area unless with the consent in writing of the owner thereof or the Authority.</p> <p>h) Give twenty eight days notice to the General Manager, Catchment Operations and Major Projects, Sydney Catchment Authority, Penrith, of its intention to commence drilling operations.</p> <p>i) Not cut or remove any timber except such as directly obstructs or prevents the carrying on of operations and the lease holder shall obtain the consent in writing of the Authority before making use of the timber so cut for other than in connection with operations.</p> <p>j) Complete work in relation to rehabilitation within the</p>	<p>a) portallos are provided for drilling activities and invoices for these were sighted;</p> <p>b) no camps were reported to have been established or were observed;</p> <p>c) no drill holes were located within 40m of the top water level;</p> <p>d) CLRP 10 was located within this area - approval was sighted dated 9/11/2007 for this location;</p> <p>e) site were not aware of any SCA tracks in the area of the ML;</p> <p>f) CLRP 10 did require an upgrade of the road and this was reported to have been approved as part of the SCA's approval for the borehole. Also, where tracks are required to be widened, this is noted on REFS completed for the borehole activities. State Forests were also consulted over the roads.</p> <p>g) no SCA fences exist in the ML area;</p> <p>h) see condition 15 - 28 days notice has been provided.</p> <p>i) Timber is not used for other purposes. Timber was reported to have been removed according to the REF completed. and SCA approvals.</p> <p>j) Rehabilitation has occurred in approx. 5 sites in the ML area. These have not been relinquished, as many are being used as piezometers, hence cannot be returned as yet. Clarence indicated that discussions have been held with State Forests who indicated they want to see long term stable growth before relinquishment of the sites. Clarence at the time of the audit were waiting for a response from State Forests on how part relinquishment of boreholes used for monitoring can be provided.</p>	Compliant (requirements ongoing)

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		Warragamba Outer Catchment Area before termination of the authority to the satisfaction of the Authority		
Mining Lease Application No 208 and 209	4	<p>Subsidence Management</p> <p>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</p> <p>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 and associated main headings, etc), and pillar extractions, and are otherwise defined by the Guideline for Applications for Subsidence Management Approvals</p> <p>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 Coal Mines Regulation Act 1982, or the document New Subsidence Management Plan Approval</p> <p>Process - Transitional Provisions</p> <p>d- Subsidence Management Plans are to be prepared in accordance with the Guideline for Applications for Subsidence Management Approvals</p> <p>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 New Approval Process for Management of Coal Mining Subsidence - Policy</p>	See audit details for 700 Area SMP and text of main report relating to Subsidence and Subsidence Impacts Audit.	Compliant
Partial Extraction 700 Area EMP	3	The WMP will be reviewed in November 2009 in accordance with the WMP annual review commitments. Consultation with the DWE will be carried out during the review of the WMP. Upon review, this EMP will be updated to include the updated WMP.	See audit details for 700 Area SMP and text of main report relating to Subsidence and Subsidence Impacts Audit.	Compliant
Partial Extraction 700 Area EMP	3	<p>Flora surveys will be undertaken at:</p> <p>CLW01,CLW02,CLW03\CLW04,CLW05</p>	URS sighted reports of flora surveys at CLW02-05 in Appendix to 2009 End of Panel Report. Additional surveys were sighted including CWL01.	Compliant
Partial Extraction 700 Area EMP	3.1.2 (a)	<p>Installation of four (4) shallow groundwater piezometers as shown on Plan CL503.</p> <p>Happy Valley Swamp- One piezometer located above the 710 Panel (3 headings) and on peizometer located in the vicinity (but</p>	Installation of the peizometers was reported in Dec 2009 End of Year Report.	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		outside) of the SMP application boundary to a depth around 3 metres. Happy Valley Swamp Upper- One piezometer located above the 704 Panel (5 headings) and one piezometer located above Panel 706 to a depth around 3 metres.		
Partial Extraction 700 Area EMP	3.1.2 (b)	Shallow groundwater piezometers in Happy Valley Swamp and Happy Valley Swamp Upper are to be downloaded on a two monthly basis.	Downloading of information from the peizometers was reported in Subsidence Management Status Reports reviewed (1 July-31 Oct 2009, 1 Nov 09 to 28 Feb 2010)	Compliant
Partial Extraction 700 Area EMP	3.1.2 (c)	The results from the monitoring program will identify potential effects from mining or rainfall and will be correlated with the results from the relevant subsidence line monitoring results and the relative face position of the Panel. All this data will assist in explaining any changes in groundwater levels. A short report will be generated every two months to present the analysis of the monitoring results. A more detailed report presenting all the data from the year will be prepared on an annual basis.	Monitoring details for these piezometers included in 2010 Status Reports. End-of-Year Reports contain groundwater monitoring details on an annual basis.	Compliant Include full years' results and associated interpretation/discussion within 2010 End-of-Year Report.
Partial Extraction 700 Area EMP	3.1.2 (d)	Approvals: Approvals required include: licences under Section 91 of the Threatened Species Conservation Act to enable the construction of the piezometers within the Swamps; bore monitoring licences under the Water Act 1912; approval from Forests NSW including the granting of Occupancy Permits to install the piezometers.	URS sighted: - bore licences for monitoring bores (as covered under other line items in this checklist) - a letter from DEWHA stating that the in stallion of peizometers was not considered a controlled action under the EPBC Act - approval from State Forests for the peizometers as per letter dated 27/7/09. Certificates under Section 95(2) of the Threatened Species Act were issued and available for review.	Compliant
Partial Extraction 700 Area EMP	3.1.4 (a)	Bungleboori Swamp 3 Photographic inspections will be undertaken to coincide with the face position of the panel as detailed below: 500m approach to Swamp (or pre-mining) Undermining (on a monthly basis if required) 500m away from Swamp (post mining) Inspections will also be carried out at every four months outside of the above mentioned face positions following post mining of the subject Panels for at least one year.	Sighted 2009 End-of-Year Subsidence Management Report and Status report for period ending 31 October 2010 which confirm that pre- and post-mining photographic inspections of this feature are being carried out.	Compliant
Partial	3.1.4 (b)	Bungleboori Swamp 4	Sighted 2009 End-of-Year Subsidence Management Report and	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
Extraction 700 Area EMP		<p>Photographic inspections will be undertaken to coincide with the face position of the panel as detailed below:</p> <p>500m approach to Swamp (or pre-mining)</p> <p>Undermining (on a monthly basis if required)</p> <p>500m away from Swamp (post mining)</p> <p>Inspections will also be carried out at every four months outside of the above mentioned face positions following post mining of the subject Panels for at least one year.</p>	Status report for period ending 31 October 2010 which confirm that pre- and post-mining photographic inspections of this feature are being carried out.	
Partial Extraction 700 Area EMP	3.1.4 (c)	Happy Valley Upper	Sighted 2009 End-of-Year Subsidence Management Report and Status report for period ending 31 October 2010 which confirm that pre- and post-mining photographic inspections of this feature are being carried out.	Compliant
Partial Extraction 700 Area EMP	3.2.2	<p>Parameters, Monitoring Methods and Frequency</p> <p>Surface water monitoring sties shown on Plan CL503 (Farmers Creek Downstream, Happy Valley) will be monitored every four months for flow, pH, electrical conductivity, iron, manganese, aluminium, arsenic, cadmium, copper, lead zinc, selenium and chromium.</p>	Data was sighted for Farmers Creek Downstream and Happy Valley	Compliant
Partial Extraction 700 Area EMP	3.3 (a)	<p>Annual Autumn Flora monitoring to be undertaken at:</p> <p>CLW01</p> <p>CLW02</p> <p>CLW03</p> <p>CLW04</p> <p>CLW05</p>	2009 flora monitoring at CLW02-05 detailed in 2009 End-of-Year report and attachments	Compliant
Partial Extraction 700 Area EMP	3.4.4 (d)	<p>Happy Valley</p> <p>Photographic inspections will be undertaken to coincide with the face position of the panel as detailed below:</p> <p>500m approach to Swamp (or pre-mining)</p> <p>Undermining (on a monthly basis if required)</p> <p>500m away from Swamp (post mining)</p> <p>Inspections will also be carried out at every four months outside of the above mentioned face positions following post mining of</p>	Sighted 2009 End-of-Year Subsidence Management Report and Status report for period ending 31 October 2010 which confirm that pre- and post-mining photographic inspections of this feature are being carried out.	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		the subject Panels for at least one year.		
Subsidence Management Plan 314-316 Area	1	The Leaseholder must carry out the activity strictly in accordance with SMP Approved Plan	Approval sighted, dated 19 February 2010 Compliance with Approved Plan is driven by requirements under Clause 88 approval, via Mines Inspectorate	Compliant
Subsidence Management Plan 314-316 Area	2	The Leaseholder must carry out the activity generally in accordance with the SMP subject to the conditions of this Approval. in the event of any inconsistency between the conditions of this Approval and the SMP, the conditions of this Approval prevail to the extent of any inconsistency	See Main report for discussion on Subsidence Management	Compliant
Subsidence Management Plan 314-316 Area	3	Where this Approval requires actions to be undertaken by the Leaseholder, including remediation of subsidence impacts, the obligation continues until the Director General notifies the Leaseholder that the action has been completed to his or her satisfaction	not triggered	Not Applicable
Subsidence Management Plan 314-316 Area	4	The Director General may vary the conditions of this Approval by notice in writing	not triggered	Not Applicable
Subsidence Management Plan 314-316 Area	5	The Director General may at his or her discretion suspend or revoke this Approval if a- the Leaseholder fails to adhere to any condition of the Approval; or b- the head of any other government authority requests suspension or revocation on the basis of the Lease holder's non-compliance, or potential non-compliance, with legislation administered by that agency related to this Approval	not triggered	Not Applicable
Subsidence Management Plan 314-316 Area	6	General Obligation to Minimise Harm to the Environment The Leaseholder must implement the SMP (as amended by the conditions of this Approval) and carry out any additional practicable measures necessary to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the activity	See Main report for discussion on Subsidence Management	Compliant
Subsidence	7	Notification of Approval	Notification evidence not audited, but Approval is available on	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
Management Plan 314-316 Area		<p>The Proponent must give notice of this SMP approval with 30 days to the DoP, DWE, DECC, Council the local Aboriginal Land Council the owners/ operators of any infrastructure and landowners in the application area and any relevant government agencies of stakeholders that the Director General's approval of the SMP has been granted</p> <p>Note: Relevant government authorities and stakeholders are listed in the Guideline for Application for Subsidence management Approvals</p>	Centennial website	
Subsidence Management Plan 314-316 Area	8	<p>Implementation of Approval</p> <p>Any plans, programmes, reports or strategies required as a condition of this Approval must be developed having regard to any guidelines adopted by the Director General for the purpose of subsidence management and mine rehabilitation</p>	Plans, programs and management strategies are effectively the same as for 700 area and CCL 705 Outbye areas. 700 area documentation was reviewed in detail, and assessed to meet these requirements.	Compliant
Subsidence Management Plan 314-316 Area	9	<p>The Leaseholder must implement any plan, programme or strategy required and approved pursuant to this Approval</p> <p>Note: The Leaseholder may at any time submit an amended plan programme or strategy for approval. Once approved the amended plan programme or strategy must be implemented however up until the date of approval the Leaseholder must continue to implement the previously approved plan programme or strategy.</p>	See Main report for discussion on Subsidence Management	Compliant
Subsidence Management Plan 314-316 Area	10	<p>Any modifications to plans, programmes or strategies already approved for the purposes of the conditions of this Approval must have regard to the matters set out in condition 8. Amended plans, programmes or strategies submitted for approval must be accompanied by all relevant supporting documentation to assist in the assessment of the amendment or modification.</p> <p>Note: This condition relates to plans, programmes and strategies required by the conditions of this Approval - if does not apply to variations to the SMP or the SMP Approved Plan which must be done in accordance with the requirements of the Mining Act, the conditions of title and the variation procedures identified in the SMP guidelines</p>	Not triggered	Not Applicable
Subsidence Management Plan 314-316 Area	11	<p>Directions</p> <p>The Leaseholder must comply with any written direction given by the Director General, Director</p>	No written directions issued.	Not Applicable

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		<p>Environmental Sustainability, Director Mine Safety Operations or Principal Subsidence Engineer</p> <p>relating to:</p> <p>a- the implementation of any aspect of the SMP or an approved plan, programme or strategy;</p> <p>b- assessing or reviewing the adequacy, effectiveness, or coverage of any approved plan, programme or strategy or any aspect of the SMP;</p> <p>c- the type, timing and/or location of monitoring of baseline conditions, subsidence or subsidence impacts</p> <p>d- any reporting requirement under this approval</p> <p>e- the carrying out of works to address subsidence impacts; and</p> <p>f- the carrying out of any studies or investigations related to subsidence or subsidence impacts and the reporting of any findings or conclusions</p> <p>The obligations under this condition prevail over any other obligation under this Approval</p> <p>Note: Compliance with a written direction will not operate as a defence to a breach of any obligation under this approval that occurred prior to the Direction being given</p>		
Subsidence Management Plan 314-316 Area	12	<p>Subsidence Monitoring</p> <p>The Leaseholder must submit to the Principal Subsidence Neglect for approval a subsidence and underground monitoring programme for the panels which are the subject of this Approval. This programme must include</p> <p>a- inspection regimes</p> <p>b- layout of monitoring points</p> <p>c- parameters to be measured</p>	<p>Subsidence and U/G Monitoring program dated 7 October 2010 available on Centennial website.</p> <p>Status Report for period to 31 October 2010 notes proposed management actions for next (i.e. current) reporting period include "resubmit the 314/316 Subsidence and U/G Monitoring Plan"</p> <p>No pillar extraction has been carried out within this area</p>	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		<p>d- monitoring methods and accuracy</p> <p>e- timing and frequencies of surveys and inspections</p> <p>f- recording and reporting of monitoring results</p> <p>The leaseholder must not commence pillar extraction prior to the subsidence monitoring programme being approved.</p> <p>Note: The programme should be submitted to the principle subsidence engineer at least 30 days prior to the expected commencement of operations to enable sufficient time for the assessment of the programme. The Principal Subsidence Engineer may require the provision of further information to assist in the assessment of the programme or a resubmission of the programme if it is considered inadequate, Complex issues or the need for additional information or a resubmission of the programme may require a longer assessment period</p>		
Subsidence Management Plan 314-316 Area	13	<p>Environmental Monitoring</p> <p>The Leaseholder must submit to the Director Environmental Sustainability for approval an environmental monitoring programme (EMP) for the panels which are the subject of this approval. This programme must address subsidence impacts on:</p> <p>a) surface and groundwater (quality and quantity);</p> <p>The EMP must develop a response strategy for each of the above to include</p> <p>a- trigger levels for subsidence impacts that require actions and responses;</p> <p>b- the procedures that would be followed in the event that the monitoring Indicates an exceedance</p> <p>of trigger levels</p> <p>c- measures to mitigate, remediate and/or compensate any identified impacts</p> <p>d- a protocol for the notification of identified exceedances of the trigger levels</p> <p>e- a contingency plan to ensure impacts are with in approved levels; and</p> <p>f- hydrogeological and fluvial / alluvial hydraulic connection</p>	<p>Environmental Monitoring program submitted to Environmental Sustainability Branch of Industry and Investment NSW 15 October 2010.</p> <p>Status Report for period to 31 October 2010 notes proposed management actions for next (i.e. current) reporting period include "resubmit the 314/316 Subsidence and U/G Monitoring Plan"</p> <p>No pillar extraction has been carried out within this area</p>	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		<p>This response strategy must be prepared in consultation with relevant landholders and government agencies. The groundwater EMP must be considered with and the Department of Water and Energy DRAFT Guidelines for Groundwater Monitoring</p> <p>Note: The programme should be submitted to the Director Environment Sustainability at least 14 days prior to the expected commencement of operation to enable sufficient time for the assessment of the programme. The Director Environmental Sustainability may require the provision of further information to assist in the assessment of the programme or a resubmission of the programme if it is considered inadequate. Complex issues or the need for additional information or a resubmission of the programme may require a longer assessment period.</p>		
Subsidence Management Plan 314-316 Area	14	<p>Public Safety</p> <p>The Leaseholder must implement a public safety management plan to ensure public safety in any surface areas that may be affected by subsidence arising for the proposed extraction. This plan must include but not be limited to regular monitoring of areas or infrastructure / structures posing safety risks erection of warning signs, entry restrictions , backfilling of dangerous surface cracks and securing of unstable built structures or rockmass where required and appropriate and the provision of timely notification of mining progress to the community and any other relevant stakeholders where management of public safety is required. The plan must be developed and implemented to the satisfaction of the Inspector of Coal Mines</p> <p>note: the plan may make reference to public safety management procedures contained in other management plans.</p>	Public Safety Management Plan for 314-316 area viewed on Centennial website. Monitoring, inspection provisions are generally the same as for other approved SMPs, with evidence of implementation via Status Reports and End-of-Year reports.	Compliant
Subsidence Management Plan 314-316 Area	15	<p>Incident and Ongoing Management Reporting</p> <p>The Leaseholder must, within 24 hours of becoming aware of the occurrence, notify</p> <ul style="list-style-type: none"> i. the Principal Subsidence Engineer ii. the Mine Subsidence Board iii. The Department of Water and Energy iv. Other relevant stakeholders any Government Agency with a regulatory role if they request such notification 	Not Triggered for this Area.	Not Triggered

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		<p>of the following</p> <p>a- Any significant unpredicted and/or higher-than predicted subsidence and/or abnormalities in the development of subsidence;</p> <p>b- Any exceedance of predicted impacts on groundwater resources and/or the natural environment that may have been caused (whether partly or wholly) by subsidence;</p> <p>c-Any observed subsidence impacts adverse to the serviceability and/or safety of infrastructure and other built structures that may be affected by mining;</p> <p>d- Any significant subsidence-induced cracking and ground deformations observed in any surface areas within the SMP application area</p> <p>Note: Under Condition 11, the Leaseholder can be directed to, among other things, prepare a report on an incident reported under this condition. A report on the details of the incident, including likely or Known causes response action and proposed responses will generally be required for incidents that involve material property or environmental damage or have the potential to cause such damage,</p>		
Subsidence Management Plan 314-316 Area	16	The Leaseholder must prepare and maintain a Subsidence Management Status Report which must include but not be limited to	314-316 area is being included in Status reports as appropriate (example is Status Report for period ending 31 October 2010)	Compliant
		<p>a- the current face position of the panel being extracted;</p> <p>b- a summary of any subsidence management actions undertaken by the Leaseholder in the period subsequent to the last regular submission of the Status Report</p> <p>c- a summary of any comments, advice and feedback from consultation with stakeholders in relation to the implementation of this Approval (including the preparation,</p>		

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		<p>implementation and review of plans, programmes, reports or strategies required by this approval) undertaken or received in the period subsequent to the last regular submission of the Status Report and a summary of the Leaseholder/s response to the comments, advice and feedback given by the stakeholders</p> <p>d- a summary of the observed and/or reported subsidence impacts, incidents, services difficulties</p> <p>community complaints, and any other relevant information reported to the Leaseholder in the</p> <p>period subsequent to the last regular submission of the Status Report and a summary of the</p> <p>Leaseholder's response to these impact, incidents, services difficulties and complaints;</p> <p>e- a summary of subsidence development based on monitoring information compared with any</p> <p>defined triggers and/or the predicted subsidence to facilitate early detection of potential subsidence impacts;</p> <p>f- a summary of the adequacy, quality and defectiveness of the implemented management processes based on the monitoring and consultant information summarised above; and</p> <p>g- a statement regarding any additional and/or outstanding management actions to be undertaken or</p> <p>the need for early repos or emergency procedures to ensure adequate management of any potential subsidence impacts due to mining.</p> <p>The Subsidence Management Status Report must be updated at least every 14 days to reflect any changes in the information required to be included in the Report. The Status Report must be regularly submitted to the Principal Subsidence Engineer and the Department of Water and Energy from the date of this Approval. The Status Report (as updated from time to time) must be provided, upon request, to the Mine Subsidence Board, the Director of Environmental Sustainability the Principal Subsidence Engineer of the Department of Primary Industries, owners/operators of any infrastructure within the application area and any other relevant stakeholders</p>		
Subsidence Management	17	End of Year Report	2010 End-of-Year Report will be the first such report since approval of the 314-316 Area SMP	Not Applicable

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
Plan 314-316 Area		<p>The Leaseholder shall prepare an end of year report. This report shall be submitted to the Director Environmental Sustainability within the first three months of the subsequent year. The end of year report must</p> <p>a- include a summary of the subsidence and environmental monitoring results for the year</p> <p>b- include an analysis of these monitoring result against the relevant</p> <p>. Impact assessment criteria</p> <p>. Monitoring results from previous years and</p> <p>. Predictions in the SMP</p> <p>c- identify any trends in the monitoring results over the life of the activity and</p> <p>d- describe what actions were taken to ensure adequate management of any potential subsidence impacts due to mining.</p>		
Subsidence Management Plan 314-316 Area	18	<p>Access to Information</p> <p>Within 3 months of the submission of an End of Year Report (as required by Condition 17) or the</p> <p>approval of a plan, programme or strategy required under this Approval or the SMP (or any</p> <p>subsequent revision of these documents), the Leaseholder must, to the satisfaction of the Director</p> <p>General:</p> <p>a- provide a copy of these document/s to all relevant agencies</p> <p>b- ensure that a copy of the relevant documents is made publicly available at the Leaseholders regional office and</p> <p>c- put a copy of the relevant documents on the Leaseholders website</p>	2010 End-of-Year Report will be the first such report since approval of the 314-316 Area SMP	Not Applicable
Subsidence Management Plan 314-316 Area	19	Survey Marks	not triggered	Not Applicable

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		At the completion of subsidence or otherwise as required by the Department of Lands the functionality of any survey marks affected by subsidence must be fully restored to the satisfaction of the Department of Lands		
Subsidence Management Plan 314-316 Area	20	Water Supply In the event of interruptions to water supplies (water quality and / or quality) due to subsidence impacts on water supply systems and or source caused by the proposed extraction the Leaseholder must provide without delay water supplies of equivalent quality and quantity to locations convenient to those affected within the SMP Application Area until such time the the affected water supply system and / or sources are restored	not triggered	Not Applicable
Subsidence Management Plan Eastern Area	1	Definitions In this document: 'proposed mining" means the extraction of the proposed partial extraction panels covered by the SMP. 'SMP" means the Subsidence Management Plan for the workings shown on the SMP Approved Plan as set out in the Clarence Colliery Eastern Partial Extraction Subsidence Management Plan Application dated October 2005 and supplementary supporting information provided to the Department	noted	noted
Subsidence Management Plan Eastern Area	2	The SMP is approved subject to the conditions set out in this document. The SMP, as modified by these conditions, must be implemented by the leaseholder.	Approval dated 27 July 2006 sighted	Compliant
Subsidence Management Plan Eastern Area	3	The proposed mining as set out in the SMP may be carried out until 1/6/2013 or the expiry of Consolidated Coal Lease 705 or Mining Lease 1353, whichever occurs earlier. The Director-General may, at his or her discretion, extend this term upon request. The obligations set out in the SMP, as modified by this approval and any subsequent written notice of the Director-General, continue until the Director-General notifies the leaseholder that no further action is required	noted	noted
Subsidence Management Plan Eastern Area	4	Extent of Approval - This approval does not include extraction of pillars within the blue solid boundaries as marked on Sheets 1 and 2 of the Eastern SMP Approved Plan	noted	noted
Subsidence Management Plan Eastern Area	5	The proposed pillar extraction shall be conducted in such a way as to maintain access to the coal resource under the Newnes State Forest within EL5072.	Not Assessed	Not Assessed
Subsidence	6	The Director - General may vary the conditions of this approval	noted	noted

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
Management Plan Eastern Area		by notice in writing at any time		
Subsidence Management Plan Eastern Area	7	The Director - General may, at his or her discretion suspend or revoke this approval if a- the leaseholder fails to adhere to any condition of the approval; or b- the head of any other government agency requests suspension or revocation on the basis of the leaseholders non-compliance, or potential non-compliance, with legislation administered by that agency due to activities relating to this approval.	not triggered	not triggered
Subsidence Management Plan Eastern Area	8	These approval conditions relate to the proposed mining in the Katoomba Seam only	noted - all mining is in Katoomba Seam	Compliant
Subsidence Management Plan Eastern Area	9	Notification -The Leaseholder shall give notice of this SMP approval to the Department of Planning, Department of Natural Resources, Department of Environment and Conservation, Lithgow city council, Mine subsidence Board, NSW state Forests, The Regional Land Management committee, Sydney catchment Authority, NSW Heritage office, local Aboriginal Land Council, the owners/operators of any infrastructure and landowners in the application area and any other relevant government agencies or stakeholders as listed in the Guideline for Application for Subsidence Management Approvals, that Director General's approval of the proposed Subsidence Management Plan has been granted. This notification and its distribution list shall be provided to the Director, Environmental Sustainability, within one month from the date of this approval.	Not assessed	Not assessed
Subsidence Management Plan Eastern Area	10	Subsidence Management Conditions The Leaseholder shall develop and implement a program to ensure on-going baseline data collection, investigation, assessment and regular reviews with the relevant stakeholders. A review schedule shall be developed in consultation with these stakeholders. The review schedule shall be submitted to the Director Environmental Sustainability within four months of this approval. The Leaseholder shall undertake further reviews if such reviews are requested by the Director Environmental Sustainability or the Principal Subsidence Engineer.	Not assessed - as per other SMPs	Not assessed
Subsidence Management Plan Eastern Area	11	Notwithstanding Condition 10, the review schedule shall include Bungleboori south No.1 swamp, Bungleboori south No. 2 swamp, Bungleboori creek, the cliff formations above Panel 612B and the cliff formations, caves and overhangs at the southern end of the	Not assessed	Not assessed

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		proposed Panels 613 and 615.		
Subsidence Management Plan Eastern Area	12	The required ongoing baseline data collection, investigation, assessment and reviews shall aim to identify appropriate management measures to mitigate and/or remediate subsidence impacts. The Leaseholder shall ensure that management reviews are conducted in consultation with the relevant stakeholders, prior to subsidence of any important surface features or as otherwise determined in the said review schedule as per Conditions 10 and 11.	Not assessed	Not assessed
Subsidence Management Plan Eastern Area	13	The Leaseholder shall regularly seek advice and/or feedback from the relevant stakeholders, with regard to the adequacy, quality and effectiveness of the implemented management processes and the need for any appropriate management measures, early response actions or emergency procedures to ensure adequate management of any potential subsidence impacts due to the proposed mining.	Not assessed	Not assessed
Subsidence Management Plan Eastern Area	14	Subsidence and Underground Monitoring - The Leaseholder shall undertake a subsidence and underground monitoring/reporting program for the subject panels. This program shall include but not be limited to any proposed inspection regimes, layout of monitoring points, parameters to be measured, monitoring methods and accuracy, timing and frequencies of surveys and inspections. It shall be agreed to by the Principal Subsidence Engineer prior to the commencement of the proposed mining. The Leaseholder must implement any changes to the monitoring/reporting program, if required by the Principal Subsidence Engineer during the development of subsidence arising from the proposed mining.	Data on subsidence and underground monitoring for panels within the Eastern Area was sighted in 2009 End-of-Year report, and Subsidence Management Status Report for period to 31 October 2010. Nature and detail of monitoring appears to be similar to that for 700 Area.	Compliant
Subsidence Management Plan Eastern Area	15	Subsidence Reporting End of Year Report - The Leaseholder shall prepare an end of year report to encompass all environmental and subsidence monitoring, including a comparison of actual impacts with predicted subsidence impacts. This report shall be submitted to the Director, Environmental Sustainability, within the first three months of the subsequent year.	Eastern Area subsidence performance covered in 2009 End-of-Year report - see comments on 700 Areas SMP for more details	Compliant
Subsidence Management Plan Eastern Area	16	The Leaseholder shall provide to the Mine Subsidence Board, the Owners/operators of any infrastructure and the Director Environmental Sustainability and Principal Subsidence Engineer of the Department of Primary industries, notification within 24 hours of occurrence or identification of the following during the development of subsidence caused by the proposed mining. The same	Not triggered	Not Applicable

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		<p>information shall also be made available to other relevant stakeholders if requested</p> <p>a- Any observed subsidence impacts adverse to the groundwater and/or the natural environment that may be affected by the proposed mining;</p> <p>b- Any observed subsidence impacts adverse to the cliff or pagoda formations in any case that may be affected by the proposed mining</p> <p>c- Any observed major caving events, significant strata instability and/or abnormal water makes within the approved panels;</p> <p>d- Any observed subsidence impacts adverse to the serviceability and/or safety of infrastructure and other built structures that may be affected by the proposed mining;</p> <p>e- Any significant unpredicted and/or higher-than-predicted subsidence and/or abnormalities in subsidence development in any surface areas that may be affected by the proposed mining;</p> <p>f- Any adverse subsidence impacts reported by any relevant stakeholder, and</p> <p>g- Any other relevant information requiring prompt notification.</p> <p>Note: Pursuant to paragraph (e) of the subsidence management condition in the leaseholders Coal Lease, the SMP is also subject to the requirements for subsidence monitoring and reporting set out in the document 'New Approval Process for Management of Coal Mining Subsidence - Policy (2003)'. The monitoring and reporting requirements set out in that document apply, as modified by these conditions.</p>		
Subsidence Management Plan Eastern Area	17	<p>Subsidence Community Consultation Process</p> <p>The Leaseholder shall establish a Subsidence Community Consultation</p> <p>Process (SCCP). The SCCP shall be established in accordance with the 'Guideline for Application for subsidence Management Approvals. The proposed SCCP shall be submitted within six months of this approval to the Department of Primary industries for Director Environmental Sustainability's approval.</p>	Community Consultative Committee has been operating since 2006, and has met 15 times to date. Minutes for the past few years are available on centennial Coal website.	Compliant
Subsidence Management	18	Management Status	Data on subsidence and underground monitoring for panels within the Eastern Area was sighted in 2009 End-of-Year report, and Subsidence	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
Plan Eastern Area		<p>18. The Leaseholder shall prepare and regularly update a subsidence</p> <p>Management Status Report until the completion of subsidence in the application area. This status Report shall be provided to the Mine</p> <p>Subsidence Board, the Director of Environmental Sustainability and Principal</p> <p>Subsidence Engineer of the Department of Primary industries. This Report shall also be made available to other relevant stakeholder if requested. It shall be submitted at a minimum four monthly interval from the date of this approval, or at any other interval as required in writing by the Director</p> <p>Environmental Sustainability or the Principal Subsidence Engineer, and shall include but not be limited to:</p> <p>a) Face position of the active panel(s) being extracted;</p> <p>b) A summary of any management actions undertaken by the Leaseholder</p> <p>c) A summary of the results of consultation with the stakeholders as per</p> <p>Condition '13 and 17;</p> <p>d) A summary of the observed and/or reported subsidence impacts, incidents, service difficulties, community complaints, and any other relevant information reported as per Condition 16;</p> <p>e) A summary of subsidence development based on monitoring information from the subsidence monitoring programs, including a statement with regard to any identified trend in the development of ground deformations/subsidence movements in the application area, as compared with any defined triggers and/or the predicted subsidence to facilitate early detection of potential subsidence impacts;</p> <p>f) A summary with regard to the adequacy, quality and effectiveness of the implemented management processes based on the monitoring and consultation information summarised above, and</p> <p>g- A statement regarding any management actions to be undertaken or the need for early responses or emergency procedures to ensure adequate management of any potential</p>	<p>Management Status Report for period to 31 October 2010. Nature and detail of monitoring appears to be similar to that for 700 Area.</p>	

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		subsidence impacts due to the proposed mining.		
Subsidence Management Plan Eastern Area	19	<p>Miscellaneous Conditions</p> <p>Roads (all types) - The Leaseholder shall implement a management plan to ensure the safety of road users and the serviceability of any roads and/or</p> <p>4WD trails within the application area. This plan shall be implemented to the satisfaction of the owners/operators of the infrastructure</p>	No management plan as described was made available during the audit.	<p>Non Compliant</p> <p>Recommendation Prepare and implement a management plan to ensure the safety of road users and the serviceability of any roads and/or 4WD trails within the application area.</p>
Subsidence Management Plan Eastern Area	20	Newnes Plateau Shrub Swamp - The Leaseholder shall develop a Newnes Plateau Shrub Swamp Management Plan in consultation with the Department of Environment and Conservation and the Principal Subsidence Engineer. Mining under the Bungleboori North No.1 Swamp is not permitted unless the management plan is approved by the Director Environmental Sustainability.	<p>No Newnes Plateau Shrub Swamp Management Plan has been prepared in consultation with the Department of Environment and Conservation and the Principal Subsidence Engineer.</p> <p>It is acknowledged that no mining has occurred to date under Bungleboori No.1 Swamp. Clarence will develop a Swamp Management Plan prior to mining under any swamp.</p>	Not Triggered
Subsidence Management Plan Eastern Area	21	Land Management - The Leaseholder shall implement a management plan to ensure adequate management of any potential impacts associated with surface cracking, erosion, soil slumping and land degradation caused by mine subsidence and/or activities associated with monitoring or other management activities in the application area. The management plan shall be developed and implemented to the satisfaction of the NSW State Forests	No management plan as indicated was available during the audit.	<p>Non Compliant</p> <p>Recommendation Develop and Implement a management plan to ensure adequate management of any potential impacts associated with surface cracking, erosion, soil slumping and land degradation caused by mine subsidence and/or activities associated with monitoring or other management activities in the application area. The management plan shall be developed and implemented to the satisfaction of the NSW State Forests</p>
Subsidence Management Plan Eastern Area	22	<p>Public Safety - The Leaseholder shall implement a public safety management plan to ensure public safety in any surface areas that may be affected by subsidence arising from the proposed mining. This plan shall include, but not be limited to, regular monitoring of areas or infrastructure/structures posing safety risks, erection of warning signs, entry restrictions, backfilling of dangerous surface cracks and securing of unstable built structures or rock mass where required and appropriate, and the provision of timely notification of mining progress to the community and any other relevant stakeholders where management of public safety is required.</p> <p>The plan shall be developed and implemented to the satisfaction</p>	Not reviewed. Eastern Area is monitored and inspected for subsidence effects in the same manner as 700 area, CCL705 Outbye Areas etc. Public safety management is covered within the relevant SMPs, which include Environment/Public Safety as key elements in their TARPs, rather than via specific Public Safety Management Plans.	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		of the District inspector of Coal Mines.		
Subsidence Management Plan Eastern Area	23	Operation Management - The Leaseholder shall ensure that the proposed mining be controlled to meet the mine design specifications as documented in the SMP, An audit program of the mine layout shall be developed to the satisfaction of the Principal Subsidence Engineer. The results of the audit shall be reported to the District inspector of Coal Mines and the Principal Subsidence Engineer within three months of completion of each panel.	Clarence carries out an underground audit system for all panels subject to partial extraction, with inspections by independent personnel (Strata Engineering (Australia) P/L) as a minimum prior to pillar stripping, and on completion of partial extraction of the panel	Compliant
Subsidence Management Plan Eastern Area	24	Surface Water and Groundwater - The Leaseholder shall ensure full compliance with any statutory requirements of the Department of Natural Resources, with regard to the management of watercourses, surface and groundwater resources that may be affected by subsidence arising from the proposed mining	Clarence Colliery Water Management Plan sighted, applies to all areas of operation.	Compliant
Subsidence Management Plan Eastern Area	25	Archaeological and Heritage Sites - The Leaseholder shall ensure full compliance with any statutory requirements of the Department of Environment and Conservation and the Heritage Office, with regard to any archaeological and heritage sites that may be affected by subsidence arising from the proposed mining or during the remediation of impacted areas.	Survey in 2005 found no artefacts or archaeological sites within Eastern SMP area. Surface effects of subsidence very minor, and no damage would be expected.	Compliant
Subsidence Management Plan Outbye Areas	1	The Leaseholder must carry out the activity strictly in accordance with SMP Approved Plan	Plan Approval sighted (8 May 2009) Compliance with Approved Plan is driven by requirements under Clause 88 approval, via Mines Inspectorate	Compliant
Subsidence Management Plan Outbye Areas	2	The Leaseholder must carry out the activity generally in accordance with the SMP subject to the conditions of this Approval. In the event of any inconsistency between the conditions of this Approval and the SMP, the conditions of this Approval prevail to the extent of any inconsistency	Not assessed in detail as assessed for other SMPs.	Not assessed
Subsidence Management Plan Outbye Areas	3	Where this Approval requires actions to be undertaken by the Leaseholder, including remediation of subsidence impacts, the obligation continues until the Director General notifies the Leaseholder that the action has been completed to his or her satisfaction	Noted	Noted
Subsidence Management Plan Outbye Areas	4	The Director General may vary the conditions of this Approval by notice in writing	Not triggered	Not Applicable
Subsidence Management Plan Outbye Areas	5	The Director General may at his or her discretion suspend or revoke this Approval if a- the Leaseholder fails to adhere to any condition of the Approval; or	Not triggered	Not Applicable

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		<p>b- the head of any other government authority requests suspension or revocation on the basis of</p> <p>the Lease holder's non-compliance, or potential non-compliance, with legislation administered by that agency related to this Approval</p>		
Subsidence Management Plan Outbye Areas	6	<p>General Obligation to Minimise Harm to the Environment</p> <p>The Leaseholder must implement the SMP (as amended by the conditions of this Approval) and carry out any additional practicable measures necessary to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the activity</p>	See Main report for discussion on Subsidence Management	Compliant
Subsidence Management Plan Outbye Areas	7	<p>Notification of Approval</p> <p>The Proponent must give notice of this SMP approval with 30 days to the DoP, DWE, DECC, Council the local Aboriginal Land Council the owners/ operators of any infrastructure and landowners in the application area and any relevant government agencies of stakeholders that the Director General's approval of the SMP has been granted</p> <p>Note: Relevant government authorities and stakeholders are listed in the Guideline for Application for Subsidence management Approvals</p>	Letters of notice dated 1 June 2009 sighted.	Compliant
Subsidence Management Plan Outbye Areas	8	<p>Implementation of Approval</p> <p>Any plans, programmes, reports or strategies required as a condition of this Approval must be developed having regard to any guidelines adopted by the Director General for the purpose of subsidence management and mine rehabilitation</p>	From brief perusal, SMP for this area is similar in content and structure to that for 700 Area, which was reviewed in detail.	Compliant
Subsidence Management Plan Outbye Areas	9	<p>The Leaseholder must implement any plan, programme or strategy required and approved pursuant to this Approval</p> <p>Note: The Leaseholder may at any time submit an amended plan programme or strategy for approval. Once approved the amended plan programme or strategy must be implemented however up until the day of approval the Leaseholder must continue to implement the previously approved plan programme or strategy.</p>	No submissions for amended plan, program or strategy. Implementation of plans and programs generally evident via Subsidence Management Status Reports and End-of-Year report.	Compliant
Subsidence Management	10	Any modifications to plans, programmes or strategies already approved for the purposes of the conditions of this Approval must	Not triggered	Not Applicable

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
Plan Outbye Areas		<p>have regard to the matters set out in condition 8. Amended plans, programmes or strategies submitted for approval must be accompanied by all relevant supporting documentation to assist in the assessment of the amendment or modification.</p> <p>Note: This condition relates to plans, programmes and strategies required by the conditions of this Approval - if does not apply to variations to the SMP or the SMP Approved Plan which must be done in accordance with the requirements of the Mining Act, the conditions of title and the variation procedures identified in the SMP guidelines</p>		
Subsidence Management Plan Outbye Areas	11	<p>Directions</p> <p>The Leaseholder must comply with any written direction given by the Director General, Director</p> <p>Environmental Sustainability, Director Mine Safety Operations or Principal Subsidence Engineer</p> <p>relating to:</p> <p>a- the implementation of any aspect of the SMP or an approved plan, programme or strategy;</p> <p>b- assessing or reviewing the adequacy, effectiveness, or coverage of any approved plan,</p> <p>programme or strategy or any aspect of the SMP;</p> <p>c- the type, timing and/or location of monitoring of baseline conditions, subsidence or subsidence</p> <p>impacts</p> <p>d- any reporting requirement under this approval</p> <p>e- the carrying out of works to address subsidence impacts; and</p> <p>f- the carrying out of any studies or investigations related to subsidence or subsidence impacts and the reporting of any findings or conclusions</p> <p>The obligations under this condition prevail over any other obligation under this Approval</p> <p>Note: Complicance with a written direction will not operate as a defence to a breach of any obligation under this approval that</p>	Not triggered	Not Applicable

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		occurred prior to the Direction being given		
Subsidence Management Plan Outbye Areas	12	<p>Subsidence Monitoring</p> <p>The Leaseholder must submit to the Principal Subsidence Engineer for approval a subsidence and underground monitoring programme for the panels which are the subject of this Approval. This programme must include</p> <ul style="list-style-type: none"> a- inspection regimes b- layout of monitoring points c- parameters to be measured d- monitoring methods and accuracy e- timing and frequencies of surveys and inspections f- recording and reporting of monitoring results <p>The leaseholder must not commence pillar extraction prior to the subsidence monitoring programme being approved.</p> <p>Note: The programme should be submitted to the principle subsidence engineer at least 30 days prior to the expected commencement of operations to enable sufficient time for the assessment of the programme. The Principal Subsidence Engineer may require the provision of further information to assist in the assessment of the programme or a resubmission of the programme if it is considered inadequate, Complex issues or the need for additional information or a resubmission of the programme may require a longer assessment period</p>	Sighted submission of subsidence and underground monitoring program to Principal Subsidence Engineer dated 10 March 2009, and letter of approval dated 28 May 2009.	Compliant
Subsidence Management Plan Outbye Areas	13	<p>Environmental Monitoring</p> <p>The Leaseholder must submit to the Director Environmental Sustainability for approval an environmental monitoring programme (EMP) for the panels which are the subject of this approval. This programme must address subsidence impacts on: a) surface and groundwater (quality and quantity);</p> <p>The EMP must develop a response strategy for each of the above to include</p> <ul style="list-style-type: none"> a- trigger levels for subsidence impacts that require actions and 	Sighted submission of EMP to Director Environmental Sustainability dated 27 March 2009, and letter of approval dated 10 June 2009.	Compliant

Appendix A – Compliance Matrix

Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		<p>responses;</p> <p>b- the procedures that would be followed in the event that the monitoring Indicates an exceedance</p> <p>of trigger levels</p> <p>c- measures to mitigate, remediate and/or compensate any identified impacts</p> <p>d- a protocol for the notification of identified exceedances of the trigger levels</p> <p>e- a contingency plan to ensure impacts are within approved levels; and</p> <p>f- hydrogeological and fluvial / alluvial hydraulic connection</p> <p>This response strategy must be prepared in consultation with relevant landholders and government agencies. The groundwater EMP must be considered with and the Department of Water and Energy DRAFT Guidelines for Groundwater Monitoring</p> <p>Note: The programme should be submitted to the Director Environment Sustainability at least 14 days prior to the expected commencement of operation to enable sufficient time for the assessment of the programme. The Director Environmental Sustainability may require the provision of further information to assist in the assessment of the programme or a resubmission of the programme if it is considered inadequate. Complex issues or the need for additional information or a resubmission of the programme may require a longer assessment period,</p>		
Subsidence Management Plan Outbye Areas	14	<p>Public Safety</p> <p>The Leaseholder must implement a public safety management plan to ensure public safety in any surface areas that may be affected by subsidence arising for the proposed extraction. This plan must include but not be limited to regular monitoring of areas or infrastructure / structures posing safety risks erection of warning signs, entry restrictions , backfilling of dangerous surface cracks and securing of unstable built structures or rockmass where required and appropriate and the provision of timely notification of mining progress to the community and any other relevant stakeholders where management of public safety is required. The plan must be developed and implemented to the satisfaction of the Inspector of Coal Mines</p> <p>Note: the plan may make reference to public safety management procedures contained in other management plans.</p>	Assessment in SMP is that likelihood of partial extraction resulting in significant surface impacts is low, and consequently a specific Public Safety Management Plan is not required. However, monitoring for surface cracking in association with survey monitoring of subsidence effects is carried out under the SMP, with specific requirements included in the TARP.	Compliant

Appendix A – Compliance Matrix

Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
Subsidence Management Plan Outbye Areas	15	<p>Incident and Ongoing Management Reporting</p> <p>The Leaseholder must, within 24 hours of becoming aware of the occurrence, notify</p> <ul style="list-style-type: none"> i. the Principal Subsidence Engineer ii. the Mine Subsidence Board iii. The Department of Water and Energy iv. Other relevant stakeholders any Government Agency with a regulatory role if they request such notification of the following <ul style="list-style-type: none"> a- Any significant unpredicted and/or higher-than predicted subsidence and/or abnormalities in the development of subsidence; b- Any exceedance of predicted impacts on groundwater resources and/or the natural environment that may have been caused (whether partly or wholly) by subsidence; c-Any observed subsidence impacts adverse to the serviceability and/or safety of infrastructure and other built structures that may be affected by mining; d- Any significant subsidence-induced cracking and of ground deformations observed in any surface areas within the SMP application area 	Not triggered	Not Applicable
Subsidence Management Plan Outbye Areas	16	<p>The Leaseholder must prepare and maintain a Subsidence Management Status Report which must include but not be limited to</p> <ul style="list-style-type: none"> a- the current face position of the panel being extracted; b- a summary of any subsidence management actions undertaken by the Leaseholder in the period subsequent to the last regular submission of the Status Report c- a summary of any comments, advice and feedback from consultation with stakeholders in relation to the implementation of this Approval (including the preparation, implementation and review of plans, programmes, reports or strategies required by this approval) undertaken or received in the period subsequent to the last regular submission of the Status Report and a summary of the Leaseholder/s response to the comments, advice and feedback given by the stakeholders 	Subsidence Management Status Reports for the 4 month periods ending 28 February and 31 October reviewed, and similar reports for other periods sighted. Status reports are comprehensive, and specifically address all of the items (a) to (g). Evidence sighted of progressive update of the report, and formal submission on a 4-monthly basis.	Compliant

Appendix A – Compliance Matrix

Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		<p>d- a summary of the observed and/or reported subsidence impacts, incidents, services difficulties community complaints, and any other relevant information reported to the Leaseholder in the period subsequent to the last regular submission of the Status Report and a summary of the Leaseholder's response to these impact, incidents, services difficulties and complaints;</p> <p>e- a summary of subsidence development based on monitoring information compared with any defined triggers and/or the predicted subsidence to facilitate early detection of potential subsidence impacts;</p> <p>f- a summary of the adequacy, quality and defectiveness of the implemented management processes based on the monitoring and consultant information summarised above; and</p> <p>g- a statement regarding any additional and/or outstanding management actions to be undertaken or the need for early repairs or emergency procedures to ensure adequate management of any potential subsidence impacts due to mining.</p> <p>The Subsidence Management Status Report must be updated at least every 14 days to reflect any changes in the information required to be included in the Report. The Status Report must be regularly submitted to the Principal Subsidence Engineer and the Department of Water and Energy from the date of this Approval. The Status Report (as updated from time to time) must be provided, upon request, to the Mine Subsidence Board, the Director of Environmental Sustainability the Principal Subsidence Engineer of the Department of Primary Industries, owners/operators of any infrastructure within the application area and any other relevant stakeholders</p>		
Subsidence Management Plan Outbye Areas	17	<p><u>End of Year Report</u> The Leaseholder shall prepare an end of year report. This report shall be submitted to the Director Environmental Sustainability within the first three months of the subsequent year. The end of year report must</p> <p>a- include a summary of the subsidence and environmental monitoring results for the year b- include an analysis of these monitoring results against the relevant . Impact assessment criteria . Monitoring results from previous years and . Predictions in the SMP c- identify any trends in the monitoring results over the life of the activity and d- describe what actions were taken to ensure adequate</p>	End-of Year Report for 2009 reviewed, similar report for 2008 sighted. Transmittal letters sighted. Reports are comprehensive, and specifically address items (a) to (d) of the Condition.	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		management of any potential subsidence impacts due to mining.		
Subsidence Management Plan Outbye Areas	18	<p>Access to Information: Within 3 months of the submission of an End of Year Report (as required by Condition 17) or the approval of a plan, programme or strategy required under this Approval or the SMP (or any subsequent revision of these documents), the Leaseholder must, to the satisfaction of the Director</p> <p>General: a- provide a copy of these document/s to all relevant agencies b- ensure that a copy of the relevant documents is made publicly available at the Leaseholders regional office and c- put a copy of the relevant documents on the Leaseholders website</p>	Letters of transmittal sighted. 2009 Report is currently on Centennial Coal website. Hard copy folder available in Clarence Colliery office.	Compliant
Subsidence Management Plan Outbye Areas	19	<p>Survey Marks</p> <p>At the completion of subsidence or otherwise as required by the Department of Lands the functionality of any survey marks affected by subsidence must be fully restored to the satisfaction of the Department of Lands</p>	Not triggered	Not Applicable
Subsidence Management Plan Outbye Areas	20	<p>Water Supply</p> <p>In the event of interruptions to water supplies (water quality and / or quality) due to subsidence impacts on water supply systems and or source caused by the proposed extraction the Leaseholder must provide without delay water supplies of equivalent quality and quantity to locations convenient to those affected within the SMP Application Area until such time tha the affected water supply system and / or sources are restored</p>	Not triggered	Not Applicable
Surface Licence Main Dam - 10SL039344	1	The holder of the license shall within three months of being called upon by the Department of Natural Resources to do so, install to the satisfaction of the department in respect of location from type and construction and appliance or appliances for the measurement of the quantity of water diverted or taken by means of the licensed work such appliance or appliances to consist of either a measuring weir or weirs with automatic recorder or meter or meters of the dethridge type or such other class of meter or means of measurement as may be approved by the department and shall continuously maintain such appliance or appliances in good working order and condition and shall after the installation of such appliance or appliances record the measurements of all water diverted or taken by means of the licensed work and supply particulars of such measurements to the department at such intervals as shall be directed by the department. Wherever called upon to do so a test certificate furnished either by manufacturer concerned or by some person ot authority duly qualified shall be	<p>General Note regarding the Main Dam Water licence: The site and auditor were not clear on the detail of the water licence - specifically, what discharges were licenced and at what point on the mine the licence related to. Infrastructure and site activities have changed and the licence detail is minimal, such that interpretation of the licence as it relates to current site activities remains unclear.</p> <p>A flow monitor is located at LD2. It is proposed that a new metering system be installed for more accurate and real time flow monitoring. A variation of the EPL has been approved to consider this change in flow monitoring.</p> <p>In 2009 the meter did not work for the period 5-8-09 to 23-8-09, and 29-8-09 to 6-8-09. As such, site were non-compliant with the requirement for this period. Site indicate that proxy volume data is available from the figures provided by the Water Treatment Plant operators (Contractors).</p>	<p>Non Compliant</p> <p>General Recommendation:</p> <p>It is recommended that Clarence re-negotiate the terms of the Main Dam Water licence with NOW such that the requirements are clearly understood and that the licence conditions relate to current operations.</p> <p>1. Non Compliant as no monitoring data for period 5-8-09 to 23-8-09, and 29-8-09 to 6-8-09.</p> <p><u>Recommendation:</u></p>

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		supplied by the holder of the licence as to the accuracy of the appliance or appliances installed.		Implement as planned the monitoring device for LD2. Ensure all monitoring as required by NOW and the licence in place after finalising the licence with them as per above recommendation.
Surface Licence Main Dam - 10SL039344	2	The Licensee shall not allow any tail water drainage to discharge into or onto: - Any adjoining public or crown road - Any other persons land - Any crown land -Any river creek or watercourse -Any ground water aquifer -Any native vegetation as described under the native vegetation conservation act 1997 -Any wetlands of environmental significance	Two pipeline failures have occurred that discharged water to the main dam. These are discussed in the main body of the report and occurred on 14/12/2010 and 12/3/2008. In addition, site discharge water to underground workings, potentially being non-compliant with this requirement. It is understood that a licence for this discharge is being applied for.	Non Compliant Recommendation: Seek to obtain a licence from NOW for the discharge of water from the leachate dams to mine workings. Also consider whether the EPL should consider this discharge. Implement effective systems to ensure no further pipeline ruptures occur from the two extraction boreholes.
Surface Licence Main Dam - 10SL039344	3	Your attention is particularly drawn to the provisions of condition 2 regarding disposal of drainage waters. The discharge of polluted waters into a river or lake otherwise than in accordance with the conditions of a license under the prosecution of the environment operations act may render the offender subject to prosecution and penalty under the act. Therefore where an approved drainage disposal system involves the possible discharge or drainage water into a river or lake, a license may be required under the protection of the environment operations act to authorise such discharge.	Noted. EPL in place.	Noted.
Surface Licence Main Dam - 10SL039344	4	Works used for the purpose of conveying, distributing or storing water taken by means of the licensed works shall not be constructed or installed so as to obstruct the reasonable passage of floodwaters flowing into or from a river	There was no apparent obstruction of floodwaters observed.	Compliant
Surface Licence Main Dam - 10SL039344	5	Where any internal combustion powered work is used for the purpose of diverting water authorised under this licence the power unit and any associated fuel storage shall be located outside any watercourse or drainage depression and a bunding wall of hay bales or other approved material shall be installed around the pumping plant to avoid contamination of any river or lake through spill or leaks of oils, fuels or greases	The pump on the main dam is electrical, hence is not applicable. A pump was observed to be (temporarily) located at the polishing lagoon and pumped water to the borehole to the mine workings. This was located in a bunded area.	Compliant
Surface Licence Main Dam - 10SL039344	6	The pumping and ancillary equipment and pump sites shall be at all times properly secured and / or sealed so as to prevent any leakage of petroleum based products and/or noxious material from entering any river or lake.	The pump on the main dam is electrical, hence is not applicable. A pump was observed to be (temporarily) located at the polishing lagoon and pumped water to the borehole to the mine workings. This was located in a bunded area.	Compliant
Surface Licence Main	7	THE EXISTING PROFILE OF THE CHANNEL AND BANK OF ANY WATERCOURSE OR DRAINAGE DEPRESSION MUST	No new drainage lines have been constructed since the approval dated 2005.	Compliant

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Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
Dam - 10SL039344		<p>NOT BE DISTURBED ANY MORE THAN IS NECESSARY IN ORDER TO SITE AND MAINTAIN THE AUTHORISED DIVERSION WORK. ANY AREA THAT IS DISTURBED WHEN CARRYING OUT</p> <p>SUCH WORK SHALL BE STABILISED AND MAINTAINED BY GRASS COVER, STONE PITCHING OR ANY</p> <p>OTHER APPROVED MATERIAL AS DIRECTED AND TO THIS DEPARTMENT'S SATISFACTION SO AS TO</p> <p>PREVENT THE OCCURRENCE OF EROSION.</p>		
Surface Licence Main Dam - 10SL039344	8	Any drainage channels or cross banks associated with the authorised diversion work or access roads to or from that work shall have installed and maintained a bunding wall of hay bales or other approved materials to prevent siltation due to the authorised diversion work or access roads from reaching any river or lake	<p>Most drains and roads were compliant with this condition. It was noted that recent works had been conducted to improve drainage along roadways with concrete drains having been constructed with rock check dams embedded.</p> <p>It was noted however, that in a few locations road batters were observed to have been eroded/washed out in recent heavy rainfall events. Locations included the car park near the main dam, and roads near the mine borehole discharge.</p>	<p>Generally Compliant</p> <p>Non Compliant (for selected areas where recent wash outs had occurred).</p> <p>Recommendation: Stabilise areas of washout around the roads and car park of the main dam.</p>
Surface Licence Main Dam - 10SL039344	9	The licensee shall comply with requirements of Sydney Water in regard to matters of concern to Sydney Water within their area of operations subject to any requirements of the Department of Natural Resources	No matters have been reported to be raised. There has been correspondence with SCA on the Water Management Plan.	Not Triggered
Surface Licence Main Dam - 10SL039344	10	The level of the crest of the wall and bywash (spillway) of the dam on the Wollangambe River shall be in accordance with contract drawings No S 5626/2 Revision4 and 5626/5 provided by Crooks Mitchell Peacock Stewart Pty Ltd, copies of which are retained in the office of the Department of Natural Resources	Sighted drawings of the spillway as referenced in the licence. No check of compliance with the drawing was completed as part of this audit. Site management noted that no changes have been made to the spillway since construction.	Not Assessed.
Surface Licence Main Dam - 10SL039344	11	The licensee shall provide pipe or pipe syphons or other approved means for passing flows through the storage of the dam referred to in condition 10. The pipe or pipe syphons shall be of sufficient capacity and of such nature as to allow its operation in accordance with condition 12	<p>There are no pipe systems or syphons in place as required by the condition. Clarence have noted this, and obtained quotes (sighted) to put such a system in place. In addition, a purchase order for the system was observed and the site was awaiting the delivery of the unit.</p> <p>The system will provide for the pumping of flows over the dam wall, largely to ensure capacity to provide for environmental flows if water is not flowing over the spillway. Currently there is no capacity to monitor flows to the Wollongambe River from the main dam.</p>	<p>Non Compliant</p> <p>Recommendation: Install pipe or pipe syphon as required. It is understood that site have ordered the pipe system and once it arrives it will be installed.</p>
Surface Licence Main Dam - 10SL039344	12	When a natural flow is entering the storage of the dam referred to in condition 11 the pipe syphons referred to in condition 12 shall be so operated as to maintain a flow in the Wollangambe River downstream of the dam equivalent to the natural flow entering the storage for the time being or a quantity of 0.05 megalitres per	There is currently no system in place for siphoned flow to the river, however, it was reported that typically flows do occur to the river well in excess of that required by the condition. During the site inspection flows were evident from the main dam to the river that were estimated to have been well in excess of the requirement.	<p>Non Compliant</p> <p>Recommendation: Install pipe or pipe syphon as required. It is understood that site</p>

Appendix A – Compliance Matrix

Approval Name	Condition No	Condition Requirement	Comment/Evidence Sighted	Compliance Status and Recommendations
		day. Whichever is the lesser	It is understood that site have ordered the pipe system and once it arrives it will be installed.	have ordered the pipe system and once it arrives it will be installed. Clarence should install flow monitoring at the main dam to quantify flows from this point to the Wollongambe River and be able to demonstrate compliance with this requirement.
Surface Licence Main Dam - 10SL039344	13	The level of the crest of the bay wash of the dam shown as No1 on the plan referred to in condition 16 shall be fixed at not higher than 1.00 metres below the level of a bench mark established on a gum tree o the left bank of the watercourse near the work and particulars of which are retained in the office of the Department of Natural Resources	This dam is not currently used.	Not Applicable
Surface Licence Main Dam - 10SL039344	14	The level of the crest of the bay wash of the dam shown as No2 on the plan referred to in condition 16 shall be fixed at not higher than 2.25 metres below the level of a bench mark established on a gum tree o the left bank of the watercourse near the work and particulars of which are retained in the office of the Department of Natural Resources	It is thought by site that this requirement relates to the Polishing Dam. There has not been adjustment of the crest level of this dam. This condition should be reviewed as part of the overall review of the licence as stated above. As site are not sure exactly on the location of this requirement, it is considered indeterminate.	Indeterminate
Surface Licence Main Dam - 10SL039344	15	The level of the crests of the by washes of the dams shown as No 3 and 5 on the plan referred to in condition 15 shall be fixed at not higher than 8.0 meters above the bed of the unnamed watercourses at the sites of these works	No. 3 dam is thought to be the Polishing Dam and No. 5 dam the leachate dam. There has not been adjustment of the crest level of this dam. This condition should be reviewed as part of the overall review of the licence as stated above. As site are not sure exactly on the location of this requirement, it is considered indeterminate.	Indeterminate
Surface Licence Main Dam - 10SL039344	16	The location of the dam(s) as shown on the plan retained in the office of the Department of Natural Resources shall not be altered	No dams have been altered in terms on location.	Compliant
Surface Licence Main Dam - 10SL039344	17	The works shall be constructed and maintained in a safe and proper manner that will minimise the possibility of damage being occasioned by them or resulting from them to any public or private interest	The dam was inspected during the audit and observed to be functioning. There was no recent engineering assessment of the dam available for review, and site do not document specific inspections made of the dam to demonstrate that the dam is maintained in a safe manner.	Compliant Recommendation: It is recommended that site commence an inspection programme on the dam to demonstrate it is maintained in a safe manner. Use could be made of Dam Safety Committee checklists to assist this process.

Appendix B Site Photographs



1. Truck wash bay and Coal Stockpiles



2. Product Coal Stockpile



3. Refuelling Bowser and Trailer at Pit top



4. Pit top area wash down bay



5. CHPP Workshop Oil Store



6. CHPP Workshop Oil Store



7. CHPP and Silt Arrestor



8. CHPP Silt Arrestor



9. CHPP Workshop



10. CHPP Silt Arrestor



11. Outside Storage Areas



12. Pit top wash down bay



13. Outside Storage Areas



14. Outside Storage Areas



15. Tailings in the REA to be reprocessed



16. Tailings in the REA to be reprocessed



17. REA Batter Rehabilitation (light green conducted pre 2005)



18. REA Batter Rehabilitation (light green conducted pre 2005)



19. REA Rehabilitation – from 1990s



20. REA Rehabilitation showing existing cover



21. Rehabilitation REA I (1990's)



22. Road to Main Dam showing recent drain construction



23. Erosion and sedimentation of batter near road to main dam



24. Erosion and sedimentation of road batter near main dam



25. Erosion and sedimentation near main dam carpark



26. Polishing Dam



27. Bore Hole drainage dam



28. Main Dam and pump



29. Main Dam Spillway



30. Air Intake on Newnes Plateau and subsidence monitoring line



31. Subsidence Monitoring Line on Newnes Plateau



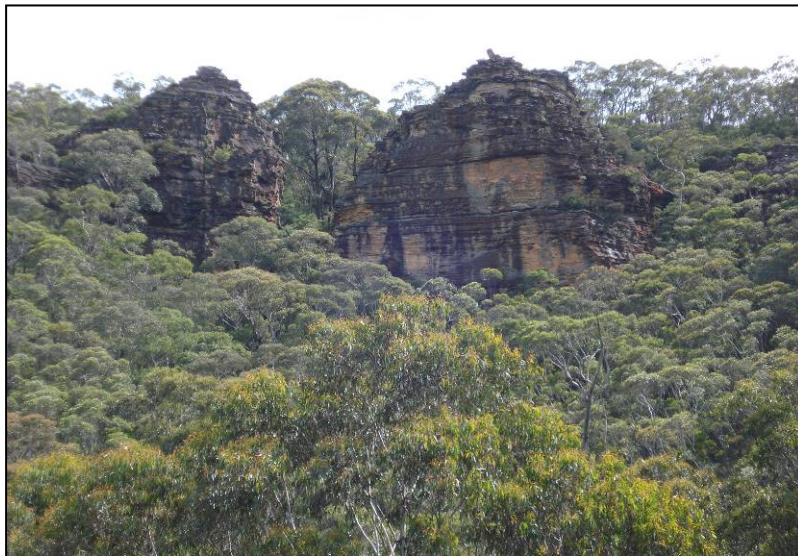
32. Subsidence Monitoring Line on Newnes Plateau



33. Subsidence Monitoring Line on
Newnes Plateau



34. Bungleboori Canyon



35. Bungleboori Subsidence Monitoring area



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