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Regulator**

COMPLIANCE AUDIT PROGRAM

BOGGABRI COAL MINE

Boggabri Coal Pty Ltd



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1. Introduction

1.1. Background

Boggabri Coal Mine is an open cut coal mine located 15 kilometres north-east of Boggabri in northern NSW. The mine comprised two mining leases and two exploration licences as detailed in Table 1.

Table 1 Summary of mining titles comprising Boggabri Coal Mine

Title	Grant	Expiry	Last renewal
Coal Lease 368 (CL368)	15 November 1990	14 November 2032	9 May 2013
Mining Lease 1755 (ML1755)	30 June 2017	30 June 2038	-
Authorisation 355 (A355)	19 July 1984	11 April 2018	Pending
Authorisation 339 (A339)	11 April 1984	11 April 2022	22 November 2016

All the titles are held jointly by:

- Boggabri Coal Pty Limited
- Chugoku Electric Power Australia Resources Pty Ltd
- NS Boggabri Pty Limited

The mine has been in operation since October 2006 and has a production rate of 7 million tonnes of coal per annum. Mining operations are undertaken within CL368 using a fleet of trucks and excavators, delivering the run of mine coal to a coal handling and preparation plant where it is crushed and screened. Rehabilitation of areas of the mine began in 2008 and have continued progressively as the mine developed. ML1755 is a smaller lease to the south west of CL368 where mining operations have not taken place.

The audit focussed on the mining and rehabilitation activities within CL368 and did not include any assessment of ML 1755 or the exploration activities on A355 or A339.

As part of the compliance audit program undertaken by the NSW Resources Regulator, an audit of the mining operations associated with the Boggabri Coal Mine was undertaken on 10 March 2020.

1.2. Audit objectives

The objectives of the audit were to:

- Undertake a compliance audit of the Boggabri Coal Mine, operated by Boggabri Coal Pty Ltd, against the requirements of the *Mining Act 1992* and the conditions of the mining leases issued pursuant to that Act.
- Assess the operational performance of the Boggabri Coal mining operations and the ability of the title holder and/or operator to implement management systems and controls to provide for sustainable management of the operations.

1.3. Audit scope

The scope of the audit included:

- mining activities associated with the Boggabri Coal Mine including:
 - mine development within CL368
 - exploration drilling within CL368
 - rehabilitation activities associated with the above mining and exploration activities.
- a review of documents and records pertaining to the mining and exploration activities
- the assessment of compliance for 1 January 2018 to 10 March 2020.

1.4. Audit criteria

The audit criteria against which compliance was assessed included:

- *Mining Act 1992*, specifically sections 5, 6, 163C to 163E, 163G, 378D
- Mining Regulation 2016, specifically clauses 59 to 68
- conditions attached to CL368 (granted 15 November 1990 with conditions modified on transfer dated 27 April 2015)
- commitments made in Boggabri Coal Operations Pty Ltd, Mining Operations Plan (MOP) December 2019 (approved 24 January 2020)

- Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales (Version 2, March 2016) published by the (then) NSW Department of Industry – Resources and Energy
- Rehabilitation Cost Estimation Tool Handbook (June 2017) published by the (then) NSW Department of Planning and Environment
- ESG3: Mining Operations Plan (MOP) Guidelines, September 2013 published by the (then) NSW Trade and Investment, Regional Infrastructure and Services – Division of Resources and Energy
- Guidelines and Format for Preparation of an Annual Environmental Management Report (January 2006) published by the (then) NSW Department of Primary Industries – Mineral Resources
- ESB28: Environmental Incident Reporting Requirements (October 2007) published by the (then) NSW Department of Primary Industries – Mineral Resources.

1.5. Publishing and disclosure of information

This audit report will be published on the NSW Resources Regulator’s website consistent with Section 365 of the *Mining Act 1992*.

This audit report may be publicly disclosed consistent with the *Government Information (Public Access) Act 2009*.

2. Audit methods

The audit process involved the interview of site personnel, a review of documentation and samples of records provided by the title holder and/or operator and a site inspection of the operations. The audit's aim was to determine the level of compliance of the operations and assess the status of the operational performance. The audit process and methodology are described in more detail in the sections below.

2.1. Opening meeting

The opening meeting was held at the Boggabri Coal Mine office on 10 March 2020. The audit team was introduced, and the scope of their responsibilities was conveyed to the auditees. The objectives and scope of the audit were outlined. The methods to be used by the team to conduct the audit were explained, including interview of personnel, review of documentation, examination of records and a site inspection to assess specific compliance requirements.

2.2. Site interviews and inspections

2.2.1. Data collection and verification

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

2.2.2. Site inspections

A site inspection was undertaken of the following areas within CL368:

- temporary stabilisation and rehabilitation of the processing plant area, including coal stockpiles and rail loadout
- northern clearing area
- 2019 southern rehabilitation area
- 2017 and 2018 rehabilitation areas.

2.3. Closing meeting

The closing meeting was held at the Boggabri Coal Mine office on 10 March 2020. The objectives of this meeting were to discuss any outstanding matters, present preliminary findings and outline the process for finalising the audit report.

2.4. Compliance assessment definitions

The reporting of results from the compliance audit was determined based on the definitions presented in Table 2.

Table 2 Audit assessment categories

ASSESSMENT	CRITERIA
Compliance	Sufficient and appropriate evidence is available to demonstrate the particular requirement has been complied with.
Non-compliance	<p>Clear evidence has been collected to demonstrate the particular requirement has not been complied with. There are three subcategories of non-compliance reflecting the severity and level of risk associated with the non-compliance:</p> <p>NC1 – the absence of planning or implementation of a required operational element which has the potential to result in a significant risk.</p> <p>NC2 – an isolated lapse or absence of control in the implementation of an operational element which is unlikely to result in a significant risk.</p> <p>NC3 – an administrative or reporting non-compliance which does not have a direct environmental or safety significance.</p> <p>Note: The identification of a non-compliance in this audit may or may not constitute a breach of, or offence under, the <i>Mining Act 1992</i>. Non-compliances identified in this audit report may be further investigated by the Regulator and regulatory actions may be undertaken.</p>
Observation of concern	<p>Where an auditee may be compliant at the time of the audit but there are issues that exist that could result in the potential for future non-compliance if not addressed.</p> <p>Observation of concern was also used where an issue may not have particular compliance requirements, but which was not conducive to good management or best practice.</p>

ASSESSMENT	CRITERIA
Suggestion for improvement	Where changes in processes or activities inspected or evaluated at the time of the audit could deliver improvement in relation to risk minimisation, sustainable outcomes and management practices.
Not determined	<p>The necessary evidence has not been collected to enable an assessment of compliance to be made within the scope of the audit.</p> <p>Reasons why the audit team could not collect the required information include:</p> <ul style="list-style-type: none"> ■ insufficient information on the file relating to the period covered by the audit or insufficient evidence collected to reach a conclusion ■ the wording on the criteria (approval condition) meant that no evidence could be gathered, or it was too difficult to gather the evidence. <p>A 'not determined' assessment was also made where the condition was outside of the scope of the audit.</p>
Not applicable	<p>The circumstances of the authorisation or title holder have changed and are no longer relevant (i.e no longer mining, mining equipment and plant has been removed).</p> <p>An invoking element in the criteria was not activated within the scope of the audit.</p>

2.5. Reporting

Following completion of the site audit, the audit checklists were completed and audit notes were reviewed to compile a list of outstanding matters to be noted in the audit report. This report was prepared to provide an overview of the operational performance of the site in relation to the mining operations and identify any non-compliances or observations of concern noted by the auditors during the site inspections and interviews.

The draft audit findings were forwarded to Boggabri Coal for comment. Consideration was given to the representations made during the finalisation of the audit report as discussed in the audit findings.

3. Audit findings

3.1. Mining operations plan

Condition 3 of CL368 requires the lease holder to comply with an approved Mining Operations Plan (MOP) in carrying out any significant surface disturbing activities, including mining operations, mining purposes and prospecting.

Boggabri Coal prepared, submitted and had an approved Mining Operations Plan for the Boggabri Mine. The MOP has been amended and approved on several occasions over the life of the mine. The current version of the MOP was *Boggabri Coal Operations Pty Ltd, Mining Operations Plan (MOP) December 2019*. This was approved by the Regulator on 24 January 2020.

Generally, evidence was available to demonstrate that the MOP commitments have been implemented. For example

- Sections 2.3.7.3 and 4.2.1.15 - observations made on site and discussions with the short term mine planners confirmed that rejects material is co-disposed as described in the approved MOP (Figure 1). A reject limit plane is imposed, allowing a 5-metre offset from the edge of the dump for any carbonaceous material dumping which must also be above the final water table.
- Section 4.2.1.1 - the maximum out-of-pit dump height of RL395m was factored into the dump design profiles. The mine planners had adopted a dump profile consistent with the final design landform from the MOP.

Figure 1 Reject materials co-disposed with overburden



- Section 4.2.1.8 - commits to confirming the geotechnical and physical characteristics of coal reject material to identify potential for spontaneous combustion and whether the material is potentially acid forming or non-acid forming (PAF/NAF). Discussions with Boggabri geological staff identified that annual sampling of reject material is undertaken which includes both NAF/PAF testing and propensity for spontaneous combustion. Results of this testing were available, confirming that testing was undertaken.
- Section 4.2.1.18 - includes requirements for the integration of final landforms between Boggabri Mine and the adjacent Tarrawonga Mine. This is achieved through the Common Boundary Integrated Management Plan. Discussions with Boggabri Coal management confirmed that Boggabri maintains regular liaison with Tarrawonga in relation to the boundary management plan. Minutes of meetings between the companies were available. The mine planners have designed the final landform to accommodate the boundary requirements and this is factored into dump levels to ensure that agreed landforms can be implemented.

3.2. Rehabilitation

3.2.1. Risk assessment

Condition 2 of CL368 requires that any disturbance resulting from the activities carried out under the mining lease must be rehabilitated to the satisfaction of the Minister. To achieve successful rehabilitation outcomes, the lease holder must be able to identify and manage any risks that could compromise rehabilitation outcomes.

Boggabri undertook a broad-brush risk assessment in 2016 which included environmental and other risks to achieving successful rehabilitation of the site. Failure to meet rehabilitation completion criteria was listed as a high risk. Rehabilitation methodologies to address the risks identified and timeframes for implementation were noted to be generally discussed in Sections 5 to 9 of the MOP.

Section 9.1 of the MOP identified threats to rehabilitation, with Table 9.1 providing a summary of rehabilitation risks, triggers and mitigation measures. One of the risks identified in Table 9.1 was severe or prolonged drought leading to widespread failure of revegetation. The trigger for mitigation actions was monitoring and vegetation assessments highlight inadequate groundcover or a paucity in species diversity/distribution.

Severe drought has been a factor in the Gunnedah area for the last two years and monitoring was showing an increased rate of mortality within the rehabilitation. Mitigation measures used by Boggabri Coal included delaying planting of target species in the 2019 southern rehabilitation area and the watering of plantings already in the ground. The 2017 and 2018 rehabilitation areas were inspected during the audit (refer to Figure 2, Figure 3, Figure 4, and Figure 5). Generally, the rehabilitation has been reasonably successful with good growth.

Figure 2 2017 rehabilitation



Figure 4 2018 rehabilitation



Figure 3 2017 rehabilitation



Figure 5 2018 rehabilitation



3.2.2. Rehabilitation objectives

Section 5.2 of the MOP defines the short, medium- and long-term rehabilitation objectives for the project. During discussions with the mine planners, it was noted that rehabilitation planning appeared to be integrated with mine planning. Dump levels and profiles were designed based on the final approved landform.

One of the short-term objectives was to progressively reshape and stabilise disturbed areas and areas were observed during the site inspection where progressive reshaping had taken place. It was observed during the site inspection that there was an area in the southern rehabilitation area that had experienced significant erosion, indicating that the landform may not have been stable and/or structural erosion control measures may not have been adequate to achieve the stated objective (refer to Figure 6 and Figure 7).

Erosion was first observed by Boggabri Coal staff prior to March 2019. The eroded area was repaired at the time and a consultant was engaged to design remediation actions to improve the stability of the dump batters (report dated March 2019). At the time of the audit, Boggabri Coal was working on construction of containment structures on the top of the embankment to stop water cascading over the embankment.

Significant rainfall in January and February 2020 resulted in erosion of the previously remediated batters. This second erosion event had not been repaired at the time of the audit (March 2020). Boggabri Coal advised that the erosion observed on the batters would be repaired once the construction work on the containment structures was completed. It is acknowledged that Boggabri had commenced actions to address the erosion issue. The erosion issue is raised as **observation of concern no. 1** and the progress and effectiveness of the construction works will be monitored by the Regulator during future inspections.

Figure 6 Landform on 2019 southern rehabilitation area



Figure 7 Erosion on 2019 southern rehabilitation area



A long-term objective identified in the MOP was the monitoring of areas to ensure stable and sustainable rehabilitation, including succession of planted native vegetation toward analogue native vegetation. In this regard, Boggabri has engaged a consultant to undertake a range of ecological tasks including rehabilitation monitoring which was noted to be done annually.

The report titled *2018 Biodiversity Monitoring: Rehabilitation Area*, which included monitoring of rehabilitation progress, flora and fauna, and photo monitoring, was reviewed on site by the audit team.

3.2.3. Land clearing and soil management

Section 7.3.5 of the MOP describes procedures for pre-clearing fauna and flora surveys. During the audit site inspection, consultant ecologists were observed monitoring the clearing operations to check for fauna. The consultant team leader advised that the ecologists inspected the area prior to clearing, marking any habitat trees and those to be salvaged with either flagging tape or paint.

During the inspection it was observed that several trees were marked in red paint - H for habitat tree and S for salvage. Stockpiles of habitat resources were sighted during the inspection. Records on the nature and quantities of resources salvaged were noted to be included in the tree clearing reports provided by the consultant. Examples of the clearing extent and site feature checklist were reviewed by the audit team, as were copies of the pre-clearing checklists, which were completed for each clearing block.

Section 7.3.6 of the MOP relates to soil management. Boggabri Coal had implemented a QAP - Soil Stripping and Placement Plan and examples of completed QAPs for topsoil activities were available for review by the audit team. Section 7.3.6.2 of the MOP identifies that vegetation not salvaged for habitat relocation is to be chipped and managed to form a compost to be incorporated in the soil. Mulchers and chippers were observed during the site inspection, as were stockpiles of mulched material. Stockpiles of gypsum were also observed in the area of clearing operations for incorporation into the topsoil prior to

stripping as described in Section 4.2.1.6 of the MOP. Figure 8 and Figure 9 show the clearing operations in progress at the time of the audit.

Figure 9 Northern clearing area - topsoil and gypsum stockpiles



Figure 8 Northern clearing area - ecologists monitoring



Section 7.3.7.4 of the MOP states that native seed collection will be undertaken to provide local provenance seed for direct broadcasting and raising of seedlings for planting. Boggabri Coal has engaged a consultant to undertake the seed collection process. It was confirmed that the same consultant undertook the tree planting on site.

3.3. Exploration

Boggabri staff advised that, generally, exploration drilling had been restricted to infill drilling for mining purposes, life of mine planning and fugitive emissions drilling. Inground sumps were reported to be used for exploration drilling projects, with drill cuttings pumped to storage containers, while alternative options for disposal were investigated. Drilling depth was typically a maximum of about 450 metres.

Mapping of the exploration holes completed in 2018 and 2019 showed that the holes were predominantly within the northern clearing area. Given that this area would be mined through within the next 12 to 18 months, an assessment of rehabilitation of exploration holes was not undertaken during the audit.

3.4. Reporting

3.4.1. Annual rehabilitation reporting

Condition 3(f) of CL368 requires the lease holder to prepare an annual rehabilitation report which provides a detailed review of the progress of rehabilitation against the performance measures and criteria established in the approved MOP. The 2018 Annual Review was submitted on 29 March 2019 and accepted by the Regulator as satisfactory on 22 October 2019. The report was submitted by the due date and the next annual review was due 29 March 2020.

Section 8 of the Annual Review provides a description of the rehabilitation methodologies used and discusses the progress and status of rehabilitation on site. Section 8.3 provides the results of rehabilitation biodiversity monitoring, including photographic monitoring, native species diversity and growth medium suitability.

The review also provides information on rehabilitation activities proposed for the next 12-month reporting period.

3.4.2. Annual exploration reporting

Section 163C of the Mining Act and clause 59 of the Mining Regulation require the preparation and submission of an annual report which provides full particulars of all exploration and other operations or activities conducted during the 12-month period.

Exploration reports for the last two years have been submitted. The reports for 2018 and 2019 were reviewed by the auditor and were found to be generally in accordance with the relevant guidelines and templates:

- Boggabri Coal Operations Pty Ltd, Annual Report Coal Lease 368 (CL368), Reporting Period: 15 November 2017 to 14 November 2018
- Boggabri Coal Operations Pty Ltd, Annual Report Coal Lease 368 (CL368), Reporting Period: 15 November 2018 to 14 November 2019.

3.4.3. Compliance and environmental incident reporting

Condition 4 of CL368 requires Boggabri Coal to notify the Department when becoming aware of any breaches of the conditions of the lease, or breaches of the Mining Act or Regulations.

Boggabri Coal staff advised that they have not notified us of any breaches of the Mining Act, Regulation or conditions of mining lease since the imposition of this condition on 19 February 2018. A review of our systems confirmed that no notifications had been received. However, a breach of the mining lease conditions was identified by the auditor as part of the audit. The non-compliance identified related to a failure to attempt to enter into a co-operation agreement with the overlapping PEL0001 title holder as required by condition 9 of the lease. Boggabri staff were not aware of the requirements relating to co-operation agreements with overlapping title holders and did not know there was an overlapping petroleum title. Hence, they were not aware that they were in breach of the lease conditions.

Boggabri Coal does have systems and processes in place to detect and report environmental incidents and generally these were observed to be implemented. A blast exceedance was reported to the NSW Environment Protection Authority and to the (then) Department of Planning, Industry and Environment in 2019.

3.5. Other mining lease compliance requirements

3.5.1. Notice to landholders

Condition 1 of the mining lease requires the lease holder to provide a notice in writing to each landholder within the lease area, advising that the lease has been granted or renewed. Mining lease CL368 was last renewed in 2013 with conditions amended on transfer in 2015, both outside of audit scope period. Therefore, the notification requirements were not verified during the audit.

3.5.2. Security deposit

Under Condition 8 of CL368, the lease holder is required to provide and maintain a security deposit to secure funding for the fulfilment of obligations under the mining lease. The current security deposit required for the Boggabri Mine is \$68,523,000. The security was increased from \$39,540,000 following a submission of a rehabilitation cost estimate with a revised MOP in March 2018. The increased security was paid in April 2018 as detailed in records held by the Department.

3.5.3. Co-operation agreement

Condition 9 of CL368 requires the lease holder to make reasonable attempts to enter into a co-operation agreement with the holders of any overlapping titles.

A review of published departmental mapping systems Commonground and Minview confirmed that Petroleum Exploration Licence 0001 (PEL001) overlaps with approximately half of CL368. Discussions with Boggabri staff revealed that they were unaware of the overlapping title, nor were they aware of the requirements of Condition 9 of the lease, which requires them to make every reasonable attempt to enter into a co-operation agreement with the overlapping title holder. There was no evidence that any attempt had been made to contact the overlapping title holder to discuss any arrangements for a co-operation agreement. This is raised as **non-compliance no. 1**. An official caution dated 8 April 2020 was issued to Boggabri Coal as a result of this breach.

Boggabri staff advised that attempts would be made to contact the overlapping title holder to discuss requirements.

4. Compliance management

4.1. Identifying compliance obligations

Identifying compliance obligations is a critical step in the development of an effective compliance management system. Compliance obligations for a mine can include:

- regulatory requirements (i.e. environmental legislation)
- conditions imposed on the grant, renewal, or transfer of mining leases
- specific commitments made by the organisation (i.e. MOP commitments).

Once identified, compliance obligations should be reviewed periodically to identify any changes in those obligations (e.g. changes in legislation).

The Boggabri staff interviewed during the audit generally demonstrated a good knowledge of the compliance requirements for their section (e.g. the Environmental Adviser was very knowledgeable on the MOP and rehabilitation obligations). However, it was observed that there was a general lack of understanding on the current conditions attached to CL368. For example, Boggabri Coal was referencing the 2013 conditions attached to the last renewal and was not aware that the conditions of title were significantly changed upon transfer in April 2015. Conditions 4 and 5 of those conditions were subsequently amended in 2018. There is a need for Boggabri staff to be aware of changing title conditions to be able to maintain compliance.

Boggabri staff advised that the mine uses the INX software system as a compliance management tool. A detailed review of the INX system was beyond the scope of the audit. Based on the auditor's general knowledge of the INX platform, it is generally an effective compliance management tool. Based on discussions with Boggabri staff, it is understood that the INX system captures the specific commitments from the MOP and other environmental obligations, and these have generally been effectively managed through INX. However, the audit identified a significant gap in the identification of compliance requirements for implementation through INX, given that staff were not aware of the changes to the mining lease conditions since renewal and did not have a copy of the most recent set of conditions available on site.

It was noted that following the audit, Boggabri Coal had obtained the latest set of updated conditions for CL368 which were made available on the mine's website.

As **suggestion for improvement no. 1**, it is suggested that Boggabri Coal establish a mechanism for maintaining up to date conditions for each of its mining leases and exploration licences. It is also

suggested that the conditions of leases should be entered into the existing INX system to facilitate better compliance management.

4.2. Risk assessment

An effective compliance management system is one that is based on a comprehensive compliance risk assessment which identifies compliance requirements, assesses the risk of non-compliance, and describes the controls and resources required to manage identified compliance risks.

An environmental broad-brush risk assessment (BBRA) was completed by Boggabri Coal which addressed the potential risk of exceeding environmental compliance requirements (i.e. exceeding approval limits, or failure to meet rehabilitation completion criteria). This risk assessment was completed by a range of Boggabri staff, including environmental personnel and operations and technical services personnel. The risk assessment was facilitated by an independent facilitator.

The BBRA was noted to identify failure modes and/or causes for each identified risk, documented existing or planned controls, and included an assessment of residual risk. Two issues ranked high risk and one ranked medium risk were reviewed during the audit to track implementation of planned or existing controls. Generally, evidence was available to demonstrate implementation of the controls as listed. For example, for materials and substances management (ranked high risk), a risk reduction strategy was to consider the development of a site wide register. In relation to the management of topsoil, a topsoil register/inventory was sighted by the audit team which maintained a basic materials balance.

While the assessment of environmental risks was generally well documented and managed, there did not appear to be any comprehensive assessment of other compliance risks, such as a failure to report under the requirements of the Mining Act or non-compliance with mining lease conditions. Consequently, although there were systems in place for compliance management, these may not address all compliance risks. Development of a comprehensive and robust compliance risk assessment was raised as **suggestion for improvement no. 2**.

4.3. Inspections, monitoring and evaluation

The BBRA completed by Boggabri Coal identified key risks and proposed controls to address those risks. An effective inspection, monitoring and evaluation process is required to:

- monitor the implementation of the risk controls
- evaluate the effectiveness of those controls based on an assessment of inspection and monitoring data

- implement an adaptive management approach, if monitoring shows that controls may be ineffective.

During the audit, it was noted that Boggabri had initiated a series of quality assurance checklists (QAPs) which form part of the inspection and monitoring program for the mine. The QAPs included a signoff requirement at each stage of the process, to check that relevant obligations had been completed before proceeding to the next stage. The QAP process was considered by the auditor to be a good initiative.

Examples of completed QAPs reviewed during the audit, which demonstrated implementation of the QAP process, included:

- QAP - Rehabilitation Slope and Topsoil Placement checklist for Area 1 East slope dated 10 January 2020
- QAP - Bioremediation Pad - Remediated Material Disposal for RL340 Biopad Cell 4 dated 5 July 2019.

4.4. Subcontractor management

Many mines use contractors to undertake specialist tasks. While the responsibility for compliance or the implementation of environmental controls is often passed to the contractor, the lease holder will retain accountability for compliance with its lease conditions and other compliance obligations. It is important that the lease holder exercises management control of its contractors by specifying contract requirements, providing oversight of contracted works, and evaluating the performance of the contractor during the contracted works.

At the time of the audit, Boggabri Coal was utilising contractors to undertake the clearing and topsoil stripping work, ahead of the next stage of mining, including consultant ecologists providing specialist ecological advice during the clearing process. Contractor management was documented in the contract documents and regular liaison and supervision was noted to be provided by Boggabri staff.

The clearing contractor held a 'stump meeting' each morning which was attended by contractor staff, the ecologists and Boggabri environmental staff. During these meetings, the day's work was discussed, including any specific requirements.

The contract supervisor had a good working knowledge of the key environmental risks and the risk controls and processes that had been put in place to manage those risks (known as Appendix B). The contractor advised that relevant records were submitted to Boggabri Coal in line with contract requirements.

4.5. Record keeping

Sections 163D and 163E of the Mining Act relate to the creation and maintenance of records required under the Act, the regulations, or a condition of title. Records must be kept in a legible form for production to any inspector and must be maintained for a period of four years after the expiry or cancellation of the title.

Generally, records were available to demonstrate compliance with most requirements, including MOP requirements. Records requested during the audit were made available for the audit team to review. Given the prior notice of the audit, Boggabri staff had collated evidence requested in the audit plan into a series of electronic folders which made finding information easy. Examples of records sighted during the audit included:

- Spontaneous Combustion Management Plan
- records for annual sampling of reject - NAF/PAF testing and spontaneous combustion testing
- Topsoil Register and Topsoil Stripped July 2019 map
- topsoil spreadsheet showing inventory of topsoil
- Landloch soil survey report
- Environmental Risk Register
- annual rehabilitation monitoring records - eg 2018 Biodiversity Monitoring: Rehabilitation Area, report prepared by WSP
- records for Appendix B training (i.e. training records dated 12 February 2019)
- Boggabri Coal Clearing Protocol and signed off completed checklist for each clearing stage for 2019
- Boggabri Coal Tree Clearing Report 2019 Summary Report prepared by WSP and dated May 2019
- QAP - Rehabilitation Slope and topsoil placement - for example Area 1 East slope 10 January 2020
- QAP Bioremediation Pad - Remediated Material Disposal - for example RL340 Biopad Cell 4 dated 5 July 2019.

4.6. Training and competency

Only training and competency related to contractors was reviewed in detail during the audit. Time did not permit a more general assessment of training and competency requirements from an environmental point of view.

For the engagement of contractors, competency requirements were specified in the tender documents and copies of any qualifications and experience were required to be submitted as part of the tender response. For the clearing and topsoil stripping process, requirements were documented in the clearing and fauna management procedure documented in Appendix B of the *Biodiversity Management Plan October 2018*.

All Boggabri staff and contractors engaged in clearing and topsoil stripping operations were required to undertake Appendix B training. Implementation of this training process was confirmed with a review of training records (i.e. Appendix B training record for 12 February 2019) and discussions with clearing contractor staff. The clearing contractor showed a good knowledge of the Appendix B requirements as did the ecologist interviewed during the site inspection, indicating that the training was reasonably effective.

4.7. Title holder response to draft audit findings

Boggabri Coal was provided with a copy of the draft audit report and invited to submit a response to the draft audit findings.

The response from Boggabri Coal was considered in finalising the audit report. The audit findings did not change but the text of the report was amended to reflect the additional information and evidence provided by Boggabri Coal in relation to:

- Erosion of the batter on the southern waste emplacement – text amended to reflect that the original erosion of the batter was repaired prior to March 2019 and a subsequent erosion event in February 2020 was responsible for the erosion observed during the audit site inspection.
- Compliance management systems – text amended to acknowledge that Boggabri Coal has implemented the INX system for compliance management, which was generally well managed, but the audit identified a gap in the identification of compliance requirements.

5. Audit conclusions

From the evidence reviewed during the audit, and observations made on site during the audit site inspections, it was concluded that Boggabri Coal has achieved a high level of compliance with the requirements of the mining lease and MOP in relation to mining operations undertaken at the Boggabri Coal Mine.

Boggabri Coal had developed and implemented effective systems for compliance management, but a gap was identified in the identification of compliance requirements. The lease holder did not have copies of the most recent set of mining lease conditions and did not have systems or processes in place to identify when changes to the mining lease conditions occurred. Further development of the compliance management systems, to address these issues, would be beneficial to promote a more robust approach to compliance management on site.

One non-compliance ranked NC3, one observation of concern and two suggestions for improvement were noted by the auditor as summarised in Table 3, Table 4 and Table 5. Regulatory actions may be undertaken in relation to the non-compliances and observations of concern identified during the audit.

Table 3 Summary of non-compliances

NON-COMPLIANCE NO.	DESCRIPTION OF ISSUE	RECOMMENDATION
1	A review of published departmental mapping systems Commonground and Minview confirmed that Petroleum Exploration Licence 0001 (PEL001) overlaps with approximately half of CL368. There was no evidence that any attempt had been made to contact the overlapping title holder to discuss any arrangements for a co-operation agreement (as required by condition 9 of CL368). An official caution was issued on 8 April 2020 to Boggabri Coal as a result of this breach.	Boggabri Coal should make attempts to contact the overlapping title holder to negotiate a co-operation agreement and should document those attempts.

Table 4 Summary of observations of concern

OBSERVATION OF CONCERN NO.	DESCRIPTION OF ISSUE	RECOMMENDATION
1	It was observed during the site inspection that there was an area in the southern rehabilitation area that had experienced significant erosion, indicating that the landform may not have been stable and/or structural erosion control measures may not have been adequate to achieve the stated objective. It is acknowledged that Boggabri Coal had commenced actions to address the erosion issue.	Boggabri Coal should complete and monitor the erosion control works on the southern rehabilitation area. The progress and effectiveness of the construction works will be monitored by the Regulator during future inspections.

Table 5 Summary of suggestions for improvement

SUGGESTIONS FOR IMPROVEMENT	DESCRIPTION OF ISSUE
1	As suggestion for improvement no. 1, it is suggested that Boggabri Coal establish a mechanism for maintaining up to date conditions for each of its mining leases and exploration licences. It is also suggested that the conditions of leases could be entered into the existing INX system to facilitate better compliance management.
2	While the assessment of environmental risks was generally well documented and managed, there did not appear to be any comprehensive assessment of other compliance risks, such as a failure to report under the requirements of the Mining Act or non-compliance with mining lease conditions. Consequently, although there were systems in place for compliance management, these may not address all compliance risks. Development of a comprehensive and robust compliance risk assessment is raised as suggestion for improvement no. 2.