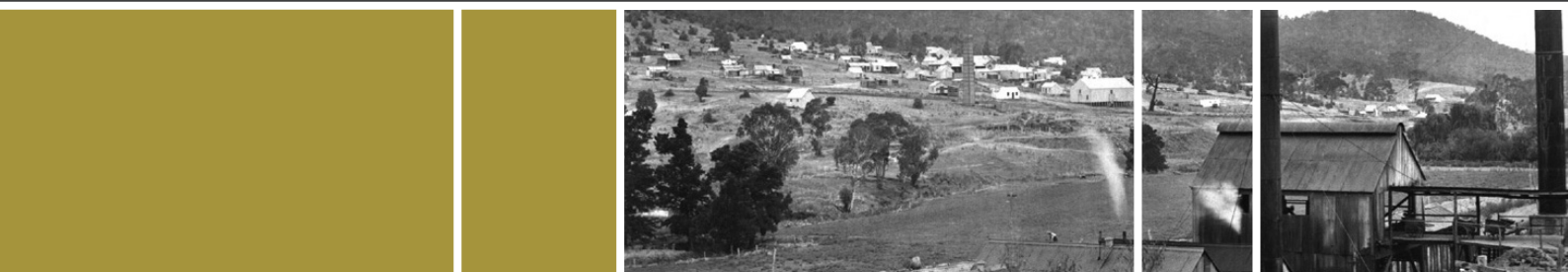


Mandatory Independent Environmental Compliance Audit

Newcrest Mining Limited, Cadia Valley Operations NSW

Mandatory Independent Environmental Compliance Audit of Cadia Valley Operations in accordance with
Schedule 5, Conditions 7 and 8 of the Planning Approval dated 6 January 2010 (as modified)

22 April 2015





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Newcrest Mining Limited

Mandatory Independent Environmental Compliance Audit – Cadia Valley Operations NSW

22 April 2015



Submitted To:

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Approvals Manager

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ABN 65 001 325 104

Project No. N3506-3



Independent Environmental Audit Submission Form

Project	
Consent No:	06_0295
Description of Project:	<p>Cadia East Project, including the:</p> <ul style="list-style-type: none"> • Cadia East underground mine; • Cadia Hill open cut mine; • Ridgeway underground mine; • Blayney and CVO Dewatering Facilities; and • ancillary infrastructure, <p>together known as the Cadia Valley Operations.</p>
Project Address:	<p>Newcrest Mining Limited Cadia Valley Operations 1460 Cadia Road South Orange NSW 2800 Australia</p>
Proponent:	Cadia Holdings Pty Limited
Proponent Address:	<p>Private Mail Bag South Orange PO, NSW 2800 Australia</p>
Independent Audit	
Title of Audit:	Cadia Valley Operations Mandatory Independent Environmental Compliance Audit
Certificate:	<p>I certify that I have prepared the contents of the attached independent audit and to the best of my knowledge:</p> <ul style="list-style-type: none"> • it is in accordance with relevant approval condition(s); • I have acted professionally, accurately and in an unbiased manner in conducting the audit; • I am not related to any owner or operator of the project as a spouse, partner, parent, child, sibling, employer, employee, business partner, in sharing a common employer, or in a contractual arrangement outside the audit; • I do not have any pecuniary interest in the project, including where there is a reasonable likelihood or expectation of appreciable financial gain or loss to me or to a person to whom I am related; • neither I nor my employer have provided consultancy services for the project that were subject to this audit; and • I have not accepted, nor intend to accept any



	<p>inducement, commission, gift or any other benefit (apart from fair payment) from any owner or operator of the project, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so.</p>
Signature:	
Name:	Graham A Brown
Address:	PO Box 1804, Newcastle NSW 2300
Email Address:	graham@grahamabrown.com.au
Auditor Certification (Body, No. Grade):	<ul style="list-style-type: none"> • RABQSA International/Exemplar Global Environmental Lead Auditor No. 14018 – Compliance; Environmental Management; Environmental Management Systems; Site Contamination • Board of Environmental Auditor Certifications (USA) Certified Professional Environmental Auditor (CPEA) No. 118862 – Environmental Compliance No.332 • Institute of Environmental Management & Assessment (UK) Principal Environmental Auditor No.2843 • International Cyanide Management Institute Lead Auditor • Clean Energy Regulator, Registered Greenhouse and Energy Auditor (RGEA), Category 1, Technical No. 0010/2010
Date:	22 April 2015



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2. Authorisation

This Report is authorised by:

Graham A Brown M.Sc. FAusIMM, FEIANZ, CPEA, RGEA

NAME

SIGNATURE

DATE: 22 April 2015



3. Limitations

Mandatory Independent Environmental Compliance Audit – Cadia Valley Operations, NSW

This is to certify:-

1. Graham A Brown & Associates (the Auditor) has prepared the accompanying Mandatory Independent Environmental Compliance Audit Report of the Cadia Valley Operations, NSW as at 22 April 2015 (the Report) from certain information provided to it by Cadia Valley Operations (the Auditee) at the request of and exclusively for the use and benefit of Cadia Valley Operations (the Client) on behalf of the Secretary, Department of Planning and Environment.
2. Under the terms of the Auditor's engagement the Auditor has conducted the audit in accordance with the requirements of Schedule 5, Conditions 7 and 8 of the Planning Approval dated 18 July 2012. The Auditor has relied on information provided by the Auditee and the Client. The Auditor expresses no opinion as to the accuracy, truth, sufficiency or legality of the information provided by the Client or the Auditee in respect of the Auditee's compliance with the conditions or other requirements set out in Schedule 5, Conditions 7 and 8 of the Planning Approval No. 06_0295 dated 6 January 2010 (as modified).
3. This Report has been prepared in accordance with generally accepted practices (including the standards set out in *AS/NZS ISO 19011:2014 Guidelines for auditing management systems*) using standards of care and diligence normally practiced by recognised consulting firms performing services of a similar nature.
4. The Lead Auditor, Graham Brown, whose qualifications and experience satisfy the criteria set out in ISO 19011, is a Registered Lead Environmental Auditor (Exemplar Global); a Principal Environmental Auditor (IEMA UK); and a Certified Professional Environmental Auditor (CPEA – BEAC USA). The Auditor is not responsible for the accuracy of information provided by other individuals or entities which is used in this Report. This Report presents the Auditor's professional judgement based upon data and findings identified in this Report and interpretation of such data based upon the Auditor's experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.
5. It is a condition of the provision of this Report that any liability of the Auditor to the Client for anything contained or stated herein shall be limited to the amount of the fee actually paid or payable by the Client to the Auditor for this Report. It is a further condition of the provision of this Report that any liability of the Auditor to the Client for anything contained or stated in the Report to the fullest extent permitted by law is hereby excluded unless the claim giving rise to such liability is made in writing to the Auditor within twelve (12) months of the date of this Report.
6. This Report is issued with the understanding that it is the responsibility of the Client, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law.
7. Neither the Auditor nor any member associate or employee of the Auditor undertakes any responsibility for any injury, loss or damage claimed by the Client or the Secretary of the Department of Planning and Environment arising out of a claim by any third party against the Client in connection with this Report.



4. Abbreviations

Abbreviation	Definition
ACHMP	Aboriginal Cultural Heritage Management Plan
AEMR	Annual Environmental Management Report
AS	Australian Standard
DME	NSW Department Mines & Energy
DP&E	Department of Planning and Environment
DRE	Department of Resources and Energy
EA	Environmental Assessment
EIP	Environment Improvement Plan
EMP	Environmental Management Plan
EMR	Environmental Management Report
EMS	Environmental Management System
EP & A Act	Environmental Planning and Assessment Act, 1979
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence
GABA	Graham A Brown & Associates
INP	NSW Industrial Noise Policy
LAeq	Equivalent Continuous Level (Noise)
LGA	Local Government Authority
MOP	Mining Operations Plan
NGERS	National Greenhouse and Energy Reporting System
NOW	NSW Office of Water
OEH	NSW Office of Environment and Heritage
PAF	Potentially Acid Forming
PAW	Potentially Acid Forming Waste
PIN	Penalty Infringement Notice
PIRMP	Pollution Incident Response Management Plan
POEO Act	Protection of the Environment Operations Act 1997
RGEA	Registered Greenhouse and Energy Auditor
ROM	Run of Mine
SAOC	Site Asset Operations Centre
TARP	Trigger Action Response Plan
TEOM	Tapered Element Oscillating Microbalance
TSP	Total Suspended Particulates
VPA	Voluntary Planning Agreement



5. Audit Summary

Audit Title:	Cadia Valley Operations Independent Environmental Compliance Audit
Site:	Cadia Valley Operations, 1460 Cadia Road, South Orange NSW 2800
Client Contact:	Andrew Wannan
Position:	Approvals Manager
Client:	Newcrest Mining Limited - Cadia Valley Operations
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Client Fax:	61 2 6366 4333
Client Email:	andrew.wannan@newcrest.com.au
Lead Auditor:	Graham A Brown M.Sc., FAusIMM, FEIANZ, CPEA Registered Lead Environmental Auditor (Exemplar Global) Principal Environmental Auditor (IEMA – UK) Certified Professional Environmental Auditor (CPEA) (BEAC – USA)
Audit Team Member:	Allan Kemp, Registered Lead Auditor (Exemplar Global)
Technical Experts	Air Quality Management Expert – Aleks Todoroski Noise Expert – Stephen Kozakiewicz Surface Water Quality Management Specialist – John Chapman Groundwater Management Specialist - David Western General Land Management Specialist – John Chapman
Auditor’s Telephone:	(02) 4927 8500
Auditor’s Fax:	(02) 4927 8400
Date of Site Visit	16 to 20 February 2015
Audit Objective:	Report on compliance by Cadia Valley Operations with Schedule 5, Conditions 7 and 8 of the Planning Approval dated 6 January 2010 (as modified). This audit must: <ul style="list-style-type: none"> (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary; (b) include consultation with the relevant agencies; (c) assess the environmental performance of the project and assess whether it is complying with the requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals); (d) review the adequacy of strategies, plans or programs required under the abovementioned approvals; and (e) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals. <p><i>Note: This audit team must be led by a suitably qualified auditor and include experts in surface water, groundwater and any other fields specified by the Secretary.</i></p>
Time period audited:	18 July 2012 to 16 May 2014
Date terms of engagement signed:	Purchase Order # 4500406219 advised on 2 February 2015. Auditor confirmed as accepted on 22 December 2014.
Date Audit Report signed (the Completion Date):	22 April 2015



6. Engagement Overview and Summary

6.1 Introduction

Graham A Brown & Associates (GABA) was engaged by Cadia Valley Operations (CVO) to undertake a Mandatory Independent Environmental Compliance Audit on compliance by CVO with the Planning Approval dated 6 January 2010 (as modified) (the Approval). This mandatory audit is carried out to satisfy the requirements of Schedule 5, Conditions 7 and 8 of the Approval and is required to:

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

Schedule 5, Condition 7 of the Approval specifies that audit team must be led by a suitably qualified auditor and include experts in surface water, groundwater and any other fields specified by the Secretary. The Scope of Works provided by CVO to the auditor included a requirement for expert opinions set out below to be provided. The experts selected and approved by DP&E are listed in Table 6.1:

- surface water,
- groundwater,
- noise,
- air quality (dust) and
- general land management.

Table 6.1 Experts Contributing to the Audit

Position	Organisation	Responsibilities
Air Quality Management Expert – Aleks Todoroski	Principal, Todoroski Air Sciences	Expert opinion on air quality management
Noise Expert – Stephen Kozakiewicz	Director / Principal Senior Acoustician, Amenity Acoustics Pty Limited	Expert opinion on noise management
Surface Water Quality Management Specialist – John Chapman	Associate, SRK Consulting (Australasia) Pty Ltd	Expert opinion on surface water quality management.
Groundwater Management Specialist - David Western	Principal Consultant, Associate, SRK Consulting (Australasia) Pty Ltd	Expert opinion on groundwater management.
General Land Management Specialist – John Chapman	Associate, SRK Consulting (Australasia) Pty Ltd	Expert opinion on general land management.



6.2 Audit Completion

It is a requirement of Schedule 5, Condition 8 of the Planning Approval that within 6 weeks of the completion of this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.

For the purpose of this condition, it is considered that the completion of the audit is the date on which the Final Report is signed by the Lead Auditor, on which date an electronic copy was provided to CVO. It is then the responsibility of CVO to prepare its response to any recommendation made in this report and to submit the report together with its response to the Secretary within the 6 weeks time period specified.

6.3 Auditor's Responsibility

Our responsibility is to conduct a mandatory Independent Environmental Compliance Audit in accordance with Schedule 5, Conditions 7 and 8 of the Planning Approval dated 6 January 2010 (as modified) and to express an opinion on CVO's compliance with the Approval, within the agreed scope, in all material respects. The procedures selected depend on our judgment, including an assessment of the risks of material non-compliance of the matter being audited. We conducted our engagement in accordance with the international standard AS/NZS ISO 19011:2014 *Guidelines for auditing management systems*.

We read other information provided by the client and considered whether it was consistent with the knowledge obtained through our procedures. We considered the implications for our report if we became aware of any apparent material inconsistencies with the matter being audited. Our responsibilities did not extend to any other information.

An Independent Environmental Compliance Audit involves performing procedures to obtain evidence about the matter being audited. The procedures selected depend on the audit team leader's judgement, including the assessment of material non-compliance of the matter being audited. In making those assessments, we considered internal controls relevant to CVO's compliance with the Planning Approval dated 6 January 2010 (as modified), Environmental Protection Licence EPL 5590, Mining Leases ML1405, ML1449, ML1472, ML1481, ML1689 and ML1690, and the Consolidated Statement of Commitments in order to design assurance procedures that are appropriate in the circumstances, including for the purpose of expressing an opinion on the effectiveness of CVO's internal controls. We consulted with relevant government agencies as required by DP&E and nominated by the client, and noted any concerns expressed by them.

We believe that the compliance evidence we have obtained is sufficient and appropriate to provide a basis for our independent opinion in this report, for the defined scope as described above.

6.4 Use of our Independent Environmental Compliance Audit Report

This Independent Environmental Compliance Audit Report has been prepared on behalf of the management of CVO for the Secretary of DP&E for the sole purpose of reporting on the matter being audited in accordance with Schedule 5, Condition 7 of the Planning Approval.

GABA disclaim any assumption of responsibility for any reliance on this report to any persons or users other than the management of CVO and the Secretary of DP&E, or for any purpose other than that for which this report was prepared.



6.5 Inherent Limitations

There are inherent limitations in performing an Independent Environmental Compliance Audit; for example, compliance audits are based on selective testing of the information being examined. It is possible that non-compliance may occur and not be detected. An Environmental Compliance Audit is not designed to detect all instances of non-compliance with the Approval and other regulatory documents, as it is not performed continuously throughout the year and the procedures performed in respect of compliance with the Approval are undertaken on a test basis. The conclusion expressed in this report has been formed based on the above limitations.

7. Statement of the Audit Methodology and Processes

This Independent Environmental Compliance Audit has been carried out based on a site visit to the Cadia Valley Operations, NSW from Monday 16th February to Friday 20th February 2015.

Key matters which were audited included a critical review of the mine's environmental performance with respect to:

- Conditions of the Approval (referenced by condition number);
- Management Plans;
- Environment Protection License;
- Environmental conditions of mining leases;
- EA predictions and commitments;
- Statements of Commitments;
- Monitoring results and trends (including against regulatory limits and EA predictions);
- Community complaints;
- Any regulatory action (Letters, Penalty Notices, Prosecutions, etc.) and outcomes;
- Annual Reviews;
- Any other specific matters raised by DP&E or other agencies;
- The adequacy of strategies, plans or programs; whether they are consistent with current best practice (not just standard industry practice); and whether management systems, proposed actions and measures are adequate; and
- Specific expert opinion on noise, air quality, surface water quality, groundwater and general land management.

These requirements were achieved by the audit team through the following activities:

- Reviewing substantiating documentation;
- Testing delineation of facility boundaries;
- Interviewing responsible administrative, environmental and operational staff regarding operational control of activities that may have an adverse impact on the environment;
- Testing management methodologies, systems and processes for data capture from activities;
- Testing methodology and accuracy of air emissions data measured from instrumentation and sampling procedures;
- Testing internal audit methodology and process;
- Testing management methodologies, systems and processes for data and document management and audit trails;



- Assessing the environmental performance of the project and whether it is complying with the relevant requirements in the Approval;
- Assessing whether the project is complying with any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals);
- Reviewing the adequacy of any approved strategies, plans or programs required under these approvals;
- Conducting an expert review of the air quality management of CVO;
- Conducting an expert review of the surface water quality management of CVO;
- Conducting an expert review of the noise management of CVO;
- Conducting an expert review of the general land management of CVO;
- Conducting an expert review of the groundwater management of CVO;
- Testing other matters which came to the attention of the audit team leader during the planning and execution of the audit.

A summary of the Procedures undertaken as part of the Independent Environmental Compliance Audit is provided Table 7.1.

Table 7.1 Audit Procedures

Phase	Key Activity	Date(s)
Plan and Prepare	<p>Plan and Prepare:</p> <ul style="list-style-type: none"> • GABA prepared a comprehensive, customised set of audit protocols (collectively called the Audit Protocol) and provided them to CVO prior to commencement of the audit. The protocols included specific compliance assessment requirements of the Planning Approval dated 6 January 2010, Environmental Protection Licence EPL 5590, 6 Coal Leases and the Consolidated Statement of Commitments. • Initial analysis of documentation provided by CVO and population of the Audit Protocol. • Review of documentation available on the CVO website http://www.cadiavalley.com.au/. • Analysis of additional data and documents provided by CVO upon request. • Liaison with Kane Winwood of DP&E. • Liaison with Tim Baker, Senior Water Regulation Officer, NSW Office of Water. • Liaison with Darryl Clift, Head Regional Operations Bathurst, Environment Protection Authority. • Liaison with Michael Young, Manager & Principal Inspector, Central, Environmental Sustainability Unit, Mineral Resources, NSW Trade & Investment. • Liaison with Mark Hodges, Manager Building and Environment, Orange City Council. • Liaison with Mark Dicker, Director Planning & Environmental Services, Blayney Shire Council. 	12 January – 13 February 2015



Phase	Key Activity	Date(s)
	<ul style="list-style-type: none"> Liaison with Heather Nicholls, Director of Environmental Services, Cabonne Council. Completion of on-line CVO Visitor's Induction. <p>Output: Audit Protocol with limited responses, auditors inducted</p>	
Site Visit	Drive to Orange (15 th February) and Opening Meeting at CVO	16 February 2015
Site Visit	Perform audit tasks – 5 days on site at CVO. <ul style="list-style-type: none"> Interviews with key staff of CVO and contractors. Site inspections, including Blayney slurry pipeline and dewatering plant. Documentation reviewed, requested and received electronically. Further documentation required identified and listed for CVO to provide subsequent to site visit. Photography. 	16-20 February 2015
Site Visit	Closing Meeting on site with preliminary audit findings.	20 February 2015
Data Requests	<ul style="list-style-type: none"> Issue data requests and follow up on key items from site visit. Establish a dedicated Dropbox site for CVO. Receive documentation from site via Dropbox and email. 	23 February – 6 March 2015
Perform	<p>Review and Reporting</p> <ul style="list-style-type: none"> Review of audit evidence against conditions of the Approval and other related documents. Draft audit findings completed and recommendations ranked. Specialist reviews requested based on draft audit findings spreadsheets and associated documentation made available through Dropbox. 	23 February – 6 March 2015
Draft Report	Preparation of Draft Independent Environmental Compliance Audit Report incorporating specialist opinions.	16 – 20 March 2015
Review	Review of Draft Independent Environmental Compliance Audit Report by CVO.	23 March – 2 April 2015
Final Report	Finalisation of Independent Environmental Compliance Audit Report, including assessment of comments on the Draft Report received from CVO and peer review.	22 April 2015

7.1 Basis for Conclusion

The Auditor has made efforts to undertake a full and complete audit for and on behalf of CVO in accordance with Schedule 5, Condition 7 of the Planning Approval. A substantial amount of the information and documentation requested initially was provided by CVO prior to and during the site visit in February 2015, with



supplementary documentation subsequently provided on request. A substantial amount of documentation was publicly available on the CVO website.

We have presented our findings under the following categories:

- Planning Approval dated 6 January 2010 (as modified);
- Environmental Protection Licence EPL 5590;
- Consolidated Statement of Commitments;
- Mining Leases ML1405 and ML1449; ML1472 and ML1481; and ML1689 and ML1690.

Our findings include our reviews of any assessments, plans or programs required under these approvals.

7.2 Findings

In general, audit evidence will be persuasive rather than conclusive. It is necessary for the auditor to use professional judgment to evaluate the audit evidence and determine whether sufficient inquiry has been undertaken. If firm conclusions cannot be drawn from the evidence available, it may be necessary to qualify the audit report accordingly.

For each compliance requirement, the Auditor has assessed the extent to which the requirement has or has not been met. Compliance is assessed in accordance with Table 7.2.

Table 7.2 Compliance Assessment

Finding	Reported as	Explanation
Complies	C	The auditee is fully in compliance with the condition or requirement. A recommendation for improvement may be made where appropriate.
Does Not Comply	NC	The auditee does not comply with the condition or requirement, wholly or in part. Recommendations for improvement are made.
Administrative Non-Compliance	ANC	A technical conformance with a condition of consent that would not result in material harm to the environment.
Observation	O	An observation that does not constitute a non-compliance e.g. it may relate to an action that has been taken in the past in compliance with a condition or requirement, but the action may not have been initiated or completed within the time specified by the condition or requirement. Recommendations may be made for improvement if appropriate.
Not Applicable	NA	The condition or requirement does not apply at the time of the audit because the action is no longer required (e.g. construction has ceased) or it relates to something that is required in the future. No recommendations are made.



Risk assessment of audit findings

The non-compliances (excluding Administrative Non-Compliances) found by the audit were risk assessed as recommended in the Department’s *Draft Guidelines for Independent Environmental Audits of Mining Projects*, March 2014. A qualitative risk assessment was conducted, consistent with AS/NZS ISO 31000:2009 *Risk management - Principles and guidelines*; HB 203:2012 *Managing environment-related risk*; and HB 436:2013 *Risk management guidelines – companion to AS/NZS ISO 31000:2009*. [Note that the references in the DPE’s Guidelines have been superseded].

The overall level of risk is estimated by combining the likelihood of harm occurring with the estimated level of impact associated with each finding, as shown in the risk matrix below (Figure 7.1).

Likelihood of harm

For each non-compliance, the likelihood of harm of occurring was assessed as certain, likely or unlikely.

The likelihood of harm was determined by assessing:

- potential contributing factors;
- past environmental performance;
- current environmental performance; and
- other implemented controls or mitigating actions.

Level of impact

The level of impact was determined by assessing factors such as:

- the nature of any potential impact;
- the scale of any potential impact;
- sensitivity of the receiving environment; and
- the likely level of public concern.

Risk was assessed using the risk matrix shown below, as per the Department’s *Guidelines*.

Likelihood of impact occurring	Estimated level of impact			Administrative, non-compliance
	High	Moderate	Low	
Almost certain	High	High	Moderate	
Likely	High	Moderate	Low	
Unlikely	Moderate	Low	Low	
				Administrative non-compliance

Figure 7.1 Risk Matrix

7.3 Recommendations

Where appropriate a recommendation has been provided against each finding to achieve compliance or improve performance. These recommendations have been ranked, based on the auditor’s opinion. This practical approach highlights those recommendations that are considered by the Audit Team to be the most



important (Emergency or Urgent) and which must be addressed within an agreed time frame, and to distinguish them from those that can be managed through normal operational practices that do not require a target time for completion (Improvement or Normal), based on the following Environmental Recommendations Ranking (ERR) scheme (Table 7.3).

Table 7.3 Environmental Recommendations Ranking

Environmental Recommendations Ranking	
Ranking	Proposed Action
“E” (Emergency)	<p>The defect is severe and poses immediate risk to the plant, the community or the environment, to regulatory compliance or to the reputation of the organisation. This may include organisational (including management) defects that will lead to rapid deterioration of the plant or operations or the inability to securely and safely deal with an incident (i.e. lack of competent staff, failure of a management process, no emergency plan, inadequate equipment to deal with an emergency, lack of environmental security, etc.).</p> <p><i>Action: Management should ensure that action is committed to minimise or eliminate the identified risk immediately, or otherwise within a time frame agreed with the auditor, or as required by regulatory requirements or agreement with the appropriate government officials or agencies. In extreme cases, the deficiency must be corrected prior to the auditor departing the site.</i></p>
“U” (Urgent)	<p>The defect presents a serious situation, but may not necessarily impact immediately on human health or safety, assets, the environment, property, security or the community. There may be a risk which is not immediate, of regulatory non-compliance or adverse publicity affecting the organisation’s public image or business reputation.</p> <p><i>Action: A firm deadline should be set by management to correct the deficiency by an agreed date and action plan should be documented.</i></p>
“I” (Improvement)	<p>Improvement is required, and can be achieved through regular channels of management, maintenance, capital improvements, or assigned to environmental management staff.</p> <p><i>Action: Documented action plans to achieve the recommended outcome should be established, e.g. through setting and reviewing Objectives and Targets or initiating a Work Order. A response of ‘Agreed’ may be acceptable. Management may decide not to undertake the recommended improvement, and should document the reasons for not doing so.</i></p>
“N” (Normal)	<p>No specific action is considered necessary, the recommendation is considered to be covered by the organisation’s normal environmental management procedures; however it should be documented through Objectives and Targets or other process, such as a Work Order. A response of ‘Agreed’ may be acceptable.</p>
“N/A”	<p>Not Applicable to this situation or at this time; there is no perceived risk to the environment or the community, no recommendation is made.</p>

7.4 Format of Table of Findings, Audit Evidence and Recommendations

The detailed analysis contained in this Audit Report is set out in Section 8 – **Table of Findings, Audit Evidence and Recommendations**. This table is structured as follows:



- **Compliance Requirement** (which is the Audit Criteria) – a requirement of the Planning Approval, the Consolidated Statement of Commitments, Environmental Protection Licence, or Mining Leases. Where appropriate, compliance requirements arising from other sources including legislation, environmental assessments and Management Plans required as part of the Planning Approval may be addressed in conjunction with related requirements of the Planning Approval.
- **Compliance** – the auditor’s view of the auditee’s compliance with the requirement.
- **Audit Finding** – results of the evaluation of the collected audit evidence against the Compliance Requirement.
- **Objective Evidence** – verifiable evidence in support of the audit finding (records, statements of fact, results of inspections or other evidence) that is provided by the auditee or identified by the auditor.
- **Recommendations** – the professional opinion of the auditor in relation to action to achieve compliance or to improve the auditee’s environmental management of the site.

The table of Findings, Audit Evidence and Recommendations is supplemented by an **Audit Recommendations and Response Table** (Appendix 9). This table provides a ranking of the recommendations resulting from this audit based on the Environmental Recommendations Ranking (ERR) scheme as shown in Table 7.3. See also section 8.4(b).

8. Executive Summary

8.1 Audit Requirement

The Mandatory Independent Environmental Compliance Audit of CVO measured compliance against the following criteria:

- Conditions of the Planning Approval dated 6 January 2010;
- Conditions of the Environmental Protection Licence EPL 5590;
- Environmental Conditions of Mining Leases ML1405, ML1449, ML1472, ML1481, ML1689 and ML1690;
- Consolidated Statement of Commitments;
- Management Plans;
- Monitoring results and trends (including against regulatory limits and EA predictions);
- Community complaints;
- Any regulatory action (Letters, Penalty Notices, Prosecutions etc.) and outcomes;
- Annual Reviews;
- Any other specific matters raised by DP&E or other agencies;
- The adequacy of strategies, plans or programs; whether they are consistent with current best practice (not just standard industry practice); and whether management systems, proposed actions and measures are adequate; and
- Specific expert opinion on noise, air quality, surface water quality, groundwater and general land management.

Operations reviewed at CVO included:

- Mining operations;
- Mineral processing;
- Workshops;
- Storage of hazardous chemicals and dangerous goods;
- Haul roads;
- Water storage and recovery;



- Air monitoring and management;
- Noise and vibration monitoring and management;
- Surface water monitoring and management;
- Groundwater monitoring and management;
- Rehabilitation and general land management;
- Tailings disposal;
- Management of heritage sites;
- Slurry pipeline from Cadia East to Blayney;
- Dewatering facilities at Blayney and loading of concentrate into half 20-foot shipping containers;
- Site and operations management and control; and
- Administration of the environmental management programs.

A list of documents reviewed is provided in Appendix 1.

8.2 Background

The following description is adapted from the Mining Operations Plan (MOP) approved for 2014-2016.

8.2.1 Cadia Hill Open Pit

Cadia Hill was a large scale open cut mine approved in September 1996. The mine commenced operations in 1998 with a 14 year mine life. Cadia Hill Mine operations have been conducted within Mining Lease (ML) 1405. Operations with ongoing recovery of ROM and other stockpiled material are conducted generally in accordance with the 2011-2013 and 2014-2016 Mining Operations Plans. Cadia Hill mining operations are now under a state of 'care and maintenance' following suspension of mining in June 2012.

8.2.2 Ridgeway / Ridgeway Deeps Underground Mine

The Ridgeway underground mine is located approximately 2.5 kilometres (km) to the north west of the Cadia Hill open pit. Ridgeway Mine was approved in October 2000 and commenced operations in 2002. In March 2005, approval was obtained from the Department of Infrastructure, Planning and Natural Resources for the extension of Ridgeway Mine (known as Ridgeway Deeps). Ridgeway/Ridgeway Deeps mining operations are conducted generally in accordance with the 2011-2013 and 2014-2016 Mining Operations Plans.

8.2.3 Cadia East Underground Mine

Cadia East involves the development of an underground mine to extract approximately 450 million tonnes (Mt) of ore over a period of approximately 21 years. The ore contains gold, copper and some molybdenum. The Cadia East Project was approved on the 6th of January 2010 under Part 3A of the Environmental Planning and Assessment Act 1979. Commercial operations of the Cadia East underground mine commenced in January 2013 following the completion of expansion of the Cadia Valley ore processing facilities and underground materials handling system and development of Cadia East Panel Cave 1 (PC1). The development of Panel Cave 2 is ongoing.

Cadia Valley Operations are now conducted generally in accordance with the Cadia East Project Approval.

The Cadia East Project Environmental Assessment included reference to obtaining additional mining leases to facilitate the project extensions of the STSF, NTSF, subsidence zone and Rodds Creek Water Holding Dam.



Mining leases ML 1690 and ML 1689 came into effect on 10 September 2013 and 11 September 2013 respectively. These additional mining leases are shown on Figure 8.1.

The existing general arrangement of the site is illustrated on Figure 8.1 and the Blayney Dewatering Plant is illustrated in Figure 8.2.



Figure 8.1. Cadia Valley Operations. Source: AEMR 2013-2014



Figure 8.2. Blayney Dewatering Plant. Source: Google Earth.

8.3 Government Agency Communications

Table 8.1 sets out the responses provided (in general terms) by contacts made with nominated government agencies with regard to the operations of CVO.

Table 8.1 Summary of Government Agency Responses

Agency	Person Responding	Response of Response
EPA	Darryl Clift, Head Central West Unit	CVO is generally operating in compliance with its environment protection licence 5590. The only issue or concern that the EPA has regarding CVO environmental performance is the state of tailings dams, particularly the southern tailing storage facility (STSF) in terms of possible discharges indirectly to the downstream environment via seepage.
Cabonne Council	Heather Nicholls, Director of Environmental Services	Council and Cadia have overall a strong relationship. Our area of most frequent discussion tends to be about traffic and roads. High on the list is progressing the agreement with Cadia for upgrade of the Four Mile Ck/Cadia Road intersection. Info re site rehab, off set establishment and most importantly - draw down on water resources continue to be of keen interest to Cabonne
DP&E	Kane Winwood, Team Leader, Mining Projects	Happy for you to record no issues, there are no specific matters that the Department considers require closer attention.
Blayney Shire Council	Mark Dicker, Director Planning & Environmental Services	I can confirm I am not aware of any specific environmental performance issue that requires investigation at CVO.
Orange City Council	Mark Hodges, Manager Building and Environment	Council has no environmental issues it wishes to be raised.
Mineral Resources,	Michael Young, Manager	CVO has obtained approval for a Mining Operations Plan to fulfill the



Agency	Person Responding	Response of Response
NSW Trade & Investment	& Principal Inspector, Central	requirements of the six leases in a single document. There is scope for auditing against the lease conditions themselves, and more detailed scope in assessing compliance with the requirements of their MOP.
NSW Office of Water	Tim Baker, Senior Water Regulation Officer	Key aspects for consideration from NOWs perspective would include: <ul style="list-style-type: none"> Water monitoring, metering and reporting in accordance with current water management plan. Contingency responses and mitigating measures implemented as appropriate. Compliance with water entitlements and extraction limits for extraction from surface and groundwater sources.

8.4 Compliance Summary

a. Compliances

CVO's compliance with the audit criteria is summarised in Table 8.2.

Table 8.2 Compliance Summary

Compliance Result		Number of Results	Per Cent
Complies		191	90.5%
Non-Compliance		11	5.2%
Administrative Non-Compliance		3	1.4%
Observation		6	2.8%
Total Applicable		211	100%
Not Applicable		105	33.3%
TOTAL		316	

Source	Complies	Non-Compliance	Administrative Non-Compliance	Observation	Not Applicable	TOTAL
Approval	46	7	2	3	20	78
EPL	48	4	1	2	20	75
Commitments	47	0	0	0	0	47
ML 1993 conds	25	0	0	1	15	41
ML 2000 conds	18	0	0	0	33	51
ML 2010 conds	7	0	0	0	17	24
TOTALS	191	11	3	6	105	316

Out of the total 316 compliance requirements audited, CVO achieved an overall compliance rate of 93.4% of the applicable compliance requirements, including all 'Compliance' and 'Observation' results recorded.

There were 191 *Compliances* identified (90.5%), 6 *Observations* identified (2.8%), and 105 of the 316 requirements were *Not Applicable* at the time of the audit (33.2%). There were 3 *Administrative Non-Compliances* identified during the audit, amounting to 1.4% of the overall number of applicable compliance requirements.

The 11 *Non-Compliances* identified during the audit amounted to 5.2% of the overall number of applicable compliance requirements. The 11 *Non-Compliances* have all been risk assessed, with no high environmental risks; 4 presenting a moderate environmental risk; and 7 presenting low environmental risks.



b. Recommendations

There have been no *Emergency* recommendations made; there are 10 *Urgent* recommendations, which includes separate items; 8 *Improvement* recommendations, some of which have several separate items amounting in total to 12 *Improvement* recommendations; and 9 *Normal* recommendations. There is a total of 27 recommendations which are set out in Section 9 *Detailed Findings and Recommendations*, and summarised in Appendix 9 *Audit Recommendations and Response Table*. CVO may disagree with the auditor's findings and recommendations in its response to Appendix 9, and provide alternative views (some of which are reported in this report in the auditor's findings) and accept, alter or reject the recommendations with appropriate reasoning provided.

8.4.1 General

It is a finding of this audit that CVO is generally in compliance with the conditions of its regulatory documents.

Verification was supported by 280 documents which were provided for review as set out in Appendix 1. A summary of the risk reviews of non-compliances with the regulatory documents is provided in the following sections. The communications from government agencies summarised in Table 8.1 and provided in Appendix 8 indicated that there were few concerns relating to CVO's operations, although there were some areas of specific interest to the regulators.

8.4.2 Planning Approval dated 6 January 2010

Table 8.3 Risk Review of Planning Approval Non-Compliances

Condition No.	CVO Non-Compliances
High Risk Non-Compliances	
N/A	There were no high risk non-compliances identified under the Project Approval.
Moderate Risk Non-Compliances	
S3.23	On 25 October 2012 water was accidentally released off site from a drainage point on the southern tailings dam. This resulted in two PINs being issued - (1) No.3050087242 Pollution of Waters and (2) No.3050087251 Failure to Notify (discharge of tailings water), both issued on 26 Feb 2013. The cause of this discharge was an agricultural pipe designed to relieve pressure on the tailings dam wall which flowed off site as it had not been connected to divert the discharge into a catch dam on site.
S5.5	Two PINs were issued by the EPA to CVO for: <ol style="list-style-type: none"> failure to notify EPA of water flowing from the southern TSF into a tributary of Rodds Creek on 25 October 2012 immediately it became aware of the discharge incident; and supplying false or misleading information in CVO's annual return in contravention of S.66(4) of the POEO Act, which related to an incident that occurred at the southern TSF in about August 2006 but which was not reported to the EPA until 7 November 2012.
Low Risk Non-Compliances	
S3.2	On 25 August 2013 at 2:06am, unattended monitoring identified an elevated noise level at 346 Carbine Road that was higher than sleep disturbance criteria in the Cadia East Project Approval and EPL 5590. The elevated level was independently assessed by Advitech Pty. Ltd and the likely source of noise was identified as mining operations.



Condition No.	CVO Non-Compliances
S3.5	The ADVITECH <i>Attended Noise Monitoring Report</i> Rev 0, dated 21 July 2014, found that the 'Road traffic noise monitoring results indicate that measured maximum LAeq,1hour noise levels did exceed the road traffic noise criteria, with noise levels above the criteria on one occasion during the day period and six occasions during the night period.'
S3.17	On 10 February 2014 the EPA was notified by letter that on the 8 th and 9 th of November 2013, an elevated dust measurement (>50ug/m3) was recorded at the Meribah TEOM dust monitor. The elevated reading exceeded the 24 hour impact assessment criteria between the hours of 11.00 am on the 8 th and 7.45 am on the 9 th of November 2013. An exceedance of the 24-hour average PM ₁₀ criterion was also recorded on 5 - 6 September 2012 at the same monitor.
S3.29	CVO did not achieve the required 3.5ML/day water flow into the Flyers Creek weir for a period of 4 consecutive days in January 2012.
S5.3	There is no evidence that CVO has reviewed, and if necessary revised, the strategies, plans, and programs required under this approval within 3 months of an incident report being provided to the EPA, except for a noncompliance under L4 in 2012-2013 where the procedure was updated to allow real-time control of activities. CVO does not agree with this finding on the grounds that all revisions deemed necessary have been referred to and agreed by DP&E. It was asserted that the revisions are through AEMRs and correspondence and no revisions have been necessary by incidents. The auditor responds that there is no evidence that reviews are permitted to be performed through AEMRs and correspondence, and that such reviews would not be reflected in the strategies, plans, and programs required under this approval unless the required changes were incorporated into them.

8.4.3 Environmental Protection Licence EPL 5590

Table 8.4 Risk Review of EPL 5590 Non-Compliances

Condition No.	CVO Non-Compliances
High Risk Non-Compliances	
N/A	There were no high risk non-compliances identified under EPL 5590.
Moderate Risk Non-Compliances	
L1.1	Repeat Finding from Project Approval S3.23. On 25 October 2012 water was accidentally released off site from a drainage point on the southern tailings dam. This resulted in two PINs being issued - (1) No.3050087242 <i>Pollution of Waters</i> and (2) No.3050087251 <i>Failure to Notify</i> (discharge of tailings water), both issued on 26 Feb 2013.
O1.1	There have been a number of incidents reported during the period of this audit as set out in L1.1, L4.1 and L4.5b relating to noise and discharge from the tailings dam. An incident was also reported to the Lead Auditor by the EPA on 17 March 2015 relating to the discharge over the spillway of tailings from the STSF. A letter from the EPA to CVO indicated a continuing concern regarding this incident (which is outside the period of this audit) following previous tailings incidents. It may be interpreted that the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity (tailings) may not have been carried out in a competent manner.



Low Risk Non-Compliances	
L4.1	Identical to S3.2 in the Project Approval. On 25 August 2013 at 2:06am, unattended monitoring identified an elevated noise level at 346 Carbine Road that was higher than sleep disturbance criteria in the Cadia East Project Approval and EPL 5590. The elevated level was independently assessed by Advitech Pty. Ltd and the likely source of noise was identified as mining operations.
L4.5b	Review of LA1, 1 minute data in the CVO August 2013 Noise Report by Advitech, revealed an exceedance of the criteria on 25 August, 2013 at 2:06am with a LA1,1minute noise level of 49 dB(A). The results were presented in Table 3 and Figure 3 of the Advitech Sleep Disturbance Noise Model Report (13 December 2013), and indicated that nine receivers displayed noise levels above the sleep disturbance impact criteria of 45 dB(A). Modelling results presented in Table 4 also show that during this event there were eight properties with noise levels greater or equal to 45 dB(A) affecting 25% or more of the land area. This non-compliance was reported to the EPA and DP&E.

8.4.4 Consolidated Statement of Commitments

There were no non-compliances.

8.4.5 Assessment of Mining Leases

Compliance with environmental conditions of Mining Leases was assessed in accordance with Table 8.5. The six Mining Leases granted to CVO were able to be divided into three groups according to the set of conditions that were incorporated, i.e. 1993 conditions, 2000 conditions and 2010 conditions. Each of the two MLs in each group referenced different conditions from the set of conditions used to document the ML, as set out in Table 8.5.

Table 8.5 Mining Lease Applicable Conditions

[from the Schedule of Conditions of Authority (ML) (1993); Schedule of Conditions of Authority (ML) (2000); and Schedule of Mining Lease Conditions (2010)]

Cond No.	1993 Conditions		2000 Conditions		2010 Conditions	
	ML1405	ML1449	ML1472	ML1481	ML1689	ML1690
1						
1A						
2						
3						
3A						
3B						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						



Cond No.	1993 Conditions		2000 Conditions		2010 Conditions	
	ML1405	ML1449	ML1472	ML1481	ML1689	ML1690
15	Black	Black	Green	Green	Grey	Grey
16	Grey	Grey	Green	Green	Black	Black
17	Black	Black	Green	Green	Black	Black
18	Grey	Grey	Green	Green	Yellow	Yellow
19	Grey	Grey	Green	Green	Black	Black
21	Black	Black	Yellow	Yellow	Yellow	Yellow
22	Black	Black	Yellow	Yellow	Black	Black
23	Grey	Grey	Yellow	Yellow	Black	Black
24	Grey	Grey	Green	Yellow	Grey	Grey
25	Black	Black	Green	Green	End of Conditions	
26	Grey	Grey	Green	Green		
27	Grey	Grey	Green	Green		
28	Grey	Grey	Green	Green		
29	Grey	Grey	Green	Green		
30	Black	Black	Green	Green		
31	Grey	Grey	Black	Green		
32	Grey	Grey	End of Conditions			
33	Grey	Grey				
34	Grey	Grey				
35	Grey	Grey				
37	Grey	Grey				
40	Grey	Grey				
43	End of Conditions					

LEGEND

- Applies to ML1405 and ML1449
- Applies to ML 1427 and ML 1481
- Applies to ML 1689 and ML 1690
- Not environmental conditions
- Conditions not included

8.4.6 Mining Leases ML1405 ML1449

There were no non-compliances

8.4.7 Mining Leases ML1472 and ML1481

There were no non-compliances

8.4.8 Mining Leases ML1689 and ML1690

There were no non-compliances

8.4.9 Management plans

It was assessed that CVO has generally implemented the commitments in the management plans required to be developed under the Planning Approval dated 6 January 2010.



8.4.10 Community complaints

There do not appear to be any trends in community complaints received by CVO. There is a wide range of concerns expressed, the majority relating to dust, noise and vibration, but also covering traffic, dogs, light etc. All are recorded and investigated by CVO, and the results reported to the complainant. They are also reported in the CVO Newsletter which is provided to the community approximately quarterly, and also recorded in the Minutes of the CVO Community Consultative Committee. Darryl Clift (EPA) provided the following response to the auditors: *“The mine is also extremely proactive with the surrounding community and as such any complaints or concerns (ie: dust/noise/ vibration) from the community are mostly reported to CVO and managed (resolved) by CVO without any EPA involvement. The community generally does not call the EPA Environment Line because when they have an issue, they contact the CVO complaints line and their issue is promptly investigated and attended to by CVO. This is a consistent comment of the EPA during the AEMR inspections each year. The EPA often only becomes aware of noise, dust or blast complaints when CVO reports its complaint stat’s to the EPA”.*

8.4.11 Regulatory action

CVO has received three PINs and a formal warning during the period covered by this audit.

- A **PIN** was issued for breach of Section 120 of the POEO Act – discharge of tailings water from the STSF into a tributary of Rodds Creek on 25 October 2012, penalty \$1,500 was imposed on 26 February 2013. A written report was requested by the EPA and provided by CVO on 2 November 2012.
- A second **PIN** was issued by the EPA relating to the same incident for the offence of breaching Section 148 of Part 5.7 of the POEO Act, and a penalty of \$5,000 was imposed also on 26 February 2013. This offence related to CVO’s failure to notify the EPA of the discharge from the STSF “immediately”.
- A **PIN** was issued by the EPA on 26 February 2013 to CVO for failing to report to the EPA a discharge from the STSF that occurred in or around August 2006, and subsequently providing a false or misleading certificate to the EPA. The penalty imposed was \$1,500.
- On 5 November 2012 a **Formal Warning** was issued by the EPA to CVO for a breach of licence conditions relating to exceedance of noise limits and the subsequent actions taken by CVO.

All required actions by CVO following or associated with the above breaches have been completed. However it is understood that there is continuing concern as expressed by the EPA in its response to the auditors regarding the state of tailings dams, particularly the southern tailing storage facility (STSF) in terms of possible discharges indirectly to the downstream environment via seepage. Previous advice was that the seepage water was essentially ground water coming to the surface as seepage areas under the weight of tailings based on characteristics of the seepage water being characteristic of groundwater for the area rather than characteristics of tailings water, however more recently CVO has advised the EPA that monitoring of downstream seepage has found tailings water to be a component of seepage water at several downstream sites beyond the mining lease (by characteristic of seepage). EPA has since requested further advice as to what is meant by a component of seepage water (how big a component and is it increasing).

EPA through Darryl Clift has advised the Lead Auditor of a reported discharge of tailings from the STSF, received on 14 March 2015 at approximately 6:40pm by the EPA, and emphasising the EPA's continuing concerns regarding the tailings dams to the auditors (this is outside the period covered by this audit). The communication is included in Appendix 8. CVO also provided the auditors with information regarding this incident at the request of the EPA.



It is noted that CVO is (or has been) involved in several legal actions brought against CVO by Gold and Copper Resources (GCR) in the Land and Environment Court and the Supreme Court in NSW, however these are not regulatory actions.

8.4.12 Annual reviews

Annual reviews have been reviewed to provide the auditors with information as a basis for recommendations regarding ongoing environmental improvement. As far as possible the auditors have verified the validity of the annual reviews and have not identified any matters of material non-compliance during the period covered by this audit. There is reference above in 8.3.12 to a PIN issued in 2013 for providing a misleading certificate in 2006, which is prior to the period covered by this audit.

8.4.13 Specific matters raised by relevant agencies or DP&E.

Specific matters raised by relevant agencies and DP&E are set out in Table 8.1.



9. Tables of Findings, Audit Evidence and Recommendations

9.1 Project Approval dated 6 January 2010

9.2 Environment Protection Licence No 5590

9.3 Consolidated Statement of Commitments

9.4 Mining Leases - Conditions of Authority - ML1405 and ML1449

9.5 Mining Leases - Conditions of Authority - ML1472 and ML1481

9.6 Mining Leases - Mining Lease Conditions - ML1689 and ML1690

Detailed Findings and Recommendations - Project Approval dated 6 January 2010

CADIA HOLDINGS PTY LIMITED
Mandatory Independent Compliance Audit for Department of Planning & Environment
Detailed Findings and Recommendations
Project Approval dated 6 January 2010

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
SCHEDULE 2 - ADMINISTRATIVE CONDITIONS					
Obligation to Minimise Harm to the Environment					
S2.1	The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the development.	C	All reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the development have been implemented as set out in this audit. Responses to the recommendations in the 2011 Mandatory Environmental Audit Report have been implemented.	Following audit evidence Audit 2011 CVO Response	There are no recommendations.
Terms of Approval					
S2.2	The Proponent shall carry out the project generally in accordance with the: (a) EA; (b) EA (Mod 1); (c) EA (Mod 2); (d) EA (Mod 3); (e) EA (Mod 4); (f) EA (Mod 5); and (g) conditions of this approval Note: The general layout of the project is shown in Appendix 2. <i>If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency.</i> <i>However, the conditions of this approval shall prevail to the extent of any inconsistency.</i>	C	The results of this audit verify that the project has been generally carried out in accordance with the requirements of this condition.	Following audit evidence	There are no recommendations.
S2.4	The Proponent shall comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of: (a) any reports, strategies, plans, programs, reviews, audits or correspondence that are submitted in accordance with this approval; and (b) the implementation of any actions or measures contained in these documents.	C	The revised AEMR report for 2010-2011 as requested in accordance with Attachment 6 to the letter from David Kitto, dated 5 December 2011 was provided on 16 May 2012.	Email from Andrew Wannan to Kane Winwood and David Kitto with attachments dated 16 May 2012.	There are no recommendations.
Limits on Approval					
S2.5	Mining operations may take place until 30 June 2031. Note: Under this approval, the Proponent is required to rehabilitate the site and perform additional undertakings to the satisfaction of the Secretary and DRE. Consequently this approval will continue to apply in all other respects other than the right to conduct mining operations until the site has been properly rehabilitated.	NA	Termination date has not been reached.		Not Applicable
S2.6	The Proponent shall not process more than 27 million tonnes of ore from the project in a calendar year.	C	2012 = 21,097,536.51 tonnes 2013 = 24,779,680.04 tonnes 2014 = 19,842,238.69 tonnes	Spreadsheet attached to email from Matthew Hope to Andrew Wannan dated Mon 9/02/2015	There are no recommendations.

Project Approval dated 6 January 2010 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
S2.7	The Proponent shall not use any cyanide or mercury to process or extract gold/copper from the project.	C	No cyanide or mercury is used to process or extract gold or copper. Note: approx. 400 kg of mercury is produced annually as a by-product of processing the ore and is removed by Remondis.	Management assertion	There are no recommendations.
Surrender of Consents					
S2.8	Within 12 months of the date of this approval, or as otherwise agreed by the Secretary, the Proponent shall surrender all existing development consents for the project in accordance with sections 75YA and 104A of the EP&A Act, to the satisfaction of the Secretary. <i>Note: This approval will apply to all components of the Cadia Valley Operations from the date of approval. The existing management and monitoring plans/strategies/programs/protocols for the project will continue to apply until the approval of the comparable plan/strategy/program under this approval.</i>	NA	This is outside the scope of this audit, however verification was received that this had been done.	Letter from Craig Jones – CVO General Manager to David Kitto regarding surrender of development consents dated 14 December 2010.	Not Applicable
Structural Adequacy					
S2.9	The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the Building Code of Australia (BCA). <i>Notes:</i> - Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works; - Part 8 of the EP&A Regulation sets out the requirements for the certification of the project.	C	McKenzie Group is the principal certifying authority. Copies of certificated provided: Fire Certificates Cadia East Surface Workshop S.pdf Engineering Building S.pdf HVWS S.pdf Main Building S.pdf Mets Lab S.pdf Muster Room 5.pdf Ridgeway Admin Building 5.pdf SAOC 5.pdf Site Access Control & ERO Facility 5.pdf Site Main Store S.pdf Building Certificates etc 067048-01CCI Construction Certificate. PDF Booster pump station occ certificate.pdf Building certificates status 2014.pdf Cadia East Building certificate status 2011.pdf Fluorine Plant Occupation Certificate.PDF Occupation certificates Final Jan 2014.pdf	Building Certificates Construction Certificates Occupation Certificates Fire Certificates	There are no recommendations.
Demolition					
S2.10	The Proponent shall ensure that all demolition work is carried out in accordance with AS 2601-2001: <i>The Demolition of Structures</i> , or its latest version.	NA	There was no demolition during the audit period		

Project Approval dated 6 January 2010 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Protection of Public Infrastructure					
S2.11	The Proponent shall:(a) repair, or pay the full costs associated with repairing, any publicly-owned infrastructure that is damaged by the project; and(b) relocate, or pay the full costs associated with relocating, any publicly-owned infrastructure that needs to be relocated as a result of the project,except where such works have been compensated through the planning agreement referred to in condition 13 below.	C	Since Cadia East Project Approval in Jan 2010 the following was provided: \$3M to the 3 Councils (\$1M each) for specific road improvement programs (new intersections and road sealing); \$1.5M in road improvements in South Orange (funds directed from annual VPA payments of \$150k per year); Special rate variation commenced in 2012/13 FY of \$1.2M per annum to Blayney Council for specific road works in Cadia District (additional to above); Approx. \$120,000 spent per year shared between Cabonne and Orange Council for Maintenance on Cadia Road; \$250,000 spent in FY 2012 on specific Cadia Road repair to Cabonne and Orange Councils; \$800,000 spent in FY 2013 on specific Cadia Road repair to Orange and Cabonne Councils; \$1M budgeted for FY 2015 for Cadia Road repairs to Orange and Cabonne Councils	Email "Summary CVO MIne roads contributions" from Andrew Wannan to Claire Doherty, NSW Minerals Council dated 8 August 2014.	There are no recommendations.
Operation of Plant and Equipment					
S2.12	The Proponent shall ensure that all the plant and equipment used on site is: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	C	This was investigated by EPA during an audit on 9 & 10 December 2014 and approx 900 documents were provided by CVO. This audit verified that the plant and equipment used on site, including contractors', is maintained in a proper and efficient condition and operated in a proper and efficient manner.	Management assertion Site Inspection	There are no recommendations.
PLANNING AGREEMENT					
S2.13	Within 12 months of the date of this approval, unless otherwise agreed by the Secretary, the Proponent shall enter into a planning agreement with the Councils in accordance with Division 6 of Part 4 of the EP&A Act, that provide for contributions to the Councils for: - upgrade of Council's road infrastructure affected by the project; and - general community enhancement to address social amenity and community infrastructure requirements arising from the project. The contributions shall be generally consistent with the terms of the offer made in the Proponent's letter dated 17 December 2009, and summarised in Appendix 7. If there is any dispute between the Proponent and any of the Councils during the formal drafting of the planning agreement, then any of the parties involved may refer the matter to the Secretary for resolution.	ANC	This agreement was signed on 9 July 2013. It was due for signature prior to 6 January 2011. As nominee of the Director-General, Kane Winwood advised by email on 8 April 2013 that the date for execution of the VPA has been extended to 30 June 2013. Annexure C of the VPA sets out the purpose of monetary contributions provided by CVO.	Final VPA signed agreement with councils 9 July 2013; Email Re Cadia East Voluntary Planning Agreement 8/4/13.	There are no recommendations.
Staged Submission of Strategies, Plans and Programs					
S2.14	With the approval of the Secretary, the Proponent may submit any management plan, strategy or monitoring program required by this approval on a progressive basis, or for a discrete component of the project.	NA	Only whole plans have been submitted.	Management assertion	Not Applicable
SCHEDULE 3 - ENVIRONMENTAL PERFORMANCE CONDITIONS					
ACQUISITION OF AFFECTED PROPERTIES					
S3.1	Acquisition Upon Request Upon receiving a written request for acquisition from the owner of the land listed in Table 1, the Proponent shall acquire the land in accordance with the procedures in conditions 5-7 of schedule 4. Table 1: Land subject to acquisition upon request: MC & PA Ewens <i>Note: To interpret the location referred to in Table 1, see the applicable figure in Appendix 2.</i>	NA	There have been no requests for acquisition of land listed in Table 1.	Management assertion	Not Applicable

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Noise					
S3.2	<p>Impact Assessment Criteria</p> <p>The Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in Table 2 at any residence on privately-owned land or on more than 25 per cent of any privately-owned land.</p> <p><i>See Table 2: Noise Impact Assessment Criteria dB(A) LAeq (15min)</i></p> <p>Notes:</p> <ul style="list-style-type: none"> -To interpret the locations referred to Tables 2-5, see the applicable figures in Appendices 2 and 4. - Noise generated by the project is to be measured in accordance with the relevant requirements, and exemptions (including certain meteorological conditions), of the NSW Industrial Noise Policy. - The noise limits do not apply if the Proponent has an agreement with the relevant owner/s of these residences/land to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement. - Noise associated with the mining operations may exceed the night time limits in Table 2 at Property 22 – JL Gill by 1 decibel during construction of the Cadia East mine. - Noise associated with the construction of the upgrade to the Blayney Dewatering Facility may exceed the noise impact assessment criteria in Table 2 by up to 3 decibels at all locations except Location 4, and is to be measured in accordance with the relevant procedures in the EPA's Interim Construction Noise Guideline. 	NC	<p>Routine attended, unattended and traffic noise surveys are conducted at Newcrest's Cadia Valley Operations (CVO) and Blayney Dewatering Facility in accordance with the CVO Noise Monitoring Program, approved by NSW Department of Planning June 2010.</p> <p>Monitoring is conducted using a combination of devices including a directional noise monitor (e.g. QuattroSound®); an attended noise monitor (e.g. the Bruel and Kjaer Sound Level Analyser) and an unattended noise monitor (eg. EL-215 type logger).</p> <p>CVO uses a mobile noise monitoring trailer including wind speed with telemetering back to the mine which is rotated around 6-7 properties. Temperature inversions are measured at two weather stations established on the mine. The records from the noise monitoring are analysed by Advitech (Newcastle) and a monthly report is provided. On 25 August 2013 at 2:06am, unattended monitoring identified an elevated noise level at 346 Carbine Road that was higher than sleep disturbance criteria in the Cadia East Project Approval and EPL 5590. The elevated level was independently assessed by Advitech Pty. Ltd and the likely source of noise was identified as mining operations. Review of recorded audio by CVO confirmed that load and haul operations associated with low grade stockpile rehandle (ie placement of rock into empty dump truck) was the likely operational source. The elevated noise lasted for approximately 6 seconds. The exceedance was notified to the regulators and was reported in the 2013-2014 AEMR. Advitech was engaged to do more noise modelling with regard to this exceedance which was handled by CVO as an incident report. The affected properties were provided with a copy of the Advitech report. This incident resulted in the restriction of equipment used overnight and the continuing use of noise alarms which report back to the Site Asset Operations Centre (SAOC).</p>	<ul style="list-style-type: none"> • Noise Monitoring Program • 2013-2014 AEMR • Advitech Noise Monitoring Monthly Reports 	There are no recommendations.
S3.3	<p>Land Acquisition Criteria</p> <p>If the noise generated by the project exceeds the criteria in Table 3 at any residence on privately owned land or on more than 25 per cent of any privately-owned land, the Proponent shall, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 5-7 of schedule 4.</p> <p><i>See Table 3: Land acquisition criteria dB(A) LAeq (15min)</i></p> <p>Note: Noise generated by the project is to be measured and evaluated in accordance with the relevant requirements, and exemptions (including certain meteorological conditions), of the NSW Industrial Noise Policy.</p>		NA	<p>Noise generated by the project has not exceeded the criteria in Table 3 at any residence on privately owned land.</p>	<ul style="list-style-type: none"> • Management assertion • Advitech Noise Monitoring Monthly Reports

RISK ASSESSMENT:
 Likelihood of harm – Unlikely
 Level of impact – Low
 Level of risk – Low

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
S3.4	<p>Cumulative Noise Criteria The Proponent shall implement all reasonable and feasible measures to ensure that the noise generated by the project combined with the noise generated by other mines and industries does not exceed the amenity criteria in Table 4 at any residence on privately-owned land or on more than 25 per cent of any privately-owned land, to the satisfaction of the Secretary.</p> <p><i>See Table 4: Cumulative noise criteria dB(A) LAeq (period)</i> <i>Note: Cumulative noise is to be measured in accordance with the relevant requirements, and exemptions (including certain meteorological conditions), of the NSW Industrial Noise Policy.</i></p>	NA	There have been no exceedances at any residence on privately-owned land or on more than 25 per cent of any privately-owned land.	Advitech Noise Monitoring Monthly Reports Management assertion	Not Applicable
S3.5	<p>Traffic Noise Impact Assessment CriteriaThe Proponent shall take all reasonable and feasible measures to ensure that the traffic noise generated by the project does not exceed the traffic noise impact assessment criteria in Table 5.</p> <p><i>See Table 5: Traffic noise impact assessment criteria dB(A)</i> <i>Note: Traffic noise generated by the project is to be measured in accordance with the relevant procedures in the EPA's Environmental Criteria for Road Traffic Noise.</i></p>	NC	<p>No complaints were received for traffic noise in 2012-13 compared to 2 in 2011-12 and none were received in 2013-14. Traffic noise is measured at potentially affected properties. Traffic noise is monitored biannually for a block period of seven days.</p> <p>Following biannual road traffic noise monitoring conducted as part of the Noise Monitoring Program (NMO), the <i>ADVITECH Attended Noise Monitoring Report</i> Rev 0 dated 21 July 2014, document ID 12917, found that the 'Road traffic noise monitoring results indicate that measured maximum LAeq,1hour noise levels did exceed the road traffic noise criteria, with noise levels above the criteria on one occasion during the day period and six occasions during the night period.'</p> <p>On the basis of the above assessment, traffic noise impacts were not compliant with criteria established in the CVO Project Approval. It is understood that there have been no requests from the landowners of the residence for CVO to implement additional noise mitigation measures, under Schedule 3, Condition 7.</p> <p>CVO has taken reasonable and feasible measures to ensure that the traffic noise generated by the project does not exceed the traffic noise impact assessment criteria in Table 5 and has initiated car pooling for its employees, and bussing for contract labour to reduce traffic on local roads.</p> <div style="border: 1px solid black; background-color: yellow; padding: 5px; width: fit-content; margin: 10px auto;"> <p>RISK ASSESSMENT: Likelihood of harm – Unlikely Level of impact – Low Level of risk – Low</p> </div>	<ul style="list-style-type: none"> Management assertion Observation (special parking for pool cars and contractors' buses on site) 2013-2014 AEMR 2012-2013 AEMR 2011-2012 AEMR Noise Monitoring Program ADVITECH Compliance Noise Monitoring report, dated 21 July 2014, document ID 12917 Expert Opinion on Noise, Amenity Acoustics Pty Limited 17 March 2015. 	<p>S3.5.1 It is recommended by the Noise Expert that CVO further investigate noise contribution from CVO traffic movements and impact upon receivers on Cadia Road in accordance with provisions of the NMP, if this is feasible and practical, as traffic density changes with changes in operations from time to time.</p> <p>Ranking: N</p>
S3.6	<p>Operating Hours The Proponent shall comply with the operating hours in Table 6.</p> <p><i>See Table 6: Operating Hours</i> <i>Note: Construction and maintenance activities may be conducted outside the hours in Table 6 provided that the activities are not audible at any residence beyond the boundary of the site.</i></p>	C	Work hour times are defined in Work Packages, however these were not sighted.	Not verified Management assertion	There are no recommendations.

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
S3.7	<p>Additional Noise Mitigation Measures Upon receiving a written request from: - the landowner of the properties identified as: o MC & PA Ewens (unless the landowner has requested acquisition); or o GP Nixon & Sons; or - the landowner of privately-owned land where subsequent operational noise monitoring shows the noise generated by the project exceeds the noise limits in Table 2 by more than: o 1 dB(A), in the case of daytime noise levels at the location identified as ML Gardner; or o 2 dB(A), in the case of all other locations; or - the landowner of the residences on Forest Road, Orchard Road, Woodville Road or other road listed in Table 5 where subsequent noise monitoring shows traffic noise levels generated by the project exceed the traffic noise criteria in Table 5, the Proponent shall implement additional noise mitigation measures such as double glazing, insulation, and/or air conditioning at any residence on the land in consultation with the landowner. These additional mitigation measures must be reasonable and feasible. If within 3 months of receiving this request from the landowner, the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution. Within 3 months of this approval, the Proponent shall notify all applicable landowners that they are entitled to receive additional noise mitigation measures, to the satisfaction of the Secretary.</p>	NA	No written requests have been received. Mitigation was offered and accepted on two properties and was offered on three others but was not accepted.	Management assertion	Not Applicable
S3.8	<p>Continuous Improvement The Proponent shall:(a) implement all reasonable and feasible best practice noise mitigation measures;(b) investigate ways to reduce the noise generated by the project, including off-site road (particularly on Forest Road, Orchard Road and Woodville Road during the night and early morning periods) and rail noise and maximum noise levels which may result in sleep disturbance; and(c) report on these investigations and the implementation and effectiveness of these measures in the Annual Review, to the satisfaction of the Secretary.</p>	C	<p>Best practice noise mitigation measures are reported in the AEMRs. These include: Traffic Noise: ● Ongoing car-pooling incentives for employees. ● Bussing of contract labour Operational Noise: ● Use of Quattrosound audio recording to further identify contributing noise sources ● Restricting high risk activities and locations to day shift only, or to a 10pm curfew ● Discussion of noise in monthly site environment meeting and quarterly Senior Leadership Meeting ● Use of Quattrosound alarm capabilities - Alarms reported through the Site Asset Operations Centre (SAOC) - Ability of SAOC technicians to access real time data and audio to confirm noise sources - Field supervisors notified of alarms and requested to investigate and apply corrective actions ● Daytime noise testing of hydrofracturing activities in Cadia East subsidence zone to verify compliance with operational noise criteria prior to allowing night shift work Blayney Dewatering Facility: ● Several night-time sessions conducted to identify potential noise sources including the isolation and assessment of separate components of the plant. ● Use of lagging on pipes and motors, and installation of sonic curtains.</p>	2013-2014 AEMR pages 29, 69, 140, 201 2012-2013 AEMR pages 82, 123, 138, 202-206 2011-2012 AEMR pages 73, 74, 91, 92, 148, 202-208 Noise Monitoring Program	There are no recommendations.

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
S3.9	<p>Noise Monitoring The Proponent shall prepare and implement a detailed Noise Monitoring Program for the project to the satisfaction of the Secretary. This program must:</p> <p>(a) be prepared in consultation with EPA, and be submitted to the Secretary for approval within 3 months of the date of this approval; and</p> <p>(b) include:</p> <ul style="list-style-type: none"> - a combination of unattended and attended monitoring measures; and - a noise monitoring protocol for evaluating compliance with the relevant noise impact assessment and land acquisition criteria in this approval. 	C	See S3.2	Noise Monitoring Program 2013-2014 AEMR 2012-2013 AEMR 2011-2012 AEMR Advitech Noise Monitoring Monthly Reports	There are no recommendations.
Blasting and Vibration					
S3.10	<p>Blasting Impact Assessment Criteria The Proponent shall ensure that blasting at the project does not exceed the criteria in Table 7. <i>See Table 7: Blasting impact assessment criteria</i> <i>Note: The impact assessment criteria for Cadia Engine House and Surrounds apply in the absence of any antivibration strengthening. Alternative criteria may be approved under the Historical Heritage Management Plan (see condition 43) if anti-vibration strengthening works are implemented.</i></p>	C	There are 8 fixed blast monitors in accordance with the CVO Vibration Monitoring Program which was approved by NSW Department of Planning in June 2013 subject to some minor amendments.. Ground vibration and blast overpressure are monitored. The blast monitors are solar powered and report exceedances. Ecotech (Victoria) calibrate and maintain the blast monitors and provide monthly reports to CVO. There is no surface blasting undertaken by CVO at present. CVO is in compliance with the 95 percentile and is currently at 0.1% against the 5% allowable rolling exceedance.	Management assertion 2013-2014 AEMR 2012-2013 AEMR 2011-2012 AEMR Vibration Monitoring Program (Incorporating Blast Monitoring Program) v3 9/12/2013	There are no recommendations.
S3.11	<p>Operating Conditions During mining operations on site, the Proponent shall implement best blasting practice to:(a) protect the safety of people, property, public infrastructure, and livestock;(b) protect items of Aboriginal and non-indigenous cultural heritage significance; and(c) minimise the dust and fume emissions from blasting at the project,to the satisfaction of the Secretary.</p>	C	Surface blasting ceased in June 2012 in the Cadia Pit and dust and fume emissions have also ceased since that time. It was modelled to work in with underground blasting. The surface blasts were capped and covered to direct the energy into the rock face. Subsequently only underground blasting has been undertaken. Production blasts at Cadia East and Ridgeway occur at the end of each shift and are advertised on the CVO website. Ground vibration monitoring is conducted to assess the ground vibration from blasting and mine induced seismic events. Monitoring is conducted continuously using a geophone set to trigger during ground vibration events greater than 0.10mm/s, and peak vector sum (PVS – mm/s) waveforms are recorded. Structural support has been provided for items of cultural heritage at the Engine House and Chimney where inspections of the chimney are made by the designated engineer or his delegate after blasts of > 15 mm/s, monthly, six-monthly and annually.	2013-2014 AEMR 2012-2013 AEMR 2011-2012 AEMR Vibration Monitoring Program (Incorporating Blast Monitoring Program) v3 /12/2013 Inspection of Engine House and Chimney	There are no recommendations.
S3.12	<p>Public Notice During mining operations on site, the Proponent shall:</p> <p>(a) notify the landowner/occupier of any residence within 2 kilometres of blasting operations who registers an interest in being notified about the blasting schedule at the mine, or any other landowner nominated by the Secretary;</p> <p>(b) operate a Blasting Hotline, or alternate system agreed to by the Secretary, to enable the public to get up-to-date information on the blasting schedule at the project;</p> <p>(c) publish an up-to-date blasting schedule on its website (for open pit and major underground blasting operations); and</p> <p>(d) advertise the blasting hotline number and website information in a local newspaper at least 2 times each year, to the satisfaction of the Secretary.</p>	ANC	Approximately 6 residents on the eastern side of the mine are notified by phonecall or email of preconditioning blasting. A Community Relations & Blasting Hotline [1800 063 043] is advertised on the CVO website as required in (b). The CVO website includes notification that "Underground production blasts occur daily at Cadia East from 6:45am to 7:00am and 6:45pm to 7:00pm and at Ridgeway at 6.15am and 6.15pm." The Community Relations & Blasting Hotline and website information has not been published in a local newspaper at least 2 times each year as required by (d), CVO stating that this would not be appropriate because of the available newspapers being inadequate. CVO has determined to replace the newspapers with the "Cadia District Newsletter", however there was no documentation available to indicate that this alternative has been approved by the Secretary. The June 2014 Cadia District Newsletter stated that "CVO has transferred the community hotline to the Site Asset Operations Centre (SAOC). The SAOC is manned around the clock and has access to CVO's monitoring data so the operators will be able to respond quickly to general community enquiries. Operators	Management assertion Cadia District Newsletter CVO website	<p>S3.12.1 It is recommended that consideration be given to applying for a variation to condition 3.12(d) to approve CVO's preferred alternative of including this information in a Community Newsletter instead of the Approval requirement of advertising the blasting hotline number and website information in a local newspaper at least 2 times each year. [NOTE: CVO has responded that this has been included in a modification application proposed to be submitted to DP&E in week commencing 16 March 2015].</p> <p>Ranking: N</p>

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
			will also be able to pass on enquiries and concerns to the community relations and environment department if required.”		
S3.13	<p>Property Inspections</p> <p>The Proponent shall advise the owners of privately-owned land that they are entitled to a structural property inspection to establish the baseline condition of buildings and other structures on the property:</p> <p>(a) within 2 months of the date of this approval, for properties within 2 kilometres of blasting operations occurring at the date of this approval; and</p> <p>(b) at least 2 months prior to blasting within 2 kilometres of additional properties.</p>	NA	This was done by letter prior to 2012 and is therefore outside the period of this audit.	Management assertion	Not Applicable
S3.14	<p>Property Inspections</p> <p>If the Proponent receives a written request for a structural property inspection from any such landowner, the Proponent shall:</p> <p>(a) within 2 months of receiving this request commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to inspect the condition of any building or structure on the land (prior to blasting taking place within 2 kilometres of the property, if possible), and recommend measures to mitigate any potential blasting impacts; and</p> <p>(b) give the landowner a copy of the property inspection report.</p>	C	On 18 April 2014 a landowner (Mr Scott Munro) reported cracked tiles in his bathroom and was concerned that it may be due to blasting. CVO agreed to investigate the claim and commissioned GHD (with the approval of the Secretary) to undertake the work. The landowner was provided with a copy of the GHD report in August 2014 which concluded that ground vibration from CVO activities was unlikely to have caused the cracks and he was satisfied with this explanation.	Email to Andrew Wannan from Jeff Burton Mon 9/02/2015 including screen shots from CVO's Consultation Manager software.	There are no recommendations.
S3.15	<p>Property Investigations</p> <p>If any landowner of privately-owned land within 2 kilometres of blasting operations, or any other landowner nominated by the Secretary, claims that buildings and/or structures on his/her land have been damaged as a result of blasting at the project, the Proponent shall within 3 months of receiving this request:</p> <p>(a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to investigate the claim; and</p> <p>(b) give the landowner a copy of the property investigation report. If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Proponent shall repair the damages to the satisfaction of the Secretary. If the Proponent or landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Secretary for resolution. If the matter cannot be resolved within 21 days, the Secretary shall refer the matter to an Independent Dispute Resolution Process (see Appendix 8).</p>	NA	There have been no requests.	Management Assertion	Not Applicable
S3.16	<p>Blast Monitoring Program</p> <p>The Proponent shall prepare and implement a Blast Monitoring Program for the project to the satisfaction of the Secretary. This program must:</p> <p>(a) be prepared in consultation with EPA, and be submitted to the Secretary for approval within 3 months of the date of this approval; and</p> <p>(b) include a protocol for evaluating blast-related impacts (including blast-induced seismic activity) on, and demonstrating compliance with the blasting criteria in this approval for:</p> <ul style="list-style-type: none"> - privately-owned residences and structures; - items of Aboriginal and non-indigenous cultural heritage significance (including the Cadia Engine House and Surrounds); and - publicly-owned infrastructure. 	C	On CVO website	Vibration Monitoring Program (Incorporating Blast Monitoring Program) v3 9/12/2013 approved by the Department on 11/7/2014.	

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Air Quality					
S3.17	<p>Impact Assessment Criteria</p> <p>The Proponent shall ensure that the dust emissions generated by the project do not cause additional exceedances of the air quality impact assessment criteria listed in Tables 8, 9 and 10 at any residence on privately owned land, or on more than 25 percent of any privately owned land.</p> <p>See Table 8: Long term impact assessment criteria for particulate matter See Table 9: Short term impact assessment criterion for particulate matter See Table 10: Long term impact assessment criteria for deposited dust</p> <p><i>Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method.</i></p>	NC	<p>There is a network of dust gauges set out in the Air Quality Monitoring Program which was approved by NSW Department of Planning in June 2010. The air quality monitoring program is set out on the CVO website at http://www.cadiavalley.com.au/site/air-quality.</p> <p>On 10 February 2014 CVO notified the Department of Planning and environment by letter that on the 8th and 9th of November 2013, elevated dust levels (>50ug/m3) were recorded at the Meribah TEOM monitor between the hours of 11.00am on the 8th and 7.45am on the 9th of November 2013.</p> <p>The letter from CVO to the Department of Planning states: "Based on air dispersion modelling the dominant contributor to PM10 at the Meribah monitoring location was non-mine related activities." The 10 February 2014 letter contradicts the analysis of this event presented in the November 2013 monitoring, and the monitoring results measured on this day. The measured data show that CVO was significantly responsible for exceeding the criteria on 8 or 9 November. An exceedance of the 24-hour average PM10 criterion was also recorded on 5 - 6 September 2012 at the same monitor. Air dispersion modelling by Advitech representing CVO Year 1 mine development plan suggested that the measured 24 hour PM10 dust exceedances at the Meribah monitoring location (5-6 September 2012) were largely due to mine related activities. The predicted extent of CVO 24 hour PM10 dust concentrations that are above 50 µg/m3 were not just limited to the immediate area about the Meribah monitoring station. The model suggests that a large area surrounding the Meribah monitoring station experienced mine dust concentrations above 50 µg/m3.</p> <p>Since 2012 there have been 17 events where elevated 24-hour average PM10 levels were reported to be above the criterion of 50 µg/m3. These events occur at one or more of the four TEOM monitors on 13 separate dates. The majority of these events occur at the Bundarra TEOM location which is TEOM 1 and is located to the west of the mine and tailings facility.</p> <p>CVO's consultants state that these events do not appear to be due to CVO operations and that it is likely that these elevated levels may be due to sheep and cattle movement, dust storms and bushfires. The exceedances are analysed and identified by CVO on the basis of wind direction data.</p> <p>The dust analyses appear to be based on a rolling 24-hour average value. This is not a correct analysis approach for compliance as the 24-hour average PM10 criteria is applicable to only the whole of the specific day, i.e. midnight to midnight. A review of the data may potentially identify that some of the 17 events on 13 days did not have 24-hour average dust levels above the criteria.</p> <p>The auditor agrees that circumstantially it is likely that the dust effects at Bundarra could mainly be due to local sources, but the case for this is not well supported.</p> <p>Management asserted that watering down of exposed tailings at the TSFs would be undertaken by helicopter when necessary to minimise dust generation.</p> <p>No exceedances of long-term PM10 limits were recorded during this audit period.</p> <p>The recommendations have been provided by the Air Quality Expert on the audit team.</p>	<ul style="list-style-type: none"> • 2013-2014 AEMR • 2012-2013 AEMR • 2011-2012 AEMR • Advitech Monthly Air Quality Assessment Reports 2012-2015 (on CVO website) • Mine Dust Modelling - 15 OCT 2012, - Advitech • Meribah Air Quality Exceedance Report 8.11.13 – Advitech • LET_8-11-13 Dust Emission Notification to DP&E 20140210JB • Expert Review by Todoroski Air Sciences. • Management Assertion 	<p>S3.17.1 It is recommended that the air monitoring reporting program be reviewed to ensure that compliance analysis is conducted for the applicable period (midnight to midnight) and reported for the correct date.</p> <p>S3.17.2 Significant and detailed investigation should be conducted into whether all that could be reasonably done to mitigate dust from the TSFs and to achieve compliance is occurring, and if not what further should be done to minimise such emissions. This should focus on dry patches in the tailings facility and wind erosion during periods of high wind speed. [It is noted that management asserted that watering down of exposed tailings at the TSFs would be undertaken by helicopter when necessary to minimise dust generation.]</p> <p>S3.17.3 CVO should provide specific evidence and/ or compelling analysis in regard to elevated dust results where CVO is not implicated.</p> <p>S3.17.4 The actual measured 24-hour average dust levels above criteria should be quantified exactly in a table in the consultants' reports so that the result can be made clear to the reader.</p> <p>Ranking: U</p>

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
			<div style="border: 1px solid black; background-color: yellow; padding: 5px;"> RISK ASSESSMENT: Likelihood of harm – Likely Level of impact – Medium Level of risk – Low </div>		
S3.18	Land Acquisition Criteria If the dust emissions generated by the project exceed the criteria in Tables 11, 12, and 13 at any residence on privately owned land, or on more than 25 percent of any privately owned land, the Proponent shall, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 5-7 of schedule 4. Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method. See Table 11: Long term land acquisition criteria for particulate matter See Table 12: Short term land acquisition criteria for particulate matter See Table 13: Long term land acquisition criteria for deposited dust	NA	There have been no exceedances on privately owned land and no written requests for acquisition from the landowners.	Management assertion	Not Applicable
S3.19	Operating Conditions The Proponent shall: (a) ensure any visible air pollution generated by the project is assessed regularly, and that operations are relocated, modified, and/or stopped as far as is reasonable and feasible to minimise air quality impacts on privately-owned land; (b) ensure that the real-time air quality monitoring and meteorological monitoring data are assessed regularly, and that operations are relocated, modified and/or stopped as required to ensure compliance with the relevant air quality criteria; and (c) implement all reasonable and feasible measures to minimise off-site odour and fume emissions generated by the project, to the satisfaction of the Secretary.	C	Dust alarms are sent by telemetry from each tapered element oscillating microbalance (TEOM) on private property to the SAOC 24/7, and the area supervisor is notified and inspects the dust being detected. Visible dust is also notified to the SAOC where the superintendent records the notification and takes appropriate action. Real-time air quality monitoring and meteorological monitoring data are assessed daily by CVO and any dust issues are addressed. This includes the use of 3 water carts permanently located on site. Monthly air quality monitoring reports by Advitech are provided on the CVO website at http://www.cadiavalley.com.au/site/air-quality . Between 2012 and December 2014 there were 13 occasions when visible air pollution was investigated and action was taken to mitigate the dust, as set out on a spreadsheet "Visible air pollution 2012 – 2014".	CVO website Discussion with SAOC Site Inspection Spreadsheet: Visible air pollution 2012 - 2014	
S3.20	Air Quality Monitoring The Proponent shall prepare and implement a detailed Air Quality Monitoring Program for the project to the satisfaction of the Secretary. This program must: (a) be prepared in consultation with EPA, and be submitted to the Secretary for approval within 3 months of the date of this approval; and (b) include: - a combination of real-time monitors, high volume samplers and dust deposition gauges to monitor the dust emissions of the project; and - an air quality monitoring protocol for evaluating compliance with the relevant air quality impact assessment and land acquisition criteria in this approval.	C	(a) An Air Quality Monitoring Program has been prepared and implemented, with amendments approved by the Department on 11/7/14 including (b) the decommissioning of the high volume air sampler at "Meribah". The air quality data is assessed on a monthly basis for compliance. It is noted that while sampling of deposited dust is consistent with AS 3580.10.1:2003, the assessment of deposited dust is different due to the high levels of background organic material collected in the deposition gauges. The CVO AEMR 2012-13 presented an alternate measure, using the ash deposition rate as a more accurate indicator of the impact of the operations. The "ash" component of deposited dust is the insoluble solids minus combustible material and is more representative of the dust emissions from operations at CVO.	Air Quality Monitoring Program Correspondence re amendments to Monitoring Plans Email from Kane Winwood to Andrew Wannan dated 11/7/14 approving amendments.	There are no recommendations.

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
METEOROLOGICAL MONITORING					
S3.21	During the life of the project, the Proponent shall ensure that there is a suitable meteorological station in the vicinity of the site that complies with the requirements in the Approved Methods for Sampling of Air Pollutants in New South Wales guideline.	C	There are two met stations at CVO, one to the north at Ridgeway (Photo 1) and one on the southern lease boundary. They are independently calibrated and maintained by ALS (Canberra). 2m and 10m temperature gauges are included to measure inversions. Both measure temperature, barometric pressure, wind direction, wind speed, sigma-theta, relative humidity and solar radiation, and the southern one also measures evaporation.	Site inspections. Air Quality Monitoring Program AEMRs Monthly Air Quality Monitoring Reports	There are no recommendations.
SOIL AND WATER					
S3.22	Water Supply The Proponent shall ensure that it has sufficient water for all stages of the project, and if necessary, adjust the scale of mining operations to match its licensed water entitlements, to the satisfaction of the Secretary. <i>Note: The Proponent is required to obtain all necessary water licences and approvals for the project under the Water Act 1912 and/or Water Management Act 2000.</i>	C	Water licences are held for the dam on Cadiangullong Creek; extraction of water from Bulubula Creek; extraction of groundwater for industrial purposes (mostly potable); and management of water in underground workings; as set out in Section 2.1 of the Water Management Plan. Numerous borehole licences are also held for monitoring bores. A water balance is provided in Section 4.1 of the Water Management Plan. A major revision of the water balance model was completed in 2014. Annual water balance calculations are detailed in the AEMR, including the breakdown of water sources, use, reuse, recycling, change in water storage and loss. The EA predicted 95% water reliability, which is now reported to be >99% due to large rainfall in 2010. The water balance was reassessed based on this new baseline. 2 separate aquifers are covered by water sharing plans.	Water Management Plan AEMRs Site inspections Management assertion	There are no recommendations.
S3.23	Discharge Limits The Proponent shall not discharge any water from the site except as may be expressly provided by an EPL, or in accordance with section 120 of the Protection of the Environment Operations Act 1997.	NC	Water is occasionally released from the sediment dams on site, the last discharge being early January 2015, with the water quality being reported as good. On 25 October 2012 water was accidentally released off site from a drainage point on the southern tailings dam. This resulted in two PINs being issued - (1) No.3050087242 <i>Pollution of Waters</i> and (2) No.3050087251 <i>Failure to Notify</i> (discharge of tailings water), both issued on 26 Feb 2013. The cause of this discharge was an agricultural pipe designed to relieve pressure on the tailings dam wall which flowed off site as it had not been connected to divert the discharge into a catch dam on site. See also S5.5. RISK ASSESSMENT: Likelihood of harm – Likely Level of impact – Moderate Level of risk – Moderate	<ul style="list-style-type: none"> Memo re discharge to Flyers Creek. Email with written report attached. PIHA Health & Safety and Environmental Management Plan. Letter from EPA re PIN for 2006 release dated 26 February 2013. Letter from EPA dated 26 February 2013 re 2 PINs for Southern TSF discharge. 	There are no recommendations

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
3.24	<p>Compensatory Water Supplies</p> <p>The Proponent shall provide compensatory water supplies to any landowner of privately-owned land whose water entitlements are impacted (other than an impact that is negligible) as a result of the project, in consultation with NOW and to the satisfaction of the Secretary. The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent to the loss attributed to the project. Equivalent water supply must be provided (at least on an interim basis) within 24 hours of the loss being identified. If the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution. If the Proponent is not able to provide an alternative long-term supply of water, the Proponent shall provide alternative compensation to the satisfaction of the Secretary, which may involve acquisition in accordance with the procedures in conditions 5-7 of schedule 4.</p> <p>See also Notes in Project Approval Schedule 3 Condition 24 on page 12.</p>	NA	There has been no water supply impact identified on privately owned land, therefore no compensatory water supplies have been required.	Management assertion MOP 2014-2016 Land ownership maps (sighted) AEMRs Water Management Plan	Not Applicable
S3.25	<p>Baseflow Offsets</p> <p>The Proponent shall offset the loss of baseflow to the Belubula River and associated creeks caused by the project, in consultation with NOW, and to the satisfaction of the Secretary. The offsets shall be provided either incrementally or on one occasion: (a) prior to the baseflow loss being realised, or within 12 months of the date of this approval for any existing realised baseflow losses that have not previously been offset; and (b) within the catchments where the baseflow loss is realised, as far as is reasonable and feasible, unless otherwise approved by the Secretary. <i>Notes:- The offsets should be provided via the retirement of adequate water entitlements to account for the loss attributable to the project.- Relevant compensatory water supplies implemented under condition 24 may be subtracted from the offsets required under this condition.- The Proponent is not required to provide additional baseflow offsets where such offsets have already been provided under previous consents for the project. These existing offsets are to be described and evaluated in the Surface and Ground Water Contingency Plan (see condition 35 below).</i></p>	NA	<p>There is no impact on baseflow and this is reported in the AEMR annually. The 2013-2014 AEMR states "While there appears to be variation in baseflow through the recorded period, baseflow is at pre-mining levels. The updated groundwater model flow rate reduction predicted for Flyers Creek and Cadiangulliong Creek is very limited as the creeks fall outside the zone of depressurisation".</p> <p>CVO has therefore not been required to offset the loss of baseflow to the Belubula River and associated creeks caused by the project. The Expert Opinion on Surface Water Management expressed by SRK Consulting indicated that the Water Management Plan does not provide clear guidance on the management of baseflow offsets, and a recommendation has been made accordingly.</p>	AEMR 2011-12 - page 128-132 AEMR 2012-13 - page 159-162 AEMR 2013-14 - page 161-164 Water Management Plan Expert Opinion on Surface Water Management – SRK Consulting	<p>S3.25.1 It is recommended by the technical expert reviewing surface water management that CVO update the Water Management Plan to reflect the approach to calculation and offsetting of baseflow losses.</p> <p>Ranking: N</p>
S3.26	<p>At least 6 months prior to the cessation of mining operations, the Proponent shall demonstrate that it has made adequate provision to provide long-term offsets to account for the permanent baseflow loss caused by the project, in consultation with NOW, and to the satisfaction of the Secretary.</p> <p><i>Note: The long-term offsets may be provided via the retiring of adequate water entitlements to account for the permanent loss attributable to the project.</i></p>	NA	Mining operations are not due to cease until at least 2031.		Not Applicable

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
S3.27	<p>Cadiangullong Creek Flows The Proponent shall manage water releases from Cadiangullong Dam to provide: (a) flows of at least: - 3.4 ML/day, for periods when inflows into the dam are more than 3.4 ML/day and the water level in the dam is at or above the lowest valve level on the multi-level offtake (ie. 773.0 metres AHD); - the volume equal to the inflow into the dam, for periods when inflows into the dam are between 0.4 and 3.4 ML/day and the water level in the dam is at or above the lowest valve level on the multi-level offtake; - 0.4 ML/day, for periods when inflows into the dam are less than 0.4 ML/day and the water level in the dam is at or above the lowest valve level on the multi-level offtake; - the volume equal to the inflow into the dam, up to 0.4ML/day, for periods when the water level in the dam is below the lowest valve level on the multi-level offtake and above the level of the scour valve (ie. 762.8 metres AHD); and - zero, when the water level in the dam is below the level of the scour valve; and (b) releases of up to 4 medium flows (of the order of 12 to 15 ML/day) per year, each for a duration of 1 to 3 days, with timing and frequency of such flows determined by hydrographs of typical medium flows, to the satisfaction of, and unless otherwise approved by, NOW.</p>	O	<p>There is a gauging station upstream of the dam (telemetered) and an electromagnetic flow meter to measure flows from the dam, plus two more stations upstream and downstream of the junction of Cadiangullong Creek with Rodds Ck. One of the environmental team assesses flows for release of water from below the dam wall through a T-valve in the pipeline to the process plant that takes water from a multi-level offtake. This operation is controlled by SAOC. The requirement in (b) can only occur when there is heavy rainfall. It was reported that the requirement of 12 to 15 ML/day is greater than the flow of the release pipe.</p>	<p>Management Assertion Site inspection Interviews</p>	<p>3.27.1 It is recommended that an amendment be sought for Condition 27(b) to set the required flow to a figure that can be achieved through the release pipe; or alternatively: 3.27.2 If possible, the riparian release equipment should be modified to allow discharge of 15ML/day from the multi-level offtake. 3.27.3 It is further recommended that an amendment be sought for Condition 27(b) to enable the medium flows to be measured at the Dam Gauging station (412144) rather than at the T-valve in the pipeline to the process plant that takes water from a multi-level offtake.</p> <p>Ranking: I</p>
S3.28	<p>The Proponent shall not extract any water from Cadiangullong Dam when the volume in the dam drops to 10 percent or less of its total capacity (ie. 778.8 metres AHD), unless otherwise approved by NOW. Flow releases (see condition 27 above) shall be continued during any such period, except when the level of water in the dam drops below the level of the dam's scour valve (ie. 762.8 metres AHD).</p>	NA	<p>The dam level has not dropped below 10% during the audit period.</p>	<p>Management assertion</p>	<p>Not Applicable</p>
S3.29	<p>Flyers Creek Flows The Proponent shall ensure that natural environmental flows of up to 3.5 ML/day into Flyers Creek weir are allowed to pass uninterrupted downstream, and any approved water extraction is limited to medium and high flows, to the satisfaction of NOW.</p>	NC	<p>Management indicated that they had not achieved the 3.5ML/day into the Flyers Creek weir for a period of 4 consecutive days in January 2012. As a result they adjusted the Logic Control at the pump station to ensure higher flows down stream and have not dropped below that flow rate for any other time in the 2012 - 2014 period. They also indicated that this matter was reported to NSW Office of Water. It was reported in section 12.6.3 of the 2012 AEMR. The 2012 AEMR was provided to Office of Water (being on the address list for the AEMR mail out to regulators). NOW was represented at the AEMR review meeting and the minutes in Dropbox (file dated 12/12/2012) raise no issue from NOW. The Annual Data required under the Project Approval are detailed at section 2.8 in the 2012 - 2013 Annual Environmental Management Report and section 2.8 in the 2013 - 2014 Annual Environmental Management Report, as well as the Water Management Plan and the monthly CVO stream flow reports are all provided on the CVO website.</p> <div style="border: 1px solid black; background-color: yellow; padding: 5px; width: fit-content; margin: 10px auto;"> <p>RISK ASSESSMENT: Likelihood of harm – Unlikely Level of impact – Low Level of risk – Low</p> </div>	<p>Management assertion CVO website: 2011-2012 AEMR 2012 - 2013 AEMR 2013 - 2014 AEMR.</p>	<p>There are no recommendations</p>

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
S3.30	<p>Site Water Management Plan The Proponent shall prepare and implement a Water Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with NOW and EPA, and be submitted to the Secretary for approval within 6 months of the date of this approval; and</p> <p>(b) include a:</p> <ul style="list-style-type: none"> - Site Water Balance; - Erosion and Sediment Control Plan; - Surface Water Monitoring Program; - Groundwater Monitoring Program; and - Surface and Ground Water Contingency Plan. 	C	This was outside the Audit period although verification was received that this was carried out. Version 4 of the approved CVO Water Management plan is available on the CVO web site and an E mail dated 5/12/14 was sighted that related to the Secretary of the Department of Planning approving the CVO Water Management Plan. The CVO Water Management Plan was originally approved in December 2000 and is reviewed annually to ensure goals and targets are being met.	Management assertion CVO website : Water Management Plan e mail from Department of Planning dated 5/12/14 approving current Water Management Plan.	There are no recommendations
S3.31	<p>The Site Water Balance must:</p> <p>(a) include details of:</p> <ul style="list-style-type: none"> - sources and security of water supply; - water use on site; - water management on site; - any off-site water transfers; - reporting procedures; and <p>(b) investigate and implement all reasonable and feasible measures to minimise water use by the project.</p>	C	The Site Water Balance forms part of the CVO Water Management Plan and includes the details required. Cadia investigate efficiency through comparisons with similar Industry (systems & climate) and review current practices through constant monitoring with weekly and monthly targets reviewed in an efficiency chart.	CVO website: Water Management Plan (v 4 Dec. 2014) Site Water Balance. Management assertion e mail from Department of Planning dated 5/12/14 approving current Water Management Plan.	There are no recommendations
S3.32	<p>The Erosion and Sediment Control Plan must:</p> <p>(a) be consistent with the requirements of Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition, 2004 (Landcom);</p> <p>(b) identify activities that could cause soil erosion and generate sediment;</p> <p>(c) describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters;</p> <p>(d) describe the location, function, and capacity of erosion and sediment control structures; and</p> <p>(e) describe what measures would be implemented to maintain the structures over time.</p>	C	The Erosion and Sediment controls and results are detailed in the Annual Environmental Management Reports of 2012-2013 and 2013 - 2014 and are identified as being in accordance with the EPL 5590. The Water Management Plan indicates that a review of Sediment Control structures was completed in June 2013 and has an appendix A related to Sediment Control calculation and site drainage.	CVO website *2012 - 2013 AEMR *2013 - 2014 AEMR. * Water Management Plan (v 4 Dec. 2014) e mail from Department of Planning dated 5/12/14 approving current Water Management Plan.	There are no recommendations
S3.33	<p>The Surface Water Monitoring Program must include:</p> <p>(a) detailed baseline data, based on sound statistical analysis, to benchmark the pre-mining natural variation in surface water flows and quality in creeks and other water bodies that could potentially be affected by the project;</p> <p>(b) surface water and stream health impact assessment criteria;</p> <p>(c) a program to monitor and assess:</p> <ul style="list-style-type: none"> - impacts on surface water flows and quality; - impacts on water users; - stream health conditions in Swallow Creek, Cadiangullong Creek, Rodds Creek, Flyers Creek and Diggers Creek, including riparian vegetation; - potential acid rock drainage; - potential leakage or spillage from tailings, mineral concentrate and effluent pipelines; <p>(d) a program for the ongoing verification and refinement of the surface water model; and</p> <p>(e) reporting procedures for the results of the monitoring program and model verification.</p>	C	In current CVO Water Management Plan as approved by Department of Planning	CVO website Water Management Plan e mail from Department of Planning dated 5/12/14 approving current Water Management Plan.	There are no recommendations

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
S3.34	<p>The Groundwater Monitoring Program must include:</p> <p>(a) detailed baseline data, based on sound statistical analysis, to benchmark the pre-mining natural variation in groundwater levels, yield and quality (including privately-owned bores within the maximum predicted 1 metre groundwater drawdown contour, as indicated on the plans in Appendix 5);</p> <p>(b) groundwater impact assessment criteria (including for monitoring bores and privately-owned bores);</p> <p>(c) a program to monitor:</p> <ul style="list-style-type: none"> - impacts on the groundwater supply of potentially affected landowners; - impacts on springs and groundwater dependent ecosystems; - the volume of groundwater seeping into open pit and underground mine workings; - regional groundwater levels and quality in all potentially affected aquifers; - potential acid rock drainage; <p>(d) a program for the ongoing verification and refinement of the groundwater model; and</p> <p>(e) reporting procedures for the results of the monitoring program and model verification.</p>	C	In current CVO Water Management Plan as approved by Department of Planning	CVO website: Water Management Plan e mail from Department of Planning dated 5/12/14 approving current Water Management Plan.	There are no recommendations
S3.35	<p>The Surface and Ground Water Contingency Plan must include:</p> <p>(a) a protocol for the investigation, notification and mitigation of any exceedances of the surface water, stream health and groundwater impact assessment criteria;</p> <p>(b) measures to mitigate and/or compensate potentially affected landowners in accordance with the compensatory water supply requirements in condition 24 above;</p> <p>(c) a protocol for providing advance warning and water supply measures for landowners of privately-owned land that are predicted to exceed the surface or ground water impact assessment criteria at some stage during the project life;</p> <p>(d) a protocol for investigating, evaluating and providing the baseflow offsets required under condition 25 above, including a detailed evaluation (in the initial plan) of offsets provided under previous consents for the project; and</p> <p>(e) the procedures that would be followed if any significant unforeseen impacts on surface or ground water are detected during the project.</p>	C	Sighted current CVO Water Management Plan as approved by Department of Planning. It includes a Trigger & Response Plan that delegates responsibilities and requires notification to NOW, a Water supply contingency for affected landholders, a protocol and triggers for advanced warning and investigations and a baseflow offset review process. Management report that there have been no significant unforeseen impacts on ground water during the 2012 – 2014 period. The Expert Opinion on Groundwater Management provided by SRK Consultants suggests that the methods to determine groundwater level triggers at selected locations may be inconsistent, and have made the recommendation provided. It is asserted that the use of the calibrated transient numerical groundwater model is an appropriate tool for this purpose.	Management assertion CVO website: Water Management Plan e mail from Department of Planning dated 5/12/14 approving current Water Management Plan.	<p>S3.35.1 It is recommended by the Groundwater Management Expert that if not already the case, in-house CVO or Newcrest staff should be trained in the use of the site groundwater model to reduce the reliance and potential loss of intellectual property, but that ongoing remote support is still recommended.</p> <p>Ranking: N</p>

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
REHABILITATION AND BIODIVERSITY OFFSETS					
S3.36	<p>Rehabilitation By the end of 2010, the Proponent shall prepare a Rehabilitation Strategy for the project to the satisfaction of the Secretary. This strategy must:</p> <p>(a) be prepared by a team of suitably qualified and experienced experts whose appointment has been endorsed by the Secretary;</p> <p>(b) be prepared in consultation with relevant stakeholders, including the Councils and the CCC;</p> <p>(c) investigate options for the future use of disturbed areas including voids upon the completion of mining;</p> <p>(d) describe and justify the proposed rehabilitation strategy for the site, including the post-mining landform and use; and</p> <p>(e) define the rehabilitation objectives for the site, as well as the proposed completion criteria for this rehabilitation.</p> <p><i>Note: The strategy should build on the concept strategy depicted in Appendix 6.</i></p>	C	<p>The current Rehabilitation Strategy is dated 30/5/2013 and is on the CVO website.</p> <p>This strategy includes voids and site infrastructure.</p> <p>Management advised that rehabilitation is also contained in the Mining Operation Plan 2014 - 2016 and the live Mining Lease Documents that are currently in place.</p>	<p>Management assertion CVO website: * Rehabilitation Strategy</p>	There are no recommendations
S3.37	<p>The Proponent shall:</p> <p>(a) carry out rehabilitation progressively, that is, as soon as reasonably practicable following disturbance; and</p> <p>(b) achieve the rehabilitation objectives in the Rehabilitation Strategy (see condition 36), to the satisfaction of the Minister for Mineral Resources.</p>	C	<p>A comprehensive report is provided in the 2012 - 2013 and 2013 - 2014 Annual Environmental Management Reports that are available on the CVO webpage.</p> <p>Annual Rehabilitation Monitoring Reports by DnA Environmental are also available on the CVO website that compare progress against approval requirements.</p> <p>Site inspections verified that progressive rehabilitation was progressing (Photos 12 and 13).</p>	<p>Management assertion CVO website: *Rehabilitation Strategy *2012 - 2013 Annual Environmental Management Report *2013 - 2014 Annual Environmental Management Report *</p>	There are no recommendations
S3.38	<p>Biodiversity Offsets The Proponent shall:</p> <p>(a) implement the biodiversity offset strategy as described in the EA, and summarised in Table 14 (and shown conceptually in Appendix 6); and</p> <p>(b) investigate ways to salvage and beneficially use resources (including timber, fauna habitat, seed and soil resources) in areas subject to subsidence as far as is reasonable and feasible, to the satisfaction of the Secretary.</p> <p><i>See Table 14: Biodiversity Offset Strategy</i></p>	C	<p>The offset strategy is included in and approved by Land and Biodiversity Management Plan.</p> <p>Management has advised that the Commonwealth Department of the Environment gave approval on the 14/5/2014. On the 11/3/14, in a letter to Cadia, the Department of Planning requested Bank Guarantees to cover the offset strategy and these were forwarded by Cadia by e mail on the 20/5/2014. Management have advised that discussions with Department of Planning are ongoing in this matter.</p>	<p>Land and Biodiversity Management Plan. CVO website: - Department of Planning Project Approval (January 2010) - Federal Department of Environment, Water Heritage & the Arts (Feb 2010)</p>	There are no recommendations
S3.39	<p>Within 2 years of the date of this approval, the Proponent shall make suitable arrangements to provide appropriate long term security for the offset areas to the satisfaction of the Secretary.</p>	C	<p>In March 2013 Cadia forwarded to the Department of Planning a copy of a letter from Blake Dawson, Solicitors in Sydney, giving advice to Cadia on the use of a voluntary planning agreement to satisfy the requirements of Environmental Planning Condition 39 of the part 3A approval for the Cadia East Project as related to 3 nominated areas and biodiversity offset.</p> <p>In an e mail to Cadia dated the 5/6/13 the Department of Planning acknowledged this correspondence and indicated they should be able to finalise the VPA by the end of August.</p>	<p>Letter from Blake Dawson Solicitors (March 2013) e Mail Department of Planning (June 2013) Letter from Department of Planning (March 2014) e Mail from Cadia (May 2014)</p>	There are no recommendations

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
S3.40	<p>Within 6 months of the approval of the Landscape Management Plan (see condition 41 below), the Proponent shall lodge a conservation and biodiversity bond with the Department to ensure that the offset strategy is implemented in accordance with the performance and completion criteria of the Landscape Management Plan. The sum of the bond shall be determined by:</p> <p>(a) calculating the full cost of implementing the offset strategy; and (b) employing a suitably qualified quantity surveyor to verify the calculated costs, to the satisfaction of the Secretary.</p> <p><i>Notes:</i></p> <ul style="list-style-type: none"> - If the offset strategy is completed to the satisfaction of the Secretary, the Secretary will release the conservation bond. - If the offset strategy is not completed to the satisfaction of the Secretary, the Secretary will call in all or part of the conservation bond, and arrange for the satisfactory completion of the relevant works. - If amendments to the Mining Act 1992 allow the Minister for Mineral Resources to require rehabilitation securities under a Mining Lease which apply to the implementation of rehabilitation works outside the boundary of a Mining Lease, the Proponent may transfer the conservation bond required under this approval to the Minister of Mineral Resources provided the Secretary and DRE agree to the transfer. 	C	<p>On the 11/3/14, in a letter to Cadia, the Department of Planning requested Bank Guarantees to cover the offset strategy and these were forwarded by Cadia by e mail on the 20/5/2014.</p>	<p>e Mail Department of Planning (June 2013) Letter from Department of Planning (March 2014) e Mail from Cadia to Department of Planning (May 2014)</p>	There are no recommendations
S3.41	<p>Landscape Management Plan</p> <p>The Proponent shall prepare and implement a Landscape Management Plan for the project to the satisfaction of the Minister for Mineral Resources and the Secretary. This plan must:</p> <p>(a) be prepared in consultation with OEH, NOW and the Councils, and be submitted to the Secretary within 18 months of the date of this approval; (b) include:</p> <p>(i) the rehabilitation objectives for the site and offset areas; (ii) a description of the short, medium, and long term measures that would be implemented to:</p> <ul style="list-style-type: none"> - rehabilitate the site in accordance with the Rehabilitation Strategy (see condition 36); - implement the offset strategy; and - manage the remnant vegetation and habitat on the site and in the offset areas; <p>(iii) detailed performance and completion criteria for the site rehabilitation and implementation of the offset strategy; (iv) a detailed description of the measures that would be implemented over the next 3 years, including the procedures to be implemented for:</p> <ul style="list-style-type: none"> - progressively rehabilitating disturbed areas; - implementing revegetation and regeneration within the disturbance areas and offset areas, including establishment of canopy, sub-canopy (if relevant), understorey and ground strata; - investigating ways to salvage and beneficially use resources in areas subject to subsidence (including timber, fauna habitat, seed and soil resources); - protecting vegetation and soil outside the disturbance areas; - rehabilitating creeks and drainage lines on the site (both inside and outside the disturbance areas); - managing potential acid forming material (including ensuring effective isolation of potential acid forming material in rock dumps); - managing salinity; - conserving and reusing topsoil; - managing salinity; 	C	<p>The first CVO Land & Biodiversity Management Plan (Landscape Management Plan) was issued on the 26/6/11 and approved 19/3/12. It was revised 20/2/13 and approved 16/5/13.</p> <p>The Plan is in line with the Project Approval and includes Roles & Responsibilities of persons holding various positions in Cadia. With reference to Consultation, it provides a list of the various Government Bodies, including NOW and OEH, that took part in the consultation, a list of the people engaged as an expert panel and a statement that the Community Consultative Committee, including representatives of Local Councils , have been involved in the consultative process.</p> <p>The Expert Opinion on General Land Management provided by SRK Consultants concludes that land management and rehabilitation is progressing utilising practices in line with other mine sites, but expresses concerns regarding topsoil identification, stripping and management (including placement). Further technical issues to be addressed include encapsulation of the PAF in the Southern Waste Rock Emplacement, verification that low sulphur waste is not a potential source of neutral mine drainage, waste management verification, and the performance of the encapsulation strategy. It is asserted by CVO that Section 3.1 and 3.7.1 of the OKC report (Appendix O in the 2010 – 2011 AEMR) covers this issue. The summary (Section 4) also highlights that the appropriate hydraulic conductivity can be reached. This was factored in with the net percolation rates for the modelling, as covered in the report. The OKC report does not provide any guidance on topsoil stripping, however the Land & Biodiversity Management Plan includes guidance on the management of topsoil.</p>	<ul style="list-style-type: none"> • CVO website: CVO Land & Biodiversity Management Plan (Landscape Management Plan v 2 approved 16/5/13). • Closure Planning Support Studies For the Cadia Valley Operations, South Waste Rock Dump, O’Kane Consultants Pty. Ltd. June 2010 report (Appendix O in the 2010 – 2011 AEMR). • Management Assertion 	There are no recommendations

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	<ul style="list-style-type: none"> - conserving and reusing topsoil; - undertaking pre-clearance surveys; - managing impacts on terrestrial and aquatic fauna (including a Squirrel Glider conservation strategy); - landscaping the site to minimise visual impacts; - collecting and propagating seed for rehabilitation works; - salvaging and reusing material from the site for habitat enhancement; - controlling weeds and feral pests, including terrestrial and aquatic species; - managing grazing and agriculture on site; - controlling access; - bushfire management; - managing and minimising any potential adverse impacts associated with the final voids; and - managing and minimising any adverse socio-economic effects associated with mine closure; (v) a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria; (vi) a description of the potential risks to successful rehabilitation and/or revegetation, and a description of the contingency measures that would be implemented to mitigate these risks; and (vii) details of who would be responsible for monitoring, reviewing, and implementing the plan. 				
Aboriginal Heritage					
S3.42	<p>Aboriginal Cultural Heritage Management Plan</p> <p>The Proponent shall prepare and implement an Aboriginal Cultural Heritage Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with OEH and the Aboriginal community, and be submitted to the Secretary for approval within 6 months of the date of this approval;</p> <p>(b) include a:</p> <ul style="list-style-type: none"> - detailed salvage program and management plan for Aboriginal sites and potential archaeological deposits within the project disturbance area; - detailed description of the measures that would be implemented to protect and monitor Aboriginal sites outside the project disturbance area; - description of the measures that would be implemented if any new Aboriginal objects or skeletal remains are discovered during the project; and - protocol for the ongoing consultation and involvement of the Aboriginal communities in the conservation and management of Aboriginal cultural heritage on the site. 	C	<p>The CVO Aboriginal Cultural Heritage Plan was approved in May 2013 and is located on the CVO website under Heritage.</p> <p>The Orange Local Aboriginal Land Council were the only registered stakeholder and form part of the consultation process both in development and ongoing implementation of the Plan.</p> <p>In April 2013 Cadia released a report prepared by Kayandell Archaeological Services that undertook Test Excavation under the CVO Aboriginal Cultural Heritage Plan at two of the three potential Archaeological deposits previously identified . The final report was distributed to the Orange Local Aboriginal Land Council and the Office of Environment, Heritage & Aboriginal Places. In February 2014 Cadia engaged Insite Heritage to undertake additional investigation based on the Kayandel report but no Aboriginal objects were found. Again this report was distributed as required.</p>	<ul style="list-style-type: none"> • Management assertions CVO website: • Aboriginal Cultural Heritage Management Plan • Cadia East Project - Archaeological Test Excavations: Terrace 48, Terrace 62 & Southern Sloping Plain by Kayandel Archaeological Services dated April 2013. • Report on Additional Archaeological Test Investigation Works - Southern Sloping Plain TIA 1 & TIA 2 by Insite Heritage April 2014 	There are no recommendations

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
HISTORICAL HERITAGE					
S3.43	<p>Historical Heritage Management Plan The Proponent shall prepare and implement a Historical Heritage Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with the Heritage Branch and be submitted to the Secretary for approval within 6 months of the date of this approval;</p> <p>(b) include:</p> <ul style="list-style-type: none"> - compilation of archival recording, excavation and/or salvage of heritage items within the project disturbance area, including the Wire Gully Gold Workings and the Little Cadia Copper Mine; - a detailed conservation management strategy for heritage items outside the project disturbance area but within the vicinity of the site, including a: <ul style="list-style-type: none"> o description of the measures that would be implemented to protect heritage items from disturbance, including disturbance from blasting activities; o program to monitor the effects of blasting on relevant heritage items; and o an Interpretation Plan for the Cadia Village. <p><i>Note: The Little Cadia Copper Mine is outside the zone of subsidence for the Cadia East mine but within its zone of influence, and therefore may potentially be subject to impact. It is proposed to conserve the site in-situ, if possible.</i></p>	C	The CVO website does not have a Historical Heritage Management Plan document on it and states that the Plan is currently under review. Management have advised that the Plan was forwarded to the Secretary of the Department of Planning in the required time frame but to date approval has not been given. An email forwarding the Draft CVO Historical Heritage Management Plan dated 6 July 2010 was provided. They also advised that they have been working to the Plan as forwarded to the Department of Planning and relevant Heritage Legislation.	CVO website Draft CVO Historical Heritage Management Plan.	There are no recommendations
TRANSPORT					
S3.44	<p>Road Construction The Proponent shall:</p> <p>(a) realign the affected sections of Cadia Road, and reconstruct the Cadia Road / Woodville Road intersection, at least 6 months before causing any subsidence of the affected roads; and</p> <p>(b) construct the CVO Dewatering Facility site intersection on Newbridge Road, prior to the commencement of construction of the facility, to the satisfaction of the applicable Council.</p>	C	<p>a) No subsidence reported or identified</p> <p>b) Letter dated 15/8/14 from Blayney Shire Council and copy of plans for both road works and buildings related to the construction of CVO Dewatering facility on Newbridge Road. The letter is a Notice of Determination of Construction Certificate Application 83/2014 giving approval.</p> <p>Management advise that they have not yet actioned the approval and this was verified by inspection of the proposed location for the Plant.</p>	<ul style="list-style-type: none"> • Management assertions • Observation • Letter dated 15/8/14 from Blayney Shire Council giving DVA approval with relevant road & building Plans attached. 	There are no recommendations
S3.45	<p>Road Haulage The Proponent shall transport all concentrate:</p> <p>(a) to the Blayney Dewatering Facility and CVO Dewatering Facility by pipeline; and</p> <p>(b) from the Blayney Dewatering Facility and CVO Dewatering Facility by rail.</p> <p>If during the life of the project pipeline or rail services are not available to transport the concentrate the Proponent may apply to the Secretary for permission to temporarily use truck facilities until such time as pipeline or rail services are returned to normal service.</p>	C	Management advise that all concentrate is transported to Blayney Dewatering Facility by pipeline and that no trucks are used on public roads in the transport process.	<ul style="list-style-type: none"> • Management assertions • Observation 	There are no recommendations

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
S3.46	<p>Road Haulage The Proponent shall ensure that all traffic accessing the Blayney Dewatering Facility does so via Marshalls Lane and Gerty Street. Hill Street shall not be used except with the written permission of Blayney Shire Council.</p>	C	Sighted letter dated 7/9/12 from Blayney Shire Council giving permission to Cadia to use Hill street under certain conditions - currently posted weight limits and not during St Josephs Central School operating hours.	Letter dated 7/9/12 from Blayney Shire Council	There are no recommendations
VISUAL					
S3.47	<p>CVO Dewatering Facility Prior to the commencement of construction of the CVO Dewatering Facility, the Proponent shall prepare: (a) architectural plans for the facility in a manner that achieves a suitable standard of design; and (b) a Landscape Plan for the facility, including provision for vegetative screening to minimise the visual impacts on adjacent receivers, in consultation with Blayney Shire Council, and to the satisfaction of the Secretary. Following approval, these plans must be implemented to the satisfaction of the Secretary.</p>	C	Sighted e Mail dated 4/7/14 from Department of Planning & Environment advising Cadia that the Architectural Plans & Landscape Plans for the CVO Dewatering Facility have been approved in accordance with condition 47 of schedule 3 of the Cadia East Project Approval. To date the plans have not been implemented.	e Mail dated 4/7/14 from Department of Planning & Environment	There are no recommendations
S3.48	<p>Mining Operations Additional Visual Impact Mitigation Upon receiving a written request from an owner of privately-owned land with significant direct views from a residence to the mining operations, the Proponent shall implement additional visual impact mitigation measures (such as landscaping treatments or vegetation screens) in consultation with the landowner, and to the satisfaction of the Secretary. These mitigation measures must be reasonable and feasible, and must be implemented within a reasonable timeframe. If within 3 months of receiving this request from the owner, the Proponent and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution. Notes: - The additional visual impact mitigation measures must be aimed at reducing the visibility of the mine from significantly affected residences and do not necessarily require measures to reduce visibility of the mine from other locations on the affected properties. The additional visual impact mitigation measures do not necessarily have to include measures on the affected property itself (i.e. the additional measures may consist of measures outside the affected property boundary that provide an effective reduction in visual impacts). - Except in exceptional circumstances, the Secretary will not require additional visual impact mitigation to be undertaken for residences that are more than 5 kilometres from the mining operations.</p>	C	During the audit It was requested of Cadia to produce any written requests from owners of privately owned land for the period 2012 - 2014. Management advise that no written request has been received.	Management assertion	There are no recommendations

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
S3.49	Visual Amenity and Lighting The Proponent shall: (a) implement all reasonable and feasible measures to mitigate visual and off-site lighting impacts of the project; (b) ensure no outdoor lights shine above the horizontal; and (c) ensure that all external lighting associated with the project complies with Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting, to the satisfaction of the Secretary.	C	Following two verbal complaints from two separate residents (in 2013) about lighting from the Waste Dump and the Tailings area and internal incident report was raised and the matters resolved within one hour by re-aligning the lights. Cadia also have a Lighting Management Plan (29/10/12), and have included Lighting in the Environmental Handbook that is part of the employee induction training. The Handbook and internal FACT sheet on lighting were viewed during the audit. Management advise that all lighting is installed and maintained by qualified and licenced tradespeople who are reminded of the relevant Australian Standards that apply on this site.	<ul style="list-style-type: none"> Management assertion. CVO website: Lighting Management Plan Environmental Handbook 	There are no recommendations
WASTE					
S3.50	Waste Minimisation (a) minimise the waste generated by the project; (b) ensure that the waste generated by the project is appropriately stored, handled and disposed of; (c) manage on-site sewage treatment and disposal in accordance with the requirements of the applicable Council; and (d) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.	O	The AEMRs cover the generation of rock, tailings and general waste over the 2012 - 2013 and 2013 - 2014 periods. For General waste, including recyclables and rebate items (oil, batteries, metal) they record the outgoings against target outgoings. The actual waste generated against targets for 2012 - 2013 and for 2013 - 2014 has been less than estimated. In general this waste is collected and disposed of by a contractor named Remondis (since 2006). Management advise that Remondis provide them with exit amounts leaving the site and receipts from the sites that the waste is deposited at and these are the documents used to prepare the data for the Annual Report. They also carry out spot inspections of the various sites waste is being stored before removal from the site. To date they have not carried out any off site inspections to verify that Remondis are disposing of it at authorised waste receiving sites and that the receipts are a genuine record. Currently they are working to the Waste Management Plan approved in February 2009 but they are considering the preparation of an updated Plan and procedure. Observations made were that both Cadia and Contractor areas were well maintained and any waste or recyclable materials were segregated and well marked and did not appear to be having an adverse impact on the environment.	Management assertion CVO website: 2012 - 2013 AEMR 2013 - 2014 AEMR. Waste Management Plan Observations	S3.50.1 Review and update the Waste Management Plan and Procedures to ensure they reflect current processes. Consider procedures that include audit of Contractors' off site disposal of waste to ensure it is being disposed of at an authorised disposal site. Ranking: I
ADDITIONAL PROCEDURES					
S4.1	Notification of Landowners Within 1 month of the date of this approval, the Proponent shall notify the owners of the land listed in Table 1 of schedule 3 in writing that they have the right to require the Proponent to acquire their land at any stage during the project.	NA	This was outside the Audit period		Not Applicable
S4.2	Notification of Landowners If the results of monitoring required in schedule 3 identify that impacts generated by the project are greater than the relevant impact assessment criteria, except where a negotiated agreement has been entered into in relation to that impact, then the Proponent shall, within 2 weeks of obtaining the monitoring results, notify the Secretary, the affected landowners and tenants (including tenants of mine owned properties) accordingly, and provide quarterly monitoring results to each of these parties until the results show that the project is complying with the criteria in schedule 3.	C	Management advised that they have complied with Schedule 3 Environmental Performance Conditions and have reported the monitoring data to show compliance in the Annual Environmental Monitoring Reports of 2012 - 2013 and 2013 - 2014.	Management assertion CVO website: *2012 - 2013 AEMR *2013 - 2014 AEMR. *Cadaai East project Approval - Schedule 3 Environmental Performance Conditions Observations	There are no recommendations

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
S4.3	<p>Independent Review</p> <p>If a landowner of privately-owned land considers the project to be exceeding the impact assessment criteria in schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the project on his/her land.</p> <p>If the Secretary is satisfied that an independent review is warranted, the Proponent shall within 3 months of the Secretary's decision:</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 Secretary, to conduct monitoring on the land, to:</p> <ul style="list-style-type: none"> - determine whether the project is complying with the relevant impact assessment criteria in schedule 3; and - identify the source(s) and scale of any impact on the land, and the project's contribution to this impact; and (c) give the Secretary and landowner a copy of the independent review. 	C	No requests to date made from the Secretary for an Independent Review.	Management assertion	There are no recommendations
S4.4	<p>Independent Review</p> <p>If the independent review determines that the project is complying with the relevant impact assessment criteria in schedule 3, then the Proponent may discontinue the independent review with the approval of the Secretary.</p> <p>If the independent review determines that the project is not complying with the relevant impact assessment criteria in schedule 3, then the Proponent shall:</p> <p>(a) implement all reasonable and feasible measures, in consultation with the landowner, to ensure that the project complies with the relevant criteria, and conduct further monitoring to determine whether these measures ensure compliance; or</p> <p>(b) secure a written agreement with the landowner to allow exceedances of the relevant impact assessment criteria, to the satisfaction of the Secretary.</p> <p>If the further monitoring referred to under paragraph (a) above determines that the project is complying with the relevant impact assessment criteria, then the Proponent may discontinue the independent review with the approval of the Secretary.</p>	NA	No requests to date made from the Secretary for an Independent Review.	Management assertion	Not Applicable
S4.5	<p>Land Acquisition</p> <p>Within 3 months of receiving a written request from a landowner with acquisition rights, the Proponent shall make a binding written offer to the landowner based on:</p> <p>(a) the current market value of the landowner's interest in the property at the date of this written request, as if the property was unaffected by the project, having regard to the:</p> <ul style="list-style-type: none"> - existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and - presence of improvements on the property and/or any approved building or structure which has been physically commenced at the date of the landowner's written request, and is due to be completed subsequent to that date, but excluding any improvements that have resulted from the implementation of the 'additional noise mitigation measures' in condition 7 of schedule 3 or 'compensatory water supplies' in condition 24 of schedule 3; <p>(b) the reasonable costs associated with:</p> <ul style="list-style-type: none"> - relocating within the same local government area, or to any other local government area determined by the Secretary; and 	NA	No written requests received	Management assertion	Not Applicable

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	<p>- obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is to be acquired; and (c) reasonable compensation for any disturbance caused by the land acquisition process.</p> <p>However, if at the end of this period, the Proponent and landowner cannot agree on the acquisition price of the land and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Secretary for resolution.</p> <p>Upon receiving such a request, the Secretary shall request the President of the NSW Division of the Australian Property Institute to appoint a qualified independent valuer to:</p> <p>(a) consider submissions from both parties; (b) determine a fair and reasonable acquisition price for the land and/or the terms upon which the land is to be acquired, having regard to the matters referred to in paragraphs (a)-(c) above; (c) prepare a detailed report setting out the reasons for any determination; and (d) provide a copy of the report to both parties.</p> <p>Within 14 days of receiving the independent valuer's report, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the independent valuer's determination.</p> <p>(b) determine a fair and reasonable acquisition price for the land and/or the terms upon which the land is to be acquired, having regard to the matters referred to in paragraphs (a)-(c) above; (c) prepare a detailed report setting out the reasons for any determination; and (d) provide a copy of the report to both parties.</p> <p>Within 14 days of receiving the independent valuer's report, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the independent valuer's determination.</p> <p>However, if either party disputes the independent valuer's determination, then within 14 days of receiving the independent valuer's report, they may refer the matter to the Secretary for review. Any request for a review must be accompanied by a detailed report setting out the reasons why the party disputes the independent valuer's determination. Following consultation with the independent valuer and both parties, the Secretary shall determine a fair and reasonable acquisition price for the land, having regard to the matters referred to in paragraphs (a)-(c) above and the independent valuer's report. Within 14 days of this determination, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the Secretary's determination.</p> <p>If the landowner refuses to accept the Proponent's binding written offer under this condition within 6 months of the offer being made, then the Proponent's obligations to acquire the land shall cease, unless the Secretary determines otherwise.</p>				

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
S4.6	Land Acquisition The Proponent shall pay all reasonable costs associated with the land acquisition process described in condition 5 above.	NA			Not Applicable
S4.7	Land Acquisition If the Proponent and landowner agree that only part of the land shall be acquired, then the Proponent shall also pay all reasonable costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of the plan at the Office of the Registrar-General.	NA			Not Applicable
SCHEDULE 5					
ENVIRONMENTAL MANAGEMENT					
S5.1	Environmental Management Strategy The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Secretary. The strategy must: (a) be submitted to the Secretary for approval within 6 months of the date of this approval; (b) provide the strategic framework for environmental management of the project; (c) identify the statutory approvals that apply to the project; (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project; (e) describe the procedures that would be implemented to: - keep the local community and relevant agencies informed about the operation and environmental performance of the project; - receive, handle, respond to, and record complaints; - resolve any disputes that may arise during the course of the project; - respond to any non-compliance; and - respond to emergencies; (f) include: - copies of the various strategies, plans and programs that are required under the conditions of this approval once they have been approved; and - a clear plan depicting all the monitoring to be carried out in relation to the project.	O	The first Draft of the Environmental Management Strategy was lodged on the 6/7/2010, a second Draft on the 15/8/2012 and the last Draft on 21/3/2013. The Strategy generally provides the detail required in the Project Approval requirements, however it does not contain "a clear plan depicting all the monitoring to be carried out in relation to the project". Section 4.1 MONITORING PROGRAMS of the Strategy states "Monitoring programs have been developed for the site where required by conditions of the Project Approval. Each program has been developed in consultation with relevant stakeholders to achieve compliance with the relevant consent criteria in a way that prevents and/or minimises the environmental impact generated by the development. The existing CVO environmental monitoring programs include: • Air quality • Noise • Vibration • Meteorological • Groundwater, including level, quality and extraction (volume) • Surface water, including quality and flow • Aquatic ecosystem monitoring • Acid rock drainage • Pests and weeds • Rehabilitation monitoring No "clear plan" is included, as the Strategy does not reference documents that set out the monitoring to be carried out under each item in the list above. This section does not reference the CVO Monitoring Manual. Approval of the Strategy was finally given by the Department of Planning & Environment in a letter dated the 11/7/2014. Cadia produced for Audit a copy of the Monitoring Manual that detailed standards and requirements for on site monitoring and a monitoring schedule in the form of a calendar matrix. This included Analysis Suites, Groundwater Schedule and Surface Water Schedule. Results of monitoring is presented annually in the AEMRs, which is available on the CVO website (AEMR 2013-14 – Appendix E – Water Monitoring Data; AEMR 2012-13 Appendix F – Water Monitoring Data; AEMR 2011-12 Appendix I – Water Monitoring Data).	Management assertion CVO website Environmental Management Strategy (v2 - July 2014) Department of Planning & Environment Letter (11/7/2014) Environment Monitoring Manual AEMRs	S5.1.1 The Environmental Management Strategy should be amended when next reviewed to include a "clear plan" that includes reference and direction to "all the monitoring to be carried out in relation to the project" including referencing the Monitoring Manual and the Monitoring Schedule. Ranking: I

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
S5.2	<p>By the end of 2010, and annually thereafter, the Proponent shall review the environmental performance of the project to the satisfaction of the Secretary. This review must:</p> <p>(a) describe the works that were carried out in the past year, and the works that are proposed to be carried out over the next year;</p> <p>(b) include a comprehensive review of the monitoring results and complaints records of the project over the past year, which includes a comparison of these results against the</p> <ul style="list-style-type: none"> • the relevant statutory requirements, limits or performance measures/criteria; • the monitoring results of previous years; and • the relevant predictions in the EA and previous EAs; <p>(c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;</p> <p>(d) identify any trends in the monitoring data over the life of the project;</p> <p>(e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and</p> <p>(f) describe what measures will be implemented over the next year to improve the environmental performance of the project.</p>	C	<p>AEMRs are prepared annually and submitted to the following NSW government agencies (2013-2014 AEMR):</p> <p>NSW Department of Planning and Environment NSW Department of Trade and Investment, Division of Resources and Energy NSW Dam Safety Committee NSW Office of Water NSW Office of Environment and Heritage NSW Environment Protection Authority Blayney Shire Council Orange City Council Cabonne Council CVO Community Consultative Committee</p>	AEMRs on CVO website	There are no recommendations
S5.3	<p>Revision of Strategies, Plans and Programs</p> <p>Within 3 months of:</p> <p>(a) an annual review under condition 2 above;</p> <p>(b) an incident report under condition 5 below;</p> <p>(c) an audit under condition 7 below; or</p> <p>(d) any modification of this approval,</p> <p>the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Secretary.</p> <p><i>Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the project.</i></p>	NC	<p>a) Management assert that the 2012 - 2013 and 2013 - 2014 AEMRs that are provided to the Department of Planning include and constitute the Annual Review by Management as Department Heads, Supervisors and Environmental Officers of CVO review the data, targets and outcomes before the final document is signed off as true and correct. Should the internal review produce recommendations for revisions, strategies, plans or programs to be modified or changed then a formal request / report is forwarded to the Secretary as required.</p> <p>b) Noncompliances are listed on the EPA Public Register, each representing an incident reported to the EPA. There is no evidence that CVO has reviewed, and if necessary revised, the strategies, plans, and programs required under this approval within 3 months of an incident report being provided to the EPA, except for a noncompliance under L4 in 2012-2013 where the procedure was updated to allow real-time control of activities.</p> <p>c) CVO responded to the 2011 audit report received on 24 April 2012 on 18 May 2012. The responses indicated that some document reviews had been completed and that revised procedures etc would be completed by 30 June 2012.</p> <p>d) Modifications to the Cadia east Project Approval are displayed on the CVO website under Statutory Approvals.</p> <p>It is noted that CVO do not agree with the finding S5.3(b) on the grounds that as this is to the satisfaction of the secretary and all revisions deemed necessary have been referred to and agreed by DP&E, this should not be a non-compliance. In CVO's opinion, the auditor appears to hold the view that the review must be documented. The revisions are through AEMRs and correspondence and no revisions have been necessary by incidents. The auditor responds that there is no evidence that reviews are to be performed through AEMRs and correspondence, and that such reviews would not be reflected in the strategies, plans, and programs required under this approval unless the required changes were incorporated in them.</p>	<p>Management assertion CVO website: *2012 - 2013 AEMR *2013 - 2014 AEMR. * Statutory Approvals</p>	<p>S5.3.1 It is recommended that consideration be given to requesting a variation of the Project Approval to incorporate the following (or similar) wording: "the Proponent shall review, and if necessary revise, <u>relevant</u> strategies, plans, and programs required under this approval to the satisfaction of the Secretary". As it stands, this clause requires the review of <u>all</u> strategies, plans, and programs, which is considered to be unreasonable and unnecessary.</p> <p>Ranking: I</p> <p>S5.3.2 CVO should ensure that its procedures reflect the requirement for review of strategies, plans, and programs (with reference to Recommendation S5.3.1) within 3 months of:</p> <p>(a) an annual review; (b) an incident report; (c) an audit; or (d) any modification of the approval,</p> <p>Ranking: I</p>

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
			<div style="border: 1px solid black; background-color: yellow; padding: 5px;"> RISK ASSESSMENT: Likelihood of harm – Unlikely Level of impact – Low Level of risk – Low </div>		
S5.4	<p>Community Consultative Committee Within 6 months of the date of this approval, the Proponent shall establish Community Consultative Committee (CCC) for the project to the satisfaction of the Secretary. This CCC must be established and operated in general accordance with the Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects (Department of Planning, 2007, or its latest version).</p> <p>Notes: - The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval. In accordance with the Guideline, the Committee should comprise an independent chair and appropriate representation from the Proponent, affected councils and the general community. - In establishing the CCC, the Department will accept the continued representation from existing CCC members, however the Proponent should ensure that adequate representation is achieved for landowners within the area surrounding the Cadia East underground mine.</p>	C	The Community Consultative Committee was established before this audit period. The CVO website has a Community Consultative Committee page that has details of all the minutes from their meetings from 2003 to present. It also has a copy of the CCC constitution & charter dated August 2010 that indicates that it was developed in accordance with the Department of Planning document <i>Establishing and Operating Community Consultative Committees for Mining Projects 2007</i> . The CCC meets quarterly and a CVO Newsletter is produced and was sighted on the web.	CVO website: * CCC Minutes from 3/11/03 to 17/11/2014 * Cadia Valley Operations Community Consultative Committee Constitution & Charter Aug. 2010 *CVO Newsletter	There are no recommendations
REPORTING					
S5.5	<p>Incident Reporting The Proponent shall notify the Secretary and any other relevant agencies of any incident associated with the project as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Secretary and any relevant agencies with a detailed report on the incident.</p>	NC	The EPA issued a PIN to CVO on 26 February 2013 for failure to notify EPA of water flowing from the southern TSF into a tributary of Rodds Creek on 25 October 2012 immediately it became aware of the discharge incident. The penalty was \$5,000 for a breach of Section 148 of Part 5.7 of the POEO Act. The EPA also issued a PIN on 26 February 2013 for supplying false or misleading information in CVO's annual return in contravention of S.66(4) of the POEO Act, which related to an incident that occurred at the southern TSF in about August 2006 but which was not reported to the EPA until 7 November 2012. The penalty was \$1,500. Correspondence on the following incidents were provided to the auditor: 1) Two noise exceedances on 9th & 20 June 2012 at Willow Creek 2) Discharge from burst water pipe at Blayney Dewatering Facility 3) Water and Tailings release below Ridgeway Conveyor 4) Leak from Blayney Return Water Line (on Brown Creeks Rd) 5) Detailed report on Blayney Return Water line leak 6) Break Pressure Tank Release January & February 2012 7) Notification of Elevated Dust Measurements on the 8th & 9th November 2013 8) Water discharge from Southern Tailings Storage Facility. 9) Report on overflow of Break Pressure Tank into Cadiangullong Creek 10) Damage to HDPE Pond Liner at Blayney Dewatering Facility 11) Report on Historic Tailings removal & clean up. 12) Dead grass south of Sediment dam. A further incident was reported to the Auditor by the EPA on 17 March 2015 relating to the discharge over the spillway of tailings from the STSF, followed by an email with attachments of the report from CVO to the	EPA Public Register PIN 3050087251 PIN 3085769262 Folder: Correspondence relating to reportable incidents. (See Documents Reviewed Appendix 1). Email from Darryl Clift to the Lead Auditor 17/3/15 Copy of report to EPA by CVO on 23/3/15. Copy of letter from EPA to CVO on 19/3/15. PIRMP summary on CVO website	There are no recommendations

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Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
			<p>EPA and a letter to CVO from the EPA on 23 March 2015. The report to the EPA included photographs showing that the discharged tailings had been cleaned up and returned to the STSF. The letter from the EPA indicated a continuing concern regarding this incident.</p> <p>Under the POEO Act, notification must be given immediately to the EPA being an "other relevant agency", i.e. promptly and without delay, after the person becomes aware of the incident, and this then becomes the requirement rather than "as soon as practicable". This is set out in section 3.1 'Duty to Notify' of the CVO PIRMP.</p> <p>In the risk assessment, the likelihood of harm is assessed as being to the company (i.e. legal non-compliance).</p> <div style="border: 1px solid black; background-color: #ffc107; padding: 5px; width: fit-content; margin: 10px auto;"> <p>RISK ASSESSMENT: Likelihood of harm – Likely Level of impact – Moderate Level of risk – Moderate</p> </div>		
S5.6	<p>Regular Reporting</p> <p>The Proponent shall provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval, and to the satisfaction of the Secretary.</p>	C	Regular performance reporting sighted on Cadia website under Environment tag, Performance Reporting and Environmental Monitoring. The website also contained historical records of past environmental reporting data.	CVO website	There are no recommendations
INDEPENDENT ENVIRONMENTAL AUDIT					
S5.7	<p>By the end of December 2011, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:</p> <p>(a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;</p> <p>(b) include consultation with the relevant agencies;</p> <p>(c) assess the environmental performance of the project and assess whether it is complying with the requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals);</p> <p>(d) review the adequacy of strategies, plans or programs required under the abovementioned approvals; and</p> <p>(e) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals.</p> <p><i>Note: This audit team must be led by a suitably qualified auditor and include experts in surface water, groundwater and any other fields specified by the Secretary.</i></p>	C	Current Audit by Graham Brown & Associates satisfies this requirement.	Tender acceptance and contract with Graham Brown & Associates, Newcastle.	There are no recommendations
S5.8	Within 6 weeks of the completion of this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.		Completion of this audit is the date on which CVO receives a final audit report from Graham A Brown & Associates.		
ACCESS TO INFORMATION					
S5.9	<p>From the end of June 2010, the Proponent shall make the following information publicly available on its website:</p> <p>(a) a copy of all current statutory approvals for the project;</p>	C	The Cadia website has copies of: Cadia East Project Approval including Notices of Modification, Project Approval under section 75J of the <i>Environmental Planning & Assessment</i>	Management assertion CVO website Newcrest Environmental Policy	There are no recommendations

Project Approval dated 6 January 2010 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
	<p>(b) a copy of the current environmental management strategy and associated plans and programs;</p> <p>(c) a summary of the monitoring results of the project, which have been reported in accordance with the various plans and programs approved under the conditions of this approval;</p> <p>(d) a complaints register, which is to be updated on a monthly basis;</p> <p>(e) a copy of the minutes of CCC meetings;</p> <p>(f) a copy of any Annual Reviews (over the last 5 years);</p> <p>(g) a copy of any Independent Environmental Audit, and the Proponent's response to the recommendations in any audit; and</p> <p>(h) any other matter required by the Secretary.</p>		<p>Act 1979, and approval by the Federal Department of the Environment, Water, Heritage and the Arts under sections 130(1) & 133 of the Environment Protection & Biodiversity Conservation Act 1999. They also list a summary of the Licences & Permits related to the Cadia Valley operations and a copy of the Environment Protection Licence and each Mining Lease that has been granted to Cadia for this site. Copies of the Environmental Policy, Plans, Strategies and Programs are also available on the website along with the monitoring and reporting results associated with the Project Approval. Copies of the CCC meetings, Annual Reviews in the format of the Annual Environmental Management Report (from 2004 - to 2014) were sighted on the web plus a copy of the last Independent Environmental Audit carried out by Umwelt Environmental Auditors, Toronto NSW and the CVO response to this Audit.</p> <p>A CVO Community Concerns Register (representing the Complaints Register) is available on the CVO website and at the time of this audit registers the concerns from February 2014 to January 2015. Community concerns are also reviewed in the minuted CCC meetings and in the CVO Newsletter.</p>	<p>CVO Incident Response Management Plan</p> <p>CVO Environmental Management Strategy</p> <p>CVO Rehabilitation Strategy</p> <p>CVO Water Management Plan</p> <p>CVO Land & Biodiversity - Landscape Management Plan</p> <p>CVO Waste management Plan</p> <p>CVO Lighting Management Plan</p> <p>CVO Blaney Dewatering Facility Environmental Management Plan</p> <p>AEMRs</p> <p>Aboriginal Cultural Heritage Plan</p> <p>Historical Heritage Management Plan</p> <p>Cadia East Project Approvals & Modifications</p> <p>Licences, Leases & Permits, Cadia East Environmental Assessment.</p>	
APPENDIX 7 - GENERAL TERMS FOR THE PLANNING AGREEMENT					
	<p>Contributions to the Councils up to a total of \$8 million (\$3 million upfront [within the first 3 years] and \$238,000 each year for 21 years) for:</p> <ul style="list-style-type: none"> - upgrade of the Councils' road infrastructure affected by the project; and - general community enhancement to address social amenity and community infrastructure requirements arising from the project. <p><i>Note: The road maintenance agreements will be determined upon completion of a road condition survey and assessment of future maintenance requirements, which will be facilitated by Orange City Council on behalf of the three Councils and the Proponent.</i></p>	C	<p>Payments required under this condition were verified through email correspondence provided by CVO. They have also formed a Roads & Infrastructure reference group that includes representation from local Councils and includes ongoing progress information on the Cadia District Enhancement Project, Roads and Infrastructure and the Community Partnership Program to the Community Consultative Committee as part of the consultation process.</p> <p>See also S2.13.</p>	<p>Email correspondence re payments to Councils</p> <p>1996 Orange Council Road Maintenance Agreement</p> <p>2001 Cabonne Council Road Maintenance Agreement</p> <p>Email re 'Notes on road maintenance' from Andrew Wannan to Nedra Burns 28/08/2012</p>	<p>There are no recommendations</p>

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 5590

9.2 CADIA HOLDINGS PTY LIMITED

Mandatory Independent Compliance Audit for Department of Planning & Environment

Detailed Findings and Recommendations

Environment Protection Licence No 5590

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation							
1. Administrative Conditions												
A1.1	<p>What the licence authorises and regulates</p> <p>This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.</p> <p>Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.</p> <p>Crushing, grinding or separating > 2000000 T processed Mineral processing > 2000000 T processed Mining for minerals > 5000000 T produced</p>	C	<p>The operations comply with this condition, having processed the following amounts (tonnes) during the period of this audit:</p> <p>2012 = 21,097,536.51 2013 = 24,779,680.04 2014 = 19,842,238.69</p>	See S2.6 of Project Approval	There are no recommendations							
A2.1	<p>The licence applies to the following premises:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Premises Details</th> </tr> </thead> <tbody> <tr> <td>CADIA VALLEY OPERATIONS</td> </tr> <tr> <td>CADIA ROAD</td> </tr> <tr> <td>CADIA</td> </tr> <tr> <td>NSW 2800</td> </tr> <tr> <td> </td> </tr> <tr> <td>MINING LEASES 1405, 1449, 1472, 1481, 1689 AND 1690; THE LOT AND DP NUMBERS FOR THE "CONCENTRATE PIPELINE (FROM CADIA VALLEY TO BLAYNEY DEWATERING FACILITY)", THE "NEW CONCENTRATE PIPELINE (FROM CADIA VALLEY TO BLAYNEY DEWATERING FACILITY THEN TO CVO DEWATERING FACILITY)", THE "NEW CONCENTRATE PIPELINE (FROM BLAYNEY DEWATERING FACILITY TO CVO DEWATERING FACILITY)" AND THE "BLAYNEY DEWATERING FACILITY" IN APPENDIX 1 - SCHEDULE OF LAND FOR THE PROJECT APPROVAL FOR THE CADIA EAST PROJECT ISSUED UNDER SECTION 75J OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 BY THE MINISTER FOR PLANNING ON 6 JANUARY 2010 (AS MODIFIED)</td> </tr> </tbody> </table>	Premises Details	CADIA VALLEY OPERATIONS	CADIA ROAD	CADIA	NSW 2800		MINING LEASES 1405, 1449, 1472, 1481, 1689 AND 1690; THE LOT AND DP NUMBERS FOR THE "CONCENTRATE PIPELINE (FROM CADIA VALLEY TO BLAYNEY DEWATERING FACILITY)", THE "NEW CONCENTRATE PIPELINE (FROM CADIA VALLEY TO BLAYNEY DEWATERING FACILITY THEN TO CVO DEWATERING FACILITY)", THE "NEW CONCENTRATE PIPELINE (FROM BLAYNEY DEWATERING FACILITY TO CVO DEWATERING FACILITY)" AND THE "BLAYNEY DEWATERING FACILITY" IN APPENDIX 1 - SCHEDULE OF LAND FOR THE PROJECT APPROVAL FOR THE CADIA EAST PROJECT ISSUED UNDER SECTION 75J OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 BY THE MINISTER FOR PLANNING ON 6 JANUARY 2010 (AS MODIFIED)		Information only - Included in this audit		
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A3.1	<p>Other Activities</p> <p>This licence applies to all other activities carried on at the premises, including Water treatment - control of potentially toxic blue-green algae (ancillary activity).</p>	NA	<p>No control of potentially toxic blue-green algae has been required since 12 March 2009, which is outside the period of this audit. Cuprocide is applied by helicopter when the cell count is greater than 5000 / ml.</p>	Management assertion	Not applicable							

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 5590

A4.1	<p>Information supplied to the EPA</p> <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>	C	<p>The current EPL is the 4th variation since 2012 and incorporates all previous variations including:</p> <ul style="list-style-type: none"> ● 14 February 2012 ● 22 February 2013 ● 3 April 2013 ● 24 March 2014 	EPL 5590	There are no recommendations
A4.2	Any other document and/or management plan is not to be taken as part of the documentation in condition A4.1, other than those documents and/or management plans specifically referenced in this licence.		Noted		

2. Discharges to Air and Water and Applications to Land

P1.1	<p>Location of monitoring/discharge points and areas</p> <p>The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point. (See page 7 of EPL).</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">EPA identification no.</th> <th style="text-align: center;">Type of Monitoring Point</th> <th style="text-align: center;">Type of Discharge Point</th> <th style="text-align: center;">Location Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">Air quality monitoring</td> <td></td> <td>Dust Deposition Gauge "DG9A" as identified on drawing 3-10 as contained within the CVO 2012/2013 AEMR</td> </tr> <tr> <td style="text-align: center;">5</td> <td style="text-align: center;">Air quality monitoring</td> <td></td> <td>Dust Deposition Gauge "DG5A" as identified on drawing 3-10 as contained within the CVO 2012/2013 AEMR</td> </tr> <tr> <td style="text-align: center;">6</td> <td style="text-align: center;">Air quality monitoring</td> <td></td> <td>Dust Deposition Gauge "DG12A" as identified on drawing 3-10 as contained within the CVO 2012/2013 AEMR</td> </tr> <tr> <td style="text-align: center;">7</td> <td style="text-align: center;">Air quality monitoring</td> <td></td> <td>Dust Deposition Gauge "DG15A" as identified on drawing 3-10 as contained within the CVO 2012/2013 AEMR</td> </tr> <tr> <td style="text-align: center;">8</td> <td style="text-align: center;">Air quality monitoring</td> <td></td> <td>Dust Deposition Gauge "DG18" as identified on drawing 3-10 as contained within the CVO 2012/2013 AEMR</td> </tr> <tr> <td style="text-align: center;">9</td> <td style="text-align: center;">Air quality monitoring</td> <td></td> <td>Dust Deposition Gauge "DG19" as identified on drawing 3-10 as contained within the CVO 2012/2013 AEMR</td> </tr> <tr> <td style="text-align: center;">10</td> <td style="text-align: center;">Air quality monitoring</td> <td></td> <td>Dust Deposition Gauge "DG29A" as identified on drawing 3-10 as contained within the CVO 2012/2013 AEMR</td> </tr> <tr> <td style="text-align: center;">11</td> <td style="text-align: center;">Air quality monitoring</td> <td></td> <td>Dust Deposition Gauge "DG17" as identified on drawing 3-10 as contained within the CVO 2012/2013 AEMR</td> </tr> <tr> <td style="text-align: center;">12</td> <td style="text-align: center;">Air quality monitoring (TEOM)</td> <td></td> <td>Tapered Element Oscillating Microbalance "TEOM1" as identified on drawing 3-10 as contained within the CVO 2012/2013 AEMR</td> </tr> <tr> <td style="text-align: center;">13</td> <td style="text-align: center;">Air quality monitoring (TEOM)</td> <td></td> <td>Tapered Element Oscillating Microbalance "TEOM2" as identified on drawing 3-10 as contained within the CVO 2012/2013 AEMR</td> </tr> <tr> <td style="text-align: center;">14</td> <td style="text-align: center;">Air quality monitoring (TEOM)</td> <td></td> <td>Tapered Element Oscillating Microbalance "TEOM3" as identified on drawing 3-10 as contained within the CVO 2012/2013 AEMR</td> </tr> <tr> <td style="text-align: center;">15</td> <td style="text-align: center;">Air quality monitoring (TEOM)</td> <td></td> <td>Tapered Element Oscillating Microbalance "TEOM4" as identified on drawing 3-10 as contained within the CVO 2012/2013 AEMR</td> </tr> <tr> <td style="text-align: center;">17</td> <td style="text-align: center;">Meteorological monitoring</td> <td></td> <td>Weather station "RW" as identified on drawing 3-9 as contained within the CVO 2012/2013 AEMR</td> </tr> <tr> <td style="text-align: center;">18</td> <td style="text-align: center;">Meteorological monitoring</td> <td></td> <td>Weather station "SLB" as identified on drawing 3-9 as contained within the CVO 2012/2013 AEMR</td> </tr> </tbody> </table>	EPA identification no.	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There are:</p> <ul style="list-style-type: none"> ● 8 Air Quality Monitoring Stations ● 4 TEOMS ● 2 meteorological stations 	CVO Air Quality Monitoring Program	There are no recommendations
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9.2 Detailed Findings and Recommendations - Environment Protection Licence No 5590

P1.2	<p>Location of monitoring/discharge points and areas 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. (See page 8 of EPL).</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th colspan="4" style="text-align: center; font-weight: normal;">Water and land</th> </tr> <tr> <th style="font-size: small;">EPA Identification no.</th> <th style="font-size: small;">Type of Monitoring Point</th> <th style="font-size: small;">Type of Discharge Point</th> <th style="font-size: small;">Location Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Discharge to waters (stormwater - sediment basins) Discharge quality monitoring</td> <td>Discharge to waters (stormwater - sediment basins) Discharge quality monitoring</td> <td>1:20 year stormwater control structures defined as Basins SB 4a, 10, 12, 13, 14, 15; CP 1A, 2, 3; AR 1, 2, 3, 4, 5; CD 11, 13, 14, 15; HC; CS; H19; T6; CDHT; and CDGL as identified on drawings 3-19 and 3-20 as contained within the CVO 2012/2013 AEMR</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Discharge to waters Discharge quality and volume monitoring</td> <td>Discharge to waters Discharge quality and volume monitoring</td> <td>The overflow point from the Orange City Council effluent reuse pipeline break pressure tank to Cadiangullong Creek</td> </tr> <tr> <td style="text-align: center;">3</td> <td></td> <td>Discharge to waters</td> <td>1:100 year, 72 hour storm event process water dams, seepage collection dams and leachate collection dams defined as Basins SR0P, NLD, SLD, STSF, and R2 as identified on drawings 3-19 and 3-20 as contained within the CVO 2012/2013 AEMR</td> </tr> </tbody> </table>	Water and land				EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description	1	Discharge to waters (stormwater - sediment basins) Discharge quality monitoring	Discharge to waters (stormwater - sediment basins) Discharge quality monitoring	1:20 year stormwater control structures defined as Basins SB 4a, 10, 12, 13, 14, 15; CP 1A, 2, 3; AR 1, 2, 3, 4, 5; CD 11, 13, 14, 15; HC; CS; H19; T6; CDHT; and CDGL as identified on drawings 3-19 and 3-20 as contained within the CVO 2012/2013 AEMR	2	Discharge to waters Discharge quality and volume monitoring	Discharge to waters Discharge quality and volume monitoring	The overflow point from the Orange City Council effluent reuse pipeline break pressure tank to Cadiangullong Creek	3		Discharge to waters	1:100 year, 72 hour storm event process water dams, seepage collection dams and leachate collection dams defined as Basins SR0P, NLD, SLD, STSF, and R2 as identified on drawings 3-19 and 3-20 as contained within the CVO 2012/2013 AEMR	C	Discharge points are shown on Figure 9 of the CVO Water Management Plan.	CVO Water Management Plan	There are no recommendations
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3. Limit Conditions																									
L1.1	<p>Pollution of waters Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.</p>	NC	<p>Repeat Finding from Project Approval S3.23. Water is occasionally released from the sediment dams on site, the last discharge being early January 2015, with the water quality being reported as good. On 25 October 2012 water was accidentally released off site from a drainage point on the southern tailings dam. This resulted in two PINs being issued - (1) No.3050087242 <i>Pollution of Waters</i> and (2) No.3050087251 <i>Failure to Notify</i> (discharge of tailings water), both issued on 26 Feb 2013. The cause of this discharge was an agricultural pipe designed to relieve pressure on the tailings dam wall which flowed off site as it had not been connected to divert the discharge into a catch dam on site. A further PIN was issued on the same day - No.3085769262 <i>Supply false or misleading certificate - Corporation</i>, in relation to the failure to include the details of this discharge in the Annual Return to the EPA and the AEMR.</p> <div style="border: 1px solid black; background-color: yellow; padding: 5px; margin-top: 10px; width: fit-content;"> <p>RISK ASSESSMENT: Likelihood of harm – Likely Level of impact – Low Level of risk – Low</p> </div>	EPA website 2013-14 AEMR Management assertion	There are no recommendations																				

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 5590

<p>L2.1</p>	<p>Concentration Limits 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. (See page 9 of EPL).</p> <p>POINT 1</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of Measure</th> <th>50 percentile concentration limit</th> <th>90 percentile concentration limit</th> <th>3DGM concentration limit</th> <th>100 percentile concentration limit</th> </tr> </thead> <tbody> <tr> <td>Oil and Grease</td> <td>milligrams per litre</td> <td></td> <td></td> <td></td> <td>10</td> </tr> <tr> <td>pH</td> <td>pH</td> <td></td> <td></td> <td></td> <td>6.5-8.5</td> </tr> <tr> <td>Total suspended solids</td> <td>milligrams per litre</td> <td></td> <td></td> <td></td> <td>50</td> </tr> <tr> <td>Turbidity</td> <td>nephelometric turbidity units</td> <td></td> <td></td> <td></td> <td>25</td> </tr> </tbody> </table> <p>POINT 2</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of Measure</th> <th>50 percentile concentration limit</th> <th>90 percentile concentration limit</th> <th>3DGM concentration limit</th> <th>100 percentile concentration limit</th> </tr> </thead> <tbody> <tr> <td>Total suspended solids</td> <td>milligrams per litre</td> <td></td> <td></td> <td></td> <td>50</td> </tr> </tbody> </table>	Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit	Oil and Grease	milligrams per litre				10	pH	pH				6.5-8.5	Total suspended solids	milligrams per litre				50	Turbidity	nephelometric turbidity units				25	Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit	Total suspended solids	milligrams per litre				50	<p>C</p>	<p>There have been no exceedances since 2012. There was one exceedance for a discharge from T6 identified on 10 April 2012 when field measurement of turbidity recorded 42.3 NTU, however the laboratory test recorded 10.6 NTU which was well within the discharge limit of 25 NTU. A retest in the field on 11 April 2012 (no discharge recorded) gave a reading of 7.36 NTU.</p>	<p>CVO EPL Summary of Monitoring Results (on CVO website):</p> <ul style="list-style-type: none"> • April 2012 - March 2013; • April 2013 - June 2014; • July 2014 - June 2015 	<p>There are no recommendations</p>
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Total suspended solids	milligrams per litre				50																																										
<p>L2.2</p>	<p>Concentration Limits Where a pH quality limit is specified in the table (page 9), the specified percentage of samples must be within the specified ranges.</p>	<p>C</p>	<p>There have been no exceedances of pH during the audit period.</p>	<p>CVO EPL Summary of Monitoring Results (on CVO website):</p> <ul style="list-style-type: none"> • April 2012 - March 2013; • April 2013 - June 2014; • July 2014 - June 2015 	<p>There are no recommendations</p>																																										
<p>L2.3</p>	<p>Concentration Limits To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table(s).</p>	<p>C</p>	<p>Water is tested for a variety of metals, nutrients and other parameters by ALS and no pollutants (i.e above background levels) have been recorded. It was verified that the following tests were conducted and reported for discharges from T6 on 31/12/2014; 1/01/2015; 2/01/2015; and 5/01/2015, and for water quality for T6 and other locations between 31/12/14 and 5/01/15.</p> <p>EA005P: pH by PC Titrator - pH Value EA010P: Conductivity by PC Titrator - Electrical Conductivity @ 25°C EA015: Total Dissolved Solids - Total Dissolved Solids @180°C EA025: Suspended Solids - Suspended Solids (SS) EA045: Turbidity - Turbidity EA065: Total Hardness as CaCO₃ - Total Hardness as CaCO₃ ED037P: Alkalinity by PC Titrator Hydroxide Alkalinity as CaCO₃ Carbonate Alkalinity as CaCO₃ Bicarbonate Alkalinity as CaCO₃ Total Alkalinity as CaCO₃ ED038A: Acidity - Acidity as CaCO₃ ED041G: Sulfate (Turbidimetric) as SO₄ 2- by DA - Sulfate as SO₄ - Turbidimetric ED045G: Chloride Discrete analyser - Chloride ED093F: Dissolved Major Cations</p>	<p>ALS T6 Discharge Report 2012-2013, 2014-2015 ALS Sediment Dam Discharge Report 2014-2015</p>	<p>There are no recommendations</p>																																										

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 5590

			<p>Calcium Magnesium Sodium Potassium</p> <p>EG020F: Dissolved Metals by ICP-MS</p> <p>Aluminium Antimony Arsenic Cadmium Chromium Cobalt Copper Lead Manganese Molybdenum Nickel Selenium Silver Zinc Iron</p> <p>EG035F: Dissolved Mercury by FIMS - Mercury</p> <p>EK057G: Nitrite as N by Discrete Analyser - Nitrite as N</p> <p>EK058G: Nitrate as N by Discrete Analyser - Nitrate as N</p> <p>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser - Nitrite + Nitrate as N</p> <p>EK061G: Total Kjeldahl Nitrogen By Discrete Analyser - Total Kjeldahl Nitrogen as N</p> <p>EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser - Total Nitrogen as N</p> <p>EK067G: Total Phosphorus as P by Discrete Analyser - Total Phosphorus as P</p> <p>EN055: Ionic Balance</p> <p>Total Anions Total Cations Ionic Balance</p> <p>EP020: Oil and Grease (O&G)</p> <p>Oil & Grease</p>		
L2.4	Concentration Limits Water and/or land concentration limits shall be as set out in the table (page 9).	NA	Information statement - same as in L2.1		
L2.5	Concentration Limits The concentration limits stipulated by condition L2.1/L2.4 for EPA identification point 1 is deemed not to apply when the discharge from the stormwater control structures (sediment basins) occurs solely as a result of rainfall measured at the premises which exceeds: a) a total of 44 millimetres of rainfall over any consecutive 5 day period. Note: A 44mm rainfall event is defined by the EPA endorsed publication "Managing urban stormwater: soils and construction" (Landcom 2004) as the rainfall depth in millimetres for a 95th percentile 5 day rainfall event for the Central Tablelands which is also consistent with the storage capacity recommended minimum design criteria) for Type D sediment basins for mines and quarries (see "Managing urban stormwater: soils and construction, Volume 2E, mines and quarries" (DECC, 2008).	NA	There have been 12 events since January 2012 greater than 44mm as measured at the southern lease boundary weather station. There were no discharges as a result of rainfall from sediment dams.	Management assertion	Not applicable

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L2.6	<p>Concentration Limits The concentration limit for total suspended solids stipulated by condition L2.1/L2.4 for EPA identification point 1 is deemed not to have been breached where:</p> <p>a) the water discharged is covered by condition L2.5; and b) the water discharged complies with the turbidity limit at the time of the discharge; and c) the EPA is advised within 3 working days of the completion of the sample testing and analysis as required by condition M2.3 of any results above the licence limit.</p> <p><i>Note: The purpose of this condition is to expediate the assessment and subsequent discharge of the clarified water from the stormwater control structures (sediment basins).</i></p>	NA	<p>There have been no discharges under (a). Routine discharges are not reported to the EPA as monitoring results are within limits.</p>	<p>Management assertion CVO EPL Summary of Monitoring Results (on CVO website):</p> <ul style="list-style-type: none"> ● April 2012 - March 2013; ● April 2013 - June 2014; ● July 2014 - June 2015 	Not applicable																				
L3.1	<p>Waste The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.</p> <p>Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.</p> <p>Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.</p> <p>This condition does not limit any other conditions in this licence. (See page 10 of EPL)</p> <table border="1"> <thead> <tr> <th>Code</th> <th>Waste</th> <th>Description</th> <th>Activity</th> <th>Other Limits</th> </tr> </thead> <tbody> <tr> <td>NA</td> <td>Drilling mud and/or muddy waters</td> <td>Drilling mud and/or muddy waters from exploration activities undertaken within the Newcrest and Newcrest Joint Venture Exploration Areas</td> <td>Waste disposal (application to land)</td> <td>Must only be disposed of within the CVO Tailings Facilities</td> </tr> <tr> <td>NA</td> <td>Biosolids categorised as unrestricted use, or as restricted use 1, 2 or 3, in accordance with the criteria set out in the biosolids guidelines</td> <td>As defined in Schedule 1 of the POEO Act, as in force from time to time</td> <td>Waste storage Waste processing (non-thermal treatment) Composting Waste disposal (application to land)</td> <td>NA</td> </tr> <tr> <td>NA</td> <td>General or Specific exempted waste</td> <td>Waste that meets all the conditions of a resource recovery exemption under Clause 51A of the Protection of the Environment Operations (Waste) Regulation 2005</td> <td>As specified in each particular resource recovery exemption</td> <td>NA</td> </tr> </tbody> </table>	Code	Waste	Description	Activity	Other Limits	NA	Drilling mud and/or muddy waters	Drilling mud and/or muddy waters from exploration activities undertaken within the Newcrest and Newcrest Joint Venture Exploration Areas	Waste disposal (application to land)	Must only be disposed of within the CVO Tailings Facilities	NA	Biosolids categorised as unrestricted use, or as restricted use 1, 2 or 3, in accordance with the criteria set out in the biosolids guidelines	As defined in Schedule 1 of the POEO Act, as in force from time to time	Waste storage Waste processing (non-thermal treatment) Composting Waste disposal (application to land)	NA	NA	General or Specific exempted waste	Waste that meets all the conditions of a resource recovery exemption under Clause 51A of the Protection of the Environment Operations (Waste) Regulation 2005	As specified in each particular resource recovery exemption	NA	C	<p>No drilling mud and/or muddy waters have been received from off site in 2014-15 (since this condition was inserted into the EPL). It is reported that no muds have been received at all from off-site including prior to when the licence allows. Biosolids are routinely received from the Orange City Council for mine rehabilitation work. During 2013/14 2,222 wet tonnes of biosolids were delivered by Orange City Council to CVO's storage area. The biosolids storage area is situated to the east of the South Waste Rock Dump and is contained within a bunded area with a sump to collect runoff from the site.</p> <p>Total wet tonnes of biosolids stockpiled at CVO is 15,718. An exemption, obtained from the EPA, to allow the acceptance, storage and use of Orange City Council biosolids remains current. The exemption relates to the Protection of the Environment Operations (Waste) Regulation 2005 allowing CVO to deviate from the EPA Biosolids Guidelines. Biosolids are managed in accordance with the CVO Land and Biodiversity Management Plan.</p> <p>No General or Specific Exempted Waste is received on site.</p>	<p>AEMR 2013-14 AEMR 2012-13 AEMR 2011-12 Management assertion Land and Biodiversity Management Plan</p>	There are no recommendations
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9.2 Detailed Findings and Recommendations - Environment Protection Licence No 5590

L4.1	<p>Noise Limits Noise generated at the premises (excluding the dewatering facility) must not exceed the noise limits in the table below. The locations referred to in the table below are indicated by property name and/or name of the property owner. <i>(See page 11 of EPL)</i></p> <p>Note: For the purpose of condition L4.1: a) Day is defined as the period from: i. 7am to 6pm Monday to Saturday, and ii. 8am to 6pm on Sundays and Public Holidays; b) Evening is defined as the period 6pm to 10pm; and c) Night is defined as the period from: i. 10pm to 7am Monday to Saturday, and ii. 10pm to 8am on Sundays and Public Holidays.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">Locality and Location</th> <th style="text-align: center;">Day - LAeq (15 minute)</th> <th style="text-align: center;">Evening - LAeq (15 minute)</th> <th style="text-align: center;">Night - LAeq (15 minute)</th> <th style="text-align: center;">Night - LA1 (1 minute)</th> </tr> </thead> <tbody> <tr> <td>'Meribah'; 'Triangle Park'; 'Mayburies'; 'Mirrabooka'; 'Eastbum'; 'Northwest'; 'South Log'</td> <td style="text-align: center;">43</td> <td style="text-align: center;">38</td> <td style="text-align: center;">38</td> <td style="text-align: center;">45</td> </tr> <tr> <td>'Coorabrin'; 'Argyle'; 'Weemalla'</td> <td style="text-align: center;">43</td> <td style="text-align: center;">38</td> <td style="text-align: center;">37</td> <td style="text-align: center;">45</td> </tr> <tr> <td>'Triangle Flat'; 'Barton Park'; 'Bonnie Glen'</td> <td style="text-align: center;">43</td> <td style="text-align: center;">38</td> <td style="text-align: center;">36</td> <td style="text-align: center;">45</td> </tr> <tr> <td>Other privately owned land</td> <td style="text-align: center;">43</td> <td style="text-align: center;">38</td> <td style="text-align: center;">35</td> <td style="text-align: center;">45</td> </tr> </tbody> </table>	Locality and Location	Day - LAeq (15 minute)	Evening - LAeq (15 minute)	Night - LAeq (15 minute)	Night - LA1 (1 minute)	'Meribah'; 'Triangle Park'; 'Mayburies'; 'Mirrabooka'; 'Eastbum'; 'Northwest'; 'South Log'	43	38	38	45	'Coorabrin'; 'Argyle'; 'Weemalla'	43	38	37	45	'Triangle Flat'; 'Barton Park'; 'Bonnie Glen'	43	38	36	45	Other privately owned land	43	38	35	45	NC	<p>Identical to S3.2 in the Project Approval. See S3.2 for details</p> <div style="border: 1px solid black; background-color: yellow; padding: 5px; margin: 10px auto; width: fit-content;"> <p>RISK ASSESSMENT: Likelihood of harm – Unlikely Level of impact – Low Level of risk – Low</p> </div>	See S3.2 of Project Approval	There are no recommendations					
Locality and Location	Day - LAeq (15 minute)	Evening - LAeq (15 minute)	Night - LAeq (15 minute)	Night - LA1 (1 minute)																															
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L4.2	<p>Noise Limits Noise generated at the Blayney dewatering facility must not exceed the noise limits in the table below. The locations referred to in the table below are indicated by location name. <i>(See page 11 of EPL)</i></p> <p>Note: For the purpose of condition L4.2: a) Day is defined as the period from: i. 7am to 6pm Monday to Saturday, and ii. 8am to 6pm on Sundays and Public Holidays; b) Evening is defined as the period 6pm to 10pm; and c) Night is defined as the period from: i. 10pm to 7am Monday to Saturday, and ii. 10pm to 8am on Sundays and Public Holidays.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">Locality and location</th> <th style="text-align: center;">Day - LAeq (15 minute)</th> <th style="text-align: center;">Evening - LAeq (15 minute)</th> <th style="text-align: center;">Night - LAeq (15 minute)</th> <th style="text-align: center;">Night - LAeq (1 minute)</th> </tr> </thead> <tbody> <tr> <td>Location 1</td> <td style="text-align: center;">50</td> <td style="text-align: center;">50</td> <td style="text-align: center;">39</td> <td style="text-align: center;">49</td> </tr> <tr> <td>Location 2</td> <td style="text-align: center;">50</td> <td style="text-align: center;">50</td> <td style="text-align: center;">36</td> <td style="text-align: center;">46</td> </tr> <tr> <td>Location 3</td> <td style="text-align: center;">46</td> <td style="text-align: center;">46</td> <td style="text-align: center;">37</td> <td style="text-align: center;">47</td> </tr> <tr> <td>Location 4</td> <td style="text-align: center;">46</td> <td style="text-align: center;">46</td> <td style="text-align: center;">36</td> <td style="text-align: center;">46</td> </tr> <tr> <td>Location 5</td> <td style="text-align: center;">58</td> <td style="text-align: center;">58</td> <td style="text-align: center;">45</td> <td style="text-align: center;">55</td> </tr> </tbody> </table>	Locality and location	Day - LAeq (15 minute)	Evening - LAeq (15 minute)	Night - LAeq (15 minute)	Night - LAeq (1 minute)	Location 1	50	50	39	49	Location 2	50	50	36	46	Location 3	46	46	37	47	Location 4	46	46	36	46	Location 5	58	58	45	55	C	<p>Attended noise monitoring is undertaken by Advitech every six months. The following exceedances have been recorded in the period covered by this audit: Location L1 - Attended monitoring conducted 28th November 2012. Non-compliance with night-time criteria 45dBA; Location L4 - Attended monitoring conducted 28th November 2012. Non-compliance with night-time criteria 41dBA. No exceedances have been recorded since 2012. The 2014 version of the EPL included criteria for the Blayney dewatering facility. Previous versions did not include this requirement, therefore exceedances relating to 2012 are not an exceedance of the licence as the criteria did not apply at that time. In the Project Approval condition S3.2 noncompliances with the Project Approval are identified.</p>	Noise Monitoring Plan AEMR 2013-14 AEMR 2012-13 AEMR 2011-12	There are no recommendations
Locality and location	Day - LAeq (15 minute)	Evening - LAeq (15 minute)	Night - LAeq (15 minute)	Night - LAeq (1 minute)																															
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L4.3	<p>Noise Limits The noise limits set out in the tables at conditions L4.1 and L4.2 apply under all meteorological conditions except for the following:</p> <p>a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or c) Stability category G temperature inversion conditions.</p>	O	Advitech exclude noise monitoring data based on rain falling, wind speed and temperature inversions in the monthly noise reports.	Advitech Monthly Noise Monitoring Reports (on CVO website).	<p>L4.3.1 It is recommended that a request be made for a variation in Condition L4.3 to add "or rainfall" to legitimise Advitech's exclusion of noise monitoring data based on rain falling.</p> <p>Ranking: N</p>
L4.4	<p>Noise Limits - Determining Compliance To determine compliance:</p> <p>a) with the LAeq (15 minute) noise limits set out in the table at condition L4.1, the noise measurement equipment must be located:</p> <p>i) approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or ii) within 30 metres of a dwelling façade, but not closer than 3m, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable iii) within approximately 50 metres of the boundary of a National Park or a Nature Reserve.</p> <p>b) with the LAeq (15 minute) noise limits set out in the table at condition L4.2, the noise measurement equipment must be located at the locations identified in the CVO 2012/2013 AEMR.</p> <p>c) with the LAeq (1 minute) noise limits set out in the tables at conditions L4.1 and L4.2, the noise measurement equipment must be located within 1 metre of a dwelling facade.</p> <p>d) otherwise with the noise limits set out in the tables at conditions L4.1 and L4.2, the noise measurement equipment must be located:</p> <p>i) at the most affected point at a location where there is no dwelling at the location; or ii) at the most affected point within an area at a location prescribed by part (a) or part (b) of this condition.</p>	C	<p>Continuous noise monitoring is undertaken on a rotating roster at six locations in the receiving environment adjacent to Newcrest Mining Cadia Valley Operations. The purpose of the monitoring is to assist with management of mining noise impacts on sensitive receivers adjacent to the mining operations, and assess these impacts against noise limits established in the CVO Project Approval (PA 06_0295) and EPL (5590). The following limitations apply to the noise monitoring program:</p> <p>(a) i) approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises - as the properties are rural and the dwellings are more than 30 m from the boundary, this condition can not be met. (a) ii) within 30 metres of a dwelling façade, but not closer than 3m, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises - this is the normal situation; iii) does not apply. (b) complies (also set out in the Noise Monitoring Program). (c) with the LAeq (1 minute) noise limits set out in the tables at conditions L4.1 and L4.2, the noise measurement equipment must be located within 1 metre of a dwelling facade - this is normally not possible but is achieved when mitigation measures are implemented. CVO proposed to the EPA by email on 14 February 2012 that LA1(1) monitoring is done with the current monitor (which may be (for example) 20m from the dwelling) and if an exceedance is identified in that location then a round of intensive monitoring is undertaken as per the licence within 1m of the dwelling. (d) does not apply as all monitoring equipment is located at dwellings.</p>	Noise Monitoring Program. Sleep Disturbance Noise Model 13 December 2013. Email to Darryl Clift 14/02/12.	<p>L4.4.1 It is recommended that consideration be given to seeking a variation to Condition L4.4 [c] to modify the words to read "with the LAeq (1 minute) noise limits set out in the tables at conditions L4.1 and L4.2, the noise measurement equipment must be located within 1 metre of a dwelling facade <u>where possible</u>" to enable compliance with this condition to be achieved.</p> <p>Ranking: N</p>
L4.5	<p>Noise Limits - Determining Compliance A non-compliance of the noise limits set out in the tables at conditions L4.1 and L4.2 will still occur where noise generated from the premises in excess of the appropriate limit is measured:</p> <p>a) at a location other than an area prescribed in condition L4.4; and/or b) at a point other than the most affected point at a location.</p>	NC	<p>Review of LA1, 1 minute data in the CVO August 2013 Noise Report by Advitech, revealed an exceedance of the criteria on 25 August, 2013 at 2:06am with a LA1,1minute noise level of 49 dB(A). The results were presented in Table 3 and Figure 3 of the Advitech Sleep Disturbance Noise Model Report (13 December 2013), and indicated that nine receivers displayed noise levels above the sleep disturbance impact criteria of 45 dB(A). Modelling results presented in Table 4 also show that during this event there were eight properties with noise levels greater or equal to 45 dB(A) affecting 25% or more of the land area. This non-compliance was reported to the EPA and DP&E.</p> <div style="border: 1px solid black; background-color: yellow; padding: 5px; margin-top: 10px;"> <p>RISK ASSESSMENT: Likelihood of harm –Likely Level of impact – Low Level of risk – Low</p> </div>	Advatech Sleep Disturbance Noise Model 346 Carbine Road, 13 December 2013	There are no recommendations

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L4.6	<p>Noise limits For the purposes of determining the noise generated from the premises (including the Blayne dewatering facility) the modification factors in Section 4 of the NSW Industrial Noise Policy (EPA 2000/2001) must be applied, as appropriate, to the noise levels measured by the noise measurement equipment.</p>	C	This is done by Advitech. The INP is addressed in the Advitech monthly noise reports.	Advitech Monthly Noise Monitoring Reports (on CVO website).	There are no recommendations																									
L5.1	<p>Blasting The licensee must ensure that blasting at the premises does not exceed the criteria specified in the Table below: See Table page 13 of EPL.</p> <table border="1"> <thead> <tr> <th>Location</th> <th>Time of Blasting</th> <th>Airblast overpressure (dB(Lin Peak))</th> <th>Ground vibration (mm/s)</th> <th>Allowable exceedance</th> </tr> </thead> <tbody> <tr> <td>Residence on privately owned land</td> <td>Any time</td> <td>120</td> <td>10</td> <td>must not be exceeded.</td> </tr> <tr> <td></td> <td>Daytime (7am - 6pm) Monday - Saturday</td> <td>115</td> <td>5</td> <td>may be exceeded by no more than 5% of the total number of blasts over each licence reporting period</td> </tr> <tr> <td></td> <td>Evening (6pm - 10pm)</td> <td>105</td> <td>2</td> <td>may be exceeded by no more than 5% of the total number of blasts over each licence reporting period</td> </tr> <tr> <td></td> <td>Night (10pm - 7am) and all day on Sunday and public holidays</td> <td>95</td> <td>1</td> <td>may be exceeded by no more than 5% of the total number of blasts over each licence reporting period</td> </tr> </tbody> </table>	Location	Time of Blasting	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance	Residence on privately owned land	Any time	120	10	must not be exceeded.		Daytime (7am - 6pm) Monday - Saturday	115	5	may be exceeded by no more than 5% of the total number of blasts over each licence reporting period		Evening (6pm - 10pm)	105	2	may be exceeded by no more than 5% of the total number of blasts over each licence reporting period		Night (10pm - 7am) and all day on Sunday and public holidays	95	1	may be exceeded by no more than 5% of the total number of blasts over each licence reporting period	C	Ecotech Consultants operate 8 blast monitoring stations which measure ground vibration and blast overpressure. The results are recorded in monthly reports that are available on the CVO website. There were no exceedances on privately-owned property reported during the period of this audit. Exceedances recorded for daytime, evening and night periods amounted to 0.1% against a limit of 5%.	Ecotech monthly Blast Monitoring Network Reports available on CVO website. CVO Vibration Monitoring Program	There are no recommendations
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L5.2	<p>Blasting Error margins associated with any monitoring equipment used to measure airblast overpressure and ground vibration are not taken into account in determining whether or not the limit has been exceeded. Note: "Noise sensitive locations" includes buildings used as a residence, hospital, school, child care centre, place of public worship and nursing homes. A noise sensitive location includes the land within 30 metres of the building.</p>	C	The results recorded by Ecotech are not adjusted for error, only absolute numbers are reported. Some exceedances have been excluded from exceedance statistics due to being attributed to non-blast-related events such as meteorological conditions. Wind speed data associated with the exceedance events are included in the reports.	Ecotech monthly Blast Monitoring Network Reports available on CVO website. CVO Vibration Monitoring Program	There are no recommendations																									
L6.1	<p>Other limit conditions Pesticides to control blooms of potentially toxic blue-green algae must only be applied to Cadiangullong Dam and/or Rodds Creek Dam when the concentration of potentially toxic blue-green algae exceeds 5,000 cells per millilitre.</p>	NA	There have been no pesticide use since 2009.	Management Assertion	Not applicable																									
L6.2	<p>Other limit conditions The application of any pesticide to control potentially toxic blue-green algae must be undertaken in accordance with the Australian Pesticides and Veterinary Medicines Authority (APVMA) approved label for the product being used.</p>	NA	Pesticide application is triggered through the Trigger and Response Plan (TARP). A spreadsheet is available to work out the dosage rate when the concentration of cells exceeds the 50,000 cells / ml triggered in the NSW Health Guidelines.	Management Assertion	Not applicable																									
L6.3	<p>Other limit conditions The licensee must not apply pesticides to Cadiangullong and/or Rodds Creek Dam to control potentially toxic blue-green algae if the dam which the product is being applied is overflowing, or likely to overflow in the following 24 hours.</p>	NA	No pesticides have been applied during the audit period.	Management Assertion	Not applicable																									

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4. Operating Conditions					
O1.1	<p>Activities must be carried out in a competent manner Licensed activities must be carried out in a competent manner. This includes:</p> <p>a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and</p> <p>b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.</p>	NC	<p>The auditors have assessed that licensed activities are carried out generally in a competent manner. There is a number of mechanisms through which this is achieved, including Fact Sheets and Licence to Operate Themes (in printed copy and available on the CVO Intranet - see under Objective Evidence), the internal Environmental Impact Permit and waste management initiatives, and the Incident Reporting system using Cintellate software.</p> <p>Fact Sheets and Licence to Operate Themes are distributed in hard copy to supervisors and superintendents, and rolled out at workforce meetings with sign-off attendance sheets.</p> <p>The Environmental Impact Permit (EIP) system was sighted, and includes the completion of a checklist form which is assessed by the Environment Group, who can put conditions on the EIP to meet regulatory requirements. There is a Procedure for EIP in the CVO EMS. A total of 1,278 EIPs have been issued, with approximately 50 in the last year. Waste rock and tailings are managed to prevent environmental harm. Currently there is no waste rock generated as the open cut is on care and maintenance. Development waste from Cadia East underground goes to the PAW rock dump after temporary storage. Remondis has a formal contract with CVO for all waste management. This includes:</p> <ul style="list-style-type: none"> ● batteries ● high value scrap steel ● general scrap steel ● co-mingled paper and cardboard, bottles, cans ● timber ● general waste ● oil ● grease ● waste chemicals ● IBCs ● drum crusher ● mercury <p>Opportunities for improvement have been identified through the site inspections conducted by the auditors of both CVO and contractors' activities. These are set out in the Recommendations. It is noted however that these issues are relatively minor given the scale of the operation, and can be improved through inspection and instruction.</p> <p>There have been a number of incidents reported during the period of this audit as set out in L1.1, L4.1 and L4.5b relating to noise and discharge from the tailings dam. As reported under S5.5 of the Approval, an incident was reported to the Lead Auditor by the EPA on 17 March 2015 relating to the discharge over the spillway of tailings from the STSF, followed by an email with attachments of the report to the EPA and a letter to CVO from the EPA on 23 March 2015. The report to the EPA included photographs showing that the discharged tailings had been cleaned up and returned to the STSF. The letter from the EPA indicated a continuing concern regarding this incident. It may be interpreted that the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity (tailings) may not have been carried out in a competent manner and improvements are proposed in Recommendation O1.1.6.</p>	<p>Fact Sheets:</p> <ul style="list-style-type: none"> ● Dust ● Drainage and Sediment Control ● Heritage ● Environmental Handbook ● Hydrocarbons ● Lighting ● Noise ● Snakes and Injured Fauna ● Waste Management <p>Licence to Operate Themes:</p> <ul style="list-style-type: none"> ● Chemical and Hydrocarbon Storage ● Sediment Fences ● Environmental Impact Permits ● Workplace Inspections ● Threatened Fauna ● Drainage, Sediment Control & Erosion ● Bunds, Drains and Sumps ● Waste Management ● Community Relations ● Dust <p>Email from Darryl Clift to the Lead Auditor 17/3/15 Copy of report to EPA by CVO on 23/3/15. Copy of letter from EPA to CVO on 19/3/15.</p>	<p>O1.1.1 Batteries were observed stored in the open and unbanded in several locations (Photos 2 and 3). It is recommended that all new and used wet cell batteries be stored on a banded pallet under cover. CVO should verify that the batteries stored in the open by Remondis may be secured within a sloping concrete enclosure that will contain any leakage.</p> <p>O1.1.2 There were many IBCs and other containers (200l, 20l etc) containing chemicals stored unbanded on bare soil (Photos 4, 5 and 6). It is recommended that chemicals are stored under cover in a banded enclosure or on banded pallets.</p> <p>O1.1.3 There were many IBCs and other containers (200l, 20l etc) containing chemicals and oils stored in the open on banded pallets, which fill with water when it rains and can not fulfil their task of retaining spilled or leaked chemicals (Photos 7, 8 and 9). It is recommended that chemicals are stored under cover in a banded enclosure or on banded pallets.</p> <p>O1.1.4 At the bulk fuel depot, sumps designed to retain any spilled diesel were almost completely blocked with sediment (Photos 10 and 11). It is recommended that these sumps be cleaned out (it is understood that this was done on the day of the inspection) and that they are regularly inspected and serviced as necessary.</p> <p>O1.1.5 It was noted on several occasions that Safety Data Sheets (SDS) were missing or out of date at both CVO and contractor sites, and in some cases the personnel in the area did not know where they were kept. As they include environmental information, it is important that SDSs are available and up to date. It is recommended that CVO reinforce the need to have up-to-date SDSs available at locations where there are dangerous goods or hazardous chemicals.</p> <p>O1.1.6 Procedures should be developed for improved inspection, monitoring, measurement, reporting and management of the STSF, especially relating to the buildup of tailings near</p>

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					the spillway and the maintenance of sufficient freeboard to prevent overflow except in the event of a major rainfall event. Ranking: U
O2.1	<p>Maintenance of plant and equipment</p> <p>All plant and equipment installed at the premises or used in connection with the licensed activity:</p> <p>a) must be maintained in a proper and efficient condition; and</p> <p>b) must be operated in a proper and efficient manner.</p>	C	<p>Inspection of the site indicated that all plant and equipment owned and operated by CVO or its contractors on site was maintained and operated in a proper and efficient manner. Both CVO heavy and light vehicle and contractor workshops were clean and tidy with a remarkable lack of evidence of oil spills (compared to other mine sites). If there was a breakdown of any equipment, whether fixed or mobile, this was immediately reported to the SAOC and repairs or replacement organised. Efficient operation of plant and equipment was controlled through EIPs which protect the environment. Any issue that affects or is likely to affect the environment is recorded as an incident and dealt with through the incident management system.</p> <p>It is noted that the EPA just prior to this audit visited CVO and audited this condition, being provided with some 900 documents relating especially to maintenance activities.</p>	<p>Site inspections</p> <p>Interviews with SAOC operators and other CVO staff</p> <p>Interviews with contractor staff</p>	There are no recommendations
O3.1	<p>Dust</p> <p>The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.</p>	C	<p>Dust is monitored continuously through fixed dust monitors with alarms which are recorded in the SAOC as well as inspections and CCTV monitors. Dust is reported to the area supervisor by the SAOC who is required to inspect and report on the dust. There are three water trucks available on site 24/7. Dust extractors are used on the High Pressure Grinding Roll. Sprays are used on conveyors to minimise dust. To prevent dust being generated at the tailings dams, spigots are used and adjusted to maintain moist conditions. There is a backup plan for the tailings dams that includes use of a helicopter to water down any dry areas within the dams. Contractors' areas were observed to be not creating dust at the time of this audit.</p>	<p>Site inspections</p> <p>Interviews with SAOC operators and other CVO staff</p> <p>Interviews with contractor staff</p>	There are no recommendations
O3.2	<p>Dust</p> <p>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.</p>	C	<p>See O3.1. Also note that dust is included in the Fact Sheets and Licence to Operate Themes listed under Objective Evidence in O1.1.</p>	See O1.1 and O3.1.	There are no recommendations
O3.3	<p>Dust</p> <p>All dust control equipment must be operable at all times with the exception of shutdowns required for maintenance.</p>	C	<p>All dust control equipment was operable at all times during the period of this audit.</p>	Management Assertion	There are no recommendations
O4.1	<p>Other operating conditions</p> <p>The stormwater control structures (sediment basins) identified at EPA identification point 1 must be drained or pumped out as necessary to maintain each basins design storage capacity within 5 days following rainfall.</p>	C	<p>This is routinely done within 5 days following rainfall after inspection.</p>	Management Assertion	There are no recommendations
O4.2	<p>Other operating conditions</p> <p>Water discharged to comply with condition O4.1 may only be discharged to waters from those stormwater control structures (sediment basins) identified at EPA identification point 1 where the discharged water complies with the discharge limits stipulated at condition L2.1/L2.4 (and taking into consideration condition L2.5).</p>	C	<p>There have been no noncompliances with discharge conditions. Discharge has occurred only from T6. See also L2.5 and L2.6.</p>	<p>Annual Returns</p> <p>AEMRs</p> <p>Management Assertion</p> <p>L2.5</p> <p>L2.6</p>	There are no recommendations

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O4.3	<p>Other operating conditions The licensee must undertake maintenance as necessary to desilt any storage basin identified at EPA identification points 1 and 3 in order to retain each storage basins design storage capacity.</p>	C	At the time of this audit, desilting of the Site Runoff Pond was completed with 8,000m ³ having being removed. Biannual surveys of the depths of the ponds identified at EPA identification points 1 and 3 are undertaken using a remote controlled boat. Surface surveys of ponds are undertaken annually.	Site inspections Management Assertion	There are no recommendations
O4.4	<p>Other operating conditions There must be no discharge to Cadiangulong and/or Rodds Creek from the process water dams, seepage collection dams and leachate collection dams as identified at EPA identification point 3 except where rainfall at the premises exceeds the 1:100 design criteria for those basins being greater than 158mm of rainfall recorded over a 72 hour period.</p>	NA	No discharge to Cadiangulong and/or Rodds Creek from the process water dams, seepage collection dams and leachate collection dams as identified at EPA identification point 3 has occurred since 2010.	Management Assertion	Not applicable
5. Monitoring and Recording Conditions					
M1.1	<p>Monitoring records The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.</p>	NA	Information statement		
M1.2	<p>Monitoring records 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.</p>	C	All data is kept in databases on servers and nothing is deleted. It is noted that there is no procedure for retention of records in the EMS. CVO-PRO-Document Control covers all documentation relating to the CVO EMS, but does not mention records, only "documents", and does not address retention times.	CVO computer records CVO website CVO-PRO-Document Control Management Assertion	<p>M1.2.1 It is recommended that a records management procedure be included in CVO-PRO-Document Control setting out the manner and retention time of environmental records and reflecting the current process on site.</p> <p>Ranking: N</p>
M1.3	<p>Monitoring records 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.</p>	C	Original data forms include the information required e.g. for surface water, groundwater, and air monitoring (dust). Noise monitoring is automatically acquired by a noise monitoring trailer and is received through telemetry.	Inspection of original data forms	There are no recommendations
M2.1	<p>Requirement to monitor concentration of pollutants discharged For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:</p>	NA	Information statement		Not applicable

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<p>M2.2</p>	<p>Requirement to monitor concentration of pollutants discharged Air Monitoring Requirements</p> <p>POINT 4,5,6,7,8,9,10,11 - See Table page 15 of EPL</p> <p>POINT 4,5,6,7,8,9,10,11</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of measure</th> <th>Frequency</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>Particulates - Deposited Matter</td> <td>grams per square metre per month</td> <td>Monthly</td> <td>Australian Standard 3580.10.1-2003</td> </tr> </tbody> </table> <p>POINT 12,13,14,15 - See Table page 16 of EPL</p> <p>POINT 12,13,14,15</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of measure</th> <th>Frequency</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>PM10</td> <td>micrograms per cubic metre</td> <td>Special Frequency 1</td> <td>Australian Standard 3580.9.8 - 2001</td> </tr> </tbody> </table> <p>Note: For the purpose of condition M2.2: a) Special Frequency 1 means: continuous with both 24 averages and a yearly average calculated and reported.</p>	Pollutant	Units of measure	Frequency	Sampling Method	Particulates - Deposited Matter	grams per square metre per month	Monthly	Australian Standard 3580.10.1-2003	Pollutant	Units of measure	Frequency	Sampling Method	PM10	micrograms per cubic metre	Special Frequency 1	Australian Standard 3580.9.8 - 2001	<p>C</p>	<p>Monitoring of air quality at Cadia Valley Operations (CVO) is managed in accordance with the CVO Air Quality Monitoring Program (Section 3.0 AIR QUALITY STANDARDS AND GUIDELINES) which was approved by NSW Department of Planning in June 2010 (revised 2014). Monitoring undertaken includes:</p> <ul style="list-style-type: none"> Ambient Dust Monitoring <ul style="list-style-type: none"> PM10 Total Suspended Particulates (TSP) Deposited Dust Monitoring Visual Dust Monitoring Meteorological Monitoring <p>Dust gauges use Approved Method – 19 AS 3580.10.1-2003 Monitoring for PM₁₀ uses Approved Method – 22 AS 3580.9.8-2001 It should be noted that while sampling of deposited dust is consistent with AS 3580.10.1:2003, the assessment of deposited dust is different due to the high levels of background organic material collected in the deposition gauges. The CVO AEMR 2012-13 presented an alternate measure, using the ash deposition rate as a more accurate indicator of the impact of the operations. The ash component of deposited dust is the insoluble solids minus combustible material and is more representative of the dust emissions from operations at CVO.</p>	<p>Air Quality Monitoring Program CVO website AEMRs Advitech monthly reports</p>	<p>There are no recommendations</p>																																
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<p>M2.3</p>	<p>Water and/ or Land Monitoring Requirements</p> <p>POINT 1 - See Table page 16 of EPL POINT 2 - See Table page 16 of EPL</p> <p>POINT 1</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of measure</th> <th>Frequency</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>Oil and Grease</td> <td>milligrams per litre</td> <td>Daily during any discharge</td> <td>Representative sample</td> </tr> <tr> <td>pH</td> <td>pH</td> <td>Daily during any discharge</td> <td>Representative sample</td> </tr> <tr> <td>Total suspended solids</td> <td>milligrams per litre</td> <td>Daily during any discharge</td> <td>Representative sample</td> </tr> <tr> <td>Turbidity</td> <td>nephelometric turbidity units</td> <td>Daily during any discharge</td> <td>Representative sample</td> </tr> </tbody> </table> <p>POINT 2</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of measure</th> <th>Frequency</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>Biochemical oxygen demand</td> <td>milligrams per litre</td> <td>Daily during any discharge</td> <td>Grab sample</td> </tr> <tr> <td>Nitrogen (total)</td> <td>milligrams per litre</td> <td>Daily during any discharge</td> <td>Grab sample</td> </tr> <tr> <td>Oil and Grease</td> <td>milligrams per litre</td> <td>Daily during any discharge</td> <td>Grab sample</td> </tr> <tr> <td>pH</td> <td>pH</td> <td>Daily during any discharge</td> <td>Grab sample</td> </tr> <tr> <td>Phosphorus (total)</td> <td>milligrams per litre</td> <td>Daily during any discharge</td> <td>Grab sample</td> </tr> <tr> <td>Total suspended solids</td> <td>milligrams per litre</td> <td>Daily during any discharge</td> <td>Grab sample</td> </tr> </tbody> </table>	Pollutant	Units of measure	Frequency	Sampling Method	Oil and Grease	milligrams per litre	Daily during any discharge	Representative sample	pH	pH	Daily during any discharge	Representative sample	Total suspended solids	milligrams per litre	Daily during any discharge	Representative sample	Turbidity	nephelometric turbidity units	Daily during any discharge	Representative sample	Pollutant	Units of measure	Frequency	Sampling Method	Biochemical oxygen demand	milligrams per litre	Daily during any discharge	Grab sample	Nitrogen (total)	milligrams per litre	Daily during any discharge	Grab sample	Oil and Grease	milligrams per litre	Daily during any discharge	Grab sample	pH	pH	Daily during any discharge	Grab sample	Phosphorus (total)	milligrams per litre	Daily during any discharge	Grab sample	Total suspended solids	milligrams per litre	Daily during any discharge	Grab sample	<p>C</p>	<p>There have been no discharges from Point 2. Sampling for Point 1 is undertaken in accordance with this requirement and as set out in the Water Management Plan, Section 4.5 Surface Water Quality.</p>	<p>CVO Website Water Management Plan AEMRs</p>	<p>There are no recommendations</p>
Pollutant	Units of measure	Frequency	Sampling Method																																																		
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M3.1	<p>Testing methods - concentration limits Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:</p> <p>a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or</p> <p>b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or</p> <p>c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.</p>	C	Set out in Section 3.0 of the Air Quality Monitoring Program	Air Quality Monitoring Program	There are no recommendations
M3.2	<p>Testing methods - concentration limits Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.</p> <p><i>Note: The Protection of the Environment Operations (Clean Air) Regulation 2010 requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".</i></p>	C	Water analyses are carried out by ALS, a NATA registered organisation, at their Sydney laboratories. ALS does not reference the <i>Approved Methods for Sampling and Analysis of Water in NSW</i> , however they adopt the USEPA Methods which are referenced in the NSW Methods document.	NATA analysis reports (sighted)	There are no recommendations
M4.1	<p>Noise monitoring The licensee must undertake bi-annual (in-line with the reporting period) noise monitoring to adequately determine compliance with the noise limits stipulated by conditions L4.1 and L4.2.</p>	C	Advitech conducts noise monitoring with reports posted on the CVO website. See L4.1 and L4.2 for sleep disturbance noncompliance.	CVO website L4.1 and L4.2	There are no recommendations
M4.2	<p>Noise monitoring The results of the noise monitoring required by condition M4.1, and an interpretation of these results, must be provided as an attachment to each corresponding years Annual Return.</p>	NA	This is a new requirement from the EPL version dated 24 March 2014. June 2014 attended noise monitoring report for Blayney dewatering facility was included as an attachment to the Annual Return for 2013-14 and is available on the CVO website, however the noise monitoring required by condition M4.1, and an interpretation of these results was not attached to the Annual Return as biennial reporting is outside the reporting period.	CVO Annual Return 2013-14	Not applicable
M4.3	<p>Noise monitoring The licensee, following the receipt of a noise related complaint and if required by the EPA, must undertake noise monitoring as required by the EPA to determine compliance with the noise limits stipulated by condition L4.1 and L4.2.</p>	NA	None required by the EPA	Management Assertion	Not applicable
M4.4	<p>Noise monitoring The results of the noise monitoring required by condition M4.3, and an interpretation of these results, must be provided to the EPA within 21 days of the completion of the noise monitoring.</p>	NA			Not applicable
M4.5	<p>Blast monitoring The licensee must monitor all blasts carried out in connection with the premises (in line with the reporting period) at or near the nearest residence or noise sensitive location (such as a school or hospital) that is not owned by the licensee or subject of a private agreement between the licensee and owner of the residence or noise sensitive location relating to alternative blasting limits, to adequately determine compliance with the blast limits stipulated by condition L5.1.</p>	C	There have been no exceedances with relation to this condition. Blast monitoring results are available on the CVP website.	Management Assertion Annual Return 2013-14 Ecotech Blast Monitoring Network Reports CVO website	There are no recommendations

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M4.6	<p>Blast monitoring The results of the blast monitoring required by condition M4.5, and an interpretation of these results, must be provided as an attachment to each corresponding years Annual Return.</p>	C	This is a new requirement from the EPL version dated 24 March 2014. Monthly Blast Monitoring Network Reports from March 2014 to June 2014 were attached to the EPL Annual Return for 2013-14. Recorded overpressure exceedences were attributed by Ecotech to weather conditions.	Annual Return 2013-14 Attached Ecotech Blast Monitoring Network Reports	There are no recommendations																														
M5.1	<p>Weather monitoring For each monitoring point specified in the table below the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns. Points 17 and 18 - See Table on page 18 of the EPL.</p> <p>Points 17 and 18</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Parameter</th> <th>Units of Measure</th> <th>Frequency</th> <th>Averaging Period</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>Air temperature</td> <td>°C</td> <td>Continuous</td> <td>1 hour</td> <td>AM-4</td> </tr> <tr> <td>Wind direction</td> <td>°</td> <td>Continuous</td> <td>15 minute</td> <td>AM-2 & AM-4</td> </tr> <tr> <td>Wind speed</td> <td>m/s</td> <td>Continuous</td> <td>15 minute</td> <td>AM-2 & AM-4</td> </tr> <tr> <td>Sigma theta</td> <td>°</td> <td>Continuous</td> <td>15 minute</td> <td>AM-2 & AM-4</td> </tr> <tr> <td>Rainfall</td> <td>mm</td> <td>Continuous</td> <td>15 minute</td> <td>AM-4</td> </tr> </tbody> </table>	Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method	Air temperature	°C	Continuous	1 hour	AM-4	Wind direction	°	Continuous	15 minute	AM-2 & AM-4	Wind speed	m/s	Continuous	15 minute	AM-2 & AM-4	Sigma theta	°	Continuous	15 minute	AM-2 & AM-4	Rainfall	mm	Continuous	15 minute	AM-4	C	There are two weather stations, one at Ridgeway Mine in the north and the other at the southern boundary of the mining leases. ALS Hydrographics (Canberra) maintain and calibrate the weather stations. Data obtained by the two on-site weather stations offer a representation of climatic conditions across numerous monitoring sites, i.e. stream flow, groundwater recharge, air quality, noise and vibration monitoring. Weather stations monitor temperature, rainfall, solar radiation, relative humidity, barometric pressure, wind speed and wind direction. In addition, rainfall is measured at 11 rain gauges in the vicinity of Cadia Valley Operations. Meteorological data is provided on the CVO website.	CVO Website Site Inspection (Photo 1)	There are no recommendations
Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method																															
Air temperature	°C	Continuous	1 hour	AM-4																															
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M6.1	<p>Recording of pollution complaints The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.</p>	C	A Community Hotline is maintained 24/7 for the receipt of complaints from the public. Complaints are recorded in the Consultation Manager folder and can also be recorded as an incident, e.g. dust complaints. A CVO Community Concerns Register is available on the CVO website and at the time of this audit registers the concerns from February 2014 to January 2015, including actions to resolve the concern. Community concerns are also reviewed in the minuted CCC meetings and in the CVO Newsletter. All complaints are reported in the AEMR and the EPL Annual Return.	CVO Website AEMRs EPL Annual Return Consultation Manager software CVO Complaints Management and Reporting Protocol	There are no recommendations																														
M6.2	<p>Recording of pollution complaints 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.</p>	C	Pollution complaints are appropriately recorded.	Consultation Manager software	There are no recommendations																														
M6.3	<p>Recording of pollution complaints The record of a complaint must be kept for at least 4 years after the complaint was made.</p>	C	See Question M1.2	CVO computer records CVO website Management Assertion	<p>Repeat of M1.2.1 It is recommended that a records management procedure be included in CVO-PRO-Documents Control setting out the manner and retention time of environmental records.</p> <p>Ranking: N</p>																														
M6.4	<p>Recording of pollution complaints The record must be produced to any authorised officer of the EPA who asks to see them.</p>	NA	Pollution complaints have not been requested to be produced by authorised officer of the EPA.	Management Assertion	Not applicable																														

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M7.1	<p>Telephone complaints line The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.</p>	C	The number for the telephone complaints line is 1800 063 043. The June 2014 CVO Newsletter informs the community that CVO has transferred the community hotline to the Site Asset Operations Centre (SAOC). The SAOC is manned around the clock and has access to CVO's monitoring data so the operators will be able to respond quickly to general community enquiries. Operators will also be able to pass on enquiries and concerns to the community relations and environment department if required.	CVO Newsletter June 2014	There are no recommendations									
M7.2	<p>Telephone complaints line 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.</p>	C	The number for the telephone complaints line is advertised on the CVO website, in the CVO Newsletter, in the CVO Environmental Handbook and on signs at the gates to the mine.	CVO website CVO Newsletter CVO Environmental Handbook Site Inspection	There are no recommendations									
M7.3	<p>Telephone complaints line The preceding two conditions 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.</p>	NA	This is outside the period of this audit, however the requirements are in place.	See previous questions.	Not Applicable 27 March 2015 10:00 AM									
M8.1	<p>Requirement to monitor volume or mass 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 below. POINT 2 - see Table on page 19 of the EPL</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: left; padding: 2px;">POINT 2</th> </tr> <tr> <th style="text-align: left; padding: 2px;">Frequency</th> <th style="text-align: left; padding: 2px;">Unit of Measure</th> <th style="text-align: left; padding: 2px;">Sampling Method</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">Daily during any discharge event</td> <td style="padding: 2px;">kilolitres per discharge event</td> <td style="padding: 2px;">Estimate</td> </tr> </tbody> </table>	POINT 2			Frequency	Unit of Measure	Sampling Method	Daily during any discharge event	kilolitres per discharge event	Estimate	C	Point 2 is the Break Pressure Tank from which any discharge is alarmed and monitored by flowmeter. b) and c) are not applicable.	Water Management Plan Site Inspection	There are no recommendations
POINT 2														
Frequency	Unit of Measure	Sampling Method												
Daily during any discharge event	kilolitres per discharge event	Estimate												
M9.1	<p>Other monitoring and recording conditions At least one representative water sample is required to be taken from the dam(s) when pesticides are used to control potentially toxic blue-green algae at the following times: a) immediately prior to the application of pesticides; b) 2 hours after the application of pesticides; c) 24 hours after the application of pesticides; and d) 7 days after the application of pesticides.</p>	NA	There has been no pesticide use since 2009.	Management Assertion	Not applicable									
M9.2	<p>Other monitoring and recording conditions The samples required to be taken from the dam(s) when pesticides are used to control potentially toxic blue-green algae, must be analysed for the following: a) potentially toxic blue-green algae (in cells/millilitre); b) toxicity; c) total and dissolved coppers (if the pesticide used is copper based); and d) the active constituents of the pesticide (if not copper based).</p>	NA	There has been no pesticide use since 2009. In the event that pesticides were to be used the following analyses are carried out: a) potentially toxic blue-green algae (in cells/millilitre) by Hunter Water; b) toxicity by Hunter Water; c) total and dissolved coppers (if the pesticide used is copper based) by ALS; and d) the active constituents of the pesticide (if not copper based) by ALS.	Management Assertion	Not applicable									

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 5590

Reporting Conditions					
R1.1	<p>Annual return documents The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: a) a Statement of Compliance; and b) a Monitoring and Complaints Summary. At 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.</p>	C	On EPA website for 2011-12 and 2012-13. Return for 2013-14 provided.	Annual Returns	There are no recommendations
R1.2	<p>Annual return documents An Annual Return must be prepared in respect of each reporting period, except as provided below. Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.</p>	C		Verified	There are no recommendations
R1.5	<p>Annual return documents 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').</p>	ANC	<p>The 2013-14 return was due on 13 August 2014 and was received on the due date by the EPA on 13 August 2014, however the 2012-13 return was received on 19 August 2013, which is 66 days after the anniversary date, and the 2011-12 return was received on 21 August 2012, which is 68 days after the anniversary date. Evidence has been provided that a system is now in place that provides automatic reminders from 3 months out from the due date and then a month and then a week out. The reminders escalate to higher levels of management if they are not completed by the due date.</p>	POEO Public Register Email from Andrew Wannan dated 9 April 2015 with system screenshot.	There are no recommendations
R1.6	<p>Annual return documents 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.</p>	C	<p>All data is kept in databases on servers and nothing is deleted. It is noted that there is no procedure for retention of records in the EMS.</p>	CVO computer records CVO website Management Assertion	<p>Repeat of M1.2.1 It is recommended that a records management procedure be included in CVO-PRO-Document Control setting out the manner and retention time of environmental records. Ranking: N</p>
R1.7	<p>Annual return documents 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.</p>	C	Documents are signed by two directors.	Annual Returns Corporate instructions	There are no recommendations
R1.8	<p>Annual return documents 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.</p>	NA			Not Applicable

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 5590

R2.1	<p>Notification of environmental harm Notifications must be made by telephoning the Environment Line service on 131 555. <i>Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.</i></p>	C	A diary note is made by the person telephoning the Environment Line service and the details of the notification are included in the written report to the EPA.	Sighted	There are no recommendations
R2.2	<p>Notification of environmental harm The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.</p>	O	An Interim Report is provided to the EPA in cases where CVO is still waiting on laboratory analyses to be received.	Management Assertion	<p>R2.2.1 Consideration should be given to applying for a Licence Variation to Condition R2.2 in order to formalise the provision of an Interim Report, to the effect that "In the event that the licensee is awaiting laboratory results in respect of a notification of environmental harm, the licensee shall provide an Interim Report with written details of the notification to the EPA within 7 days of the date on which the incident occurred. A final written report must be provided to the EPA within 7 days of the laboratory analyses being received by the Licensee".</p> <p>Ranking: I</p>
R3.1	<p>Written report Where an authorised officer of the EPA suspects on reasonable grounds that: a) where this licence applies to premises, an event has occurred at the premises; or b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.</p>	C	<p>On 12 January 2012, Richard Whyte Regional Director for Office of Environment and Heritage (EPA) phoned in response to a report made by CVO to the EPA Hotline of discharge of turbid water to Flyers Creek and requested a written report which was provided on 19 January 2012. On 25 October 2012 a discharge from the Southern TSF occurred and was reported to the EPA on 26 October. A written request for a report was made and the report was provided to the EPA on 2 November 2012. This event resulted in 2 PINs being issued for \$1500 for breach of Section 120 of the POEO Act and one for \$5000 for breach of Section 148 of Part 5.7 of the POEO Act.</p> <p>A further PIN for \$1500 was issued by the EPA on 26 February 2013 following a written report received from CVO on 13 November 2012 regarding a tailings release in about August 2006 that CVO had failed to report to the EPA.</p> <p>CVO has complied with all requests from the EPA for written reports.</p>	<p>Memo re discharge to Flyers Creek Email with written report attached. PIHA Health & Safety and Environmental Management Plan. Letter from EPA re PIN for 2006 release dated 26 February 2013. Letter from EPA dated 26 February 2013 re 2 PINs for Southern TSF discharge.</p>	There are no recommendations
R3.2	<p>Written report 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.</p>	C	Reports have been provided as required by CVO to the EPA	See R3.1	There are no recommendations

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 5590

R3.3	<p>Written report The request may require a report which includes any or all of the following information:</p> <ul style="list-style-type: none"> 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. 	NA	Requests from the EPA for written reports have not included this information.	Management Assertion	Not applicable
R3.4	<p>Written report 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.</p>	C	On 30 January 2012 CVO provided a copy of the Environmental Management Plan for the pipeline construction as requested in an email from Darryl Clift, Head Regional Operations EPA Bathurst on 24 January 2012.	Email correspondence	There are no recommendations
R4.1	<p>Annual system performance report An Annual Environmental Management Report (EMR) for the premises must be prepared and submitted to the EPA at the same time as the Annual Environmental Management Report (AEMR) required by the Department of Trade and Investment, Mineral Resources and Energy. The AEMR will satisfy the requirement of an EMR provided it contains the following:</p> <ul style="list-style-type: none"> a) an assessment of environmental performance relevant to the conditions of this licence; b) an analysis and interpretation of any monitoring data required by the EPA; and c) recommendations on improving environmental performance to meet or exceed the outcomes specified by the conditions of this licence. 	C	The AEMR states "This report addresses all Cadia Valley Operations which incorporate the Cadia East Underground Mine, Cadia Hill Gold Mine (Cadia Hill), Ridgeway Gold Mine (Ridgeway) in respect to Mining Leases 1405, 1449, 1472, 1481, 1689 and 1690, the Cadia East Project Approval (06_295) and Environmental Protection Licence 5590; and the Blayney Concentrate Dewatering Facility and associated concentrate pipeline from the mine site to Blayney in respect to the Cadia East Project Approval (06_295) and Environmental Protection Licence 5590. It is therefore designed to satisfy the requirements for the EMR. It was reported that CVO received advice from DoPI during 2010 that a combined reporting approach with the AEMR was acceptable.	AEMRs Management Assertion	There are no recommendations
R5.1	<p>Other Reporting Conditions The licensee is required to make and keep records for any application of pesticides to Cadiangullong and/or Rodds Creek Dam as per the requirements of Part 4A of the Pesticides Regulation 2009.</p>	NA	There has been no application of pesticides since 2009.	Management Assertion	Not applicable

9.2 Detailed Findings and Recommendations - Environment Protection Licence No 5590

<p>NOTE: Information to be contained in record (Clause 14 of Regulation)</p> <p>(1) A record required to be made under this Part must contain the following information:</p> <p>(a) the full product name of the pesticide applied,</p> <p>(b) a description of the crop in respect of which the pesticide was applied or other situation in which it was used,</p> <p>(c) the rate of application of the pesticide and the quantity applied,</p> <p>(d) a description of the equipment used to apply the pesticide,</p> <p>(e) the address of the property and the delineation of the area in which the pesticide was released and, in the case of a record under clause 13 (1) (g)-(j), the order in which areas (such as paddocks or sheds) were treated,</p> <p>(f) the date and time of the application of the pesticide (including the start and finish time),</p> <p>(g) the name, address and contact details of the person who applied the pesticide or, if the pesticide was applied by a person employed to apply the pesticide, the name of the employee and the name, address and contact details of the employer,</p> <p>(h) the name, address and contact details of the owner or occupier of the land in respect of which the pesticide was applied (if the information is not the same as the information required by paragraph (g)),</p> <p>(i) if, because of clause 13 (3), the record is required to be made by a supervisor-the name of each person who used the pesticide under the supervision or direction of the supervisor,</p> <p>(j) if the pesticide is applied outdoors by means of any spray equipment:</p> <p>(i) the estimated wind speed and direction at the start of the application and whenever there is any significant change during the application, and</p> <p>(ii) if other weather conditions (such as temperature, humidity or rainfall conditions) are specified on the pesticide label as being relevant for the proper use of the pesticide-a description of those conditions at the start of the application and whenever there is any significant change during the application.</p> <p>(2) The record must:</p> <p>(a) be made as soon as practicable after the use of the pesticide concerned and, in any event, no later than 24 hours after the pesticide is used, and</p> <p>(b) be written legibly in the English language.</p>					
General Conditions					
G1.1	<p>Copy of licence kept at the premises or plant</p> <p>A copy of this licence must be kept at the premises to which the licence applies.</p>	C		Sighted	There are no recommendations
G1.2	<p>The licence must be produced to any authorised officer of the EPA who asks to see it.</p>	C	Produced on 9 December 2014 as requested during EPA audit.	Management Assertion	There are no recommendations
G1.3	<p>The licence must be available for inspection by any employee or agent of the licensee working at the premises.</p>	C	Available on the intranet and the CVO website.	Sighted	There are no recommendations

Detailed Findings and Recommendations - Consolidated Statement of Commitments

CADIA HOLDINGS PTY LIMITED
Mandatory Independent Compliance Audit for Department of Planning & Environment
Detailed Findings and Recommendations
Consolidated Statement of Commitments

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
SOC 1.1 ENVIRONMENTAL MANAGEMENT AND MITIGATION					
1.1A	Environmental management and mitigation measures to be implemented at the Cadia Valley Operations during the development and operation of the Cadia East Project (the Project) are described in the following sections of the Environmental Assessment (EA):		The EA is available on the CVO website		
1.1A.1	Land Resources, Climate and Bushfire Regime - Section 4.1 ;	C	A Bushfire Management Plan is in draft for the mine site and the offset areas.	Land and Biodiversity Management Program Agistment program Draft Bushfire Management Plan	There are no recommendations
1.1A.2	Groundwater - Section 4.2;	C	Water Management Plan Bore Census shows that there is no change in the groundwater regime. The groundwater water is reviewed in the AEMR and reported on the CVO website in the monthly Groundwater Monitoring Summary, and discussed in detail in the CCC Meetings Minutes.	Water Management Plan CCC Meeting Minutes AEMR CVO website CVO Monitoring Manual CVO Monitoring Schedule	There are no recommendations
1.1A.3	Surface Water - Section 4.3;	C	Monitoring of various aspects of the local water resources at CVO is conducted in accordance with the CVO Water Management Plan. The plan was developed by Newcrest in consultation with the NSW Office of Water (NOW), Department of Environment, Climate Change and Water (DECCW) and local residents. Consultation with local residents was conducted in three focus groups: Surface water – residents along Flyers Creek; Groundwater – residents within the predicted groundwater impact zone; Groundwater plus – concerned residents from outside the predicted groundwater impact zone. Monitoring includes the Site water balance; Surface water flows and quality; and Groundwater levels and quality. The water quality and water balance is reviewed in the AEMR and reported on the CVO website in the monthly Groundwater Monitoring Summary. There are no riparian users - all riparian land is company owned.	AEMR Water Management Plan. CVO website CVO Monitoring Manual CVO Monitoring Schedule	There are no recommendations

Consolidated Statement of Commitments- Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
1.1A.4	Flora - Section 4.4;	C	Covered in the AEMR, MOP and Land and Biodiversity Management Plan. Offsets are included in the Land and Biodiversity Management Plan. Offsets land must be owned by CVO and is reviewed by an ecologist. Offsets are also required under the EPBC Act approval. Over 826 ha has been secured. CVO is buying some Croal land at Black Rock Range. Approval variation has been requested from DP&E. There was a shortfall in the amount of land required to be purchased due to a resurvey from fencelines to cadastral, and this has been made up. The Department of Planning has been provided with a bank security for the offsets. Black Rock has been rezoned for conservation and is subject to a Voluntary Planning Agreement in 2011. A Bushfire Management Plan is in draft for the mine site and the offset areas. Problem weed areas are identified through regular inspections by environmental staff, the Farm Management Agent and by weed inspectors from relevant authorities. Information regarding restrictions is distributed to employees. A contract and works program is in place for the control of noxious and environmental weeds.	<ul style="list-style-type: none"> Land and Biodiversity Management Plan AEMR Draft Bushfire Management Plan Management Assertion 	There are no recommendations.
1.1A.5	Fauna - Section 4.5;	C	See 1.1A.4. The Land and Biodiversity Management Plan includes management of Fauna. The area secured where habitat has been rehabilitated and areas fenced off is reported in the AEMRs. Vegetation corridors are set out in Figure 3.3 of the Land and Biodiversity Management Plan. Threatened species are managed through the Vegetation Clearance Protocol and other measures and through Threatened Species Assessment where required. The Habitat Salvage Programme (HSP) was developed to reduce the impact of habitat loss by recovering existing habitat resources from the impact areas and relocating these to an area low in habitat features, for example rehabilitation areas. The HSP is using a staged approach to reduce the impact on the existing fauna residing in the remnant woodland. These programs are reviewed in the AEMR and newsletters.	<ul style="list-style-type: none"> Land and Biodiversity Management Plan The Habitat Salvage Programme Vegetation Clearance Protocol AEMR Newsletters Management Assertion 	There are no recommendations
1.1A.6	Air Quality - Section 4.6;	C	An Air Quality Monitoring Program ensures the monitoring and management of air quality. Alarmed dust monitors report to the SAOC and remedial action is initiated. CVO reports under the Commonwealth NGERS legislation. Meteorology and air quality are reported in the AEMR and on the CVO website. There is also a Tailings Deposition Management Plan that has procedures to minimise dust through actions such as helicopter watering if tailings dry out. Normal operations include the use of 3 water carts permanently on site that are activated by the SAOC. Air quality (mainly dust) is included in the CVO Fact Sheets, the Licence to Operate Themes and the Environmental Handbook.	Air Quality Monitoring Program AEMR CVO website SAOC inspection and interview CVO Fact Sheets Licence to Operate Themes Environmental Handbook.	There are no recommendations
1.1A.7	Noise - Section 4.7;	C	A Noise Monitoring Program and a Blasting and Vibration Monitoring Program are in place and reported in the AEMR and on the CVO website as well as in the CCC Committee Minutes.	Noise Monitoring Program Blasting and Vibration Monitoring Program CVO Website CCC Committee Minutes	There are no recommendations

Consolidated Statement of Commitments- Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
1.1A.8	Aboriginal Heritage - Section 4.8	C	Covered in original aboriginal heritage reports and for additional extraction areas. There have been no additional significant discoveries of aboriginal heritage items. Managed through the Aboriginal Cultural Heritage Management Plan which is available on the CVO website. It was reported that no further areas are to be disturbed.	Aboriginal Cultural Heritage Management Plan CVO website Management Assertion Cadia East Project Archaeological Test Excavations Terrace 48, Terrace 62 and Southern Sloping Plain 2013. Additional Archaeological Test Investigation Works Southern Sloping Plain TIA1 & TIA2 2015	There are no recommendations
1.1A.9	European Heritage - Section 4.9	C	There is a draft Historical Heritage Management Plan which has not yet been approved by DP&E, and includes a Cadia Interpretation Plan. It is referenced on the CVO website. CVO is providing \$100,000 towards the construction of a new museum in Orange to house aboriginal and European artefacts.	Draft Historical Heritage Management Plan CVO website	There are no recommendations
1.1A.10	Road Transport - Section 4.10	C	A planned road deviation for the intersection of Cadia Road and Cadia Hill Access Road has been deferred for 5-10 years depending on the subsidence propagation rate. The use of employee shuttle buses was tried but was not successful and has been replaced by a system of share cars to reduce the traffic on local roads. Construction contractors for Cadia East use buses. The CVO Dewatering Facility at Blayney will reroute oversize vehicles associated with this facility. CVO has a Voluntary Planning Agreement (VPA) signed agreement dated 9 July 2013 with Orange City Council, Blayney Shire Council and Carbonne Shire Council, to upgrade Council's road infrastructure.	Management Assertion Final VPA signed agreement with councils 9 July 2013	There are no recommendations
1.1A.11	Regional Economy - Section 4.11	C	The economic impact of CVO's activities on the defined CVO region, was assessed for the 2012/13 Financial Year and reported in the 2013-2014 AEMR. The combined economic impact is an aggregation of the individual impacts on the local economy through mining operations, local capital expenditure and local community contributions, and construction including local construction expenditure and local capital expenditure. It demonstrated a significant positive impact on the local economy. The CVO website "Social Responsibility Programs" sets out the contributions made by CVO to the local community. CVO has a Voluntary Planning Agreement (VPA) dated 9 July 2013 with Orange City Council, Blayney Shire Council and Carbonne Shire Council, to upgrade Council's road infrastructure and provide general community enhancements.	Cadia EA Appendix H 2013-14 AEMR CVO website "Social Responsibility Programs" Final VPA signed agreement with councils 9 July 2013 Cadia Road Upgrade Orange Local Government Area. Email dated 8/8/14 from Andrew Wannan to Claire Doherty, NSW Mining Council re CVO MIne roads contributions.	There are no recommendations
1.1A.12	Employment, Population and Community Infrastructure - Section 4.12	C	CVO has had a positive impact on employment in the district, generating approximately 2,428 FTE jobs, representing 6.5 percent of the local economy's total full time equivalent employment. The CVO CCC is in place with minutes of meetings published on the CVO website. A number of Social Responsibility Programs are also set out on the CVO website. Other initiatives include approved landscape plan for the Blayney Dewatering Facility and a Lighting Plan to minimise disturbance to neighbours.	Cadia EA Appendix H 2013-14 AEMR CVO website CCC Minutes Lighting Plan	There are no recommendations
1.1A.13	Visual Character - Section 4.13;	C	Visual character is addressed through the MOP.	MOPs	There are no recommendations

Consolidated Statement of Commitments- Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
1.1A.14	Hazard and Risk - Section 4.14	C	Risks associated with the mining operations have been identified through the Cadia Hill EIS, Ridgeway EIS and the Cadia East Environmental Assessment. Environmental aspects and impacts are also reflected in the CVO Aspects and Impacts register which has been developed and assessed in accordance with the requirements of ISO 14001:2004 'Environmental Management Systems'. An additional assessment has been undertaken as part of the development of the MOP relating to risks associated with mine rehabilitation, mine closure and mining lease relinquishment, identified through a site based Semi Quantitative Risk Assessment conducted on mine closure involving key environmental, community relations and risk management staff. A table in the MOP provides a summary of key environmental risks that have been identified at CVO and specifically apply to mine closure, environmental / community legacy and relinquishment risks. In addition a PIRMP has been prepared and is summarised on the CVO website. Tailings rehabilitation is included in the CVO Rehabilitation Strategy.	MOP 2013-14 Aspects and Impacts Register Rehabilitation Strategy. PIRMP CVO website	There are no recommendations
1.1B	Cadia Holdings Pty Limited (CHPL) will prepare and implement the following new plans for the Cadia Valley Operations:				
1.1B.1	Groundwater Management Plan;	C	Included in the Water Management Plan available on CVO website	Water Management Plan	There are no recommendations
1.1B.2	CVO Dewatering Facility Environmental Management Plan	C	Available on CVO website	Blayney Dewatering Facility Environmental Management Plan	There are no recommendations
1.1C	CHPL will also review and update the following existing Cadia Valley Operations environmental management plans and monitoring programmes to include Project-related activities, as appropriate:				
1.1C.1	Site Management Plan	C	Now the Site Management Strategy	Site Management Strategy	There are no recommendations
1.1C.2	Land Management Plan	C	In the Land and Biodiversity Management Program	Land and Biodiversity Management Program	There are no recommendations
1.1C.3	Water Management Plan	C		Water Management Plan	There are no recommendations
1.1C.4	Flora and Fauna Management Plan	C	Now in the Land and Biodiversity Management Program	Land and Biodiversity Management Program	There are no recommendations
1.1C.5	Mine Closure Plan	C	Included in the MOPs	MOP	There are no recommendations
1.1C.6	Noise Management Plan	C	Now the Noise Management Program	Noise Management Program	There are no recommendations
1.1C.7	Blasting and Vibration Management Plan	C	Now the Blasting and Vibration Monitoring Program	Blasting and Vibration Monitoring Program	There are no recommendations
1.1C.8	Dust Management Plan	C	Included in the Air Quality Monitoring Program	Air Quality Monitoring Program	There are no recommendations
1.1C.9	Integrated Erosion and Sediment Control Plan	C	Included in the Water Management Plan	Water Management Plan	There are no recommendations
1.1C.10	Bushfire Management Plan	C	Also covered in the Land and Biodiversity Management Program	Bushfire Management Plan Land and Biodiversity Management Program	There are no recommendations

Consolidated Statement of Commitments- Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
1.1C.11	Lighting Management Plan	C		Lighting Management Plan	There are no recommendations
1.1C.12	Contingency Water Supply Plan	C	Included in the Water Management Plan	Water Management Plan	There are no recommendations
1.1C.13	Cadia Interpretation Plan	C	Part of the draft Historical Heritage Management Plan	Draft Historical Heritage Management Plan	There are no recommendations
1.1C.14	Waste Management Plan	C		Waste Management Plan	There are no recommendations
SOC 1.2 COMPENSATORY MEASURES AND OTHER ECOLOGICAL INITIATIVES					
1.2	Measures to offset the flora and fauna impacts of the Project will include:				
1.2.1	rehabilitation of post-mining landforms (described in Section 5 of the EA);	C	Progressive rehabilitation is described in the MOP and the Land and Biodiversity Management Program and can be clearly seen at the mine (Photos 12 and 13).	MOPs Land and Biodiversity Management Program Site inspection	There are no recommendations
1.2.2	provision of a Squirrel Glider monitoring programme described in Section 4.5.3 of the EA);	C	A 2011 report concluded that "It is very unlikely that a Squirrel Glider resides within the Southern Remnant, or in the immediate surrounds, and even less likely that a viable population of the Squirrel Glider is extant within the remnant. From time to time it is possible that individual Squirrel Gliders may also be observed within suitable locations of the CVO." 5 glider box locations provided by CVO are registered on a spreadsheet.	Determining if a Viable Squirrel Glider Population is Present within the Southern Remnant in the Cadia East Project Area, Cenwest Environmental Services, March 2011. Glider Box Locations spreadsheet	There are no recommendations
1.2.3	enhancement and conservation of vegetation and habitat within an offset area.	C	See 1.1A.4. Replanting is undertaken in conjunction with the Orange Aboriginal Group as modified from time to time.	See 1.1A.4	There are no recommendations
SOC 1.3 ENVIRONMENTAL MONITORING					
1.3.1	An Environmental Monitoring Programme (EMP) will be developed for the Project.	C	Monitoring undertaken across site and in the vicinity of CVO includes: <ul style="list-style-type: none"> • Noise monitoring • Air quality monitoring • Blast and vibration monitoring • Groundwater level and quality monitoring • Spring Monitoring • Surface water flows and quality • Aquatic ecosystem monitoring • Rehabilitation monitoring • Pollution discharge monitoring The Environmental Monitoring Manual includes Surface Water, Ground Water Quality & Levels, Data logger downloads and compensation, Surface Water Flows, Noise, Vibration and Air Quality . A Monitoring Schedule spreadsheet is maintained that includes Analysis Suites, Groundwater Monitoring and Surface Water Monitoring.	Environmental Monitoring Manual Monitoring Schedule spreadsheet	There are no recommendations
1.3.2	The monitoring components in Table SOC-1 will be described in either the EMP and/or other relevant management plans (e.g. FFMP and DMP).	C	All are included in the Environmental Monitoring Manual	Environmental Monitoring Manual	There are no recommendations
1.3.3	Monitoring frequency will be reviewed annually in the Annual Environmental Management Report (AEMR).	C		AEMRs	There are no recommendations

Consolidated Statement of Commitments- Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
SOC 1.4 REPORTING					
1.4.1.1	Mining Operations Plan The existing MOP will be revised and updated to include Project-related operations.	C	The current MOP is for MARCH 2014 – FEBRUARY 2016 and was approved on 4 February 2015. The MOP is revised and upgraded every two years.	MOP April 2014	There are no recommendations
1.4.1.2	Mining Operations Plan The MOP will provide information in regard to the mining, processing and rehabilitation operations, relevant lease and development conditions, licences and other approvals.	C		MOPs	There are no recommendations
1.4.1.3	Mining Operations Plan The MOP will be revised periodically as well as prior to any significant alteration to Project operations.	C	The MOP is revised and upgraded every two years.	MOPs	There are no recommendations
1.4.2.1	Annual Environmental Management Report An AEMR for the Cadia Valley Operations will continue to be prepared to address the reporting of the status of approvals, leases, licences and environmental risk management and environmental control strategies.	C	The AEMRs are on the CVO website and are approved by DRE and EPA.	AEMRs CVO website	There are no recommendations
1.4.2.2	Annual Environmental Management Report For the preceding 12 month period, the AEMR will provide a summary of community relations and liaison, mine development and rehabilitation in relation to the MOP.	C		AEMRs CVO website	There are no recommendations
1.4.2.3	Annual Environmental Management Report Project environmental performance in relation to the collective conditions of approvals, leases and licences for the previous 12 month period will also be reported.	C		AEMRs CVO website	There are no recommendations
1.4.2.4	Annual Environmental Management Report The AEMR will also include a review and any proposed improvements in relation to environmental monitoring and management systems and environmental performance and will specify environmental and rehabilitation targets to be achieved during the ensuing 12 month period.	C		AEMRs CVO website	There are no recommendations
1.4.3	Other Licences and Approvals CHPL will report to the relevant authorities in accordance with their licences and approvals (e.g. Environmental Protection Licence No. 5590 requirements, water extraction and bore licences issued by the DWE)	C		MOP EPA Annual Return	There are no recommendations
1.4.4	Greenhouse Gas Emissions Greenhouse gas emissions and energy consumption will be reported in accordance with the National Greenhouse and Energy Reporting Act, 2007 (NGER Act).	C	Verified - included in Newcrest Mining Limited NGER Report.	Annual NGER Return Clean Energy Regulator Website.	There are no recommendations
1.4.5	Community Consultative Committee CHPL will continue to consult with the local community through the Community Consultative Committee, providing a forum for discussion between representatives of the Cadia Valley Operations and the local community on issues directly relating to CHPL's operations, environmental performance and community relations, and to keep the community informed on these matters.	C	The CCC Charter and Meeting Minutes are on the CVO website.	CVO website	There are no recommendations

Consolidated Statement of Commitments- Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
1.4.6	<p>Public Reporting Monitoring results at the Cadia Valley Operations will be made available on the internet through the Cadia Valley Operations website. The format of reporting on the website will be determined in consideration of appropriate DoP guidelines and standards.</p>	C	<p>Appropriate DoP guidelines and standards have been superseded by Planning Approval conditions. Monitoring information provided by CVO includes: Monitoring undertaken across site and in the vicinity of CVO includes:</p> <ul style="list-style-type: none"> • Noise monitoring • Air quality monitoring • Blast and vibration monitoring • Groundwater level and quality monitoring • Surface water flows and quality • Rehabilitation and Biodiversity monitoring • EPL Discharge Points • Meteorology 	CVO website	There are no recommendations

9.4 Detailed Findings and Recommendations - Mining Leases - Conditions of Authority - ML1405 and ML1449

9.4 CADIA HOLDINGS PTY LIMITED

Mandatory Independent Compliance Audit for Department of Planning & Infrastructure

Detailed Findings and Recommendations

Mining Leases - Conditions of Authority - ML1405 and ML1449

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Notice to Owners and Occupiers					
ML1	Within a period of three months from the date of this lease or within such further time as the Minister may allow, the lease holder must serve on each owner or occupier of private land and on each occupier of the Crown Land held under a pastoral lease within the subject area a notice in writing indicating that this lease has been granted and whether the lease includes the surface. The notice must be accompanied by an adequate plan and description of the subject area. If there are ten or more owners. or occupiers affected, the lease holder may serve the notice by publication in a newspaper circulating in the region. where the subject 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 subject area.	NA	Not applicable during this audit period.		Not Applicable
ML1A [ML1449]	The lease holder must conduct operations within the subject area generally in accordance to the manner outlined and detailed in the Statement of Environmental Effects, prepared by Resource Strategies Ply Ltd, titled Ridgeway Trial and dated December 1998, and must not vary the scale or method of operations without the prior written approval of the Minister and subject to any conditions he may stipulate.	NA	This condition has been superseded.		Not Applicable
Mining, Rehabilitation, Environmental Management Process (MREMP)					
ML3A(1)	Mining Operations Plan. (MOP) Mining operations, including mining purposes, must be conducted in accordance with a Mining Operations Plan (the Plan) approved by the Director-General. The Plan together with environmental conditions of development consent and other approvals will form the basis for:- (a) ongoing mining operations and environmental management; and (b) ongoing monitoring of the project.	C	Mining and mining purposes operations are carried out in accordance with the relevant MOPs and a number of variations and extensions to the MOPs approved by DRE from time to time, as set out in the folder "MOP Variations and Extensions" included in the Documents Reviewed section of this report.	2014-2016 MOP 2011-2013 MOP MOP Variations and Extensions See also Commitments	There are no recommendations
ML3A(2)	Mining Operations Plan. (MOP) The Plan must be prepared in accordance with the Director-General's guidelines current at the time of lodgement.	C		2014-2016 MOP 2011-2013 MOP	There are no recommendations

Mining Leases - Conditions of Authority - ML1405 and ML1449 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
ML3A(3)	<p>Mining Operations Plan. (MOP) An application for approval of a proposed Plan must be accompanied by a copy of the Plan and must be lodged with the Director-General: (a) prior to the commencement of operations; and (b) subsequently as appropriate.</p>	C	Modifications to the MOP have been requested from time to time by the DRE, e.g. by letter dated 5 June 2013 for modification to the 2011-2013 MOP, following a site meeting on Wednesday 29 May 2013 where the proposed revision of the Mining Operations Plan (MOP) due by end October 2013 was discussed, and it was requested that the revision of the MOP be prepared in accordance with draft DRE guidelines (Pub. 1364 ESG3).	2014-2016 MOP, Amendment lodged 16 January 2015 2011-2013 MOP Letter from M Young of DRE extending 2011-2013 MOP to 30 April 2014 Letter dated 5 June 2013 requiring modification to the 2011-2013 MOP. MOP Variations and Extensions folder	There are no recommendations
ML3A(4)	<p>Mining Operations Plan. (MOP) The Plan must present a schedule of proposed mine development for a period of up to seven (7) years and contain diagrams and documentation which identify:- (a) area(s) proposed to be disturbed under the Plan; (b) mining and rehabilitation method(s) to be used and their sequence; (c) existing and proposed surface infrastructure; (d) progressive rehabilitation schedules; (e) areas of particular environmental sensitivity; (f) water management systems; and (g) proposed resource recovery.</p>	C	These requirements are included in the MOPs	2014-2016 MOP 2011-2013 MOP	There are no recommendations
ML3A(5)	<p>Mining Operations Plan. (MOP) Where the lease holder and/or the Director-General is of the opinion that an approved Plan should be amended, the lease holder shall submit an amended Plan for approval.</p>	C	MOP amendments are regularly requested and approved and are reported in the AEMRs. The 2014-2016 MOP states "The MOP will be reviewed on a biannual basis. Should any significant changes be made to mining operations an amendment to the Mining Operations Plan will be submitted in accordance with the relevant guidelines at that time".	AEMRs MOP Variations and Extensions folder 2014-2016 MOP	There are no recommendations
ML3B(1)	<p>Annual Environmental Management Report (AEMR) 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>	C	AEMRs from 2005-05 to 2013-14 are available on the CVO website.	CVO website	There are no recommendations
ML3B(2)	<p>Annual Environmental Management Report (AEMR) The AEMR must be prepared in accordance with the Director-General's guidelines current at the time of reporting and contain a review and forecast of performance for the preceding and ensuing twelve months in terms of: (a) the approved Mining Operations Plan; (b) development consent requirements and conditions; (c) Environment Protection Authority licences and approvals; (d) any other statutory environmental requirements; and (e) details of any variations to environmental approvals applicable to the lease area.</p>	C	The 2013-2014 AEMR states: "This report addresses all Cadia Valley Operations which incorporate the Cadia East Underground Mine, Cadia Hill Gold Mine (Cadia Hill), Ridgeway Gold Mine (Ridgeway) in respect to Mining Leases 1405, 1449, 1472, 1481, 1689 and 1690, the Cadia East Project Approval (06_295) and Environmental Protection Licence 5590; and the Blayney Concentrate Dewatering Facility and associated concentrate pipeline from the mine site to Blayney in respect to the Cadia East Project Approval (06_295) and Environmental Protection Licence 5590".	2013-2014 AEMR	There are no recommendations

Mining Leases - Conditions of Authority - ML1405 and ML1449 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
ML3B(3)	Annual Environmental Management Report (AEMR) 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 such manner and within such period as may be specified in the notice to ensure that operations on the lease area are conducted in accordance with sound mining and environmental practice	NA	No notices received for changes to operations.	Management Assertion	Not Applicable
ML3B(4)	Annual Environmental Management Report (AEMR) 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.	C	CVO has meetings in late October/early November each year with DRE, EPA and the local councils to review the AEMR. Minutes of these meetings are produced.	Minutes of AEMR meeting and inspection held on 7 November 2014.	There are no recommendations
ML4	Mining Methods The lease holder must restrict mining operations on the subject area to open cutting and must not adopt any other method of mining without the prior written approval of the Minister and subject to any conditions he may stipulate.	NA	Underground mining was approved on 25 October 2004 (outside the time of this audit) and continues.	Management Assertion	Not Applicable
ML7	Drilling If the lease holder proposes to drill a drill hole he must ensure: (a) all cored holes are accurately surveyed and permanently marked so that their location can be readily ascertained; (b) all holes whether cored or otherwise are sealed so as to prevent collapse of the surrounding surface; (c) all flowing drill holes are effectively sealed to prevent surface discharge of groundwaters; (d) that where any drill hole encounters natural or noxious gases it is plugged or sealed so as to prevent their escape; (e) that where any drill hole encounters an artesian or sub-artesian flow that it is sealed effectively to prevent contamination of aquifers.	C	[a] It was not known at the time of this audit if all drillholes were permanently marked, although it was asserted that they were accurately surveyed. This was confirmed in an email with attachments on 25 March 2015. It is noted that few exploration drillholes have been completed during the period of this audit. 27 drill holes have been created since 2012 within the MLs, principally ML1405 (1 in ML1472): 3 were exploration holes and 24 associated with mining focussing on the Cadia East subsidence area. The latter have not been capped as they have been used for ongoing monitoring and/or have been destroyed in the subsidence breakthrough or in the exclusion zone. [b] Complies. Drill holes affected or being used in association with the Cadia east subsidence zone are unable to be sealed. These have or will collapse within the cave zone of the Cadia East mine. [c] Not applicable – there have been no flowing drillholes. [d] Not applicable - gases have not been encountered at CVO. [e] Not applicable – no drill hole has encountered an artesian or sub-artesian flow. . Groundwater impacts associated with the Cadia East subsidence are referenced in the Cadia East EA, AEMRs and regular monitoring. NOTE: It is noted that this clause ML7 and the following clause ML8 were not addressed in the 2011 Mandatory Environmental Compliance Audit on the grounds that they were not environmental conditions, with which the current auditors strongly disagree.	<ul style="list-style-type: none"> • Management Assertion • Email 25 March 2015 from Andrew Wannan. • Drill site rehab status. 2011 - 2012 exploration drilling. • Subsidence Zone Drilling 2014-2015 • Surface drill holes (plans) • Photographs of completed drillholes 	There are no recommendations
ML8	Drilling As soon as any drill hole ceases to be used it must be filled or plugged to the satisfaction of the Regional Inspector of Mines and the land in its immediate vicinity left in a clean, tidy and stable condition.	C	CVO provided documentation to verify that as soon as any drill hole ceases to be used it is filled or plugged and the land in its immediate vicinity is left in a clean, tidy and stable condition.	See ML7.	

Mining Leases - Conditions of Authority - ML1405 and ML1449 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
ML9 [ML1405]	Blasting The lease holder must ensure that the ground vibration peak particle velocity generated by any blasting within the area of the subject lease does not exceed 10mm/second and does not exceed 5mm/second in more than 5% of the blasts at any dwelling or occupied premises outside the said area, unless approval has been granted by the Regional Inspector of Mines to exceed the said particle velocity or as otherwise determined by the Environment Protection Authority under the provisions of the Noise Control Act 1975.	C	The Project Approval is more stringent and includes daytime and nighttime limits. See Project Approval S3.10.	Project Approval S3.10	There are no recommendations
ML10 [ML1405]	Blasting The lease holder must ensure that the blast overpressure noise level generated by any blasting within the area of the subject lease does not exceed 120 dB (linear) and does not exceed 115 dB (linear) in more than 5% of blasts, outside the said area, at any dwelling or occupied premises, as the case may be unless approval has been granted to exceed such levels by the Regional Inspector of Mines or as otherwise determined by the environment Protection Authority under the provisions of the Noise Control Act 1975.	C	The Project Approval is more stringent and includes daytime and nighttime limits. See Project Approval S3.10.	Project Approval S3.11	There are no recommendations
ML11	Safety Operations must not be carried out in a manner that endangers the safety of any persons and stock in the vicinity of the operations. In particular, all shafts and excavations are to be appropriately protected, to the satisfaction of the Regional Inspector of Mines, to ensure that access to them by persons and stock is restricted. Abandoned shafts and excavations opened up or used by the lease holder are to be filled in or otherwise rendered safe to a standard acceptable to the Regional Inspector of Mines.	O	This is a work in progress with full compliance to be achieved. A dry moat and fence have been constructed around the Ridgeway subsidence zone, and a fence is currently being constructed around the East Cadia subsidence zone. Fences are in place around vent shafts and the old winder shaft. The Cadia Extended pit has been filled in. Adits and declines are still in use, and operations in the Cadia East area require a Pit Permit for entry.	Site Inspections Management Assertion	There are no recommendations
Settling Dams					
ML12	Topsoil replacement and Rehabilitation (a) Any topsoil that is removed in the course of operations is to be set aside for replacement at a later date. Other soil, rock and residues are to be used to fill abandoned shafts and excavations and are to be covered by the topsoil previously removed. (b) The land over which the operations have been carried on: (i) is to be appropriately restored and landscaped, to the satisfaction of the Regional Inspector of Mines, to ensure that the land is properly drained and protected from soil erosion; and (ii) is to be planted with vegetation appropriate to the area and at a density acceptable to the Regional Inspector of Mines. Where the agreed final land use is to include native vegetation, indigenous species must be used in all revegetation programs, unless otherwise directed.	C	Topsoil management and rehabilitation is covered in the MOP (as varied from time to time) and progress against the MOP is reported in the AEMR. Landscaping and vegetation of the site are approved by the Regional Inspector of Mines through the approval of the MOP and variations. Rehabilitation of mine dumps and TSFs at various stages were observed by the auditors (Photos 12 and 13).	MOPs AEMRs Site Inspections	There are no recommendations

Mining Leases - Conditions of Authority - ML1405 and ML1449 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
ML13	Topsoil replacement and Rehabilitation The lease holder must comply with any reasonable direction given by the Regional Inspector of Mines regarding the stabilisation and revegetation of any mine residue, tailings or overburden dumps associated with the mining operation.	NA	No directions have been given during the period of this audit.	Management Assertion	Not Applicable
ML16	Topsoil replacement and Rehabilitation On completion of operations the lease holder must rehabilitate all areas disturbed as a result of operations having been carried out within the subject area and must ensure that such areas are adequately maintained for such a period as is necessary to satisfy the Minister that long term rehabilitation standards and environmental safeguards have been fulfilled.	C	Topsoil management and rehabilitation is covered in the MOP (as varied) and progress against the MOP is reported in the AEMR.	MOPs AEMRs Site Inspections	There are no recommendations
Fences and Gates					
ML18	Fences on the subject area must not be interfered with without the prior written approval of the owner thereof or the Minister and subject to any conditions the Minister may stipulate.	NA	All land on the leases is owned by CVO. . Crown road reserves and a single Crown reserve are subject to occupation permits.	Management Assertion	Not Applicable
ML19	Any gates within the subject area must be closed or left open in accordance with the requirements of the owner or occupier.	NA	All land on the leases is owned by CVO. . Crown road reserves and a single Crown reserve are subject to occupation permits.	Management Assertion	Not Applicable
Roads and Tracks					
ML23	Access tracks must be kept to a minimum and be positioned so as not to cause any unnecessary drainage to the land. Temporary access tracks must be ripped, topsoiled and revegetated as soon as possible after they cease to be required for mining operations. The design and construction of access tracks must be in accordance with specifications fixed by the Department of Land and Water Conservation.	C	Little exploration drilling has been undertaken during the period of this audit and access tracks have therefore been kept to a minimum.	AEMRs Site inspection Vegetation Clearing Protocol	
ML24	Operations must be carried out in a manner that does not interfere with or impede the use of any track on the subject area or endanger its stability.	NA	The land covered by the leases is all private freehold owned by CVO. See also ML23.	MOP 2014-2016	Not Applicable
ML25	During wet weather the use by the. lease holder of any road or track must be restricted to prevent damage to such road or track.	NA	The land covered by the leases is all private freehold owned by CVO. There are no public roads on the lease areas (MOP 2014-2016 Table 1.3)	MOP 2014-2017 MOP 2011-2013	Not Applicable
Trees and Vegetation					
ML27a	The lease holder must not fell trees, strip bark or cut timber on any private land, or Crown land held under a pastoral lease within the subject area, otherwise than in accordance with the consent of the owner or occupier of the land or, if the owner or occupier refuses consent or attaches unreasonable conditions to the consent, with the approval of a warden.	NA	There is no privately owned freehold or Crown land on the leases.	MOP 2014-2017 MOP 2011-2013	Not Applicable
ML27b	The lease holder must not destroy or injure any tree, sapling, shrub or scrub on any protected land, as determined by the Soil Conservation Act, 1938, except in accordance with an authority issued by the Department of Land and Water Conservation under Section 21D of that Act.	NA	There is no protected land on the leases. Under the Native Vegetation Act 2003, the former 'state protected land' is now classed as 'vulnerable land'. Section 21D of the Soil Conservation Act has been repealed and is now under the jurisdiction of the Native Vegetation Act 2003. It was asserted that Section 12 of the NVA does not apply to the Cadia east Project by virtue of s75U of the EP&A Act which continues to apply to Cadia East Project as a transitional major project.	Management Assertion	Not Applicable

Mining Leases - Conditions of Authority - ML1405 and ML1449 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
ML27c	The lease holder must not cut, destroy, ringbark or remove any timber or other vegetative cover on any other land subject of this lease except such as directly obstructs or prevents the carrying on of the operations.	C	Managed through the Land and Biodiversity Management Plan (Landscape Management Plan)	Land and Biodiversity Management Plan	There are no recommendations
ML27d	The lease holder must obtain any necessary licence from the Forestry Commission of New South Wales before taking timber from any Crown land within the subject area.	NA	There is no Crown Land within the lease area under the responsibility of NSW State Forests.	Management Assertion	Not Applicable
ML28	All trees, shrubs and undergrowth which the lease holder proposes to cut down, remove or damage for the purpose of the operations must be disposed of in accordance with the Mining Operations Plan.	C	Pre-clearance assessments are made in accordance with the MOP Section 3.2.1.6 - Flora including the Vegetation Clearance Protocol and the Threatened Species Protocol.	<ul style="list-style-type: none"> MOP 2014-2017 Vegetation Clearance Protocol Threatened Species Protocol 	There are no recommendations
ML29	The lease holder must observe any instructions given by any responsible authority with a view to the eradication of noxious weeds. The lease holder must make all reasonable efforts to prevent the introduction and establishment of noxious weeds.	NA	No notices have been received. Referred to in the Land and Biodiversity Management Plan and the Environmental Handbook page 20 "Weeds". Most mine vehicles stay on site. Contractors and licenced vehicles use wash bays to remove weeds and seeds.	<ul style="list-style-type: none"> Land and Biodiversity Management Plan Environmental Handbook Site Inspection 	Not Applicable
Settling Dams					
ML31	Settling dams or other dams constructed on the subject area must be constructed and maintained to the satisfaction of the Regional Inspector of Mines.	NA	There have been no notices regarding the construction and maintenance of settling and other dams on site. There are 4 prescribed dams on site which are reported to the NSW Dam Safety Committee. The EPA and the Mines Inspector inspect the dams periodically.		
ML32	<p>The lease holder must provide and maintain efficient means to prevent contaminated waters discharging or escaping from the subject area onto surrounding areas.</p> <p>Only the concentrator and workshop areas are directed in full to the SROP. Parts of the SWRD catchment report here too but this is under review. NWRD goes to Hoares Creek dam and sed basins to the north of the open pit. The open pit captures water which is then pumped direct to the process. Haul road report to the pit, NLD and tailings dams. Drainage is described in the water management plan in detail including drainage maps.</p>	C	<p>This is a requirement under the EPL and also Section 120 of the POEO Act. Some water has been discharged in compliance with the EPL during the period of this audit, and one discharge was not in compliance and was subject to a PIN from the EPA.</p> <p>Runoff from non-disturbed areas is diverted where possible into the Cadiangullong Creek, with the remaining runoff directed into either sedimentation or containment systems. Runoff from some rehabilitated and disturbed areas is directed into sediment dams to allow suspended sediments to settle out of the water before it is released into Cadiangullong Creek. Water from these sediment dams can also be pumped back to the process water system if necessary.</p> <p>Runoff from concentrator and workshop areas and parts of the SWRD is directed to the site runoff pond (SROP), where it can be used to feed either the raw or process water systems.</p> <p>Runoff from the NWRD goes to Hoares Creek dam and sediment basins to the north of the open pit. The open pit captures water which is then pumped direct to the process. Haul roads report to the pit, NLD and tailings dams. Runoff from the tailings dam catchment is contained on the tailings dam. This water is recycled through the concentrator using the tailings decant recovery system.</p> <p>Drainage is described in the Water Management Plan in detail including drainage maps.</p>	<ul style="list-style-type: none"> See EPL R3.1 Water Management Plan Site inspections 	There are no recommendations

Mining Leases - Conditions of Authority - ML1405 and ML1449 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Prevention of Soil Erosion					
ML33	Operations must be carried out in a manner that minimizes soil erosion or stream sedimentation. The lease holder must observe and perform any reasonable instructions given by the Regional Inspector of Mines in this regard.	C	The Land and Biodiversity Management Plan outlines the primary means of erosion and sedimentation management including: <ul style="list-style-type: none"> Re-vegetation of exposed surfaces (with perennial species) as the primary means of long-term land stabilisation. The use of drainage controls such as contour drains, drop structures, dissipation ponds, rock lining of channels etc The use of 'chain of ponds' concepts in rehabilitation planning and implementation. Repair of any active erosion. Annual monitoring and assessment against mine closure criteria. A review of sediment control was completed in June 2013. The review included revision of the catchment areas and assessment of the required containment volume and full storage surface area.	<ul style="list-style-type: none"> MOP 2014-2016 Land and Biodiversity Management Plan Water Management Plan 	There are no recommendations
ML34	Run off from any worked area including the overflow from any depression or ponded area must be discharged in accordance with the Mining Operations Plan.	C	Discharges are controlled by the Environment Department in accordance with the conditions of the EPL. Water is tested prior to discharge.	See EPL 2.3	There are no recommendations
Use of Cyanide					
ML35	The lease holder must not use cyanide or any solution containing cyanide on the subject area without the prior written approval of the Minister and Subject to any conditions he may stipulate.	C	Cyanide is not used for the recovery of gold. There are no chemical storage tanks labelled with cyanide. Cyanide is not included in the register of chemicals maintained by Chemalert.	<ul style="list-style-type: none"> Management Assertion Site inspection Phonecall with Chemalert 	There are no recommendations
Catchment Areas and Watercourses					
ML37a	Operations must be carried out in a manner which avoids pollution of the Lachlan River Catchment Area.	C	This is managed through the Water Management Plan	Water Management Plan	There are no recommendations
ML37b	If the lease holder is using or about to use any process which the Minister believes is likely to pollute the waters of the said Catchment Area the lease holder must refrain from using or cease using such process within twenty-four (24) hours of the receipt by the lease holder of a notice in writing requiring the lease holder so to do.	NA	No notices have been received.	Management Assertion	Not Applicable
ML37c	The lease holder must comply with any regulations in force for the protection from pollution of the said Catchment Area.	C	Conditions of the EPL and S.120 of the POEO Act.	EPL	There are no recommendations
ML40	Operations must be carried out in a manner that avoids the pollution or/siltation of any watercourse or waterbody.	C	Managed through the Water Management Plan	Water Management Plan	There are no recommendations
Aboriginal Place or Relic					
ML43	The lease holder must not knowingly destroy deface or damage any aboriginal place or relic within the subject area except in accordance with an authority issued under the National Parks and Wildlife Act, 1974, and must take every precaution in drilling, excavating or disturbing the land against any such destruction, defacement or damage.	C	Managed through the Aboriginal Cultural Heritage Management Plan	See Project Approval S3.42.	There are no recommendations

9.5 Detailed Findings and Recommendations - Mining Leases - Conditions of Authority - ML1472 and ML1481

9.5 CADIA HOLDINGS PTY LIMITED

Mandatory Independent Compliance Audit for Department of Planning & Infrastructure

Detailed Findings and Recommendations

Mining Leases - Conditions of Authority - ML1472 and ML1481

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
Notice to Owners and Occupiers					
ML1	<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. The notice must be accompanied by an adequate plan and description of the lease area.</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>	NA	Not applicable during this audit period.		Not Applicable
Mining, Rehabilitation, Environmental Management Process (MREMP)					
ML2(1)	<p>Mining Operations Plan. (MOP) 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>	C		2014-2016 MOP 2011-2013 MOP See also Commitments	There are no recommendations
ML2(2)	<p>Mining Operations Plan. (MOP) The Plan must be prepared in accordance with the Director-General's guidelines current at the time of lodgement.</p>	C	Guidelines used for the 2014-2016 MOP are ESG3 issued by the Director-General.	2014-2016 MOP 2011-2013 MOP	There are no recommendations
ML2(3)	<p>Mining Operations Plan. (MOP) 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>	C	Modifications to the MOP have been requested from time to time by the DRE, e.g. by letter dated 5 June 2013 for modification to the 2011-2013 MOP, following a site meeting on Wednesday 29 May 2013 where the proposed revision of the Mining Operations Plan (MOP) due by end October 2013 was discussed, and it was requested that the revision of the MOP be prepared in accordance with draft DRE guidelines (Pub1364 ESG3).	2014-2016 MOP, Amendment lodged 16 January 2015 2011-2013 MOP Letter from M Young of DRE extending 2011-2013 MOP to 30 April 2014 Letter dated 5 June 2013 requiring modification to the 2011-2013 MOP.	There are no recommendations

Mining Leases - Conditions of Authority - ML1472 and ML1481 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
ML2(4)	<p>Mining Operations Plan. (MOP) 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> <ul style="list-style-type: none"> (a) area(s) proposed to be disturbed under the Plan; (b) mining and rehabilitation method(s) to be used and their sequence; (c) areas to be used for disposal of tailings/waste; (d) existing and proposed surface infrastructure; (e) existing flora and fauna on the site; (f) progressive rehabilitation schedules; (g) areas of particular environmental, ecological and cultural sensitivity and measures to protect these areas; (h) water management systems (including erosion and sediment controls); (i) proposed resource recovery; and 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. 	C	These conditions have been met. Condition (j) is not applicable as the mine will not close during the period of the MOP (it is licenced to 2031).	2014-2016 MOP 2011-2013 MOP	There are no recommendations
ML2(5)	<p>Mining Operations Plan. (MOP) The Plan when lodged will be reviewed by the Department of Mineral Resources.</p>	C	A letter of approval was received from DoPE for the 2014-2016 MOP dated 4 April 2014.	Letter of approval	There are no recommendations
ML2(6)	The Director-General may within two (2) months of the lodgement of a Plan, require modification and re-lodgement.	NA	No modifications required to the 2014-2016 MOP within 2 months during the period of this audit.	Management assertion	Not Applicable
ML2(7)	If a requirement in accordance with clause (6) is not issued the lodgement of a Plan, the lease holder may proceed within two (2) months of implementation of the Plan.	NA	The 2014-2016 MOP was lodged on 1 April 2014 and approved on 4 April 2014.	Letter from CVO submitting the 2014-2016 MOP dated 1 April 2014 Letter from DRE approving the 2014-2016 MOP dated 4 April 2014.	Not Applicable
ML2(8)	During the life of the Mining Operations Plan, proposed modifications to the Plan must be lodged with the Director-General and will be subject to the review process outlined in clauses (5) - (7) above.	C	2014-2016 MOP, Amendment lodged 16 January 2015. Several modifications to the 2011-2013 MOP were approved during the life of this MOP, as set out in the folder "MOP Variations and Extensions" included in the Documents Reviewed section of this report.	2014-2016 MOP - Amendment lodged 16 January 2015 2011-2013 MOP - Letter from M Young of DRE extending 2011-2013 MOP to 30 April 2014. Other modifications to 2011-2013 MOP. MOP Variations and Extensions folder	There are no recommendations
ML3(1)	<p>Annual Environmental Management Report (AEMR) 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>	C	AEMRs from 2005-05 to 2013-14 are available on the CVO website.	CVO website	There are no recommendations

Mining Leases - Conditions of Authority - ML1472 and ML1481 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
ML3(2)	<p>Annual Environmental Management Report (AEMR) The AEMR must be prepared in accordance with the Director-General's guidelines current at the time of reporting and contain a review and forecast of performance for the preceding and ensuing twelve months in terms of:</p> <ul style="list-style-type: none"> (a) the accepted Mining Operations Plan; (b) development consent requirements and conditions; (c) Environment Protection Authority and Department of Land and Water Conservation licences and approvals; (d) any other statutory environmental requirements; (e) details of any variations to environmental approvals applicable to the lease area; and (f) where relevant, progress towards final rehabilitation objectives. 	C	The 2013-2014 AEMR states: "This report addresses all Cadia Valley Operations which incorporate the Cadia East Underground Mine, Cadia Hill Gold Mine (Cadia Hill), Ridgeway Gold Mine (Ridgeway) in respect to Mining Leases 1405, 1449, 1472, 1481, 1689 and 1690, the Cadia East Project Approval (06_295) and Environmental Protection Licence 5590; and the Blayney Concentrate Dewatering Facility and associated concentrate pipeline from the mine site to Blayney in respect to the Cadia East Project Approval (06_295) and Environmental Protection Licence 5590".	AEMRs	There are no recommendations
ML3(3)	<p>Annual Environmental Management Report (AEMR) 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>	NA	No notices received for changes to operations.	Management assertion	There are no recommendations
ML3(4)	<p>Annual Environmental Management Report (AEMR) The lease holder shall, as and when directed by the Minister, co-operate with the Director-General to conduct and facilitate review of the AEMR involving other government agencies and the local council.</p>	C	CVO has meetings in late October / early November each year with DRE, EPA and the local councils to review the AEMR. Minutes of these meetings are produced.	Minutes of AEMR meeting and inspection held on 7 November 2014.	There are no recommendations
ML5	<p>Control of Operations</p> <ul style="list-style-type: none"> (a) If an Environmental Officer of the Department of Mineral Resources 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:- <ul style="list-style-type: none"> (i) cease working the lease; or (ii) cease that part of the operation not complying with the Act or conditions; until in the opinion of the Environmental Officer the situation is rectified. (b) The lease holder must comply with any direction given. The Director-General may confirm, vary or revoke any such direction. (c) A direction referred to in this condition may be served on the Mine Manager. 	NA	There have been no notices.	Management assertion	Not Applicable

Mining Leases - Conditions of Authority - ML1472 and ML1481 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
ML12(a)	<p>Rehabilitation 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. 	C	<p>Progress on rehabilitation is reported in the AEMR. A warning letter (undated) from the DRE re lack of progress on rehabilitation against the commitments in the 2011-2013 MOP was received by CVO requiring an updated MOP to be submitted by the end of September 2011, which is outside of the period covered by this audit. Several subsequent requests for variations to the MOP regarding rehabilitation timetables were submitted and approved by DRE. DRE has accepted CVOs progress on rehabilitation and requested changes to the MOP. MOP amendments are reported in the AEMR.</p> <p>An inspection of the site demonstrated that significant progress has been made on rehabilitation as shown in Photo 12, land rehabilitated in 2005, and Photo 13, land recently prepared and sown with seed during the period of this audit.</p>	<p>MOPs AEMR Letter NWRD rehabilitation warning lack of progress. Various correspondence between CVO and DRE re variations to the MOP regarding rehabilitation 2012-2014. Site Inspection</p>	There are no recommendations
ML12(b)	<p>Rehabilitation Any topsoil that is removed must be stored and maintained in a manner acceptable to the Director-General.</p>	C	All areas of topsoil are currently managed according to the Land and Biodiversity Management Plan and as outlined in the 2014-2016 MOP.	<p>2014-2016 MOP Land and Biodiversity Management Plan Site inspection</p>	There are no recommendations
ML13	<p>Rehabilitation The lease holder must comply with any direction given by the Director-General regarding the stabilisation and revegetation of any mine residues, tailings or overburden dumps situated on the lease area.</p>	NA	No directions have been received.	Management assertion	There are no recommendations
ML14	<p>Prevention of Soil Erosion and Pollution Operations must be carried out in a manner that does not cause or aggravate air pollution, water pollution (including sedimentation) or soil contamination or erosion, unless otherwise authorised by a relevant approval, and in accordance with an accepted Mining Operations Plan. For the purpose of this condition, water shall be taken to include any watercourse, waterbody or groundwaters. The lease holder must observe and perform any instructions given by the Director-General in this regard.</p>	C	<p>The management and maintenance of sediment control structures is undertaken in accordance with the Water Management Plan and specific requirements as detailed in EPL 5590 (Operating condition O4). Dust is managed as set out in the Air Quality Monitoring Program and is reported in the AEMR and on the CVO website. Dust suppression methods being employed at CVO include:</p> <ul style="list-style-type: none"> • dust suppression water sprays within the crusher surge bin • water cart sprays over haul roads • sprays on the coarse ore stockpiles (COS) stacking conveyor (CV002) • maintenance of a high COS height to minimise the ore drop • improved management of tailings deposition • a review of dust suppression options for the Tailings Storage Facilities (TSF) 	<p>MOP AEMR CVO website</p>	There are no recommendations
ML15	<p>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 area without the prior written approval of the Director-General and subject to any conditions he may stipulate.</p>	NA	Operations have not interfered with or impaired the stability or efficiency of any transmission line, communication line, pipeline or any other utility on the area. CVO has an Electrical Corridor Permit and has 132 KVA and 33 KVA lines, as well as Telstra connection.	<p>Management assertion Site inspection</p>	Not Applicable

Mining Leases - Conditions of Authority - ML1472 and ML1481 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
ML16	Fences, Gates (a) Activities on the lease must not interfere with or damage fences without the prior written approval of the owner thereof or the Minister and subject to any conditions the Minister may stipulate. (b) Gates within the lease area must be closed or left open in accordance with the requirements of the landholder.	NA	CVO owns all the land on the leases as set out in ML1993 Report.		Not Applicable
ML17(a)	Roads 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.	C	The MOP provides for road diversions required by the Southern Tailings Dam.	MOP Management Assertion Site Inspection	There are no recommendations
ML17(b)	Roads The lease holder must pay to the local council, the Department of Land and Water Conservation 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.	NA	There are no public roads on the lease as they have been closed. Road maintenance agreements have been in place since 1998 for roads outside the lease. See also Approval S2.13 and Appendix 7 - General Terms for the Planning Agreement.	Management Assertion Blayney Council Road Closure Plan	There are no recommendations
ML18	Roads 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, top soiled 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 Land and Water Conservation.	C	Little exploration drilling has been undertaken during the period of this audit and access tracks have therefore been kept to a minimum.	AEMRs Site inspection Vegetation Clearing Protocol	There are no recommendations
ML19(a)	Trees and Timber 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.	NA	CVO owns the land on the leases, some of which is leased to NSW Forestry.		Not Applicable
ML19(b)	Trees and Timber 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 Vegetative Conservation Act 1997.	NA	No clearing of timber has occurred during the period of this audit.	Management Assertion	Not Applicable
ML19[c]	Trees and Timber The lease holder must have any necessary licence from the Forestry Commission of New South Wales before using timber from any Crown land within the lease area.	NA	There is no Crown land on the leases.	MOP 2014-2016	Not Applicable

Mining Leases - Conditions of Authority - ML1472 and ML1481 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
ML24 [ML1472]	Public Positive Covenant For the purposes of ensuring the safe rehabilitation of the Ridgeway Mining Lease area, the Minister for Mineral Resources and Cadia Holdings Pty Limited (the registered proprietor of the lands within the exclusion subsidence zone) shall enter into and lodge a memorandum of public positive covenant within the meaning of that term in Section 88E(3) of the Conveyancing Act 1919, prior to the cessation of mining under the mining lease. The memorandum of public positive covenant shall be drafted to include the following obligations:	NA	This has not occurred within the time of this audit	Management Assertion	Not Applicable
ML24(a) [ML1472]	Public Positive Covenant - The registered proprietor of the lands within the exclusion subsidence zone shall: maintain the bund and barrier exclusion around the land identified as the Ridgeway Exclusion Subsidence Zone so that all persons and stock are excluded from this zone;	NA			
ML24(b) [ML1472]	Public Positive Covenant - The registered proprietor of the lands within the exclusion subsidence zone shall: at the written request of the Director-General, repair, maintain or replace the bund and barrier exclusion fence to the satisfaction of the Director-General;	NA			
ML24(c) [ML1472]	Public Positive Covenant - The registered proprietor of the lands within the exclusion subsidence zone shall: allow representatives of the Director-General access to the land at any time to inspect the bund and barrier exclusion fence;	NA			
ML24(d) [ML1472]	Public Positive Covenant - The registered proprietor of the lands within the exclusion subsidence zone shall: not carry out any development as defined in the Environmental Planning and Assessment Act 1979 within the Ridgeway Subsidence Zone or within 50 metres of the bund or barrier exclusion fence around the zone.	NA			
ML25(a) [ML1472]	State Forests At least fourteen days prior to the commencement of any operations within a State forest, the lease holder must provide the Regional Manager of State Forests, or his deputy with a plan or plans showing the location of all proposed works which will cause disturbance to the surface of the land, including drillhole sites.	NA	There is no State Forest within the lease area.	Management Assertion	Not Applicable
ML25(b) [ML1472]	State Forests The lease holder must obtain approval of the said Regional Manager or his deputy prior to constructing any access roads or tracks. Such roads or tracks must be constructed to a standard approved by the said Regional Manager or his deputy.	NA			

Mining Leases - Conditions of Authority - ML1472 and ML1481 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
ML25(c) [ML1472]	State Forests At least fourteen days prior to the commencement of any clearing operations the lease holder must notify the said Regional Manager or his deputy of his intentions so to do for the purpose of allowing an inspection of the site in order to assess the compensation payable for the timber to be destroyed.	NA			
ML25(d) [ML1472]	State Forests Any necessary clearing shall be done only with the prior permission of the said Regional Manager or his deputy and compensation must be paid for any mature trees or semi-mature trees damaged or destroyed at the rate fixed by the State Forests of New South Wales and such compensation shall be payable on demand at the end of each calendar month. In the event of any non-merchantable trees being destroyed by operations, compensation payable to State Forests of New South Wales shall relate to the cost of establishment and tending of the part of the forest affected by the operations.	NA			
ML25(e) [ML1472]	State Forests This consent does not confer the power to cut or remove any timber within any State forest except such as directly obstructs or prevents the carrying on of the operations hereby authorised and the lease holder must obtain authority under the provisions of the Forestry Act, 1916, as amended, or any Act amending the same and the Regulations thereunder before making use of the timber so cut for other than in connection with the operations hereby authorised. The sanction of the said Regional Manager or his deputy must be obtained before proceeding to cut any other timber within the said forest.	NA			
ML25(f) [ML1472]	State Forests The lease holder must take all precautions against causing an outbreak of fire on the said Forest and must not burn off any grass dry herbage or surface litter without the prior consent of the said Regional Manager or his deputy and must under the direction and control of that Officer stack and burn the heads of any trees destroyed during the course of the operations hereby authorised and the lease holder must not permit any fireplace to be constructed unless protected by stone wallings and fires lit therein must not be left unattended.	NA			
ML25(g) [ML1472]	State Forests This consent is issued subject to any conditions and/or restrictions which may be prescribed in accordance with the provisions of the Forestry Act, 1916, as amended, or any Act amending the same and the Regulations under the Rural Fires Act 1997.	NA			

Mining Leases - Conditions of Authority - ML1472 and ML1481 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
ML25(h) [ML1472]	State Forests In the event of operations encroaching on or within 10 metres of any constructed road or fire-break the lease holder must provide a suitable deviation to the same standard as the previous road or fire-break and upon the completion of operations or the sooner determination of this lease the lease holder must restore the road or firebreak to its original position and condition to the satisfaction of the said Regional Manager or his deputy.	NA			
ML25(i) [ML1472]	State Forests The Director-General reserves the right to suspend operations immediately if weather conditions and/or the operations are causing unnecessary damage to any assets of the State Forests.	NA			
ML25(j) [ML1472]	State Forests During operations and progressively the lease holder must restore, consolidate and make trafficable all roads and fire-breaks at present existing and which are affected by the operations to the satisfaction of the said Regional Manager or his deputy.	NA			
ML25(k) [ML1472]	State Forests The lease holder must not operate a crawler tractor within the forest unless with the approval of the said Regional Manager or his deputy.	NA			
ML25(l) [ML1472]	State Forests Upon abandonment or completion of operations hereby authorised the lease holder must either fill in or securely cover all shafts or workings opened up or used by the lease holder in a manner satisfactory to the Regional Inspector of Mines who shall consult with the said Regional Manager or his deputy.	NA			
ML25(a) [ML1481]	Tailings Dam The leaseholder must consult with the Environmental Officer of the Department of Mineral Resources, Orange, regarding the construction and management of the tailings dam.	C	This is done through the AEMR Meetings and inspections and the MOP.	Minutes of AEMR meeting and inspection held on 7 November 2014.	There are no recommendations
ML25(b) [ML1481]	Tailings Dam The lease holder shall ensure that all design and works in connection with the construction of the tailings dam(s) (including the method and material for lining the dam(s) are carried out in accordance with professionally recognised engineering standards and practices appropriate to the construction of tailings dams and that any such works are carried out under the supervision and control of a person or organisation whose qualifications and experience are currently recognised by the Institute of Engineers, Australia.	C	Neil Mattes, Senior Principal, URS Australia P/L is retained by CVO to advise on dam safety. He visits CVO every few weeks to supervise work on the two tailings dams and to ensure that all design and works in connection with the construction of the tailings dams (including the method and material for lining the dams) are carried out in accordance with professionally recognised engineering standards and practices. Several documents were sighted regarding dam construction and safety. Neil Mattes assists CVO with submissions as required to the NSW Dams Safety Committee.	Documents sighted. Email confirmation 4 March 2014 from CVO.	There are no recommendations

Mining Leases - Conditions of Authority - ML1472 and ML1481 - Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
ML26 [ML1481]	Tailings Dam Prior to the use of any dam structure for the storage of tailings the lease holder must submit written confirmation to the Environmental Officer, Orange, that the design and construction of the dam structure have been satisfactorily carried out in accordance with the requirements of Condition 25.	NA	Outside the time for this audit. The southern TSF became operational in 2002.	Management Assertion	Not Applicable
ML27 [ML1481]	Tailings Dam The lease holder must undertake a Tailing Pipeline Environmental Risk Evaluation Study to the satisfaction of the Environmental Officer, Orange.	NA	Outside the time for this audit.		Not Applicable
ML28 [ML1481] and ML27 [ML1472]	Special Requirements The lease holder must prepare to the satisfaction of the Environmental Officer, Orange an acceptable acid mine drainage procedures manual within six months of the grant of the mining lease.	NA	Outside the time for this audit.		Not Applicable
ML29 [ML1481] and ML28 [ML1472]	Special Requirements The leaseholder shall, to the satisfaction of the Environmental Officer Orange, document in the Mining Operations Plan quality control and quality assurance mechanisms to cover all aspects of project construction and management.	C	This is achieved through using the current guidelines for preparation of a MOP which requires a risk management approach. Each section of the MOP reviews "Risk" and associated "Mitigation Measures".	MOP	There are no recommendations
ML30 [ML1481] and ML29 [ML1472]	Special Requirements The lease holder shall document in the Mining Operations Plan and/or Annual Environmental Management Report such other matters as directed by the Environmental Officer, Orange or the Director General.	C	See ML2(3)	See ML2(3)	There are no recommendations
ML31 [ML1481] and ML30 [ML1472]	Special Requirements The lease holder shall prepare a Mine Closure Plan at least two years prior to the cessation of mining operations to the satisfaction of the Director General.	NA	The mine will not close within 2 years.	MOP Mining Leases	Not Applicable

9.6 Detailed Findings and Recommendations - Mining Leases - Mining Lease Conditions - ML1689 and ML1690

9.6 CADIA HOLDINGS PTY LIMITED

Mandatory Independent Compliance Audit for Department of Planning & Infrastructure

Detailed Findings and Recommendations

Mining Leases - Mining Lease Conditions - ML1689 and ML1690

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
1. Notice to Owners and Occupiers					
ML1(a)	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. The notice must be accompanied by an adequate plan and description of the lease area.	NA	Not applicable during the period of this audit.		Not Applicable
ML1(b)	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.	NA	Not applicable during the period of this audit.		Not Applicable
2. Environmental HarmML2(a)					
ML2(a)	The lease holder must implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or rehabilitation of any activities under this lease.	C	Previous audit findings verify this condition	Previous audit findings	There are no recommendations
ML2(b)(i)	For the purposes of this condition: environment means components of the earth, including: (A) land, air and water, and (B) any layer of the atmosphere, and (C) any organic or inorganic matter and any living organism, and (D) human-made or modified structures and areas, and includes interacting natural ecosystems that include components referred to in paragraphs (A) - (C).		Statement		
ML2(b)(ii)	For the purposes of this condition: harm to the environment includes any direct or indirect alteration of the environment that has the effect of degrading the environment and, without limiting the generality of the above, includes any act or omission that results in pollution, contributes to the extinction or degradation of any threatened species, populations or ecological communities and their habitats and causes impacts to places, objects and features of significance to Aboriginal people.		Statement		

Mining Leases - Conditions of Authority - ML1689 and ML1690 – Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
3. Mining Operations Plan					
ML3(a)	Mining Operations Plan. (MOP) Mining operations must not be carried out otherwise than in accordance with a Mining Operations Plan (MOP) which has been approved by the Director-General.	C		MOP 2014-2016 MOP 2011-2013	There are no recommendations
ML3(b)	Mining Operations Plan. (MOP) The MOP must: (i) identify areas that will be disturbed by mining operations; (ii) detail the staging of specific mining operations (iii) identify how the mine will be managed to allow mine closure (iv) identify how mining operations will be carried out in order to prevent and or minimise harm to the environment. (v) reflect the conditions of approval under: • the Environmental Planning and Assessment Act 1979 • the Protection of the Environment Operations Act 1997 • and any other approvals relevant to the development including the conditions of this lease; and • have regard to any relevant guidelines adopted by the Director-General.	C	Guidelines used for the 2014-2016 MOP are ESG3 issued by the Director-General.	MOP 2014-2016 MOP 2011-2014	There are no recommendations
ML3(c)	Mining Operations Plan. (MOP) The leaseholder may apply to the Director-General to amend an approved MOP at any time.	C	Various amendments to the MOPs for the period of this audit have been approved. The 2014-2016 MOP was amended on 16 January 2015.	MOP 2014-2016 MOP 2011-2015 Folder "MOP variations and extensions" in the Documents Reviewed Appendix	There are no recommendations
ML3(d)	Mining Operations Plan. (MOP) It is not a breach of this condition if: (i) the operations constituting the breach were necessary to comply with a lawful order or direction given under the Mining Act 1992, the Environmental Planning and Assessment Act 1979, Protection of the Environment Operations Act 1997, Mine Health and Safety Act 2004/ Coal Mine Health and Safety Act 2002 and Mine Health and Safety Regulation 2007/Coal Mine Health and Safety Regulation 2006 or the Work Health and Safety Act 2011; and (ii) the Director-General had been notified in writing of the terms of the order or direction prior to the operations constituting the breach being carried out.	NA	No orders have been received.	Management Assertion	There are no recommendations
ML3[e]	Mining Operations Plan. (MOP) A MOP ceases to have effect 7 years after date of approval or other such period as identified by the Director-General	NA	Current MOP was approved on 7 March 2014.	MOP 2014-2016	Not Applicable

Mining Leases - Conditions of Authority - ML1689 and ML1690 – Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
4. Environment Management Report					
ML4(a)	The lease-holder must lodge Environmental Management Reports (EMR) with the Director-General annually or at dates otherwise directed by the Director-General;	C	The AEMR is accepted as the EMR and references the mining leases. CVO received advice from DoPI during 2010 that a combined reporting approach with the AEMR was acceptable, as stated in the AEMR. Environment Protection Licence No. 5590 (Condition R4.1) further requires the preparation of an Environmental Management Report (EMR). The AEMR is also intended to meet the requirements of Condition R4.1 of EPL 5590	AEMRs EPL 5590	There are no recommendations
ML4(b)	The EMR must: (i) report against compliance with the MOP; (ii) report on progress in respect of rehabilitation completion criteria; (iii) report on the extent of compliance with regulatory requirements; and (iv) have regard to any relevant guidelines adopted by the Director-General	C	The AEMR includes these requirements.	AEMR	There are no recommendations
5. Environment Incident Report					
ML5(a)	The lease holder must report any environmental incidents. The report must: (i) be prepared according to any relevant Departmental guidelines; (ii) be submitted within 24 hours of the environmental incident occurring	NA	No reportable incidents have occurred in ML1689 or ML1690 during the period of this audit.	Management Assertion Environmental and community incident summary 2012-2015	Not Applicable
ML5(b)	For the purposes of this condition, environmental incident includes: (i) any incident causing or threatening material harm to the environment; (ii) any breach of Conditions 1 to 9 and 11 to 24; (iii) any breach of environment protection legislation ; or, (iv) a serious complaint from landholders or the public.	NA	No reportable incidents have occurred in ML1689 or ML1690 during the period of this audit.	Management Assertion Environmental and community incident summary 2012-2016	Not Applicable
ML5(c)	For the purposes of this condition, harm to the environment is material if: (i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or (ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, where loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.	NA	No reportable incidents have occurred in ML1689 or ML1690 during the period of this audit.	Management Assertion Environmental and community incident summary 2012-2017	Not Applicable
6. Additional Environment Reports					
ML6	Additional environmental reports may be required from time to time as directed in writing by the Director-General and must be lodged as instructed.	NA	No additional environmental reports have been requested for ML1689 or ML1690 during the period of this audit.	Management Assertion	Not Applicable

Mining Leases - Conditions of Authority - ML1689 and ML1690 – Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
7. Rehabilitation					
ML7	Any disturbance as a result of activities under this lease must be rehabilitated to the satisfaction of the Director-General.	NA	Rehabilitation of ML1689 or ML1690 has not been started during the period of this audit.	Management Assertion	Not Applicable
12. Prevention of soil erosion and pollution					
ML12	Prospecting operations must be carried out in a manner that does not cause or aggravate air pollution, water(including groundwater) pollution, soil contamination or erosion, unless otherwise authorised by a relevant approval, and in accordance with an accepted Mining Operations Plan.	NA	No prospecting operations have been carried out on ML1689 or ML1690 during the period of this audit.	Management Assertion	Not Applicable
13. Transmission Lines, Communication Lines and Pipelines					
ML13	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 stipulated.	NA	No utilities have been disturbed on ML1689 or ML1690 during the period of this audit.	Management Assertion	Not Applicable
14. Roads and Tracks					
ML14(a)	The lease holder must pay to the relevant roads authority in control of the road or track the reasonable costs incurred by the roads authority in making good any damage to roads or tracks caused by operations carried out under this lease less any amount paid or payable from the Mine Subsidence Compensation Fund.	NA	All roads on ML1689 or ML1690 have been closed and are not accessible to the public or maintained by Council.	Management Assertion	Not Applicable
ML14(b)	During wet weather the use of any road or track must be restricted so as to prevent damage to the road or track.	NA	All roads on ML1689 or ML1690 have been closed and are not accessible to the public or maintained by Council.	Management Assertion	Not Applicable
ML14(c)	Existing access tracks should be used for all operations where reasonably practicable. New access tracks must be kept to a minimum and be positioned in order to minimise damage to the land, watercourses or vegetation.	C	CVO is using existing tracks to access ML1689 or ML1690.	Management Assertion Site Inspection	There are no recommendations
ML14(d)	Temporary access tracks must be rehabilitated and revegetated to the satisfaction of the Director-General as soon as reasonably practicable after they are no longer required under this lease.	NA	All access tracks on ML1689 or ML1690 are currently in use.	Management Assertion Site Inspection	Not Applicable
15. Trees and Vegetation					
ML15(a)	The leaseholder must not fell trees, strip bark or cut timber on any land subject of this lease without the consent of the landholder who is entitled to the use of the timber.	NA	CVO owns the land on the leases, some of which is leased to NSW Forestry.	Management Assertion	Not Applicable

Mining Leases - Conditions of Authority - ML1689 and ML1690 – Detailed Findings and Recommendations

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
ML15(b)	The lease holder must contact Forests NSW and obtain any required permit, licence or approval before taking timber from any Crown land within the lease area. <i>Note: Any clearing not authorised under the Act must comply with the requirements of the Native Vegetation Act 2003. Any clearing or taking of timber on Crown land is subject to the requirements of the Forestry Act 1916.</i>	NA	There is no Crown Land within ML1689 or ML1690.	MOP 2014-2016	Not Applicable
24. Cooperation Agreement					
ML24	The lease holder must make every reasonable attempt, and be able to demonstrate their attempts, to enter into a cooperation agreement with the holder(s) of any overlapping title(s). The cooperation agreement should address but not be limited to issues such as: <ul style="list-style-type: none"> • access arrangements • operational interaction procedures • dispute resolution • information exchange • well location • timing of drilling • potential resource extraction conflicts and • rehabilitation issues. 	NA	There were no overlapping titles in force over ML1689 or ML1690 during the period of this audit.	CVO Newsletter – June 2014	There are no recommendations

Appendices

Appendix 1 – Documents Provided for Review

Appendix 2 – Persons Interviewed

Appendix 3 – Audit Team Members

Appendix 4– Expert Opinion on Surface Water, Groundwater and General Land Management

Appendix 5 – Expert Opinion on Air Quality Management

Appendix 6 – Expert Opinion on Noise Management

Appendix 7 – Audit Photographs

Appendix 8 – Government Agency Consultation

Appendix 9 –Audit Recommendations and Response Table

Appendix 1

Documents Provided for Review

Doc No.	DOCUMENT NAME
1	Community Relations Consultative Committee Minutes
2	CVO Newsletters
3	AEMR 2013-14 and Appendices
4	AEMR 2012-13 and Appendices
5	AEMR 2011-12 and Appendices
6	CVO Compliance Audit - Umwelt 2011
7	CVO Response to 2011 Compliance Audit
8	CVO Air Quality Monitoring Program
9	CVO Air Quality Monitoring Report January 2015
10	CVO Air Quality Monitoring Report February 2015
11	Air Quality Monitoring Reports 2014
12	Air Quality Monitoring Reports 2013
13	Air Quality Monitoring Reports 2012
14	Air Quality Monitoring Reports 2011
15	CVO Noise Monitoring Program
16	CVO Quattro Sound Noise Monitoring January 2015
17	Noise Monitoring Reports 2014
18	Noise Monitoring Reports 2013
18	Noise Monitoring Reports 2012
20	Noise Monitoring Reports 2011
21	Noise Monitoring Reports 2010
22	Noise Monitoring Locations
23	Noise Monitoring Locations Blayney
24	Noise Monitoring Locations Roads
25	CVO Vibration Monitoring Program
26	CVO Blast Monitoring Report January 2015
27	Vibration Monitoring Reports 2014
28	Vibration Monitoring Reports 2013
29	Vibration Monitoring Reports 2012
30	Blast & Vibration Locations
31	CVO Meteorology Monitoring Summary
32	Meteorological monitoring locations
33	CVO Rehabilitation Monitoring 2013-14
34	CVO Rehabilitation Monitoring 2012-13
35	CVO Rehabilitation Monitoring 2011-12
36	CVO Water Management Plan
37	Water Balance
38	CVO Groundwater Monitoring Summary
39	CVO Streamflow Report - January 2015
40	Streamflow Monitoring Reports 2014
41	Streamflow Monitoring Reports 2013
42	Streamflow Monitoring Reports 2012
43	Monitoring Locations - Groundwater
44	Monitoring Locations - Northeast Sites
45	Monitoring Locations - Northwest Sites
46	Monitoring Locations – Southern Sites
47	CVO EPL Summary of Monitoring Results July 2014 - June 2015
48	CVO EPL Summary of Monitoring Results April 2012 - March 2013
49	CVO EPL Summary of Monitoring Results April 2013 - June 2014
50	CVO Aboriginal Cultural Heritage Management Plan

Doc No.	DOCUMENT NAME
51	Historical Heritage Management Plan - <i>(Currently under review)</i>
52	Consolidated Cadia East Project Approval (including Mod 5)
53	Approval – EPBC Act – Federal Department of Environment, Water, Heritage and the Arts
54	CVO Licences & Permits Summary
55	Cadia Valley Operations Licences and Permits Summary
56	Environmental Protection Licence 5590
57	Mining Leases
58	Cadia East Environmental Assessment
59	Description of CVO
60	Audit Tables First Draft CVO Responses
61	Revised CE Statement of Commitments
62	EPL 5590 Signed Annual Return 2011 – 2012
63	EPL 5590 Annual Return 2012 – 2013
64	EPL 5590 Annual Return 2011 – Letter of transmittal
65	EPL 5590 Additional information for 2014 Annual Return
66	EPL 5590 Annual Return 2013-2014
67	Blast Monitoring Network 1 April - 30 April
68	Blast Monitoring Network 1 June 2014 - 30 June 2014
69	Blast Monitoring Network 1 March-31 March
70	Blast Monitoring Network 1 May - 31 May 2014
71	EPA Return - Execution Request Form
72	Cadia Squirrel Glider Report March 2011
73	Glider Box Locations
74	Tailings Dam & Rodds Creek Audit Report Feb 2014
75	La1 Measurement Locations
76	CVO Sleep Disturbance Exceedance Report
78	Lab results T6 Sediment Dam Discharge
79	Licence to Operate Theme – Bunds, Drains & Sumps
80	Licence to Operate Theme – Drainage Sediment Erosion Control
81	Licence to Operate Theme – Dust
82	Licence to Operate Theme – Sediment Fences
83	Licence to Operate Theme – Workplace Inspections
84	Licence to Operate Theme – Community Relations Nov 2014
85	Licence to Operate Theme Dec 2014 – Environmental Impact Permits
86	Licence to Operate Theme January 2015 – Fauna
87	Monthly Theme 201404 – Chemical and Hydrocarbon Storage
88	Waste Management Theme May 14
89	Air Quality Monitoring Program
90	Blayne Dewatering Plant EMP
91	Bushfire Management Plan
92	Environmental Management Strategy
93	Integrated Erosion and Sediment Control Plan
94	Land & Biodiversity Landscape Management Plan
95	Lighting Management Plan
96	Noise Management Program
97	PIRMP
98	Rehab Strategy
99	Waste Management Plan
100	Water Management Plan
101	ML 1405 2(5) DRE review 2013-6-5 Proposed revision to MOP letter
102	2014-4-4 CVO MOP 2014-2016 Approval
103	LET From M. Young extending MOP Term 2014
104	LET Approval 2011-13 MOP DTI-ORE 2011

Doc No.	DOCUMENT NAME
105	LET MOP to DRE 20140401
106	Title Dealing Enquiry – ML 1405 Dealings
107	Title Dealing Enquiry - ML 1405 Dealing #16
108	Details of Mining Lease - NSW Search ML 1405
109	ML1405 LET Michael Young Inspection Report 20120807
110	Monitoring Schedule
111	CVO Environment Monitoring Manual
112	2013-6-5 - Proposed revision to MOP letter
113	2014-4-4 CVO MOP 2014-2016 - Approval Plan
114	2015-2-4 Approval MOP - Amendment A
115	Advice re Rehab Extension Pending MOP Variation 20130930
116	CVO MOP comments
117	LET MOP Variation - Variation Rehabilitation Schedule 20130115JB
118	LET Approval 2011-13 MOP DTI-ORE 2011
119	LET MOP Modification Soil Removal from CE Subsidence 20140224
120	LET MOP to DRE 20140401
121	MOP 2014-2016 Amendment A January 2015
122	Audit 2008 Matrix
123	Audit 2011 CVO Response
124	Audit 2011 Umwelt
125	2010-2011 Reviewed AEMR
126	Revised Monitoring Programs
127	Email Re Submit Management plans - Cadia WMP - NOW additional response
128	Email - CVO Water Management Plan_20110408AW
129	Emailing Water Management Plan_v4 July 2010
130	Current Blast Schedule
131	Community Hotline since January 2012
132	Ltr.Knox.Offer to Paint Home 17April2013
133	'Meribah' Inspection Report
134	Email - Compliance Audit
135	Cadia East Conservation Offset Security
136	Cadia Offset Security
137	Conservation Offset Security Estimate 20140520 AW
138	Email RE Cadia East Biodiversity Offset Plan (1)
139	Email RE Cadia East Biodiversity Offset Plan (2)
140	Email RE Cadia East Biodiversity Offset Plan (3)
141	Email RE Cadia East Biodiversity Offset Plan (4)
142	Email RE Cadia East Biodiversity Offset Plan (5)
143	Email RE Cadia East Biodiversity Offset Plan (6)
144	Email RE Cadia East Biodiversity Offset Plan (7)
145	Email RE Cadia East Biodiversity Offset Plan (8)
146	Email RE CVO offset area
147	Cadia_ACHMP_Testing_FINAL
148	CVO_SSPTIA1TIA2_Testing Report_Final
149	Blayney Hill Street access letter
150	Email - CVO Dewatering Facility - Cond 47
151	Email - CVO Dewatering Plan - Plans for approval
152	Email - CVO Dewatering Plant
153	Email - FW Sea Link Project
154	Email - CVO Dewatering Sea link Blayney
155	Email - CVO On-site Sewage Management Systems
156	Email - Ridgeway Sewage Treatment
157	Email - Sewage Management Systems at CVO

Doc No.	DOCUMENT NAME
158	Email - CVO On-site Sewage Management Systems (1)
159	Email - CVO on-site Sewage Management Systems (2)
160	Email - Section 68 Approval Application for On-site Treatment of Sewage
161	CVO-SWI-Sediment Control Inspections
162	CVO-TARP-Stormwater
163	Water Analysis Matrix
164	Fact Sheet - Drainage and Sediment Control
165	Fact Sheet - Dust
166	Fact Sheet - Heritage
167	Fact Sheet - Hydrocarbons
168	Fact Sheet - Lighting
169	Fact Sheet - Noise
170	Fact Sheet - Snakes and Injured Fauna
171	Fact Sheet - Waste Management
172	Letter re PINs from October 2012 tailings water release
173	Penalty notice re 2006 tailings failing to report
174	PINs re tailings water release
175	File Note Flyers Creek discharge 20120112_AW
176	LET formal warning from EPA regarding noise exceedences 20121105
177	MEM Incident Notification to EPA - Water discharged to Flyers Creek
178	REP_Flyers Creek incident_PIHA EMP_20120130_AW
179	REP_Notification of Flyers Creek Discharge_20120119_AW
180	Belubula River over extraction notification
181	CVO - Tailings pipeline failure
182	Email - Noise exceedence June 2012
183	Exceedence of Cadia East Project Approval Traffic Noise Criteria
184	Exceedence of CVO Sleep Disturbance Criteria
185	Incident Report - Blayney Dewatering Facility 04 02 2014
186	Incident report - Hole in pond liner at Blayney Dewatering Facility
187	Incident Report - Dead Grass
188	LET EPA Discharge below RW conveyor 4th October 2012_JB
189	LET EPA Leak from Blayney return water line 8th October 2012_JB
190	LET EPA Leak from Blayney return water line 27102014_JB
191	LET_8-11-13 Dust Emission Notification to DoPI_20140210JB
192	LET_EPA discharge below STSF_20121102AW
193	LET_EPA_sample results discharge below STSF 20121106
194	Letter - Leak from Blayney Return Water Pipeline
195	Letter to EPA - Blayney Dewatering Facility Damaged HDPE Pond Liner
196	letter to EPA re tailings Nov 2012
197	Letter to EPA results of dead grass incident 141217JB
198	Noise exceedence report June 2012_20120725AW
199	Non-compliance with EPL 5590
200	RE Non-compliance with EPL 5590
201	RE Report of water discharge from STSF on 26 Oct 2012
202	REP_Flyers Creek incident_PIHA EMP_20120130_AW
203	REP_Notification of Flyers Creek Discharge_20120119_AW
204	CVO June 2014 Newsletter
205	GCR proceedings
206	Newcrest accused of Cadia East licence breach
207	2014-4-4 CVO MOP 2014-2016 Approval
208	LET_MOP to DRE 20140401
209	LET_From M YOUNG MOP extension to end April 2014
210	CVO Mining Operations Plan (MOP) request for extension Dec 2013 AW

Doc No.	DOCUMENT NAME
211	Advice from M Young re rehab extension pending CVO MOP variation 20130930
212	MOP letter (final) to DRE 20131115_AW
213	AW advice to M Young - CVO MOP variation 30 Sept 2013
214	Re Advice from M Young re rehab beyond 30 Sept 2013
215	LET_NWRD_rehabilitation_warning_lack of progress
216	MOP 2014-2016 Amendment A January 2015
217	Let_MOP_submission_AW_20111011
218	Email Re Incident Report - Blayney 04 02 2014 (1)
219	Incident Report - Blayney 04 02 2014 (1)
220	Email Re Incident Report - Blayney 04 02 2014 (2)
221	Incident Report - Blayney 04 02 2014 (2)
222	Incident Report - Blayney 04 02 2014 (3)
223	2014 EPL Return
224	CVO skills training matrix
225	Additional information log from Andrew Wannan
226	Tailings Dam & Rodds Creek Audit Report Feb 2014
227	LET_Michael_young inspection report_20120807
228	2010-2011 Reviewed AEMR
229	Cadia East - Amended Monitoring Plans
230	Let from D Kitto on management plan requirements 20111205 (1)
231	LET_2013 review monitoring programs and strategy 20131209_JB
232	revised monitoring programs
233	Copy of CVO Material Milled 2010-14
234	CVO Material Milled 2010-14
235	Surrender of development consents
236	067048-01CC1 Construction Certificate
237	Booster pump station occupation certificate
238	Building certificates status 2014
239	Cadia East Building certificate status 2011
240	Fluorine Plant Occupation Certificate
241	Occupation certificates Final Jan 2014
242	Fire safety certificates folder (10 items)
243	Cadia Road Upgrade Orange Local Government Area
244	FW 2003096 - Cadia Road Patching & Vegetation Work
245	FW Cadia Road Bridge
246	FW SUMMARY CVO Mine roads contributions
247	Re 2003519 - Cadia Road Improvements
248	RE Cadia Road Bridge
249	Final VPA signed agreement with councils 9 July 2013
250	Re Cadia East Voluntary Planning Agreement
251	Submission of management plans folder (18 emails)
252	Current blast schedule
253	Evidence of Community Hotline since January 2012
254	Ltr.Knox.Offer to Paint Home 17April2013
255	'Meribah' Inspection Report
256	Community complaints regarding blast damage
257	Offset security folder (8 emails)
258	Cadia Squirrel Glider Report March 2011
259	Glider box locations
260	Mining Leases Drilling compliance folder (spreadsheets and photographs)
261	ML1405
262	ML1449
263	ML1472

Doc No.	DOCUMENT NAME
264	ML1481
265	ML1689
266	ML1690
267	1996 Orange Council Road Maintenance Agreement
268	2001 Cabonne Council Road Maintenance Agreement
269	Email re Road maintenance agreements
270	Annual payment to Orange Council VPA
271	Orange Council invoice
272	RE Voluntary Planning Agreement (1)
273	RE Voluntary Planning Agreement
274	Re VPA cheques for local councils (2)
275	RE VPA cheques for local councils (3)
276	RE VPA cheques for local councils
277	Mine Dust Modelling 15 Oct 2012 REV3 – Advitech
278	Meribah Air Quality Exceedance Report 8.11.13 – Advitech
279	Email from Andrew Wannan re Statement of Commitments clause 1.1A.4 dated 13/04/2015
280	Operating Approval Summary EPL 5590
281	Additional evidence March 2015 folder (6 items)

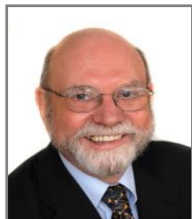
Appendix 2

Persons Interviewed

ACTIVITY/LOCATION	NAME
Opening Meeting Attendees	Andrew Wannan
	Jeff Burton
	Amy McKenzie
	Michael Butcher
	Brendan Pitt
Closing Meeting Attendees	Nedra Burns
	Jeff Burton
	Jessica Leeson
	Amy McKenzie
	Michael Butcher
	Brendan Pitt
CVO Environment Team Auditees	Andrew Wannan
	Jeff Burton
	Amy McKenzie
	Michael Butcher
CVO Site Asset Operations Centre	Clinton Grambeau
CVO Blayney Dewatering Facility	Les Hopkins
Chandler McLeod Heavy Vehicle Workshop	Ross Peters.
Boral Concrete Batching Plant	Ray Barlow
	Barry Fenner
PHE Electrical & Instrumentation Contracting	Peter Macqueen

Appendix 3

Audit Team Members



Graham Brown

MSc, FAusIMM, FEIANZ, CPEA, Registered Lead Auditor Australia, USA, UK

Audit Role

- Lead Auditor
- Quality Assurance

Responsibilities

- Audit planning
- Lead site inspection and interview team
- Principal client contact
- Report writing
- Oversight the project and ensure highest level of quality

Relevant Experience

Graham Brown is the Principal of Graham A Brown & Associates. He holds a Master of Science degree in Geology. He is registered by Exemplar Global (formerly RABQSA International) as a Lead Environmental Auditor; as a Principal Environmental Auditor by the Institute of Environmental Management and Assessment (IEMA) in the UK; as a Certified Professional Environmental Auditor (CPEA) by the Board of Environmental, Health and Safety Auditor Certifications (BEAC) in the USA; as a Greenhouse and Energy Auditor – Technical by the Australian Clean Energy Regulator; and as a Lead Auditor for the International Cyanide Management Code.

He has over 40 years' experience in the mining and resource industries, along with other industry sectors, including over 30 years as an environmental consultant, during which time he has carried out over 500 environmental assignments. Graham Brown is the author of a series of environmental guidebooks including *The Environmental Audit Guidebook* and the *Environmental Management Systems Guidebook*, environmental audit protocols and other publications which are regarded as industry standards. He is also one of Australia's leading trainers of environmental auditors and regularly conducts accredited public and in-house environmental auditor training workshops.

Graham was the Lead Auditor for the 2011 Integra Independent Mandatory Environmental Compliance Audit; the 2014 mandatory audit of the Boggabri Coal mine; the 2012 mandatory audit of the Rasp lead, zinc and silver mine at Broken Hill; the 2012 voluntary audit of the CSA copper mine at Cobar; the 2011 mandatory audit of coal seam gas exploration at Moree; the 2013 mandatory audit under the EPBC act of the Ord River Irrigation Expansion Project; and many more.

Graham has extensive experience in the metalliferous and gold mining sector. His experience extends beyond Australia to petroleum and mining projects in North America, the Middle East, South East Asia, New Zealand, Japan, the Philippines, PNG and the Pacific Islands.

Graham undertook the first environmental impact assessment in WA of the Telfer gold mine, has undertaken environmental and social auditing at Lihir, and was involved with other GABA staff in the development of an integrated management system for the Hidden Valley Joint Venture (HVJV), one of three unincorporated joint ventures between subsidiaries of Newcrest (50 per cent) and Harmony Gold Mining Company Limited of South Africa (50 per cent).

Relevant Clients

- CBH Resources, NSW (Rasp Mine, Broken Hill)
- CSA Mine, Cobar, NSW
- Citic Pacific Mining WA (iron ore)
- Sepon Gold and Copper Mine (Laos)
- Phu Bia gold and Phu Kham copper mines (Pan Australian Resources, Laos)
- Gold Ridge Gold Mine (Solomon Islands)
- Copper Mines of Tasmania, Mt Lyell copper/gold mine
- Integra Coal Complex NSW
- Boggabri Coal NSW
- Bulga Coal NSW
- Anglo Coal NSW and Qld
- Centennial Coal NSW
- Oaky Creek Coal Qld
- Wambo Coal NSW

Value to the Audit

Graham brings to the audit a lifetime of experience in the mining industry as a geologist, general manager, environmental consultant and environmental auditor.

Graham is internationally recognised as a leading practitioner in the profession of environmental auditing having been one of the first to practice in the field (in 1975) and the leading trainer of environmental auditors. His leadership of the audit team lends the highest possible veracity to the audit findings.



ALLAN KEMP

EHSQ Compliance Auditor

Audit Role

- Audit Team Member
- Legal and Regulatory Compliance Specialist

Responsibilities

- Prepare audit protocol
- Participate in site inspection and interview team
- Draft audit report

Relevant Experience

Allan Kemp is a senior consultant at Graham A Brown & Associates. Allan has a working background (as a Senior Manager including 27 years as an OHS inspector) in environmental management, workplace safety, training, industrial relations & staff management, investigations, fraud prevention, audits and inspections, training and emergency planning. Alan also has day to day knowledge of dealing with legislation and law, the various Government Authorities that regulate the law and industry and the general public that have to comply with the Law.

He is certified as an Exemplar Global (formerly RABQSA International) Environment Health and Safety Principal Auditor, has qualifications from the Chisholm Institute as an Environment and Health and Safety Lead Auditor, and in Risk Management from the University of NSW. He has many years' experience as a compliance auditor and assessor.

Relevant experience includes as an EHS Consultant (2007-2014), Risk Management, Audits, Investigations, Training, Emergency Planning, Fraud Prevention, Consultation, Hazardous Substances, Dangerous Goods, High Risk Plant, Working Environment, Safety Culture, Management Responsibility, Workers Compensation & Injury Management, Legislation.

He was with WorkCover NSW from 1991-2007, where he was Manager of Project Officers and Administration staff in the development of policy related to intervention and compliance with the OHS Act, program and project planning to address identified Occupational Health and Safety Division priorities. He managed the Licensing Branch and provided program support and advice on OHS, Workers Compensation and Injury Management practices. He also managed all matters related to Construction and high risk work including the training of Country North Inspectors and the cooperation with Department of Commerce in these matters.

Prior experience includes Regional Manager – Department of Labour, Victoria from 1980-1990 where he assumed the responsibility of Chief Inspector for Construction, Lifts, Boilers & Pressure Vessels and Dangerous Goods during the changeover phase from prescriptive legislation to the performance based OH&S legislation.

Allan has recently conducted a major audit (with Graham Brown) of the giant Sino Iron Project in Western Australia, the largest magnetite project in Australia (>\$7B investment) which was still in the construction phase and included open cut mining; crushing, grinding and concentration; power station; slurry pipeline and dewatering; stacking and reclaiming; port, barging and transshipment operations; overburden, waste rock and tailings disposal; and desalination plant. Contractor and sub-contractor compliance were major considerations

of this audit. The mine commenced production in November 2012. Due to the involvement of Graham Brown in the development of the project's environmental management systems, environmental issues were also addressed by the auditors during this audit, many being joint EHS issues such as dangerous goods, hazardous substances, asbestos in the orebody, air quality and many more. Other relevant EHS clients include the Borg Group of Companies, One Steel, Gloucester Coal, Hunter Water, and Powerdown (who manufacture suspension parts for off-road vehicles).

Relevant Clients

- Citic Pacific Mining
- Ausgrid
- Borg Group of Companies
- One Steel
- Gloucester Coal
- Hunter Water
- Powerdown

Value to the Audit

Allan has extensive experience in legal and regulatory compliance requirements, the development of compliance audit protocols, and compliance auditing. His experience as a compliance regulator and auditor will ensure that the detail required by the Department of Planning and Environment will be achieved.



Robyn Laurenson

M.H.M. Grad. Dip. Training and Development

Audit Role

- Project Manager

Relevant Experience

Robyn holds a Masters Degree in Hospitality Management (1995) from Griffith University and has had over 25 years industrial and commercial experience in banking, mining, catering, hospitality, farming and the environmental industry. As Business Manager of Graham A Brown & Associates, a consultancy that operates nationally and internationally, Robyn has had a wide breadth of business experience including Auditing, Financial Management, Project Management, Human Resource Management, Training and Development, Environment and Occupational Health and Safety.

She also holds a Graduate Diploma in Training & Development (1997), Charles Sturt University, and a Diploma in Environmental Management, Environmental Awareness & Compliance – British Safety Council.

Robyn has extensive committee experience including being Vice President on the Board of the Merewether Golf Club, a Director of Archdall Investments Pty Ltd, a member of the Samaritans Development Board, Vice President of Hunter Business Women, and a committee member of the Newcastle Business Club.

Robyn has a strong business and training background, developed working in the hospitality industry, mining, farming and environmental industries. Robyn comes from a farming family with three family farms in the Bay of Islands in New Zealand. She has undertaken many audits and participated in management systems development and implementation both nationally and internationally. As an experienced auditor Robyn has a sound knowledge of the requirements of auditing in a variety of industries, remote locations, and industrial environments. Notable were the audits of the Indian Ocean Territories – Christmas Island and Cocos Keeling Islands and of a number of mining operations.

Robyn (along with Graham Brown) developed the Environmental Auditor Certification Workshop, certified by Exemplar Global (formerly RABQSA International). She has continued to ensure the in-house certification processes and procedures and assessment are of a high standard for the annual Exemplar Global Audits.

Robyn's extensive experience in differing sectors of industry has allowed her to hone her skills, demonstrate effective communication skills at all levels of contact and sound financial and strategic planning knowledge that enables effective growth within an organisation.

Relevant Clients

- Copper Mines of Tasmania (compliance audit and heritage assessment)
- CSA Mine Cobar (mine closure audit)
- Australian Antarctic Division (audits and EMS development including training)
- Commonwealth Government - Australia's Indian Ocean Territories (compliance audits)
- Many GABA audits especially for DP&E in NSW and under EPBC Act nationally as Project Manager

Value to the Audit

As Business Manager Robyn Laurenson impresses with her professional, calm approach, conscientiousness and reliability, and maturity of perception and opinion. She has a demonstrated organized approach to work, with attention to detail and the ability to meet tight deadlines on time and within budget. Her role will be to ensure that the audit team meets the deadlines and budgets set.



John Chapman

MSc (Chemical Engineering), University of Cape Town, 1989

BSc (Chemical Engineering), University of Pretoria, 1984

P.Eng (British Columbia), Reg No: 17427

P.Eng (Yukon Territory), Reg No: 1397

Engineers Australia Graduate Member

Audit Role

- Expert opinion on surface water management and water quality
- Expert opinion on general land management

Responsibilities

- Independent opinion of surface water quality
- Independent opinion of general land management aspects (including reclamation and mine closure as applicable)

Relevant Experience

John Chapman has more than 26 years of relevant experience and has developed multi-disciplinary skills relating to mining environmental impacts assessment and environmental controls. He is a recognised expert in ARD assessment and prediction, mine waste characterisation and management, and mine closure with recent project experience in Australia, South East Asia, Canada, USA and Europe.

John has facilitated enterprise-wide risk assessment workshops, undertaken due diligence and environmental risk assessments for a wide range of mining projects. Recent projects include detailed geochemical assessment of the tailings properties for the Olympic Dam Project in SA, design and development of the geochemical characterisation program for the Cannington Life Extension project in QLD as well as for the Yeelirrie Project in WA. This included developing site wide water and load balances, completing detailed water quality predictions. Recently, he developed the load balance for Andina Ovejeria Tailings deposit which included assessing various water management strategies for operation and closure of the facility. Other recent project experience includes water quality predictions for the proposed Polymet Mine in Minnesota.

Relevant Clients

- Kaltim Prima Coal, Indonesia – Defined and coordinated a field program to quantify the effectiveness of a multilayered cover (that included a geosynthetic liner) on a waste rock dump. Established the reduction in oxygen and water flux into the waste due to the cover.
- Savage River, Australia – Peer review of a program of work to assess the performance of a cover a waste rock dump.
- Mt Leyshon, Australia – Assessment of the effect of a period of high rainfall on the oxygen diffusion coefficient of porphyry and oxide heap leach waste rock dump cover materials
- Olympic Dam Operation (SA, BHPBilliton) - Co-facilitated Enterprise Wide Risk Management workshop and developed costs estimates for overall site closure.
- Faro Zinc Lead Mine (Yukon, Canada) - Site assessment and environmental audit of closed out open operation, waste rock deposits and tailings area. Portions of the waste rock area are eroding and acid generating. The tailings area has eroded and resulted in sediment release to nearby creeks, and the tailings have a potential to generate acid. Developed a water treatment requirement and cost model to enable evaluation and selection of conceptual closure alternatives to stabilize current situation, estimate water treatment requirements and developed conceptual water management plan. Estimated overall site liability to achieve acceptable close-out conditions.
- XinXin Nickel Sulphide Project (China) - Environmental and overall risk assessment as independent engineer for Initial Public Offering. Completed overall site assessment, established compliance and identified potential environmental risks for the Kaletongke Mine, Kaletongke mill and smelter, and the Fukang nickel refinery.
- Lihir Gold Mine (PNG) - Ongoing role as Independent Technical Engineer to ABN AMRO and the syndicated banks for reviewing operational performance and compliance of the Lihir Gold Mine.
- Olympic Dam Operation (SA, BHPBilliton) - Developed conceptual engineering cover design for the closure and rehabilitation of the Tailings Facility cells I, II and III, including assessment of cover and geochemical performance and overall closure costs.
- Island Copper Mine (BC Canada, BHPBilliton) - Completed technical review of water treatment system; developed design criteria and operational requirement for large scale pilot testing program to verify treatment strategy; developed passive water management system to regulate flow and reagent additions; participated in risk assessment workshop.
- Lepanto Mine (Philippines) - Technical review of mine environmental operation strategy and closure alternatives. Developed recommendations for improved operating strategy to control short and long term acid generation.

Value to the Audit

John Chapman is a recognised international expert in Acid/Alkaline Rock Drainage (ARD) assessment and prediction, water treatment, mine waste management and reclamation, mine closure and mine land management.



Aleks Todoroski

B.E. (Mech)

Audit Role

- Air Quality Management Expert

Responsibilities

- Review the air quality management and monitoring data
- Provide an opinion regarding air quality management (dust)

Relevant Experience

Aleks has a bachelor degree in mechanical engineering and 20 years of experience in air quality and environmental noise both in consulting and in government. At NSW OEH (DECCW/EPA) he worked for 10 years in the role of principal technical policy adviser in the air policy section and as the assessments manager in the noise and air policy sections. Prior to this Aleks was Principal Engineer Australia in a large environmental consultancy for over 6 years. Throughout his employment, Aleks has been directly involved in the development of significant air and noise policy and in the approval process of many significant projects in NSW.

He was responsible for the impact assessments for many hundreds of significant projects in the private sector and in government, including many major mining, industrial and land development projects. In government Aleks implemented the load based licensing scheme in Sydney which involved negotiating emission load limits with the state's largest industries.

Aleks has extensive experience in air dispersion modelling, impact assessment and government approval and policy work on various projects conducted in Australia and overseas. He has represented clients and government in significant legal proceedings, Commissions of Inquiry (COI) and public processes such as Planning Assessment Commissions (PAC). Aleks has represented the Department of Planning and Infrastructure, and various coal mines, appearing directly before closed PAC hearings to advise on air quality matters. Aleks also represents the Australian Minerals Council as industry representative on the National Environment Protection Measure, Air Quality Peer Review Committee.

Since June 2011, Aleks has had no involvement with any Cadia mine operations. Prior to this he would have had some contact with the mine through his role with the NSW EPA and as General Manager of PAE Holmes, but has not worked directly on Cadia operations. He is therefore independent in terms of Section 4 – Auditor Independence of the Department of Planning and Infrastructure's *Draft Guidelines for Independent Environmental Audits of Mining Projects*, March 2014.

Relevant Clients

- Peak Hill, Rasp and other gold and mineral mines

- Boggabri Coal mine, Mt Arthur Coal, Mount Arthur North, Bengalla, Mount Pleasant, Warkworth, Wambo, Bulga, Drayton, Mt Thorley, Hunter Valley Operations, Mt Owen, United, Ashton, Narama, Ravensworth, Ulan, Moolarben, Mangoola, Boggabri and many other coal mines.

Value to the Project

Aleks will provide in-depth review and an expert opinion of air quality management data and air quality management procedures.



David Western

MIAH, MAusIMM, MIMWA, MAWA

MSc (Hydrogeology), University of Technology, Sydney, 1994 BAppSc Hons (Geology), Ballarat University College, Ballarat, 1991 BAppSc (Environmental Management and Land Use Policy) Victoria College, Melbourne, 1989

Audit Role

- Groundwater management and modelling

Responsibilities

- Independent opinion of groundwater aspects

Relevant Experience

David Western has over 23 years' experience in consulting and industry roles in the fields of hydrogeology and exploration geology. He has successfully conducted and managed hydrogeological and geological investigations in remote arid and tropical environments.

Since 1995, he has worked as a hydrogeologist, largely providing strategic and technical advice/support to the mining, CSG and water industries on holistic water resource planning, water supply, mine dewatering and depressurisation, water resources impacts and the management and protection of these resources, baseline assessments (water, noise, air) and mine closure. This advice has been provided to brown coal operators in the Latrobe Valley, black coal operators in the Bowen Basin, CSG operators in NSW and QLD as well as iron ore, metalliferous and mineral sand miners with operations in Australia, Indonesia and Kyrgyzstan.

David has managed and provided technical and strategic direction for groundwater and numerical modelling teams.

Relevant Clients

- Aquifer Depressurisation Program – Strategic Review, Loy Yang Mine, Loy Yang Power. The review involved site inspections, consultation with project staff, and a review of background documentation, existing literature and aquifer depressurisation programs for open pit mining operations. Advice on operational program improvements to increase the efficiency of the program and ultimately result in cost savings was provided. Recommendations included organisational restructuring of project resourcing, investigative studies, risk assessment reviews, hazard mapping and observations from contemporary overseas aquifer depressurisation programs.
- East Field NE Batter Failure – Provision of Hydrogeological Advice, Yallourn Mine, Mining One Pty Ltd. Review of relevant reports and documents to identify hydrogeological factors that may have contributed to the batter failure.
- Project managed an assessment of alternative (horizontal) dewatering methods and pumping trial data as part mine (coal) dewatering. East Field Extension. Yallourn Energy.

- Licensing of a flyash contaminant facility. Hazelwood Ash Retention Area. International Power. An assessment of risk to groundwater from the 'as built' Hazelwood Ash Retention Area and a verification report on the construction to assess conformance and compliance with the Construction Quality Assurance Plan was prepared. Predictive numerical groundwater flow and solute modelling was undertaken to inform the risk assessment, along with a qualitative assessment of mine practises and design features that could not be incorporated into the model. The work undertaken assisted International Power Hazelwood to obtain Environmental Protection Agency approval and comply.
- Project managed a groundwater resource assessment as part of a due diligence assessment for a mineral sands operation. Metallica Minerals Ltd, Bairnsdale.
- Prepared a Groundwater Management Technical Review in support of an EA Amendment application for a proposed expansion at the Collinsville Coal Mine. The review addressed relevant Queensland and Commonwealth legislation including the EPBC water trigger guidelines. Glencore Coal Queensland, Collinsville, 2014.
- Undertook a strategic review of the Oaky Creek Mine underground water impact report. A hydrogeological site model was developed as part of the review, key risks identified and a work program scoped. Oaky Creek Coal, Oaky Creek, 2013.
- Developed a preliminary hydrogeological site model and scoped a detailed forward work plan to assess potential impacts on the receiving environment as part of Xstrata's Collinsville EA licence conditions. A comprehensive review and analysis of historical background information combined with analysis of the current geological resource model was used to develop the preliminary model. Xstrata, Collinsville.
- Managed the groundwater assessment component of QRN's CQIRP, which involved an evaluation of Brownfield alignment sections 11A/11C and Greenfield section 6A. Environmental values of groundwater along the corridor were described, groundwater systems characterised and potential impacts on groundwater from the proposed development assessed. Mitigation measures were provided for potential impacts. QRN, Central Queensland Integrated Rail Project (CQIRP).

Value to the Audit

David Western has extensive experience directing, managing and executing hydrological assessments, exploration and development of groundwater supply, mine water control (dewatering and depressurization), environmental impact assessment and approvals, aquifer storage and recovery, mine closure concept engineering and design, design and implementation of water monitoring systems, strategic advice on water planning, management and infrastructure design, seepage studies, conceptual and numerical groundwater modelling, groundwater and soil contamination assessment and high level technical review and audits.



Stephen Kozakiwiicz BE (Mech), MAAS

Project Role

- Noise Expert

Responsibilities

- Provide expert opinion on acoustics & vibration

Relevant Experience

Stephen has over 12 years' experience in acoustics & vibration engineering consulting, gaining extensive experience in field measurements, data analysis, environmental noise modelling, noise and vibration control, technical reviews and project management.

Key experience areas include:

- Project Management, technical reviews, monitoring, modelling, measurement and testing of noise and vibration on many varied types of residential, commercial and industrial sites;
- Works including: Military, Aircraft, Rail, Watercraft, Road Traffic, Construction, Environmental, Industrial, Development Applications, EIS, Noise control design, Mine surveys and mobile plant noise emission testing to International Standards, routine surveillance monitoring, Architectural and Building Acoustics, Sound transmission loss testing and impact testing (in-situ and laboratory), LAB DAs and compliance for Licensed Premises (e.g. Pubs, Clubs, R.S.L's), ADR Static & Dynamic Vehicle compliance testing. Building damage vibration assessment, human response and WBV analysis; and
- Noise modelling using Datakustik Computer Aided Noise Abatement (Cadna-A) Noise Prediction Software, RTA Group's ENM Software and spreadsheet calculations.

Relevant Clients

- Boggabri Coal mine
- Ravensworth Operations mine, Xstrata Coal.
- Mount Owen Complex (Mount Owen and Glendell Mine), Xstrata Coal
- Oceanic Coal Australia Limited - West Wallsend Colliery
- Whitehaven Coal – Werris Creek Mine
- Beltana and Blakefield South Mining Operations
- Coal & Allied Industries Limited - Bengalla Coal Mine, Hunter Valley Operations, Mount Thorley Warkworth
- Bulga Coal Complex – Bulga Coal Surface Operations (Open Cut Operations) & Beltana Highwall Mining (Underground Operations)

- Centennial Coal - Mandalong South

Value to the Audit

Stephen is recognised as an expert in acoustics & vibration engineering and brings a wide range of knowledge and experience to his role as Noise Expert.

Appendix 4

Expert Opinion on Surface Water, Groundwater and General Land Management

17 March 2015

GBR001

Principal
Graham A Brown & Associates
PO Box 1804
NEWCASTLE NSW 2300**Attention: Graham****CVO Mandatory Independent Compliance Audit – Groundwater Management Review****1 Introduction**

Graham A Brown & Associates (GABA) is completing a Mandatory Independent Compliance Audit of Newcrest's Cadia Valley Operations (CVO). GABA requested SRK Consulting (Australasia) Pty Ltd (SRK) complete a desktop technical review of the audit findings prepared by the GABA team in support of the following components:

- Groundwater quality and management;
- Surface water quality and management; and,
- General land management including rehabilitation and closure.

GABA requested that any recommendations, as appropriate, for improvements in these management practices be provided.

This report includes a review of the GABA team audit findings based on an independent review of relevant and available information and recommendations to improve management practices.

1.1 Key Sources of Information

The following key sources of information have been used in this review:

- Cadia Valley Operations Water Management Plan (Version 4; Dec 2014)
- Cadia Valley Operations Annual Environmental Management Report 2011/12
- Cadia Valley Operations Annual Environmental Management Report 2012/13
- Cadia Valley Operations Annual Environmental Management Report 2013/14
- CVO Monitoring Schedule spreadsheet
- CVO Monitoring Summary (January 2015)
- CVO Land and Biodiversity Management Plan
- CVO Rehabilitation Strategy
- CVO Waste Management Plan
- CVO Environmental Monitoring Manual
- CVO Statement of Commitments
- CVO SWI Sediment Control Inspection
- CVO – TARP – Stormwater
- CVO – Water Management Plan

It is important to note that SRK undertook a desktop review of technical documents that were provided; a site visit was not completed and the actual implementation of management plans and operational controls achieve could not be assessed.

2 GABA Audit Findings Review

2.1 Audit Methodology

The GABA team undertook a site visit comprising interviews, inspections and review of documentation. Based on these interviews, inspections and reviews, a draft Audit Report was prepared, which includes a series of spreadsheets on the audit findings and recommendations provided to SRK for its review.

The audit methodology and information provided by the GABA team is considered suitable for the intended purposes of this review.

2.2 Groundwater

2.2.1 Groundwater Usage and Entitlement

Table 2-1 summarises the groundwater usage for the last three annual reporting years.

Table 2-1: Summary of Groundwater Usage and Licensed Entitlements

Year	Groundwater Source	Entitlement including trades & carry overs (ML)	Usage (ML)
2011/12	Orange Basalt	157	153
	Lachlan Fold Belt MDB	1,302	1,265
2012/13	Orange Basalt	176	165
	Lachlan Fold Belt MDB	1,302	1,088
2013/14	Orange Basalt	161.6	160
	Lachlan Fold Belt MDB	1,302	722

Note: Source – Cadia Valley Operations Annual Environmental Management reports; 2011/12, 2012/13 and 2013/14.

Table 2-1 shows that groundwater usage was within the licensed groundwater entitlements. SRK agrees with the GABA audit findings that CVO is in compliance with its licenced Groundwater Supply requirements.

It should be noted that the total groundwater usage for Water Access Licence (WAL) 36229, which is part of the Lachlan Fold Belt MBD groundwater source, was incorrectly reported above actual usage for 2013/14.

2.2.2 Groundwater Management

Monitoring, Assessment and Reporting

The current approved Water Management Plan (WMP) includes programs for monitoring groundwater levels, quality and yield. These programs involve the use of monitoring bore infrastructure established across the site, regional bores and predictive results from a calibrated transient numerical groundwater model. According to the WMP, the groundwater model will continue to be updated and validated during the life of operations.

A groundwater monitoring schedule spreadsheet has been developed which succinctly articulates the frequency and location of monitoring and the parameters to be measured.

A combination of beneficial use guidelines and statistical analysis of baseline groundwater quality data has used to determine groundwater quality trigger levels for selected bores.

Groundwater level triggers have been developed for selected groundwater bores in the Ridgeway and Cadia East areas. The method used to develop the groundwater level triggers for the Ridgeway area groundwater bores is not clear. Groundwater level triggers for the Cadia East area bores are based on groundwater drawdowns of more than 3 metres above what is considered normal climatic variation. A consistent approach to determining groundwater level triggers should be employed. The use of the calibrated transient numerical groundwater model to assist groundwater level trigger determinations should be considered.

Site performance on groundwater is assessed by a comparison of measured groundwater levels or groundwater quality against trigger levels for the selected bores. Several other methods are also used to assess site performance as follows:

- Groundwater level and quality trend analyses.
- Comparisons of groundwater level trends with cumulative rainfall departure.
- Characterisation of hydrogeochemical signatures (indicators).
- Numerical groundwater modelling predictions.

Groundwater monitoring results are reported in the annual environmental returns as well as monthly summaries on the CVO website. The results are also discussed at the Community Consultative Committee meetings.

SRK agrees with GABA's audit findings that CVO has complied with its licenced Groundwater Monitoring Program requirements.

Management and Contingency Measures

The WMP contains management and contingency actions to mitigate and if required, compensate affected groundwater users in-addition to trigger and response plans, and protocols and triggers for advanced warnings. Importantly, the use of groundwater specialists for conducting higher level investigations when such investigations are triggered by an event is highlighted.

SRK agrees with GABA's audit findings that CVO has complied with its licenced Groundwater Contingency Plan requirements.

2.3 Surface Water

The current approved Water Management Plan (WMP) includes criteria release of surface water, identifies designated roles and responsibilities and includes trigger values and a suitable response plan. The WMP also includes an action plan for continuous improvement of the water management strategy for the site.

A primary strategy of the WMP is to maximise the reuse of water in the milling process which reduces the risk of release of contaminated water from the site. This is consistent with best practice elsewhere in the mining industry.

The WMP provides background on the site hydrology and summarises the baseline surface water quality for the area. The WMP clearly identifies the legal and other requirements for site water management and the requirements to meet these are addressed adequately in the WMP. This includes a risk assessment which identifies the likely activities that could cause water quality impacts. Appropriate controls and actions are identified and integrated within the WMP.

The water balance indicates that water supply for the process is drawn as priority from surface sources including site runoff, waste rock dump leachate ponds, the tailings storage facility, mine dewatering and treated effluents. Other sources include groundwater bores, Upper Rodds Creek Dam and Cadiangullong Dam. Water is released from the site from the Cadiangullong Dam riparian release area, and from the dam spillway once runoff exceeds the capacity. Water is also released from the sediment dams following rainfall events in excess of the design events provided the discharge criteria are met. The surface water balance for the site is revised annually; a major update was completed in 2014. The water balance was not reviewed and whilst it is indicated that the model is updated annually it is not clear whether or not it is being utilised as tool to actively manage the water reserves on site (i.e. on a daily/weekly basis). The parameters that have been established for the water balance however appear to be reasonable.

Site specific trigger values for downstream surface water quality have been developed and are proposed for the downstream receiving environment (GH Pty Ltd 2012 as referenced in the WMP; the study was not reviewed as it is beyond the scope of the current evaluation). The site specific trigger values however do appear to be appropriate based on the information provided.

Surface water flows are measured monthly with some stations connected to provide real time monitoring of baseflows. SRK notes that ratings for the stations are updated regularly which represents good practice. SRK would suggest that a schedule of frequency be identified for updating each of the stations with the ratings reported on a regular basis. It is not clear from the WMP which stations deliver real time monitoring data. We note however that the 2011 audit identified non-compliance with respect to baseflow offsets. Real time stations located in streams that require base flow offsets would provide ideal input into management of such offsets. The WMP however states

that: "While there appears to be variation in baseflow through the recorded period, baseflow is at pre-mining levels. As such there is no requirement to provide baseflow offsets for existing baseflow losses." As such the WMP does not identify a control method for managing baseflows. It is however noted that in the forward works program (action plan) there is a line item to formalise with the NSW Office of Water an approach for calculation and offset of baseflow loss. This should be incorporated into the WMP when complete.

Since surface water may be discharged via the sediment ponds after design rainfall events, the storage capacity of the sediment ponds are critical to the control of releases. We note that CVO has developed a management plan to ensure that sediment control structures are maintained according to the criteria detailed in the WMP and the Environmental Protection License EPL5590. The EPL requires that the design capacity of the stormwater control structures be re-established within 5 days following rainfall. CVO has also developed a Trigger and Response Plan for stormwater management (2015), which combines the sediment control inspection and the sediment release plans. The inspection strategy, mitigation measures and response plan identified are considered appropriate.

It is noted that an Integrated Erosion and Sediment Control Plan has been developed and was last updated in 2007; it is anticipated that the sediment control plan would have been revised to reflect site conditions and operational requirements as mining progresses. This does not appear to have been done. Nevertheless, considering the controls and management strategies in place for the sedimentation ponds, most of the functions identified in the Erosion and Sediment Control Plan appear to have been captured elsewhere.

A surface water monitoring schedule spreadsheet has been developed which identifies the frequency and location of monitoring and the parameters to be measured.

2.4 Land Management, Rehabilitation and Closure

Based on independent monitoring as reported in the Annual EMRs (DnA Environmental 2014), rehabilitation land management at the site is progressing well. It is considered that best practices are being followed and the available resources are being utilised to establish post closure land use conditions that meet the objectives for the site. However, it is noted that some issues with respect to erosion are present at newly rehabilitated sites in part due to placement of unsuitable soils and with a high frequency of erosion on sloped surfaces. The rehabilitation monitoring assessment places a high priority on the use of suitable soils for rehabilitation. The CVO Land and Biodiversity Management Plan describes a topsoil management plan in broad terms but does not provide any specific guidelines or criteria that may be used to identify and manage topsoil, sub soils and clays. We recommend that consideration be given to developing soil criteria (chemical and physical properties) which can be incorporated into a soil management plan to identify appropriate soils for rehabilitation. An inventory of soils should be developed and be used to verify that sufficient materials would be available for rehabilitation of the site.

Whilst the Land Function Analysis (LFA) provides an indication of surface functionality of the rehabilitated landform, long term closure and post closure impacts will depend on the effectiveness of the mine waste management strategy, which includes: i) waste classification criteria, ii) waste sampling frequency and testing; iii) placement control and verification, iv) effectiveness of encapsulation; and v) long term performance of the final landform.

The waste classification criteria that have been adopted by CVO in general are consistent with criteria that have been adopted at other mine sites. However, a sulfur cut-off of 0.5% has been shown elsewhere to be a potential source for neutral mine drainage with elevated sulfate concentrations, and potentially elevated metals concentrations as well. The seepage from the waste rock dumps do contain elevated sulfate concentrations (>2000 mg/L) which, if released could impact on the salinity of the downstream surface flows. While it is possible that the elevated sulfate concentrations may be sourced from exposed high sulfur waste rock (at the tipping face) the low sulfur waste rock may equally be the cause of the sulfate. In 2011 a review was undertaken of the results from column test completed on waste rock samples; it does not appear that any scale-up of, for example sulfate production from the low sulfur (<0.5%) had been completed. Sulfate production from the low sulfur waste rock should be assessed against likely long term water quality of seepage and percolate from the waste rock dumps.

The EMR (2013/14) does not report the frequency of waste rock sampling nor the analytical results for any classification sampling and testing. In-situ (after placement) verification and sampling would

generally also be undertaken to demonstrate that the waste rock classification and placement strategy is effective; based on the review of the EMR this does not appear to be undertaken.

As noted before, the LFA provides a clear and positive indication of rehabilitation of the waste rock dumps at the site. However, actual infiltration and net percolation rates are not being established. Furthermore, based on the information reviewed it is not clear that the performance/effectiveness of the encapsulation and isolation strategy is being assessed. As noted before, seepage from the waste rock dump shows elevated sulfate concentrations (and thus elevated EC values), and it is uncertain as to whether these relate to the low sulfur waste rock or to ineffective encapsulation. In the event that the cause is ineffective encapsulation, acidification of the high sulfur waste rock could occur. Whilst this is not a current compliance issue, it may have intermediate and longer term implications, in particular for post closure conditions where seepage and percolate could be released off-site.

Furthermore, there is a discrepancy in the potentially acid forming (PAF) waste rock encapsulation specifications between the Southern Waste Rock Emplacement and the North Waste Rock Emplacement as noted in Table 2.1 in the Land and Biodiversity Management Plan. The plateaus of the PAF in the Southern Waste Rock Emplacement are to be covered by compacted waste rock only; this would be considered insufficient for closure and is inconsistent with the specification for the North Emplacement.

3 Summary and Recommendations

CVO has established a number of standard-industry practices, methods and procedures to assist management of surface and groundwater at the site.

A water management plan has been developed to guide water management and discharge at the site. A site water balance has been developed to assess water utilisation and storage capacity for stormwater management. However, the water management plan does not provide clear guidance on management of baseflow offsets. We recommended that the water management plan be updated to reflect the approach for calculation and offsetting of baseflow losses.

Methods and procedures for groundwater management include:

- Metering of groundwater usage.
- Monitoring spatial and transient groundwater level and quality responses from site and regional bore infrastructure networks.
- Development of groundwater level and quality trigger levels for selected bores to assess potential impacts on groundwater from site operations in-addition to the use of trend analyses, groundwater level trend comparisons with cumulative rainfall departure and groundwater quality indicators.
- Development of a calibrated transient numerical groundwater model to predict drawdown responses.

We recommend that CVO ensure the method used to determine groundwater level triggers at selected locations is consistent. The use of the calibrated transient numerical groundwater model is considered an appropriate tool for this purpose. If not already the case, in-house CVO or Newcrest Ltd staff should be trained in the use of the site groundwater model. This will reduce the reliance and potential loss of intellectual property. On-going remote support however is still recommended.

Land management and rehabilitation is progressing utilising practices in line with other mine sites. However, it is recommended that more specific guidelines for topsoil identification, stripping and management (including placement) be developed and incorporated in the Land and Biodiversity Management Plan. Other technical issues that need to be addressed include encapsulation of the PAF in the Southern Waste Rock Emplacement, verification that the low sulfur waste is not a potential source of neutral mine drainage, waste management verification, and the performance of the encapsulation strategy.

4 Closing Statement

Thank you for the opportunity to complete a technical review in support of the audit. Should you have any questions or comments please do not hesitate to contact the undersigned.

Yours faithfully

SRK Consulting (Australasia) Pty Ltd



David Western
Principal Consultant (Hydrogeology)



John Chapman, M.Eng, P.Eng
Principal Consultant

Appendix 5

Expert Opinion on Air Quality Management



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20 April 2015

Graham Brown
Principal
Graham A Brown & Associates
Via email: Graham@grahambrown.com.au

RE: Review of Environmental Audit findings for Cadia Valley Operations

Dear Graham,

Thank you for your engaging Todoroski Air Sciences to review the air quality aspects of your audit of the Cadia Valley Operations (CVO).

It is understood that the open cut operation is in care and maintenance, thus there is little scope for significant dust impact to arise.

I have reviewed the monitoring data for the past three years and the associated documents that appeared to be relevant and were available.

There is a network of dust gauges set out in the Air Quality Monitoring Program which was approved by NSW Department of Planning and Environment in June 2010. The air quality monitoring program is set out on the CVO website at <http://www.cadiavalley.com.au/site/air-quality>.

Since 2012 there have been 17 events where elevated 24-hour average PM₁₀ levels were reported to be above the criterion of 50 µg/m³. These events occur at one or more of the four TEOM monitors on 13 separate dates. The majority of these events occur at the Bundarra TEOM location which is TEOM 1 and located to the west of the mine and tailings facility.

Two exceedances of the 24-hour average PM₁₀ criteria applicable to the Project were recorded at the Meribah monitor (TEOM 4 located to the south east of the tailing facility), one in September 2012 and the other in November 2014.

On 10 February 2014 CVO notified the Department of Planning by letter that on the 8th and 9th of November 2013, elevated one hour average dust levels (>50ug/m3) were recorded at the Meribah TEOM monitor between the hours of 11.00am on the 8th and 7.45am on the 9th of November 2013. (However this appears to actually be 8 November, as detailed later in this letter).

CVO commissioned Advitech Pty Ltd to undertake an air dispersion modelling assessment of the situation in November 2013 when measured 24-hour PM₁₀ levels exceeded the assessment criteria. The letter from CVO to the Department of Planning and Environment states:

“Results of the air dispersion modelling indicated that the measured 24 hour PM₁₀ dust exceedance at the Meribah monitoring location was a result of a small CVO mine dust increment (approx. 11.6 ug/m³) and a larger ambient background PM₁₀ component (approx. 30.8 ug/m³). Based on air dispersion modelling the dominant contributor to PM₁₀ at the Meribah monitoring location was non-mine related activities.

Air dispersion modelling has shown that 4 private properties in the vicinity of CVO may have experienced PM₁₀ dust concentrations > 50ug/m³ on the 8th and 9th of November 2013. No community complaints were received at the time of the elevated readings. Affected residents have been notified in writing and provided a copy of the Advitech report. In addition, as per Schedule 4, Condition 2 of the Cadia East Project Approval, subsequent monitoring results have been provided showing compliance with criteria in schedule 3.”

The 10 February 2014 letter however contradicts the analysis of this event presented in the November 2013 monitoring and the monitoring results on this day.

The November 2013 monitoring report states:

- *“review of results from other monitoring locations at this time (presented in Figure 12) indicates that regional PM₁₀ levels were generally elevated (approximately 25ug/m³), but not to the same extent that they were at Meribah. This result indicates that the observed result is not attributable to ambient environmental factors leading to regionally elevated levels of PM₁₀.*

On the basis of this assessment, it is considered likely that the observed result may be attributable to the transportation of particulates from CVO mining operations, under strong north-westerly winds.”

Review of November 2013 Monitoring report

Figure 12 from the February 2013 monitoring report is copied below and shows the exceedance day clearly, but the date of the exceedance has been labelled incorrectly as 9 November.

A 24-hour average PM₁₀ level exceeding the criteria occurred on 8 November but the graphs and also the text in the report incorrectly refer it as occurring on 9 November.

All of the figures in the monitoring report appear to incorrectly show the rolling 24-hour average levels 15 minutes after midnight, instead of the levels at midnight, thus the actual levels and the dates being reported appear to be incorrect in the report.

It is recommended that the 24-hour average PM₁₀ level of a particular day be computed correctly for the period from midnight to midnight (24 hours) encompassing the day of interest. The data should be presented for the correct date, and the correct data value should be presented, clearly. A summary table quantifying the actual measured levels is suggested.

Although it is stated that this is the case in the monitoring report, the data show that it is not the case and it is therefore recommended that this issue be corrected in any future reports.

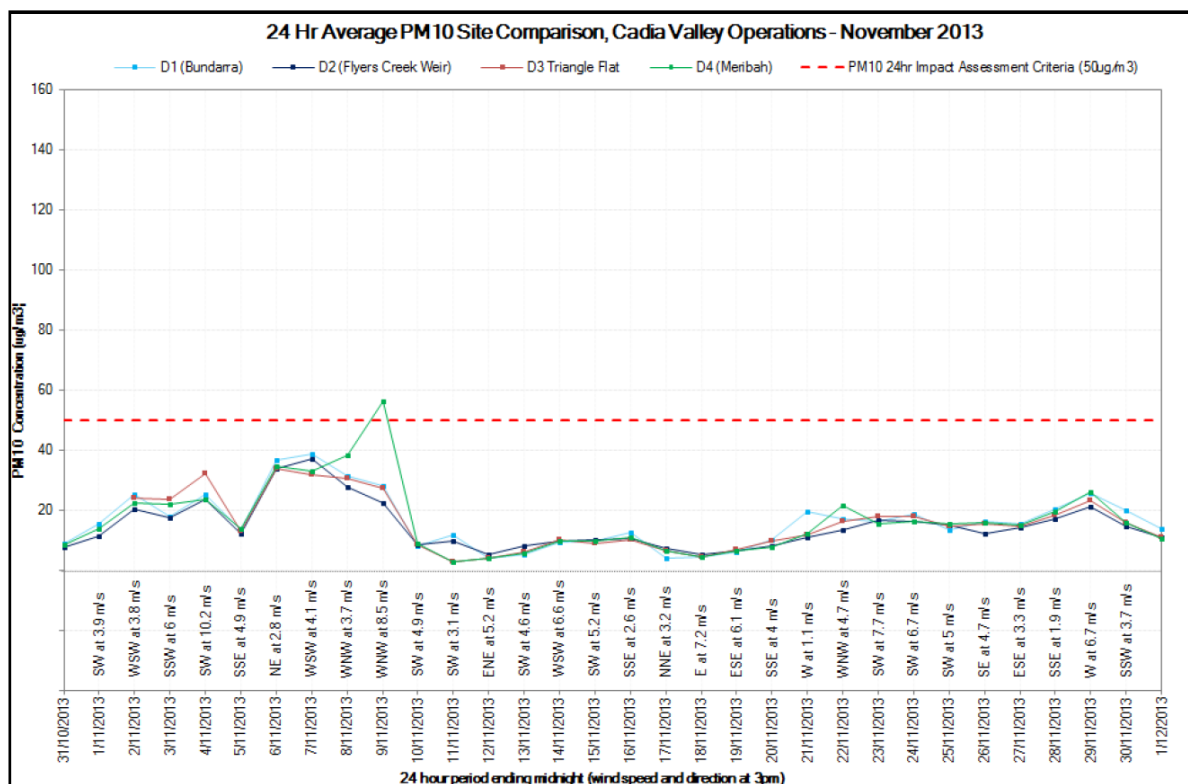


Figure 12: 24 hour average PM₁₀ mass concentration at all locations, November 2013

Figure 13 of the Feb 2013 monitoring report is copied below, and shows the one hour average PM₁₀ level for the period of elevated emissions from 8 to 9 November 2013. It is not clear what the wind speed and directions presented in Figure 13 of the Feb 2013 monitoring report pertain to (e.g. it is not stated whether they are instantaneous or averaged over a certain time-interval). This could be improved in future reports.

However, despite some relatively minor issues with data labelling etc., the monitoring data are analysed reasonably and clearly show that there was a large source or sources of dust located between the Bundarra and Meribah monitors that caused the dust levels to increase significantly, and to exceed the criteria at the Meribah monitor.

The upwind PM₁₀ level was 28µg/m² and the downwind level 57µg/m³, meaning that source(s) between the monitors contributed 29µg/m³ to the total, or more than half of the total level that was exceeded.

The southern tailings emplacement facility is a significant potential dust source between the two monitors.

Figure 13 of the monitoring report shows that the dust levels were elevated during a period of strong winds late in the day. As stated in the monitoring report, it is likely that strong winds affecting the dust emissions from the tailings facility were a large contributing factor to the exceedance at Meribah, and not likely other factors.

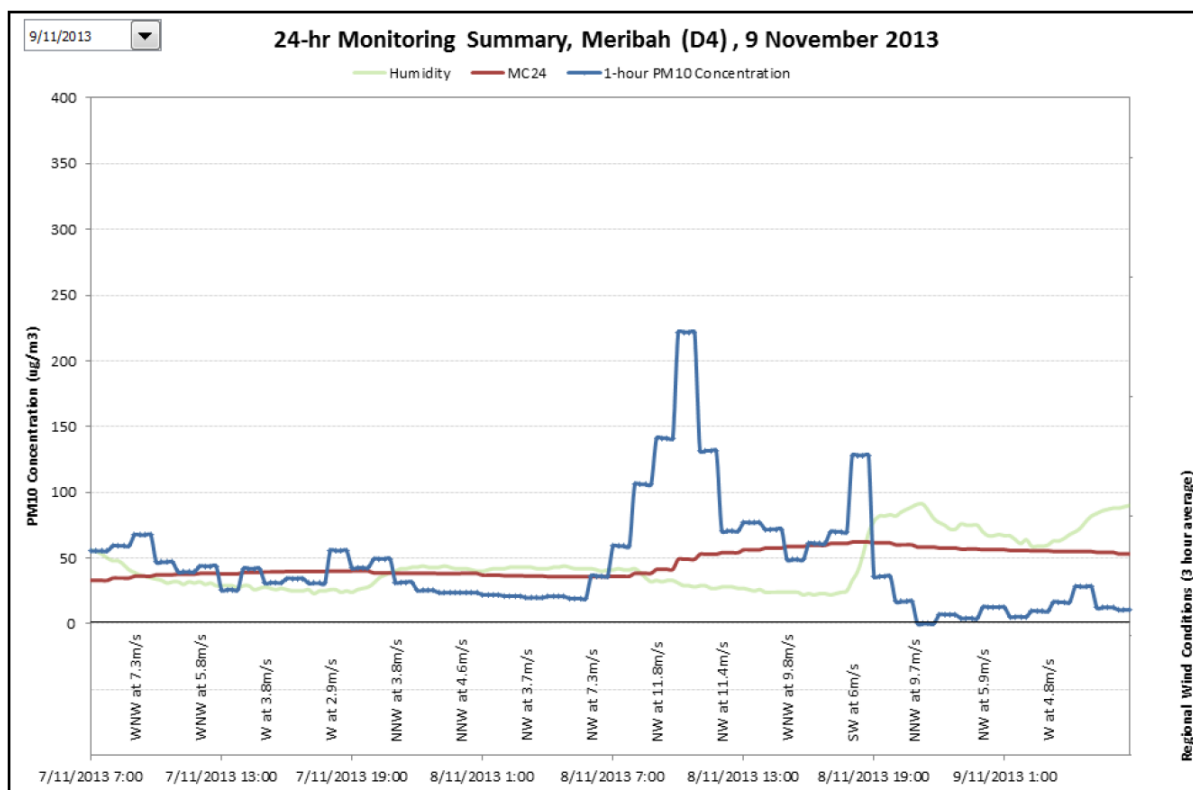


Figure 13: Detailed monitoring results, Meribah (D4) 9 November, 2013

Modelling report

The weather monitoring data show that the Bundarra monitor was generally upwind of the mine for all of 8 November 2013 and it is reasonable to use the Bundarra monitor as the background level in the modelling report.

The measured 24-hour average PM_{10} level at the upwind Bundarra monitor was $28\mu\text{g}/\text{m}^3$ on 8 November, however the modelling assessment report calculates a level of $30.8\mu\text{g}/\text{m}^3$ as the background level at the monitor using the monitoring data.

The modelling report also incorrectly calculates the 24-hour average level at the downwind monitor as $48.8\mu\text{g}/\text{m}^3$ whereas the actual measured level is $56.8\mu\text{g}/\text{m}^3$.

This error occurs because the average of the rolling average values (for each 15minutes, but changing only each hour) for the Meribah monitor was used in the calculation, and only 23 hours of these data were averaged, which is doubly incorrect. It is possible that the incorrect background level presented for the Bundarra monitor in the modelling report has also been calculated in this way, however as the full data are not presented in either report it is not certain.

It can also be confirmed that the modelling report calculations are incorrect without such data analysis. For example, there is no purpose in conducting dispersion modelling to investigate an exceedance when the value "exceeding" the criterion of $50\mu\text{g}/\text{m}^3$ is stated to be $48.8\mu\text{g}/\text{m}^3$. The modelling prediction of cumulative impact of $42.4\mu\text{g}/\text{m}^3$ is stated to be "slightly below" the measured value of $48.8\mu\text{g}/\text{m}^3$, however the actual measured value is $56.8\mu\text{g}/\text{m}^3$.

Irrespective of these errors, the modelling predictions themselves are also unreliable and are not fit for the purpose used.

This is because the modelling is based on a hypothetical 2009 modelling scenario, which shows impacts of $42.4\mu\text{g}/\text{m}^3$ vs. actual levels of $57\mu\text{g}/\text{m}^3$ at Meribah, and levels of approximately $45\mu\text{g}/\text{m}^3$ vs. actual levels of $22\mu\text{g}/\text{m}^3$ at a monitoring location further north. There is no attempt to reasonably represent the likely mine operations on this day in the modelling, nor any attempt to reasonably analyse the validity of the data before making the (invalid) conclusions.

The modelling results and conclusions thus are unreliable.

CVO correspondence to regulator

The claims in the correspondence from CVO to regulators in regard to CVO's small contribution and regional effects on this day are thus also unreliable, as they are based on the unreliable and incorrect modelling. The claims are not substantiated with the actual data, which indicates the opposite of what is claimed.

It is recommended that CVO re-examines and refines its procedures for compliance reporting and compliance investigation. The procedures should generally ensure that reasonable and relatively simple investigations such as for example, a site inspection of the areas between the upwind and down wind monitor be considered and potentially undertaken prior to resorting to hypothetical analysis methods. If modelling is to be conducted, a clear prior need for such modelling should be established, and the modelling results checked to be correct and demonstrated to reasonably correlate with the actual situation.

Other matters

It is considered that the reporting would benefit from a review to prevent errors in the labelling and reporting and analysis of data that have been identified. Such a review may potentially identify that some of the 17 events on 13 days did not have 24-hour average dust levels above the criteria.

The November monitoring report also states:

"It is recommended that CVO representatives undertake review of operations (both on-site and off-site) around this time in an effort identify likely sources of this potential emission."

The audit agrees with this recommendation, but does not find evidence that this was done. The available data indicate potential for the tailings facility to cause effects off-site on a few days. The record of visible dust complaints indicates approximately four complaints each year most of which are related to dust from the tailings facility.

Thus it would be prudent for CVO to undertake a detailed investigation into the potential issue of elevated dust emissions from the tailing facility on high wind speed days to determine whether all that could be reasonably done to mitigate dust from the tailings facility and to achieve compliance is occurring and if not, what should be done to minimise such emissions.

It is unclear whether the indicated dust impacts occur often enough or that the dust is concentrated enough to lead to other contamination due to other pollutants contained in the dust.

Other dust events.

A modelling report dated 15 October 2012, examining elevated dust levels in September 2012 was provided. The modelling results show high dust contributions due to the CVO, and the monitoring data in the September 2012 report also indicate high contributions from CVO.

The modelling results appear to be unreliable, and in the circumstances of the clear monitoring evidence, the need for such modelling analysis of this event is questionable. The monitoring data

show that dust levels were in the order of $83\mu\text{g}/\text{m}^3$ whilst at other sites the levels were around $22\mu\text{g}/\text{m}^3$ indicating a contribution from CVO of approximately $61\mu\text{g}/\text{m}^3$. A simple analysis of the prevailing wind would appear to make it clear that this impact was predominantly due to CVO.

There have also been a number of other exceedances of PM_{10} in the last three years, however these are stated by CVO's consultants to not appear to be due to CVO operations, and that it is likely that these elevated levels may be due to sheep and cattle movement, dust storms and bushfires. The exceedances are analysed and identified by CVO on the basis of wind direction data. Whilst the audit agrees that circumstantially it is likely that the dust effects at the most impacted location, Bundarra, could mainly be due to a nearby sheep pen, the case for this is not well supported. Therefore it is suggested that it would be appropriate in future to provide specific evidence and/ or compelling analysis in this regard. This need not be complicated, and a short term analysis of the weather monitoring data would be likely to suffice in most cases.

Other comments

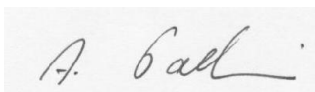
It is generally unsatisfactory to argue that the data at TEOM 1 (Bundarra) are affected by local sources such as a sheep pen when it is downwind of the mine, but to not also discount the effects of the localised dust source when using the same site to represent the upwind ambient level at other times. Doing so will understate the likely effect of the mine. Thus greater care is needed to make a compelling case when assessing compliance.

It would also be appropriate that the actual measured 24-hour average levels above criteria are quantified exactly in a table in the report so that the result can be made clear to the reviewer.

No exceedances of long-term PM_{10} limits were identified for the audit period.

Yours faithfully,

Todoroski Air Sciences



Aleks Todoroski

Appendix 6

Expert Opinion on Noise Management



Date: Monday, 23 March 2015

Graham A Brown & Associates
Level 1, 7 Newcomen Street,
NEWCASTLE New South Wales 2300

Attention: **Graham A Brown**

Dear Graham,

Acoustic Review – Cadia Holdings Pty Limited, Mandatory Independent Compliance Audit for Department of Planning & Environment

1 Introduction

Amenity Acoustics Pty Limited (Amenity Acoustics) was engaged by *Graham A Brown & Associates* (GABA) to undertake the acoustic review component of the Mandatory Independent Compliance Audit for the Cadia Holdings Pty Limited, Cadia Valley Operations (CVO) against the Project Approval, Environmental Protection Licences, and relevant plans and programs.

The review of the Mandatory Independent Compliance Audit findings relating to acoustics was undertaken by Stephen Kozakiewicz of Amenity Acoustics as a series of review of provided noise management documentation and telephone conversations with representatives of GABA.

2 Findings

Amenity Acoustics concurs with the number of non-compliances that were identified in the detailed findings and recommendations of the Mandatory Independent Compliance Audit.

Table 2.1 provides additional recommendations for improvement in noise management practices considered appropriate.

Table 2.1 – Additional recommendations to the ‘Detailed Findings and Recommendations’ of the Mandatory Independent Compliance Audit

Approval / Clause	Condition	Audit Finding	Recommendation
Project Approval, dated 6 January 2010 Traffic noise (Schedule 3, Condition 5).	Schedule 3, Condition 5, Traffic noise impact assessment criteria dB(A) <i>‘5. The Proponent shall take all reasonable and feasible measures to ensure that the traffic noise generated by the project does not exceed the traffic noise impact assessment criteria in Table 5.’</i>	Following biannual road traffic noise monitoring conducted as part of the Noise Monitoring Program (NMO), the ADVITECH Compliance Noise Monitoring report, dated 21 July 2014, document ID <i>12917 Attended Noise Monitoring Rev 0.docx</i> , found that the <i>‘Road traffic noise monitoring results indicate that measured maximum LAeq,1hour noise levels did exceed the road traffic noise criteria, with noise levels above the criteria on one occasion during the day period and six occasions during the night period.’</i> On the basis of the above	It is recommended that CVO further investigate noise contribution from CVO traffic movements and impact upon receivers on Cadia Road in accordance with provisions of the NMP. It is understood that CVO has initiated car-pooling for its employees, and bussing for contract labour to reduce traffic on local roads.



Amenity Acoustics Pty Limited

Approval / Clause	Condition	Audit Finding	Recommendation
		<p>assessment, traffic noise impacts were not compliant with criteria established in the CVO Project Approval (PA 06_0295 Mod2).</p> <p>It is understood that there have been no requests from the landowners of the residence for the Proponent to implement additional noise mitigation measures, under Schedule 3, Condition 7.</p>	

I trust this response meets your requirements. If you require any further information, or clarification of any issues addressed in this letter, please contact me on 0405 709 120.

Regards,

Stephen Kozakiewicz

Director / Principal Senior Acoustician, BE(Mech), MAAS

e. stephenk@amenityacoustics.com.au

Amenity Acoustics Pty Limited

Appendix 7

Audit Photographs



Photo 1 – Ridgeway meteorological station.



Photo 2 – Batteries stored in the open unbanded and not under cover.



Photo 3 – Batteries stored in the open unbanded and not under cover at the Remondis waste compound.



Photo 4 – Example of an IBC and 200 litre drums stored unbunded in the open on bare soil at the PHE Electrical & Instrumentation Contracting compound.



Photo 5 – Unbunded IBCs stored in the open on bare soil at the Boral Concrete Batching Plant.



Photo 6 - Example of 200 litre and 20 litre drums stored unbunded in the open on bare soil at the PHE Electrical & Instrumentation Contracting compound.



Photo 7 – Oil being drained into a bunded pallet in the open on bare soil, with the risk of the pallet filling with water during rainfall and overflowing onto the soil.



Photo 8 – Bunded pallets under IBCs stored in the open and partly filled with water.



Photo 9 – IBCs stored in the open above metal bunds that can fill with water during rainfall.



Photo 10 - At the bulk fuel depot, sumps designed to retain any spilled diesel were almost completely blocked with sediment.



Photo 11 - At the bulk fuel depot, sumps designed to retain any spilled diesel were almost completely blocked with sediment



Photo 12 – Rehabilitation progress since 2005.



Photo 13 – Recent rehabilitation area which has been seeded.

Appendix 8

Government Agency Consultation

Responses from:

- Kane Winwood – DP&E
- Darryl Clift – EPA
- Darryl Clift – EPA (second email)
- Michael Young – DRE
- Mark Hodges – Orange Shire Council
- Mark Dicker – Blayney Shire Council
- Heather Nicholls – Carbonne Shire Council

Graham Brown

From: Kane Winwood <Kane.Winwood@planning.nsw.gov.au>
Sent: Friday, 13 March 2015 2:15 PM
To: Graham Brown
Subject: RE: Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations

Hi Graham,

Happy for you to record no issues, there are no specific matters that the Department considers require closer attention.

Regards,
Kane

From: Graham Brown [<mailto:Graham@grahambrown.com.au>]
Sent: Friday, 13 March 2015 2:08 PM
To: Kane Winwood
Subject: RE: Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations

Kane,

Just checking if there are any environmental performance issues that you are aware of, associated with CVO that you wish to have addressed in our report on Cadia Valley Operations, as per the email below. We are in the process of preparing the draft report and need to incorporate your views, if any. Otherwise we can record a "no issues" response.

Regards,

Graham Brown
Principal



Office Level 1, 7 Newcomen Street Newcastle NSW 2300 Australia
Postal PO Box 1804, Newcastle NSW 2300 Australia
Phone 61 2 4927 8500 **Fax** 61 2 4927 8400
Mobile 0412 411 947
Web www.grahambrown.com.au

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From: Graham Brown
Sent: Monday, 2 February 2015 10:49 AM
To: 'kane.winwood@planning.nsw.gov.au'
Subject: Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations

Kane,

Graham A Brown and Associates are undertaking a Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations (CVO) in mid-February this year.

We are required to consult with relevant agencies prior to performing the audit to obtain comments and observations on the environmental performance of the mine. Feedback from each agency will provide guidance during the audit and draw attention to areas we should focus on.

The Department of Planning has nominated the agencies we are to consult with and, accordingly, CVO has provided me with your contact details.

Can you please provide us information on any environmental performance issues that you are aware of, associated with CVO? A letter style response for inclusion in the final audit report would be appreciated.

If you could respond to this email by Thursday 12th February that would be appreciated, so that we can take your comments into consideration during our site visit commencing on Monday 16th February.

Regards,

Graham Brown
Principal



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You should scan any attached files for viruses.

Graham Brown

From: Darryl Clift <Darryl.Clift@epa.nsw.gov.au>
Sent: Monday, 16 March 2015 12:05 PM
To: Graham Brown
Subject: RE: Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations

Graham

My apologies for not responding to your earlier request of 2 February 2015. When I finally found time to consider a response it was well past the 12 February 2015 (the date you sought a response/advice from EPA).

As indicated to you over the telephone today in response to your second email (reminder), with respect to your request for “comments and observations on the environmental performance of Cadia Valley Operations (CVO);

1. The CVO is generally operating in compliance with its environment protection licence 5590. In addition, any incidents at the mine or non-compliances with licence are reported to the EPA promptly by CVO. The mine is also extremely proactive with the surrounding community and as such any complaints or concerns (ie: dust/noise/vibration) from the community are mostly reported to CVO and managed (resolved) by CVO without any EPA involvement. The community generally does not call the EPA Environment Line because when they have an issue, they contact the CVO complaints line and their issue is promptly investigated and attended to by CVO. This is a consistent comment of the EPA during the AEMR inspections each year. The EPA often only becomes aware of noise, dust or blast complaints when CVO reports its complaint stat’s to the EPA.

As such, rather than reply late to your 2 February 2015 request, I had decided to take the “no issue” response by not responding.

2. The only issue or concern that the EPA has regarding CVO environmental performance is the state of tailings dams, particularly the southern tailing storage facility (STSF) in terms of possible discharges indirectly to the downstream environment via seepage. Previous advice was that the seepage water was essentially ground water coming to surface as seepage areas under weight of tailings based on characteristic of the seepage water being characteristic of groundwater for area rather than characteristics of tailings water, however more recently CVO has advised the EPA that monitoring of downstream seepage has found tailings water to be a component of seepage water at several downstream site beyond the mining lease (by characteristic of seepage). EPA has since requested further advice as to what is meant by a component of seepage water (how big a component and is it increasing).

Yours sincerely

Darryl Clift

Head Central West Unit |

NSW Environment Protection Authority |

☎: (02) 6332 7602 | Mobile 📱: 0427 935 262 | 📠: (02) 6332 7630 | ✉: darryl.clift@epa.nsw.gov.au

From: Graham Brown [<mailto:Graham@grahamabrown.com.au>]
Sent: Friday, 13 March 2015 2:03 PM

To: Clift Darryl
Subject: RE: Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations

Darryl,

Just checking if there are any environmental performance issues that you are aware of, associated with CVO that you wish to have addressed in our report on Cadia Valley Operations, as per the email below. We are in the process of preparing the draft report and need to incorporate your views, if any. Otherwise we can record a “no issues” response.

Regards,

Graham Brown
Principal



Office Level 1, 7 Newcomen Street Newcastle NSW 2300 Australia
Postal PO Box 1804, Newcastle NSW 2300 Australia
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Web www.grahamabrown.com.au

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From: Graham Brown
Sent: Monday, 2 February 2015 10:49 AM
To: 'darryl.clift@environment.nsw.gov.au'
Subject: Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations

Darryl,

Graham A Brown and Associates are undertaking a Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations (CVO) in mid-February this year.

We are required to consult with relevant agencies prior to performing the audit to obtain comments and observations on the environmental performance of the mine. Feedback from each agency will provide guidance during the audit and draw attention to areas we should focus on.

The Department of Planning has nominated the agencies we are to consult with and, accordingly, CVO has provided me with your contact details.

Can you please provide us information on any environmental performance issues that you are aware of, associated with CVO? A letter style response for inclusion in the final audit report would be appreciated.

If you could respond to this email by Thursday 12th February that would be appreciated, so that we can take your comments into consideration during our site visit commencing on Monday 16th February.

Regards,

Graham Brown
Principal



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Graham Brown

From: Darryl Clift <Darryl.Clift@epa.nsw.gov.au>
Sent: Tuesday, 17 March 2015 1:10 PM
To: Graham Brown
Subject: RE: Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations

Graham

Further to your request of 13-Mar-2015 and my reply yesterday (16-3-2015), please find attached a copy of a self-report the EPA received yesterday afternoon in relation to a discharge of tailings from the STSF via the STSF spillway, that you may be aware. The EPA is investigating this matter as it is of concern that tailing have been allow to build up (in the absence of a wall lift) to a level within the STSF that tailings could discharge via the spillway which should only ever occur/discharge at the spillway in periods of extreme wet weather.

Yours sincerely

Darryl Clift

Head Central West Unit |

NSW Environment Protection Authority |

☎: (02) 6332 7602 | Mobile ☎: 0427 935 262 | 📠: (02) 6332 7630 | ✉: darryl.clift@epa.nsw.gov.au

From: WMS.Admin@environment.nsw.gov.au [<mailto:WMS.Admin@environment.nsw.gov.au>]

Sent: Monday, 16 March 2015 12:37 PM

To: Clift Darryl; Clyne Mark; Helms Andrew; Ledger Sheridan; Scott Graham; Adams Allan; Corradin Matthew; Whyte Richard

Subject: Incident Allocated to EPA - Clearing House - BathurstI03683-2015500 WASTE - 506 MINE ORANGE

Automatic App Name: email - **I03683-2015** Incident Created.

Incident Received Date

16-Mar-2015

Incident Details

Call Code: **500 WASTE - 506 MINE** and Offence Type: **POEO Act 1997**

Description of Incident: **After hours Cadia Valley Operations SELF REPORT Ref 109886 : Tailings have gone through spill way on southern Tailings Dam. Contained within mining lease area. Which means its contained within protection area. Information has only just been received by management, unsure what time it started. Relates to tailing from spigots. Have been turned off near spill way. Amounts will be reported once have been made aware. Duty officer contacted at 18:46 and ACK at 18:46.**

Incident Address

Incident Address: **Cadia Valley Operations (EPL 5590), 460 Cadia Rd, Orange ORANGENS2800**

LGA: **Orange**

Address Description: **Cadia Valley Operations (EPL 5590), 460 Cadia Rd, Orange**

Caller Details

Caller Name: **Andrew Wannan**

Caller Confidentiality: **False**

Caller contact - Phone: **Mb: 0437001823**

- Email:

Suspect Details

Main Suspect: **Andrew Wannan**

Please [click here](#) to open the form.

For assistance relating to CIRAM please contact the [CIRAM Helpdesk](#)

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PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING THIS EMAIL

Graham Brown

From: Michael Young <michael.young@trade.nsw.gov.au>
Sent: Friday, 6 February 2015 4:09 PM
To: Graham Brown
Subject: Re: FW: Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations

Hello Graham,

Thank you for consulting with DRE regarding the forthcoming mandatory audit of Cadia Valley Operations (CVO). DRE's role is essentially to regulate for compliance with the requirements of the Mining Act. 1992 and conditions of mining authorisations issued under the Act. There are six mining leases associated with CVO; ML1405, 1472, 1449, 1481, 1689 and 1690. Each of these have conditions requiring mining operations to be conducted in accordance with an approved Mining Operations Plan (MOP). CVO has obtained approval for a Mining Operations Plan to fulfill the requirements of the six leases in a single document. DRE's primary focus in assessing compliance by way of audit or review of submitted compliance documentation (e.g Annual Environmental Management Report) is to assess conformance with the rehabilitation plan component of the MOP. This is in terms of the rehabilitation programme itself (e.g hectares completed), methodology and completion criteria.

There is scope for auditing against the lease conditions themselves, and more detailed scope in assessing compliance with the requirements of their MOP. CVO has been undertaking large scale rehabilitation works on the North Waste Rock Dump and the much larger South Dump over the past few years.

Happy to discuss over the phone if you need to.

regards,

Michael

Michael Young

Manager & Principal Inspector, Central

| Environmental Sustainability Unit | Mineral Resources | NSW Trade & Investment |

| Locked Bag 21 ORANGE NSW | (: (02) 6360 5346 | (: 0429 168 007 |

| 8:michael.young@industry.nsw.gov.au |

On Mon, Feb 2, 2015 at 11:01 AM, Graham Brown <Graham@grahamabrown.com.au> wrote:

Michael,

Forwarding a returned email to you due to incorrect copying of your address initially.

Graham Brown

From: Graham Brown
Sent: Monday, 2 February 2015 10:49 AM
To: '|michael.young@industry.nsw.gov.au'
Subject: Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations

Michael,

Graham A Brown and Associates are undertaking a Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations (CVO) in mid-February this year.

We are required to consult with relevant agencies prior to performing the audit to obtain comments and observations on the environmental performance of the mine. Feedback from each agency will provide guidance during the audit and draw attention to areas we should focus on.

The Department of Planning has nominated the agencies we are to consult with and, accordingly, CVO has provided me with your contact details.

Can you please provide us information on any environmental performance issues that you are aware of, associated with CVO? A letter style response for inclusion in the final audit report would be appreciated.

If you could respond to this email by Thursday 12th February that would be appreciated, so that we can take your comments into consideration during our site visit commencing on Monday 16th February.

Regards,

Graham Brown

Principal



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Graham Brown

From: Mark Hodges <MHodges@orange.nsw.gov.au>
Sent: Friday, 13 March 2015 7:38 PM
To: Graham Brown
Subject: Re: Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations

Hi Graham
Council has no environmental issues it wishes to be raised.
Kind regards Mark Hodges
Manager Building and Environment
Orange City Council

Sent from Samsung Mobile

----- Original message -----

From: Graham Brown
Date: 13/03/2015 15:56 (GMT+10:00)
To: Mark Hodges
Subject: RE: Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations

Mark,

Just checking if there are any environmental performance issues that you are aware of, associated with CVO that you wish to have addressed in our report on Cadia Valley Operations, as per the email below. We are in the process of preparing the draft report and need to incorporate your views, if any. Otherwise we can record a "no issues" response.

Regards,

Graham Brown
Principal



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From: Graham Brown
Sent: Monday, 2 February 2015 10:49 AM
To: 'MHodges@orange.nsw.gov.au'
Subject: Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations

Mark,

Graham A Brown and Associates are undertaking a Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations (CVO) in mid-February this year.

We are required to consult with relevant agencies prior to performing the audit to obtain comments and observations on the environmental performance of the mine. Feedback from each agency will provide guidance during the audit and draw attention to areas we should focus on.

The Department of Planning has nominated the agencies we are to consult with and, accordingly, CVO has provided me with your contact details.

Can you please provide us information on any environmental performance issues that you are aware of, associated with CVO? A letter style response for inclusion in the final audit report would be appreciated.

If you could respond to this email by Thursday 12th February that would be appreciated, so that we can take your comments into consideration during our site visit commencing on Monday 16th February.

Regards,

Graham Brown
Principal



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Mobile 0412 411 947
Web www.grahamabrown.com.au

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Graham Brown

From: Mark Dicker <MDicker@blayney.nsw.gov.au>
Sent: Friday, 13 February 2015 4:23 PM
To: Graham Brown
Subject: RE: Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations

Hi Graham,

I can confirm I am not aware of any specific environmental performance issue that requires investigation at CVO.

Kind Regards,

Mark Dicker
Director Planning & Environmental Services
02 6368 2104



www.blayney.nsw.gov.au

From: Graham Brown [<mailto:Graham@grahamabrown.com.au>]
Sent: Monday, 2 February 2015 10:49 AM
To: Mark Dicker
Subject: Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations

Does this message need to be registered in the corporate recordkeeping system ?

Mark,

Graham A Brown and Associates are undertaking a Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations (CVO) in mid-February this year.

We are required to consult with relevant agencies prior to performing the audit to obtain comments and observations on the environmental performance of the mine. Feedback from each agency will provide guidance during the audit and draw attention to areas we should focus on.

The Department of Planning has nominated the agencies we are to consult with and, accordingly, CVO has provided me with your contact details.

Can you please provide us information on any environmental performance issues that you are aware of, associated with CVO? A letter style response for inclusion in the final audit report would be appreciated.

If you could respond to this email by Thursday 12th February that would be appreciated, so that we can take your comments into consideration during our site visit commencing on Monday 16th February.

Regards,

Graham Brown
Principal



Office Level 1, 7 Newcomen Street Newcastle NSW 2300 Australia
Postal PO Box 1804, Newcastle NSW 2300 Australia
Phone 61 2 4927 8500 **Fax** 61 2 4927 8400
Mobile 0412 411 947
Web www.grahamabrown.com.au

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Graham Brown

From: Heather Nicholls <Heather.Nicholls@cabonne.nsw.gov.au>
Sent: Thursday, 12 February 2015 10:57 AM
To: Graham Brown
Subject: Re: Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations
Attachments: image003.jpg; image004.jpg

Graham

Council and Cadia have overall a strong relationship. Our area of most frequent discussion tends to be about traffic and roads. High on the list is progressing the agreement with Cadia for upgrade of the four mile ck / Cadia road intersection.

The environmental management of the mine is monitored by council through its involvement with the CCC meetings and the annual environmental report and review. Info re site rehab, off set establishment and most importantly - drawn down on water resources continue to be of keen interest to Cabonne Pls contact me if you require further clarification on any point raised above

Heather Nicholls
Director of Environmental Services
Cabonne Council

Sent from my iPad

On 2 Feb 2015, at 12:30 pm, "Graham Brown"
<Graham@grahamabrown.com.au<<mailto:Graham@grahamabrown.com.au>>> wrote:

Heather,

Graham A Brown and Associates are undertaking a Mandatory Independent Environmental Compliance Audit for Cadia Valley Operations (CVO) in mid-February this year.

We are required to consult with relevant agencies prior to performing the audit to obtain comments and observations on the environmental performance of the mine. Feedback from each agency will provide guidance during the audit and draw attention to areas we should focus on.

The Department of Planning has nominated the agencies we are to consult with and, accordingly, CVO has provided me with your contact details.

Can you please provide us information on any environmental performance issues that you are aware of, associated with CVO? A letter style response for inclusion in the final audit report would be appreciated.

If you could respond to this email by Thursday 12th February that would be appreciated, so that we can take your comments into consideration during our site visit commencing on Monday 16th February.

Regards,

Graham Brown
Principal

<image003.jpg>

Office Level 1, 7 Newcomen Street Newcastle NSW 2300 Australia
Postal PO Box 1804, Newcastle NSW 2300 Australia

Phone 61 2 4927 8500 Fax 61 2 4927 8400

Mobile 0412 411 947

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Appendix 9

Audit Recommendations and Response Table

Environmental Recommendations Ranking	
Ranking	Proposed Action
“E” (Emergency)	<p>The defect is severe and poses immediate risk to the plant, the community or the environment, to regulatory compliance or to the reputation of the organisation. This may include organisational (including management) defects that will lead to rapid deterioration of the plant or operations or the inability to securely and safely deal with an incident (i.e. lack of competent staff, failure of a management process, no emergency plan, inadequate equipment to deal with an emergency, lack of environmental security, etc.).</p> <p><i>Action: Management should ensure that action is committed to minimise or eliminate the identified risk immediately, or otherwise within a time frame agreed with the auditor, or as required by regulatory requirements or agreement with the appropriate government officials or agencies. In extreme cases, the deficiency must be corrected prior to the auditor departing the site.</i></p>
“U” (Urgent)	<p>The defect presents a serious situation, but may not necessarily impact immediately on human health or safety, assets, the environment, property, security or the community. There may be a risk which is not immediate, of regulatory non-compliance or adverse publicity affecting the organisation’s public image or business reputation.</p> <p><i>Action: A firm deadline should be set by management to correct the deficiency by an agreed date and action plan should be documented.</i></p>
“I” (Improvement)	<p>Improvement is required, and can be achieved through regular channels of management, maintenance, capital improvements, or assigned to environmental management staff.</p> <p><i>Action: Documented action plans to achieve the recommended outcome should be established, e.g. through setting and reviewing Objectives and Targets or initiating a Work Order. A response of ‘Agreed’ may be acceptable. Management may decide not to undertake the recommended improvement, and should document the reasons for not doing so.</i></p>
“N” (Normal)	<p>No specific action is considered necessary, the recommendation is considered to be covered by the organisation’s normal environmental management procedures; however it should be documented through Objectives and Targets or other process, such as a Work Order. A response of ‘Agreed’ may be acceptable.</p>
“N/A”	<p>Not Applicable to this situation or at this time; there is no perceived risk to the environment or the community, no recommendation is made.</p>

NOTE: The auditee may agree or disagree with the audit recommendations in the following Audit Recommendations and Response Table. In the column “CVO Response” enter “Agree” or “Do not Agree” in which case the reason for disagreement should be stated. The Proposed Action should commensurate with the ranking of the Recommendation in accordance with the Table above.

Appendix 9 – Audit Recommendations and Response Table

Clause	Requirement	Compliance	Recommendation	CVO Response	Proposed Action	Target Completion Date	Responsibility
Recommendations - Project Approval dated 6 January 2010							
S3.5	<p>Traffic Noise Impact Assessment Criteria The Proponent shall take all reasonable and feasible measures to ensure that the traffic noise generated by the project does not exceed the traffic noise impact assessment criteria in Table 5.</p> <p><i>See Table 5: Traffic noise impact assessment criteria dB(A)</i> <i>Note: Traffic noise generated by the project is to be measured in accordance with the relevant procedures in the EPA's Environmental Criteria for Road Traffic Noise.</i></p>	C	<p>S3.5.1 It is recommended by the Noise Expert that CVO further investigate noise contribution from CVO traffic movements and impact upon receivers on Cadia Road in accordance with provisions of the NMP, if this is feasible and practical, as traffic density changes with changes in operations from time to time.</p> <p>Ranking: N</p>				
S3.12	<p>Public Notice During mining operations on site, the Proponent shall:</p> <p>(a) notify the landowner/occupier of any residence within 2 kilometres of blasting operations who registers an interest in being notified about the blasting schedule at the mine, or any other landowner nominated by the Secretary;</p> <p>(b) operate a Blasting Hotline, or alternate system agreed to by the Secretary, to enable the public to get up-to-date information on the blasting schedule at the project;</p> <p>(c) publish an up-to-date blasting schedule on its website (for open pit and major underground blasting operations); and</p> <p>(d) advertise the blasting hotline number and website information in a local newspaper at least 2 times each year, to the satisfaction of the Secretary.</p>	ANC	<p>S3.12.1 It is recommended that consideration be given to applying for a variation to condition 3.12(d) to approve CVO's preferred alternative of including this information in a Community Newsletter instead of the Approval requirement of advertising the blasting hotline number and website information in a local newspaper at least 2 times each year. [NOTE: CVO has responded that this has been included in a modification application proposed to be submitted to DP&E in week commencing 16 March 2015].</p> <p>Ranking: N</p>				
S3.17	<p>Impact Assessment Criteria The Proponent shall ensure that the dust emissions generated by the project do not cause additional exceedances of the air quality impact assessment criteria listed in Tables 8, 9 and 10 at any residence on privately owned land, or on more than 25 percent of any privately owned land.</p> <p><i>See Table 8: Long term impact assessment criteria for particulate matter</i> <i>See Table 9: Short term impact assessment criterion for particulate matter</i> <i>See Table 10: Long term impact assessment criteria for deposited dust</i> <i>Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method.</i></p>	NC	<p>S3.17.1 It is recommended that the air monitoring reporting program be reviewed to ensure that compliance analysis is conducted for the applicable period (midnight to midnight) and reported for the correct date.</p> <p>S3.17.2 Significant and detailed investigation should be conducted into whether all that could be reasonably done to mitigate dust from the TSFs and to achieve compliance is occurring, and if not what further should be done to minimise such emissions. This should focus on dry patches in the tailings facility and wind erosion during periods of high wind speed.</p> <p>S3.17.3 CVO should provide specific evidence and/ or compelling analysis in regard to elevated dust results where CVO is not implicated.</p> <p>S3.17.4 The actual measured 24-hour average dust levels above criteria should be quantified exactly in a table in the consultants' reports so that the result can be made clear to the reader.</p> <p>Ranking: U</p>				

Appendix 9 – Audit Recommendations and Response Table

Clause	Requirement	Compliance	Recommendation	CVO Response	Proposed Action	Target Completion Date	Responsibility
S3.25	<p>Baseflow Offsets</p> <p>The Proponent shall offset the loss of baseflow to the Belubula River and associated creeks caused by the project, in consultation with NOW, and to the satisfaction of the Secretary. The offsets shall be provided either incrementally or on one occasion:(a) prior to the baseflow loss being realised, or within 12 months of the date of this approval for any existing realised baseflow losses that have not previously been offset; and(b) within the catchments where the baseflow loss is realised, as far as is reasonable and feasible, unless otherwise approved by the Secretary.<i>Notes:- The offsets should be provided via the retirement of adequate water entitlements to account for the loss attributable to the project. - Relevant compensatory water supplies implemented under condition 24 may be subtracted from the offsets required under this condition.- The Proponent is not required to provide additional baseflow offsets where such offsets have already been provided under previous consents for the project. These existing offsets are to be described and evaluated in the Surface and Ground Water Contingency Plan (see condition 35 below).</i></p>	NA	<p>S3.25.1 It is recommended by the technical expert reviewing surface water management that CVO update the Water Management Plan to reflect the approach to calculation and offsetting of baseflow losses.</p> <p>Ranking: N</p>				
S3.27	<p>Cadiangullong Creek Flows</p> <p>The Proponent shall manage water releases from Cadiangullong Dam to provide:</p> <p>(a) flows of at least:</p> <ul style="list-style-type: none"> - 3.4 ML/day, for periods when inflows into the dam are more than 3.4 ML/day and the water level in the dam is at or above the lowest valve level on the multi-level offtake (ie. 773.0 metres AHD); - the volume equal to the inflow into the dam, for periods when inflows into the dam are between 0.4 and 3.4 ML/day and the water level in the dam is at or above the lowest valve level on the multi-level offtake; - 0.4 ML/day, for periods when inflows into the dam are less than 0.4 ML/day and the water level in the dam is at or above the lowest valve level on the multi-level offtake; - the volume equal to the inflow into the dam, up to 0.4ML/day, for periods when the water level in the dam is below the lowest valve level on the multi-level offtake and above the level of the scour valve (ie. 762.8 metres AHD); and - zero, when the water level in the dam is below the level of the scour valve; and <p>(b) releases of up to 4 medium flows (of the order of 12 to 15 ML/day) per year, each for a duration of 1 to 3 days, with timing and frequency of such flows determined by hydrographs of typical medium flows, to the satisfaction of, and unless otherwise approved by, NOW.</p>	O	<p>3.27.1 It is recommended that an amendment be sought for Condition 27(b) to set the required flow to a figure that can be achieved through the release pipe; or alternatively:</p> <p>3.27.2 If possible, the riparian release equipment should be modified to allow discharge of 15ML/day from the multi-level offtake.</p> <p>3.27.3 It is further recommended that an amendment be sought for Condition 27(b) to enable the medium flows to be measured at the Dam Gauging station (412144) rather than at the T-valve in the pipeline to the process plant that takes water from a multi-level offtake.</p> <p>Ranking: I</p>				
S3.35	<p>The Surface and Ground Water Contingency Plan must include:</p> <p>(a) a protocol for the investigation, notification and mitigation of any exceedances of the surface water, stream health and groundwater impact assessment criteria;</p> <p>(b) measures to mitigate and/or compensate potentially affected landowners in accordance with the compensatory water supply requirements in condition 24 above;</p> <p>(c) a protocol for providing advance warning and water supply measures for landowners of privately-owned land that are predicted to exceed the surface or ground water impact assessment criteria at some stage during the project life;</p>	C	<p>S3.35.1 It is recommended by the Groundwater Management Expert that if not already the case, in-house CVO or Newcrest staff should be trained in the use of the site groundwater model to reduce the reliance and potential loss of intellectual property, but that ongoing remote support is still recommended.</p> <p>Ranking: N</p>				

Appendix 9 – Audit Recommendations and Response Table

Clause	Requirement	Compliance	Recommendation	CVO Response	Proposed Action	Target Completion Date	Responsibility
	(d) a protocol for investigating, evaluating and providing the baseflow offsets required under condition 25 above, including a detailed evaluation (in the initial plan) of offsets provided under previous consents for the project; and (e) the procedures that would be followed if any significant unforeseen impacts on surface or ground water are detected during the project.						
S3.50	Waste Minimisation <i>(a) minimise the waste generated by the project;</i> <i>(b) ensure that the waste generated by the project is appropriately stored, handled and disposed of;</i> <i>(c) manage on-site sewage treatment and disposal in accordance with the requirements of the applicable Council; and</i> <i>(d) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.</i>	O	S3.50.1 Review and update the Waste Management Plan and Procedures to ensure they reflect current processes. Consider procedures that include audit of Contractors' off site disposal of waste to ensure it is being disposed of at an authorised disposal site. Ranking: I				
S5.1	Environmental Management Strategy The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Secretary. The strategy must: (a) be submitted to the Secretary for approval within 6 months of the date of this approval; (b) provide the strategic framework for environmental management of the project; (c) identify the statutory approvals that apply to the project; (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project; (e) describe the procedures that would be implemented to: - keep the local community and relevant agencies informed about the operation and environmental performance of the project; - receive, handle, respond to, and record complaints; - resolve any disputes that may arise during the course of the project; - respond to any non-compliance; and - respond to emergencies; (f) include: - copies of the various strategies, plans and programs that are required under the conditions of this approval once they have been approved; and - a clear plan depicting all the monitoring to be carried out in relation to the project.	O	S5.1.1 The Environmental Management Strategy should be amended when next reviewed to include a "clear plan" that includes reference and direction to "all the monitoring to be carried out in relation to the project" including referencing the Monitoring Manual and the Monitoring Schedule. Ranking: I				
S5.3	Revision of Strategies, Plans and Programs Within 3 months of: (a) an annual review under condition 2 above; (b) an incident report under condition 5 below; (c) an audit under condition 7 below; or (d) any modification of this approval, the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Secretary. <i>Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the project.</i>	NC	S5.3.1 It is recommended that consideration be given to requesting a variation of the Project Approval to incorporate the following wording: "the Proponent shall review, and if necessary revise, <u>relevant</u> strategies, plans, and programs required under this approval to the satisfaction of the Secretary". As it stands, this clause requires the review of <u>all</u> strategies, plans, and programs, which is considered to be unreasonable and unnecessary.				

Appendix 9 – Audit Recommendations and Response Table

Clause	Requirement	Compliance	Recommendation	CVO Response	Proposed Action	Target Completion Date	Responsibility
			<p>Ranking: I</p> <p>S5.3.2 CVO should ensure that its procedures reflect the requirement for review of strategies, plans, and programs (with reference to Recommendation S5.3.1) within 3 months of:</p> <p>(a) an annual review; (b) an incident report; (c) an audit; or (d) any modification of the approval,</p> <p>Ranking: I</p>				
Recommendations - Environment Protection Licence No 5590							
L4.3	<p>Noise Limits The noise limits set out in the tables at conditions L4.1 and L4.2 apply under all meteorological conditions except for the following:</p> <p>a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or c) Stability category G temperature inversion conditions.</p>	O	<p>L4.3.1 It is recommended that a request be made for a variation in Condition L4.3 to add "or rainfall" to legitimise Advitech's exclusion of noise monitoring data based on rain falling.</p> <p>Ranking: N</p>				
L4.4	<p>Noise Limits - Determining Compliance To determine compliance:</p> <p>a) with the LAeq (15 minute) noise limits set out in the table at condition L4.1, the noise measurement equipment must be located:</p> <p>i) approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or ii) within 30 metres of a dwelling façade, but not closer than 3m, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable iii) within approximately 50 metres of the boundary of a National Park or a Nature Reserve.</p> <p>b) with the LAeq (15 minute) noise limits set out in the table at condition L4.2, the noise measurement equipment must be located at the locations identified in the CVO 2012/2013 AEMR. c) with the LAeq (1 minute) noise limits set out in the tables at conditions L4.1 and L4.2, the noise measurement equipment must be located within 1 metre of a dwelling facade. d) otherwise with the noise limits set out in the tables at conditions L4.1 and L4.2, the noise measurement equipment must be located:</p> <p>i) at the most affected point at a location where there is no dwelling at the location; or ii) at the most affected point within an area at a location prescribed by part (a) or part (b) of this condition.</p>	C	<p>L4.4.1 It is recommended that consideration be given to seeking a variation to Condition L4.4 [c] to modify the words to read "with the LAeq (1 minute) noise limits set out in the tables at conditions L4.1 and L4.2, the noise measurement equipment must be located within 1 metre of a dwelling facade <u>where possible</u>" to enable compliance with this condition to be achieved.</p> <p>Ranking: N</p>				
O1.1	<p>Activities must be carried out in a competent manner Licensed activities must be carried out in a competent manner. This includes:</p> <p>a) the processing, handling, movement and storage of materials and</p>	NC	<p>O1.1.1 Batteries were observed stored in the open and unbanded in several locations (Photos 2 and 3). It is recommended that all new and used wet cell batteries be</p>				

Appendix 9 – Audit Recommendations and Response Table

Clause	Requirement	Compliance	Recommendation	CVO Response	Proposed Action	Target Completion Date	Responsibility
	<p>substances used to carry out the activity; and b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.</p>		<p>stored on a bunded pallet under cover. CVO should verify that the batteries stored in the open by Remondis may be secured within a sloping concrete enclosure that will contain any leakage.</p> <p>O1.1.2 There were many IBCs and other containers (200l, 20l etc) containing chemicals stored unbunded on bare soil (Photos 4, 5 and 6). It is recommended that chemicals are stored under cover in a bunded enclosure or on bunded pallets.</p> <p>O1.1.3 There were many IBCs and other containers (200l, 20l etc) containing chemicals and oils stored in the open on bunded pallets, which fill with water when it rains and can not fulfil their task of retaining spilled or leaked chemicals (Photos 7, 8 and 9). It is recommended that chemicals are stored under cover in a bunded enclosure or on bunded pallets.</p> <p>O1.1.4 At the bulk fuel depot, sumps designed to retain any spilled diesel were almost completely blocked with sediment (Photos 10 and 11)> It is recommended that these sumps be cleaned out (it is understood that this was done on the day of the inspection) and that they are regularly inspected and serviced as necessary.</p> <p>O1.1.5 It was noted on several occasions that Safety Data Sheets (SDS) were missing or out of date at both CVO and contractor sites, and in some cases the personnel in the area did not know where they were kept. As they include environmental information, it is important that SDSs are available and up to date. It is recommended that CVO reinforce the need to have up-to-date SDSs available at locations where there are dangerous goods or hazardous chemicals.</p> <p>O1.1.6 Procedures should be developed for improved inspection, monitoring, measurement, reporting and management of the STSF, especially relating to the buildup of tailings near the spillway and the maintenance of sufficient freeboard to prevent overflow except in the event of a major rainfall event.</p> <p>Ranking: U</p>				
M1.2	<p>Monitoring records All records required to be kept by this licence must be:</p>	C	<p>M1.2.1 It is recommended that a records management procedure be included in</p>				

Appendix 9 – Audit Recommendations and Response Table

Clause	Requirement	Compliance	Recommendation	CVO Response	Proposed Action	Target Completion Date	Responsibility
	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.		CVO-PRO-Document Control setting out the manner and retention time of environmental records and reflecting the current process on site. Ranking: N				
M6.3	Recording of pollution complaints The record of a complaint must be kept for at least 4 years after the complaint was made.	C	Repeat of M1.2.1 It is recommended that a records management procedure be included in CVO-PRO-Document Control setting out the manner and retention time of environmental records. Ranking: N				
R1.6	Annual return documents The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	C	Repeat of M1.2.1 It is recommended that a records management procedure be included in CVO-PRO-Document Control setting out the manner and retention time of environmental records. Ranking: N				
R2.2	Notification of environmental harm The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.	O	R2.2.1 Consideration should be given to applying for a Licence Variation to Condition R2.2 in order to formalise the provision of an Interim Report, to the effect that "In the event that the licensee is awaiting laboratory results in respect of a notification of environmental harm, the licensee shall provide an Interim Report with written details of the notification to the EPA within 7 days of the date on which the incident occurred. A final written report must be provided to the EPA within 7 days of the laboratory analyses being received by the Licensee". Ranking: I				