

## 2016 Independent Environment Audit Findings and Actions

<b>Low Risk Non-Compliance</b>
<b>Administrative Non-Compliance</b>
<b>Not Verified</b>

Finding	Recommendation	Corrective Action Responses	Action Progress
The quarterly attended noise monitoring results for monitoring undertaken on 31/03/2016 were provided to Springvale Coal on 12/04/2016. The results recorded a 2 dBA exceedance of the evening noise criteria at Receptor S2.	<b>Recommendation 1:</b> Implement a process for consultants undertaking attended noise monitoring to immediately report noise limit exceedances to the Springvale Coal Environment Coordinator.	<b>Comment:</b> Once attended noise monitoring is completed, consultants notify Springvale Environmental Department of indicative results, potential exceedances and/or notable environmental conditions either in person or over the phone. A true exceedance cannot be confirmed until results have undergone data processing and validation by the noise consultant.  <b>Action:</b> Springvale is developing a Form for noise monitoring consultants to complete and hand to site following on-site monitoring. This will allow for immediate response and corrective actions as required.	Completed. A Contractor Management and Notification Process Form (SV-SWP-2356) has been rolled out to environmental contractors/consultants. The Form provides a documented communication notification process to ensure that Springvale environmental personnel are aware of indicative monitoring results, actual or potential exceedances and/or notable environment conditions following environmental monitoring work.
	<b>Recommendation 2:</b> Assess if processes are in place for immediate reporting by consultants to Centennial Coal of exceedances for other monitoring required under regulatory approvals and licences that is undertaken by consultants (in addition to noise) e.g. water quality, dust, subsidence etc.	<b>Comment:</b> Springvale has conducted an evaluation of the current exceedance notification process. It was determined that this process is generally undertaken (notification via email, over the phone or in person) however a formalised approach should be implemented.  <b>Action:</b> Springvale is developing a Form for consultants to complete and hand to site following on-site monitoring work. This will allow for immediate response and corrective actions as required.	Completed. A Contractor Management and Notification Process Form (SV-SWP-2356) has been rolled out to environmental contractors/consultants. The Form provides a documented communication notification process to ensure that Springvale environmental personnel are aware of indicative monitoring results, actual or potential exceedances and/or notable environment conditions following environmental monitoring work.
	<b>Recommendation 3:</b> Revise SV-STD- 2172 Noise Management Surface Standard to: - Increase the frequency of undertaking inspections in accordance with SV-STD-2172 (Noise Management Surface) to quarterly; - Identify responsibility for implementing SV-STD-2172; and - Describe how the effectiveness of implementing the procedure is monitored and reported.	<b>Comment:</b> The Noise Management Surface Standard (SV-STD-2171) is a current internal document that outlines: - The risk areas at Springvale for noise; and - Control measures which may be applied to minimise noise impacts.  <b>Action:</b> Update Procedure to include: - Increased frequency of inspections; - Define responsibility of implementation; and - Describe how the Procedure is effectively monitored and reported.	Completed. The Noise Management Surface Standard (SV-STD-2171) was updated to include an audit checklist and sign off procedure. The audit frequency was updated to quarterly and the Standard has been included in the Work Orders issued to the Mine Services Superintendent for completion.
Low frequency investigations were not included in the 2016 WRNMP.	<b>Recommendation 4:</b> Include the findings of the low frequency investigations that are currently being undertaken, referenced in Appendix E of the 2016 WRNMP, in future Annual Reviews and consider incorporation of relevant findings/actions from the investigation into the WRNMP.	<b>Comment:</b> Low Frequency Noise Investigations are currently underway.  <b>Action:</b> The Low Frequency Noise Report findings and any actions undertaken as a result of the findings will be reported on in the Annual Review. Relevant recommendations will then be considered for inclusion in the Western Region/Springvale Noise Management Plan.	Completed. The Low Frequency Noise Report findings have been reported on in the Annual Review and are included in the Western Region Noise Management Plan which was submitted to DPE in March 2016. Further findings/results will be incorporated into the Western Region Noise Management Plan and reported on in the Annual Review as applicable.
The EMS did not include a comprehensive list of management plans and the status of the plan; and a plan depicting all of the monitoring required to be carried out under SSD-5594 was only partially provided. Although SSD-5594 conditions were available on the Compliance Database, the system had not been comprehensively and consistently adopted for tracking compliance across EPBC Approvals,	<b>Recommendation 5:</b> Update the EMS to include: - References and/or links to a register identifying the status of strategies, plans and programs approved under SSD-5594 (e.g. not commenced, draft, approved, final etc); and - A clear plan in the EMS depicting all of the monitoring required to be carried out under SSD-5594. Refer also to SSD-5594 CoA S6-15.	<b>Action:</b> Springvale is developing an EMS register, or similar, detailing information as per Recommendation 5 that can then be updated as new documents, i.e. Management Plans, are approved and implemented.	Completed. An internal EMS register has been developed which outlines the hierarchy of Springvale approval and post-approval documents and their current status. The EMS is updated routinely or as new documents are approved.

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mining tenements, licences and related mining approvals.			
<p>A high level review by MCW Environmental identified that the following information was not available on the Centennial Coal website at the time of the IEA (although this list is not considered comprehensive):</p> <ul style="list-style-type: none"> <li>- DA 461/02 (Ventilation Shaft No.3);</li> <li>- Statement of environmental effects and the letter supplied by Umwelt Environmental Consultants (15/01/2003) for DA 461/02;</li> <li>- ML 1727;</li> <li>- 2016 Environment Management Strategy;</li> <li>- MOP (2015 -2022); and</li> <li>- Information provided to and recommendations made by the Independent Monitoring Panel.</li> </ul>	<p><b>Recommendation 6:</b> Develop a register of mining tenements, approvals, licences and management plans, strategies, programs and correspondence that is document controlled and consistent across:</p> <ul style="list-style-type: none"> <li>- MOP Table 4;</li> <li>- EPL 3607 condition A2.1;</li> <li>- Environmental Assessments;</li> <li>- Annual Reviews;</li> <li>- Management Plans; and</li> <li>- Centennial Coal (Springvale Coal) website.</li> </ul> <p>When the register is complete, update information on the Centennial Coal web site in accordance with SSD-5594 CoA S6-15 including the general description of the project 'Development and Environment Approvals'.</p>	<p><b>Comment:</b> Centennial Coal has already developed a website document control spreadsheet and an audit of the Springvale website against this spreadsheet has been completed. A work order has been scheduled prompting a review of the website and document register every three months. An internal guideline is also being developed for placing documents on the website.</p> <p><b>Action:</b> 1) Maintain a register of documents required to be uploaded to the Springvale website and ensure its accuracy. 2) Review and update the Springvale website as per the scheduled three-monthly Work Order (or as gaps are identified), to ensure required documents are available.</p>	<p>Completed.</p> <p>Centennial has undertaken an internal website review audit which identified documents required to be uploaded under SSD 5594 to the Springvale website. Any outstanding documents have been uploaded to the website. A three-monthly Work Order is in place to upload any outstanding documents (i.e. newly approved or updated) to the website.</p>
<p>The mining tenements listed in EPL 3607 Premises Details were not consistent with the mining tenements provided in Table 4 of the 2015 – 2022 MOP e.g. EPL 3607 included CL 733 (rather than 377) and did not include ML 1620 and ML 1727. The map titled 'Figure No. 1 – Plan of Operations' did not include mining tenements for SSD 5594.</p>	<p><b>Recommendation 7:</b> Submit an EPL 3607 variation to reflect the SMEP premises such as current mining tenements and supporting figure.</p>	<p><b>Action:</b> A review of the EPL3607 reference figures is being completed and an EPL variation will be undertaken to align figures with the SSD5594 and supporting Management Plans. This will be completed in conjunction with the Senior Centennial Coal Environment and Approvals team.</p>	<p>A review of the noise and air quality monitoring locations is currently being undertaken for the Western Region Noise Management Plan and Western Region Air Quality and Greenhouse Gas Management Plan. The review has entailed confirming the monitoring coordinates and locations in the context of a Western Region monitoring network. Once the update is completed and approved by relevant agencies, the EPL variation can be progressed.</p>
<p>During an inspection of LDP 4 and 5, no signage was sighted indicating the identification number of the LDP.</p>	<p><b>Recommendation 8:</b> Mark the location of LDPs 004 and 005 clearly. Locate the signs as close as practical to LDPs 004 and 005.</p>	<p><b>Action:</b> Springvale will install signs at LDPs 004 and 005 to clearly mark their location.</p>	<p>Completed.</p> <p>Signs have been installed at LDPs 004 and 005.</p>
<p>During the site inspection at the Ventilation Shaft No. 3 compound on 27/06/2016 MCW Environmental observed areas of the site that had not been revegetated or sealed, evidence of erosion in the area adjacent to the sediment dams, shallow channelling in the APZ and a high sediment load behind some sediment fences.</p>	<p><b>Recommendation 9:</b> Identify the cause of erosion on the Ventilation Shaft No. 3 site and shallow channelling in the adjacent APZ zone. Undertake corrective actions to improve sediment and erosion controls.</p>	<p><b>Comment:</b> Works are already underway at Newnes Plateau facilities to improve drainage and erosion and sediment controls. Work completed to date includes:</p> <p><u>Ventilation Shaft 3 Site</u></p> <ul style="list-style-type: none"> <li>- Drains cleared of silt; and</li> <li>- Installation of sediment fencing to prevent erosion and sediment run-off.</li> </ul> <p><u>Borehole 8 Compound</u></p> <ul style="list-style-type: none"> <li>- Installation and maintenance of sediment fencing around drainage lines, access tracks and compound perimeter to prevent erosion and sediment run-off.</li> </ul> <p><b>Action:</b> Continue works in accordance with the Managing Urban Stormwater: Soils and Construction, particularly focusing on the Borehole 8 and Ventilation Shaft 3 compound. Continue inspection regime of facilities to identify causes of erosion and any ongoing remediation works required. Document progress for reporting purposes.</p>	<p>Completed.</p> <p>Erosion and sediment control works have been undertaken at both locations to address erosion with and around the compounds. The work has included:</p> <ul style="list-style-type: none"> <li>• Ensuring drains are clear of silt and able to flow freely;</li> <li>• Sediment fencing installed in areas at higher risk of high water flow and subsequent sediment runoff;</li> <li>• Sediment fences maintained and replaced where required;</li> <li>• Silt build up cleared from sediment fences;</li> <li>• Restoration of drainage lines within the compound footprints (e.g. maintenance of channels, rock drains) to manage stormwater flows.</li> </ul> <p>A monthly inspection regime is in place to assess whether any further work is required.</p>

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<p>A number of documents required under EPBC 2011/5949 were not sighted on the Centennial Coal website.</p>	<p><b>Recommendation 10:</b> The following improvements were identified for the Centennial Coal website:</p> <ul style="list-style-type: none"> <li>- Locate all documents required under EPBC Approval 2011/5949 in one location on the Centennial Coal website;</li> <li>- Standardise document titles to clearly identify document title and purpose of each document (e.g. 2015 THPSSMP Annual Report/ EPBC Approval condition 29);</li> <li>- Include the document date on the website (not the date uploaded);</li> <li>- Upload the 2015 THPSSMP Annual Report (CC, 03/2016); and</li> <li>- Upload annual EPBC 2011/5949 Compliance Reports (2013 to 2016) on the Centennial Coal website.</li> </ul>	<p><b>Comment:</b> To be completed in conjunction with the actions identified as part of Recommendation 6. The website review will also focus on improved document identification. The internal guideline being developed for placing documents on the Centennial website will also assist in addressing this recommendation.</p> <p><b>Action:</b> In addition to the actions identified as part of Recommendation 6, improve document identification and standardisation of website documents by developing an internal guideline. Ensure the internal guideline is referenced in the document website register.</p>	<p>Underway.</p> <p>Following the internal website review audit a Centennial standard is being developed to ensure consistency across the documents uploaded to the Centennial website and with each operations approval documents.</p>
<p>During the site inspection on 27/06/2016 MCW Environmental observed that the design of the sediment fence adjacent to the windrow on the Bore 8 compound site generated a high, downslope sediment load and there was a high sediment load behind some sediment fences. Opportunities for improvement in erosion and sediment control at the Ventilation Shaft 3 compound were also identified. To meet the SSD-5594 CoA S4-12 Table 6 performance measure on 'Construction and Operation of Infrastructure', the design, installation and maintenance of erosion and sediment controls is required to be generally in accordance with Managing Urban Stormwater: Soils and Construction.</p>	<p><b>Recommendation 11:</b> Revegetate disturbed areas outside of the operations areas and/or design and maintain sediment and erosion controls in accordance with the Managing Urban Stormwater: Soils and Construction e.g. at the Borehole 8 dewatering facility and Ventilation Shaft 3 compound. The sediment and erosion controls are required so that operations do not to cause or aggravate soil erosion and to meet the requirements of s120 of the Protection of the Environment Operations Act 1997.</p>	<p><b>Comment:</b> Works are already underway at Newnes Plateau facilities to improve drainage and erosion and sediment controls. Work completed to date include:</p> <p><u>Ventilation Shaft 3 Site</u></p> <ul style="list-style-type: none"> <li>- Drains cleared of silt; and</li> <li>- Installation of sediment fencing to prevent erosion and sediment run-off.</li> </ul> <p><u>Borehole 8 Compound</u></p> <ul style="list-style-type: none"> <li>- Installation and maintenance of sediment fencing around drainage lines, access tracks and compound perimeter to prevent erosion and sediment run-off.</li> </ul> <p><b>Action:</b> Continue works in accordance with the Managing Urban Stormwater: Soils and Construction, particularly focusing on the Borehole 8 and Ventilation Shaft 3 compound. Continue inspection regime of facilities to identify causes of erosion and any ongoing remediation works required. Document progress for reporting purposes.</p>	<p>Completed.</p> <p>Erosion and sediment control works have been undertaken at both locations to address erosion around the compounds. The work has included:</p> <ul style="list-style-type: none"> <li>• Ensuring drains are clear of silt and able to flow freely;</li> <li>• Sediment fencing installed in areas at higher risk of high water flow and subsequent sediment runoff;</li> <li>• Sediment fences maintained and replaced where required;</li> <li>• Silt build up cleared from sediment fences; and</li> <li>• Restoration of drainage lines within the compound footprints (e.g. maintenance of channels, rock drains) to manage stormwater flows.</li> </ul> <p>A monthly inspection regime is in place to assess whether any further work is required. Where possible, rehabilitation of areas no longer in use, e.g. infrastructure corridors, will be undertaken.</p>
<p>As the Bushfire Management Plan and Bushfire Management Procedure had not been revised since 2013, and as the MSEP works had not commenced on site, an assessment that the development is suitably equipped to respond to any fire on site was unable to be made and consequently SSD-5594 CoA S4-26 was assessed as not verified.</p>	<p><b>Recommendation 12:</b> Undertake an independent Bushfire Hazard Assessment to assess the adequacy of fire response equipment and procedures at the Pit Top and for the SMEP development:</p> <ul style="list-style-type: none"> <li>- In accordance with the requirements of the Rural Fires Act 1997, the Rural Fires Regulation 2008, the RFS document 'Planning for Bushfire Protection 2006' for the purposes of bushfire hazard and impact determination and Australian Standard AS 3959 – 2009 titled 'Construction of buildings in bushfire-prone zone areas as amended for building/structural provisions;</li> <li>- In consultation with the RFS and FCNSW; and the</li> <li>- Taking into account ISSC 3 Guideline for Managing Vegetation Near Power Lines – December 2005.</li> </ul> <p>Following completion of the assessment, revise the Bushfire Management Plan as required.</p>	<p><b>Comment:</b> Asset Protection Zones have recently been cleared around infrastructure on the Newnes Plateau (following completion of the Ecological and Heritage Due Diligence process).</p> <p><b>Action:</b> 1) Complete a Bushfire Hazard Assessment as outlined in Recommendation 12. Following completion of the assessment, review current Procedures and controls and update as required. 2) Continue to record Bushfire Hazard preventative works as undertaken.</p>	<p>A specialist consultant has been engaged to complete the Bushfire Hazard Assessment. The assessment is currently underway. The scope of the assessment includes:</p> <ul style="list-style-type: none"> <li>• Desktop review and site visit to inspect primary site infrastructure and assets;</li> <li>• Identifying vegetation and topography which will most significantly influence bushfire behaviour per the RFS Planning for Bushfire Protection 2006 (PBP 2006);</li> <li>• Computer modelling to calculate radiant heat exposure to quantitatively assess Bushfire Attack Levels (BALs);</li> <li>• Develop BAL Contour Map of likely bushfire mitigation measures to identify setbacks required for each asset;</li> <li>• Undertake consultation with RFS and Fire and Rescue NSW;</li> <li>• Review ISSC 3 Guidelines for Managing Vegetation Near Power Lines; and</li> <li>• Prepare Bushfire Threat Assessment and assist with updates to site Bushfire Management Plan.</li> </ul> <p>The findings and actions from the Assessment will be reported on in the next Annual Review.</p>

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<p>An assessment of mining operations in the Warragamba Outer Catchment Area against all provisions of the Sydney Water Catchment Act was not available.</p>	<p><b>Recommendation 13:</b> Assess if the requirements of Sydney Water Catchment Management Act 1998 and regulations applying to the prevention of pollution of the Warragamba Outer Catchment Area or the preservation of the purity of the water supply have been taken into account in the plans and procedures associated with works in the Outer Catchment Area e.g. Upper Cocks River Action and Monitoring Plan, Water Management Plan, SV-STD-1972_State Forest Civil &amp; General Earth Works Environmental Controls. and Springvale Coal incident reporting requirements. Record the findings of the assessment on the Compliance Database for ML 1326 CoA 28. Undertake corrective actions as required.</p>	<p><b>Comment:</b> Centennial Coal and Springvale Management Plans, e.g. Western Region and Springvale Water Management Plans have been developed to address prevention of pollution to catchments across Springvale tenements.</p> <p><b>Action:</b> Undertaken a review of the Sydney Water Catchment Management Act 1998 and regulations applying to the prevention of pollution of the Warragamba Outer Catchment Area or the preservation of the purity of the water supply, to ensure conditions under ML1326 are adequately met. Record the findings of the assessment on the Compliance Database for ML 1326 CoA 28. Undertake corrective actions as required.</p>	<p>Completed.</p> <p>A review was undertaken of the Act in the context of prevention of pollution of the Warragamba Outer Catchment Area.</p> <p>The Springvale Mine Extension Project EIS, approved SSD 5594 and post approval requirements (e.g. Extraction Plan, SSD5594 Management Plans) address the requirements of prevention of pollution, i.e. negligible impact.</p> <p>Trigger Action Response Plans (TARPs) have also been developed for all relevant management plans that outline responses and adaptive management purposes if monitoring indicates any potential impacts. The measures ensure that any risk of potential pollution can be managed within acceptable (defined) timeframes.</p> <p>The compliance database has been updated accordingly.</p>