



Mt Arthur Coal

Independent Environmental Audit

July 2017 – June 2020

Response to Audit Recommendations



21 January 2021

1. Introduction

The Mt Arthur Coal (MAC) Independent Environmental Audit 2017 (IEA) was completed in accordance with Schedule 5 Condition 9 of Project Approval 09_0062.

This report satisfies the proponent's requirements in Schedule 5 Condition 10 of Project Approval 09_0062, to provide a response to any recommendations contained in the audit report.

The IEA period is 1 July 2017 to 30 June 2020. This is the three - year period based on the date of the previous IEA. The IEA also included a series of specialists including surface water, groundwater, noise/blast, air and rehabilitation.

The IEA generally identified a high level of compliance, with no high or medium risks identified during the audit. There were a total 24 non-compliances and a total of 33 recommendations.

Of the 33 recommendations:

- 13 were related to Non-compliances (NC REC) - the proponent's responses to these are provided in Table 1, and
- 20 were Improvement Recommendations (IMP REC) which did not relate to a non-compliance - the proponent's responses to these are provided in Table 2.

2. Breakdown Non-compliances and Recommendations

Regulatory Document	Non- Compliances		Recommendations	
	Low Risk	Administrative	Non-compliance	Improvement
Project Approval	8	4	9	15
Environment Protection Licence	3	4	2	4
Key Environmental Assessment Commitments 2013 EA	4	1	2	-
CCL 396	-	-	-	1
TOTAL	15	9	13	20

3. Response to Non – Compliance Recommendations

Table 10 of the Independent Environmental Audit 2020 report outlines the summary of non - compliances for each of the key approvals assessed within the IEA and audit recommendations relating to the non-compliance. MAC’s responses to these non-compliance recommendations are outlined in Table 1.

Table 1 – MAC Response to Non-Compliance Recommendations

Schedule and Condition Number	Condition	Compliance Status	Recommendations	MAC Response																
Project Approval (PA09-0062)																				
S3 C20	<p>Impact Assessment Criteria</p> <p>The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the project do not cause exceedances of the criteria listed in Tables 6, 7 and 8 at any residence on privately-owned land (except for air quality affected land listed in Table 1).</p> <p><i>Table 6: Long term impact assessment criteria for particulate matter</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> </tr> </thead> <tbody> <tr> <td>Total suspended particulate (TSP) matter</td> <td>Annual</td> </tr> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>Annual</td> </tr> </tbody> </table> <p><i>Table 7: Short term impact assessment criterion for particulate matter</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> </tr> </thead> <tbody> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>24 hour</td> </tr> </tbody> </table> <p><i>Table 8: Long term impact assessment criteria for deposited dust</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>Maximum increase in deposited dust level</th> </tr> </thead> <tbody> <tr> <td>^c Deposited dust</td> <td>Annual</td> <td>^b 2 g/m²/month</td> </tr> </tbody> </table>	Pollutant	Averaging period	Total suspended particulate (TSP) matter	Annual	Particulate matter < 10 µm (PM ₁₀)	Annual	Pollutant	Averaging period	Particulate matter < 10 µm (PM ₁₀)	24 hour	Pollutant	Averaging period	Maximum increase in deposited dust level	^c Deposited dust	Annual	^b 2 g/m ² /month	Admin Non - Compliance	NC REC 1: Ensure that all non - compliances are recorded in the Annual Review under the Incident Reporting Section.	<p>Comments NC REC 1:</p> <p>The evidence referenced in the audit report identified specifically that the Non-compliance related to;</p> <p>1. <i>“The Annual Reviews recorded times where the data capture for the TEOM’s was not 100%. Although the capture rate was high this still is a non - compliance, as this affects the annual average and some short term results for PM₁₀. DC09 had a data capture of 85% during the FY 2019 period. This triggers a <u>non - compliance</u> in relation to data collection.”</i></p> <p>MAC will access and report data capture compliance in the Annual Review consistent with the accepted approach for EPA Annual Return reporting, which includes consideration for scheduled maintenance and calibrations which are in place to ensure compliant operation of the monitoring equipment.</p>
Pollutant	Averaging period																			
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Schedule and Condition Number	Condition	Compliance Status	Recommendations	MAC Response
				<p>2. "1 July 2017 - 30 June 2018 - Table 15 (pg 34) from the FY 2018 Annual Review had the MAC contribution for the TEOM - DC09 (27 September 2017) as 51µg/m³), which is above the short term criteria for PM₁₀. This was not recorded as a non - compliance in the FY 2018 Annual Review in the Incident Section, however information was provided outlining that DPIE were notified at the time of the exceedance."</p> <p>MAC acknowledges this omission from the non-compliance summary table (Table 3) contained within the Annual Review FY18. The exceedance was reported in Table 15 of the Annual Review FY18.</p> <p>ACTION NC REC 1:</p> <p>Update the annual review process document to include a task to ensure that all independent environmental audit actions relating to annual review content are reviewed and included in the Annual Review.</p> <p>Forecast Completion: 31 March 2021</p>
S3 C33	<p>Groundwater Monitoring Program</p> <p>The Groundwater Monitoring Program must include:</p> <p>(a) detailed baseline data of groundwater levels, yield and quality in the region, and privately-owned groundwater bores, that could be affected by the project;</p> <p>(b) groundwater impact assessment criteria;</p> <p>(c) a program to monitor:</p> <ul style="list-style-type: none"> • groundwater inflows to the mining operations; • impacts on regional aquifers; • impacts on the groundwater supply of potentially affected landowners; 	Non - Compliant (Low Risk)	NC REC 2: MAC needs to have the Site water management plan and the GMP approved by DPIE and undertake any further monitoring considering these approved documents.	<p>Comments NC REC 2:</p> <p>MAC submitted a new Water Management Plan to DPIE for approval in April 2020, which includes a revised groundwater monitoring program. As at December 2020 MAC has responded to all Requests for Information relating to the assessment of the Water Management Plan and is awaiting approval of the plan by DPIE.</p> <p>Once approved MAC will ensure that all further groundwater monitoring is conducted in accordance with the new Water Management Plan.</p> <p>ACTION NC REC 2:</p> <p>A new scope of works will be issued to the groundwater monitoring contractor to commence monitoring in accordance with the revised groundwater monitoring program approved in the Water Management Plan.</p>

Schedule and Condition Number	Condition	Compliance Status	Recommendations	MAC Response
	<ul style="list-style-type: none"> • impacts on the Hunter River and Saddlers Creek alluvial aquifers; and • impacts on any groundwater dependent ecosystems and riparian vegetation; (d) procedures for the verification of the groundwater model; and (e) reporting procedures for the results of the monitoring program and model verification.		<p>NC REC 3: There are a number of monitoring protocols and procedures which have not been followed in spite of those being recommended: these monitoring protocols recommended in Section 4 of the 2018/2019 Groundwater Annual Review need to be made mandatory to ensure that the results are reliable and reflective of site conditions. It is recommended that quality control for groundwater data is improved.</p> <p>NC REC 4: A number of exceedances that are reported for Hunter River and Saddlers Creek alluvium need to be investigated and the mitigation measure/resolution provided in the next monitoring report.</p> <p>NC REC 5: GMP 2015 states that as no measurement of inflow volumes can be taken, therefore the modelled values are considered most appropriate method of estimates, unless the trigger values are exceeded. Given that trigger values were exceeded in 2018, 2019 and 2020 the impacts also need to be re-assessed.</p>	<p><u>Forecast Completion:</u></p> <p>Within 3 months of approval of the Water Management Plan.</p> <p><u>ACTION</u> NC REC 3: Assess and develop an action plan of all monitoring protocols recommended in the 2018/2019 Groundwater Annual Review and the more recent 2019/2020 reports.</p> <p><u>Forecast Completion:</u> 31 March 2021</p> <p><u>ACTION</u> NC REC 4: An investigation has been triggered in relation to exceedances that were reported for Hunter River and Saddlers Creek alluvium. The results of the Investigation will be reported to DPIE and included in the next Annual Ground Water Review.</p> <p><u>Forecast Completion:</u> 31 March 2021</p> <p><u>Comments</u> NC REC 5: The groundwater model was under revision in 2020 but had not been completed at the time of the Audit. The model revision was completed in November 2020. All inflow predictions have been assessed as complaint against EA predictions and the Project Approval. New Trigger levels resulting from this review have been included within the revised Water Management Plan currently with DPIE for approval. No further action is proposed.</p>

Schedule and Condition Number	Condition	Compliance Status	Recommendations	MAC Response
S3 C34	<p>Surface and Ground Water Response Plan</p> <p>The Surface and Ground Water Response Plan must describe the measures and/or procedures that would be implemented to:</p> <p>(a) investigate, notify and mitigate any exceedances of the surface water, stream health and groundwater impact assessment criteria;</p> <p>(b) compensate landowners of privately-owned land whose water supply is adversely affected by the project, including provision of an alternative supply of water to the affected landowner that is equivalent to the loss attributed to the project;</p> <p>(c) minimise, prevent or offset potential groundwater leakage from the Hunter River and Saddlers Creek alluvial aquifers; and</p> <p>(d) mitigate and/or offset any adverse impacts on groundwater dependent ecosystems or riparian vegetation.</p>	Non - Compliant (Low Risk)	<p>Groundwater:</p> <p>NC REC 6: Annual reporting needs to make a record of no complaints from the private bore owners.</p>	<p>Comments NC REC 6:</p> <p>Future annual reports will make a record of no complaints from the private bore owners following a similar format to the most recent 2019/2020 Annual Review that was assessed with this condition.</p> <p>ACTION NC REC 6:</p> <p>The annual review process document has been updated to include a task to ensure that all independent environmental audit actions relating to annual review content are reviewed and included in the Annual Review.</p> <p>Forecast Completion: Completed – 21/01/2021</p>
S3 C45	<p>Aboriginal Cultural Heritage Management Plan</p> <p>The Proponent shall prepare and implement an Aboriginal Heritage Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with OEH, the Aboriginal community, Council and relevant landowners;</p>	Admin Non - Compliance	<p>NC REC 7: Access protocols need to be determined through consultation with Aboriginal Stakeholders. Additional details on the outcome of this consultation will be provided in Section 5.5 of the ACHMP regarding access into the Thomas Mitchell Drive heritage offset area.</p>	<p>Comments NC REC 7 & NC REC 8:</p> <p>The Aboriginal Cultural Heritage Management Plan was being revised in 2019/2020. However due to Covid-19 restrictions through 2020 consultation with the Aboriginal Community has not been possible. DPIE have been consulted in relation to the delay in finalising the Management Plan due to consultation restrictions.</p> <p>ACTION NC REC 7 & NC REC 8:</p>

Schedule and Condition Number	Condition	Compliance Status	Recommendations	MAC Response
	<p>(b) include the following for the management of Aboriginal heritage on-site:</p> <ul style="list-style-type: none"> • a plan of management for the Thomas Mitchell Drive Offsite Offset Area (identified in Condition 36); and • a program/procedures for: <ul style="list-style-type: none"> o salvage, excavation and/or management of Aboriginal sites and potential archaeological deposits within the project disturbance area; o protection and monitoring of Aboriginal sites outside the project disturbance area, including the scarred trees and axe grinding grooves identified on the site; o managing the discovery of any new Aboriginal objects or skeletal remains during the project; o maintaining and managing access to archaeological sites by the Aboriginal community; o ongoing consultation and involvement of the Aboriginal communities in the conservation and management of Aboriginal cultural heritage on the site; and o management of the “Fairford 1” site in situ, including reasonable and feasible measures to mitigate impacts on this site, until an agreement can be reached with relevant Aboriginal stakeholders and OEH, for its salvage and relocation. 		<p>NC REC 8: Further information is required including location and a procedure for moving and managing items within the Keeping Place. Details should be added about who is allowed to access the Keeping Place.</p>	<p>Submit the Aboriginal Cultural Heritage Management Plan incorporating the requirement of NC REC7 and NC REC 8.</p> <p>Forecast Completion: 31 August 2021</p>

Schedule and Condition Number	Condition	Compliance Status	Recommendations	MAC Response
S5 C4	<p>Revision of Strategies, Plans and Programs</p> <p>Within 3 months of:</p> <p>(a) the submission of an annual review under condition 3 above;</p> <p>(b) the submission of an incident report under condition 7 below;</p> <p>(c) the submission of an audit under condition 9 below; or</p> <p>(d) any modification to the conditions 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. Where this review leads to revisions in any such document, then within four weeks of the review the revised document must be submitted to the Secretary for approval.</p>	Admin Non - Compliance	NC REC 9: In terms of the timings of updating management plans, this should be completed in accordance with Schedule 5 Condition 4 of the Development Consent.	<p><u>ACTION</u> NC REC 9:</p> <p>All management plans will be reviewed within 3 months of the submission of the IEA Report.</p> <p>Where this review identifies revisions are required, the revision will be undertaken within four weeks of the review. The revised document will then be submitted to the Secretary for approval.</p> <p><u>Forecast Completion:</u></p> <p>Review Completed: 22 April 2021</p> <p>Revisions completed (where triggered): 20 May 2021</p>

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Environment Protection Licence (EPL) 11457										
M2.2	Air Monitoring Requirements POINT 11,12,13,14 <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of measure</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>PM10</td> <td>micrograms per cubic metre</td> <td>Continuous</td> </tr> </tbody> </table>	Pollutant	Units of measure	Frequency	PM10	micrograms per cubic metre	Continuous	Admin Non - Compliance	NC REC 10: Continue to investigate methods of improving the reliability of continuous and real time monitoring systems to increase data capture.	<p>Comments NC REC 10:</p> <p>In December 2020 MAC has implemented a series of alerts to provide early warning when sites go offline. Reports are also distributed daily that provide information on the data capture for the reporting period. This allows for immediate diagnosis of equipment errors and system faults. MAC believes that this new system satisfies NC REC 10. No further action is proposed.</p>
Pollutant	Units of measure	Frequency								
PM10	micrograms per cubic metre	Continuous								
M2.3	POINT 15 <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of measure</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Faecal Coliforms</td> <td>colony forming units per 100 millilitre</td> <td>Quarterly</td> </tr> </tbody> </table>	Pollutant	Units of measure	Frequency	Faecal Coliforms	colony forming units per 100 millilitre	Quarterly	Admin Non - compliance	NC REC 11: Ensure all sampling undertaken to required frequencies for LDP 15.	<p>ACTION NC REC 11:</p> <p>Develop a compliance action management system (SAP) work management strategy for sampling to ensure sampling is planned and executed in accordance with requirements.</p> <p>Forecast Completion: 28 February 2021</p>
Pollutant	Units of measure	Frequency								
Faecal Coliforms	colony forming units per 100 millilitre	Quarterly								

Schedule and Condition Number	Condition	Compliance Status	Recommendations	MAC Response
Key Environmental Commitments 2013 Environmental Assessment				
Groundwater	Groundwater monitoring at the Mt Arthur Coal Mine would continue to be undertaken in accordance with the Ground Water Monitoring Program (BHP Billiton, 2012e). The Ground Water Monitoring Program would be reviewed and, if necessary, revised to incorporate the Modification.	Non Compliant (Low Risk)	NC REC 12: Surface Water and Groundwater Response Plan needs to be updated if the proposed and submitted SWMP is approved by DPIE.	Comments NC REC 12: MAC has submitted a new Water Management Plan to DPIE for approval in April 2020. The New Water Management Plan includes a revised Groundwater Response Plan. As at December 2020 MAC had responded to all Requests for Information relating to the assessment of the Water Management Plan and is awaiting approval of the plan by DPIE. No further action is proposed.
Surface and Groundwater Response	The Surface and Groundwater Response Plan (BHP Billiton, 2012f) would be reviewed and, if necessary, revised to incorporate the Modification. Notwithstanding the negligible effects due to the Modification predicted at surrounding private bores (Appendix B), consistent with the Project Approval for the Mt Arthur Coal Mine – Open Cut Consolidation Project Statement of Commitments: In the event of interruption to water supply resulting from the Project, an alternative water supply will be provided, until such interruption ceases.	Non Compliant (Low Risk)	As per Schedule 3 Condition 34 recommendation. Annual reporting needs to make a record of no complaints from the private bore owners.	Note: this item links directly to NC REC 6 with the comment and action replicated below. Comments NC REC 6: Future annual reports will make a record of no complaints from the private bore owners following a similar format to the most recent 2019/2020 Annual Review that was assessed with this condition ACTION NC REC 6: The annual review process document has been updated to include a task to ensure that all independent environmental audit actions relating to annual review content are reviewed and included in the Annual Review. Forecast Completion: Completed - 21/01/21

Schedule and Condition Number	Condition	Compliance Status	Recommendations	MAC Response
	<p>The process for identifying and compensating the interruption to water supply resulting from Mt Arthur Coal operations would be in accordance with the “protocol for adverse affects to nearby users” outlined in the Surface and Groundwater Response Plan (BHP Billiton, 2012f).</p>			
Groundwater	<p>In addition, notwithstanding the minor impacts to alluvium associated with the Modification, consistent with the Project Approval for the Mt Arthur Coal Mine – Open Cut Consolidation Project Statement of Commitments: Mt Arthur Coal will continue to monitor hydro-geomorphological conditions and scrutinise for evidence of any groundwater ingress or endwall instability indicators as it progresses the previously approved mining towards the Hunter River Alluvials. Mining (other than that already approved in the MAN [Mt Arthur North] EIS) will not extend beyond a nominal 150 m buffer zone from the Hunter River Alluvials until agreement is reached with DWE regarding the installation of a lower permeability barrier along the point of connections of mining and the alluvium or other appropriate safeguards.</p>	Non Compliant (Low Risk)	<p>NC REC 13: It is recommended that the groundwater model be verified such that the predicted drawdown reflects the observed drawdown and that hydro-geomorphological conditions can be assessed accurately.</p>	<p>Comments NC REC 13: The Groundwater Model was revised and verified in 2020. This will be reported on in the next Annual Review.</p> <p>ACTION NC REC 13: The annual review process document has been updated to include a task to ensure that all independent environmental audit actions relating to annual review content are reviewed and included in the Annual Review.</p> <p>Forecast Completion: Completed - 21/01/21</p>

4. Response to Additional Improvement Recommendations

Additional recommendations not directly related to a non-compliance are outlined within Table 11 of the Independent Environmental Audit Report. MAC's responses to these improvement recommendations are outlined in Table 2.

Table 2 – MAC Response to Improvement Recommendations

Aspect	Condition Reference	Improvement REC Number	Recommendation	MAC Response
Demolition/Annual Review	S2 C10 of PA	IMP REC 1	Details of demolition should be included in the Annual Review going forward.	<p>Comments IMP REC 1: There is a section in the current MAC template for the inclusion of Demolition works, however not all demolition works were identified at the time of completing the report., MAC will ensure that all demolition works are detailed in the Annual Review.</p> <p>ACTION IMP REC 1: The annual review process document has been updated to include a task to ensure that all independent environmental audit actions relating to annual review content are reviewed and included in the Annual Review.</p> <p>Forecast Completion: Completed - 21/01/21</p>
Noise Monitoring Locations	S3 C2	IMP REC 2	When a review of the Noise Management Plan is triggered, the monitoring locations table should be updated to provide a reference between the Project Approval and EPL monitoring identification locations.	<p>ACTION IMP REC 2: MAC will include this improvement recommendation in the management plan review process triggered by this IEA</p> <p>Forecast Completion: 22 April 2021</p>

Aspect	Condition Reference	Improvement REC Number	Recommendation	MAC Response
Traffic Noise Criteria	S3 C6	IMP REC 3	<p>Include reference to the traffic noise criteria and compliance with them in the Annual Reviews.</p> <p>The Annual Review should include information about when the most recent traffic noise assessment was undertaken and when the next one is due.</p>	<p>Comments IMP REC 3: MAC will include reference to traffic noise assessments in Annual Reviews.</p> <p>ACTION IMP REC 3:</p> <p>The annual review process document has been updated to include a task to ensure that all independent environmental audit actions relating to annual review content are reviewed and included in the Annual Review.</p> <p>Forecast Completion: Completed - 21/01/21</p>
Blasting Hours	S3 C11	IMP REC 4	<p>Include day of week in blast database addition to date to confirm blasting does not occur on Sundays or public holidays.</p>	<p>ACTION IMP REC 4:</p> <p>Update the blasting spreadsheet to include the day of the week.</p> <p>Forecast Completion: 31 March 2021</p>

Aspect	Condition Reference	Improvement REC Number	Recommendation	MAC Response
Air Quality – Impact Assessment Criteria	S3 C20	IMP REC 5	Reporting of exceedances' of criteria, with evidence to be provided by MAC to support compliance with the 'all reasonable and feasible avoidance and mitigation measures' component of this air quality management condition.	<p>Comments IMP REC 5:</p> <p>MAC reports exceedances to the DPIE in accordance with the approved Air Quality Management Plan. An email notification is provided to the DPIE as soon as practicable after becoming aware of an exceedance of the PM10 24-hour average criterion Assessment Criteria. An investigation is then conducted to validate the monitoring result. The investigation includes calculating the contribution from Mt Arthur Coal mining activities and the reporting evidence of the reasonable and feasible mitigation measures which were implemented in line with the approved Air Quality Management Plan.</p> <p>MAC currently reports the total number of the cumulative PM10 24-hour average criterion Assessment Criteria in the Annual Review and will provide additional detail to support compliance with the requirement to employ 'all reasonable and feasible avoidance and mitigation measures' where the mine contribution is found to have caused the exceedance of the criteria.</p> <p>The information provided in the previous Annual Review documents has been accepted by the DPIE.</p> <p>ACTION IMP REC 5:</p> <p>The annual review process document has been updated to include a task to ensure that all independent environmental audit actions relating to annual review content are reviewed and included in the Annual Review.</p> <p>Forecast Completion: Completed - 21/01/21</p>

Aspect	Condition Reference	Improvement REC Number	Recommendation	MAC Response
Air Quality Management Plan	S3 C24	IMP REC 6	We recommend that an independent air quality specialist is engaged to complete a quality check and review of the real time air quality management system. This includes a review of the dust contributions from the site.	<p><u>ACTION</u> IMP REC 5:</p> <p>Engage an air quality specialist to complete a quality check and review of the real time air quality management system.</p> <p><u>Forecast Completion:</u> 31 March 2022</p>
Rehabilitation Management Plan	S3 C44	IMP REC 7	Undertake a complete site soil balance. This is urgent and critical to long term rehabilitation planning and future costings.	<p><u>Comments</u> IMP REC 7:</p> <p>An estimated topsoil balance will be prepared as part of a Topsoil Management Plan.</p> <p>Previous work has been completed to undertake trials in the use of alternative growth media to ensure adequate topsoil materials available for planned rehabilitation activities. This includes trials using Mixed Waste Organic Output (MWO), prior to the EPA revoking the general and specific Resource Recovery Orders and Resource Recovery Exemptions.</p> <p><u>ACTION</u> IMP REC 7</p> <p>Revise the Rehabilitation Management Plan (part of the Mining Operations Plan) to include a draft version of the Topsoil Management Plan.</p> <p><u>Forecast completion:</u> June 2021</p>

Aspect	Condition Reference	Improvement REC Number	Recommendation	MAC Response
Rehabilitation Management Plan	S3 C44	IMP REC 8	Soil stockpiles should be either nominated as long-term or short-term stockpiles. Long-term stockpiles should be shaped and seeded. Stockpiles were observed to not be shaped or seeded with cover crop or pastures. Soil stockpiles should be sign posted and the locations updated on a GIS based program (created by the soil balance in Point 1). No stockpile signage was observed.	<p>Comments IMP REC 8:</p> <p>MAC has a topsoil management process detailed in MAC-ENC-PRO-012 Land Management Procedure.</p> <p>MAC also has a GIS database of topsoil stockpile locations supplied to the Auditor as part of the August 2020 information request.</p> <p>ACTION IMP REC 8:</p> <p>Revise the Rehabilitation Management Plan (part of the Mining Operations Plan) to include a tracking process that matches the operational requirements and internal planning process within the Topsoil Management Plan.</p> <p>Forecast completion: June 2021</p>

Aspect	Condition Reference	Improvement REC Number	Recommendation	MAC Response
Rehabilitation Management Plan	S3 C44	IMP REC 9	Soil stockpiles should be managed for weeds to avoid an increase to the weed seed bank. Stockpile was infested with weeds creating a weed seed bank for future management.	<p>Comments IMP REC 9: MAC has a topsoil management process detailed in MAC-ENC-PRO-012 Land Management Procedure.</p> <p>MAC notes that weeds present in stockpiles are annual species from a seed bank present in topsoil prior to stripping. High rainfall and warm weather broke seed dormancy of the pre-existing seed bank. This is a regional issue. Weeds treatment at MAC occurs as scheduling of contractors allows.</p> <p>ACTION IMP REC 8: Revise the Rehabilitation Management Plan (part of the Mining Operations Plan) to include a more detailed topsoil management process.</p> <p>Forecast completion: June 2021</p>
Visual Amenity and Lighting	S3 C52	IMP REC 10	Recommend a Lighting Audit to assess against Australian Standards AS 4282 - 1997. This will cover fixed exterior lighting and interior lighting that could impact the outdoor environment.	<p>ACTION IMP REC 10: MAC will undertake a lighting audit of high risk fixed lighting.</p> <p>Forecast Completion: 31 January 2022</p>

Aspect	Condition Reference	Improvement REC Number	Recommendation	MAC Response
Waste	S3 C53	IMP REC 11	Ensure all contractor areas are inspected as part of general inspections as these are areas of higher risk of poorer environmental management. Ensure future oil storage and servicing areas are within bunded areas. This recommendation currently relates to the EMECO and Pit Master Areas only.	<p>Comments IMP REC 11: The contractor areas referred to in the audit were scheduled for decommissioning at the time of the audit.</p> <p>ACTION IMP REC 11: The EMECO and Pit Master Areas will be decommissioned.</p> <p>Forecast Completion: 31 December 2021</p>
Waste	S3 C53	IMP REC 12	Consider completing a review of segregation requirements and labelling of bins across site to identify improvement opportunities.	<p>Comments IMP REC 12: MAC has a robust waste management system in place all bins referred to in this recommendation are colour coded to the Australian Standard for mobile bin colours AS 4123.7–2006 and are positioned in designated locations. It is also noted that due to the harsh workshop environments the longevity of labels is limited, which is why the bin colour coding is the preferred identification mechanism in these situations. This system is proving effective an inspection of the bin content during the audit showed that they were being used correctly. No further action is proposed.</p>

Aspect	Condition Reference	Improvement REC Number	Recommendation	MAC Response
Waste	S3 C53	IMP REC 13	Ensure inspections are completed at a higher interval at the Thiess Workshop as the area does not have a setup to trap potentially contaminated water/liquids prior to it leaving the Thiess workshop area. Additional controls could be put in place during servicing within this workshop to prevent leakage of hydrocarbons.	<p>Comments IMP REC 12:</p> <p>The Layered audit process is part of the MAC Field Leadership program and provides a structured audit process for identifying risks and controls, as well implementing any identified corrective actions.</p> <p>ACTION IMP REC 13:</p> <p>Undertake a layered audit of the hydrocarbon management and drainage in the Thiess workshop area.</p> <p>Forecast Completion: 30 May 2021</p>
Management Plans	S5 C2	IMP REC 14	Cross referencing tables containing the relevant conditions should be added to Management Plans which have not received a recent update. This would include all relevant conditions of the Development Consent and EPL and commitments from the 2013 Environmental Assessment.	<p>ACTION IMP REC 14:</p> <p>The Project Approval Controlled Document Review Checklist MAC-HSE-FRM-001 will be updated to include a requirement to access Cross Referencing tables that include all relevant conditions of the Development Consent and EPL.</p> <p>Forecast Completion: 31 March 2021</p>
Incident Reporting	S5 C7	IMP REC 15	Consider improving the information provided in incident reports, this may include the addition of photographs where appropriate, consistent headings and layouts for reports. This will ensure consistency across incident reporting.	<p>Comments IMP REC 15:</p> <p>MAC has not had any comments from the EPA or DPIE that incident reporting is not to an acceptable standard. MAC will however consider this recommendation when writing future reports and will continue to work with the appropriate regulators on further improvements. No further action proposed.</p>

Aspect	Condition Reference	Improvement REC Number	Recommendation	MAC Response
Discharge Monitoring Points	P1.3 of EPL	IMP REC 16	Review and update Surface Water Management Plan and Monitoring Program to reflect the EPL variation.	<p>Comments IMP REC 16:</p> <p>The Project Approval Controlled Document Review Checklist MAC-HSE-FRM-001 includes a requirement to review any changes to the EPL since the last management plan review. No further action is proposed.</p>
Blast Monitoring Locations	P1.4 of EPL	IMP REC 17	Clearly identify the EPL monitoring locations and ID within the BMP and Annual Reviews (ie BP04 [EPL ID 7])	<p>ACTION IMP REC 17:</p> <p>MAC will include this improvement recommendation in the management plan review process triggered by this IEA.</p> <p>Forecast Completion: 22 April 2021</p>
Pollution of Waters	L1.1 of EPL	IMP REC 18	Implement the PRP for water pipelines in consultation with the EPA.	<p>Comments IMP REC 18:</p> <p>MAC is currently in consultation with EPA regarding the incident and implement the actions that result in accordance with the EPA's requirements. As this process is being controlled by the EPA regulatory instruments. No further action is proposed.</p>
Blasting	L6.1 of EPL	IMP REC 19	Include day of week in blast database addition to date to confirm blasting does not occur on Sundays or public holidays.	<p>ACTION IMP REC 19:</p> <p>Update the blast database to include the day of the week.</p> <p>Forecast Completion: 28 February 2021</p>

Aspect	Condition Reference	Improvement REC Number	Recommendation	MAC Response
Annual Review	CCL 396 Condition 2	IMP REC 20	Include a cross referencing table in the Annual Review outlining the conditions relevant to the Development Consent and Mining Lease.	<p><u>ACTION</u> IMP REC 20:</p> <p>The annual review process document has been updated to include a task to ensure that all independent environmental audit actions relating to annual review content are reviewed and included in the Annual Review.</p> <p><u>Forecast Completion:</u> Completed - 21/01/21</p>