

MOOLARBEN COAL INDEPENDENT ENVIRONMENTAL COMPLIANCE AUDIT 2013 - ACTION PLAN

Area	Approval and Condition	Compliance Status	Auditor's Comments	Auditor's Recommendation	MCO Action	Responsibility	Due Date	Status
Aboriginal Heritage	Project Approval S3C49(c)	O	Whilst the program appears to have been developed, it has not yet been implemented.	It is recommended that the Aboriginal Heritage Management Plan be updated to include activities undertaken on site since the plan was developed in July 2008. The Aboriginal Heritage Management Plan is to be updated to include detail of the salvage works which have been undertaken as well as providing reference to the progress of existing mining operations. The updated plan should also provide and update on the status of the program to be developed by MCO to assess and document the Aboriginal Heritage Values of the MCO	Obtain approval of updated Aboriginal Heritage Management Plan which includes this information	Luke Bowden	31/05/2013	Closed
Blasting	Project Approval S3C11 Environmental Protection Licence L6.3 Mining Lease 1606 Condition 15(b)	NC	Requirements identified in BMP - Section 3.1. Review of blasting records identified a blast on 8/7/2010 which registered an overpressure of 120.6 at BM1 (Ulan School). Requirements identified in BMP - Section 3.1. Review of blast records identifies two exceedances of 115dB within the audit period (1/7/2010 and 14/6/2011). However the number of exceedances above 115 is less than 5% over each reporting period.	No recommendation provided	Comments noted. No action required.	NA	NA	Closed
Blasting	Project Approval S3C14(c) Environmental Protection Licence L6.2	O	Whilst MIC of each blast is recorded on the blasting data sheets, this information is not maintained by the environment team in their blasting data spreadsheet. This makes it difficult to confirm compliance with this condition. However given that blasts averaged less than 4 per week during the audit period, this requirement is considered to have been met.	It is recommended that MCO adapt the existing Blast Monitoring Results spreadsheet to include the MIC of each blast to enable tracking of the number of blasts greater than 650kg	Modify blast data sheet to include MIC of each blast	Klay Marchant	31/05/2013	Closed
Blasting	Project Approval S3C15(b)	O	Moolarben advised that blast notifications are received from both Ulan and Wilpinjong which detail when blasting is proposed to be undertaken at these operations. In the event that a blast is proposed for the same time that Moolarben propose to blast, then Moolarben reschedule the blast to avoid simultaneous blasting. It is understood that the Blast Management Plan has been updated to reflect this, with the revised plan submitted to DP&I and awaiting approval.	No recommendation provided	Comments noted. No action required.	NA	NA	Closed
Community	General Comment	O	No comments provided	It is recommended MCO adapt the complaint management procedure to include the recording of all actions taken in response to the complaint, including a comment where no action was taken	Update complaints management procedure to include recording of actions taken and/or not taken in response to a complaint	Klay Marchant	30/06/2013	Closed
Contractor Management	Project Approval S2C1	NC	In terms of environmental controls, the current practices in place for the storage, handling and use of hazardous substances would not be considered to represent all reasonable and feasible measures to minimise harm to the environment from the storage and use of these substances. Specifically, it was noted that secondary containment has not been provided to the diesel fill point at the Downer compound, and isolated drums of grease and oil were observed to be stored in unbunded areas.	It is recommended that MCO review the hydrocarbon and chemical storage practices at the Downer EDI compound, using the Technical Considerations in Appendix 2 of the 'Storage and Handling Liquids: Environmental Protection, Participant's Manual' (DECC 2007) as a guide	Include secondary containment in the design of the relocated Downer facility	Klay Marchant	30/06/2013	Closed

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Ecology	Project Approval S3C41(a)	NC	Technically non-compliant however the transfer of lands was undertaken in a prompt manner and is considered to be generally in accordance with the consent although technically marginally (3 weeks) outside the prescribed 12 months from the date of the approval.	No recommendation provided	Comments noted. No action required.	NA	NA	Closed
Ecology	Project Approval S3C41(b)	NC	Technically non-compliant however the payment of funds was undertaken in a prompt manner and is considered to be generally in accordance with the consent although technically marginally (3 weeks) outside the prescribed 12 months from the date of the approval.	No recommendation provided	Comments noted. No action required.	NA	NA	Closed
Ecology	Project Approval S3C44(a)	O	LMP - Section 1.0 and Appendix 1 Whilst it was noted that the Plan had been prepared by a suitably qualified consultant, formal approval of the consultant was not obtained.	No recommendation provided	Comments noted. No action required.	NA	NA	Closed
Ecology	Project Approval S3C45(d)	O	Noted that clearing of mining areas had been delayed due to the identification of active grey-crowned babbler nests during pre-clearance surveys. Nest Boxes have not been installed as per the LMP.	It is recommended that MCO install nest boxes and structures in accordance with the ROMP and/or commission an ecological assessment to determine the extent of hollow resources currently occurring in the Moolarben land holding, particularly in offset areas and make recommendations regarding the identification of any areas that are low in hollow resources that could therefore benefit from the introduction of nest boxes	Commission an ecological assessment to determine the extent of hollow resources in Offset Areas	Julie Thomas	31/12/2013	Active
Energy Savings	General Comment	NA	No comments provided	It is recommended that the ESAP be reviewed to ensure it is consistent with the ongoing operations at MCO, and to confirm that status of proposed actions such as the preparation of an Energy Management System are included within the ESAP and are actioned	Capture energy savings opportunities in the Energy Efficiency Opportunities process.	Klay Marchant	31/12/2013	Active
Energy Savings	Project Approval S3C62(a) S3C62(d)	NC	No evidence is available to confirm that the ESAP was prepared in consultation with NOW. It is recommended that the ESAP be reviewed to identify actions associated with ongoing operations.	It is recommended that the ESAP be reviewed to identify any energy saving measures which may be implemented on site to reduce the energy use on site, as mining operations have now commenced. The ESAP is also to include a program to monitor the effectiveness of the measures to reduce energy use, with the updated plan to be developed in consultation with NOW (we note that the condition currently refers to NOW, however, the relevant agency should be clarified with DP&I).	Capture energy savings opportunities in the Energy Efficiency Opportunities process.	Klay Marchant	31/12/2013	Active
Environmental Management Reporting	Mining Lease 1605 Condition 5 Mining Lease 1606 Condition 5 Mining Lease 1628 Condition 5	O	Whilst the discussion of rehabilitation in Section 5 of the AEMR makes reference to the MOP, the remainder of the report does not appear to address any specific MOP requirements. It was noted in Section 1.1 of the 2011-2012 AEMR that the introductory statements do not make reference to the MOP or the reporting requirements contained in the mining leases for the site.	No recommendation provided	Update 2012-2013 AEMR to include introductory statements referring to the MOP and reporting requirements contained in the mining leases	Julie Thomas	31/10/2013	Closed
Environmental Management Strategy	Project Approval SSC1	O	It is understood that the EMS has been updated by MCO and the revised strategy has addressed the issues raised by the auditor as outlined in the following sections. The revised strategy has been submitted to DP&I for approval but no approval had been received at the time of the audit. MCO was noted to be operating in accordance with the revised strategy.	No recommendation provided	Comments noted. No action required.	NA	NA	Closed

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Environmental Management Strategy	Project Approval SSC1(a)	O	The EMS includes a brief description of the operations, however given that it was prepared for the construction activities, this section may not reflect the operations that currently exist in relation to OC1 and the CHPP.	No recommendation provided	Comments Noted. Updated EMS has addressed this so no further action is required	NA	NA	Closed
Environmental Management Strategy	Project Approval SSC1(b)	O	Section 3 of the EMS document outlines the statutory requirements that apply to the project, including the specific requirements of the Project Approval. This section identifies what additional approvals are required by the operations and what approvals, licences etc have already been obtained. It is suggested that this section of the EMS needs to be regularly updated to reflect any changes in legislation. For example, the EMS refers to the Occupational Health and Safety Act which has now been superseded by the Workplace Health and Safety Act.	No recommendation provided	Comments Noted. Updated EMS has addressed this so no further action is required	NA	NA	Closed
Environmental Management Strategy	Project Approval SSC1(c)	O	Moolarben has implemented a reasonably comprehensive environmental inspection system for its own operations. The EMS identifies that that contractors will be required to submit an environmental control plan or environmental management plan for MCO approval prior to commencement of work. However, no evidence was sighted during the audit to indicate that MCO had obtained an EMP or similar from the Downer Mining Services contractor. It was also noted that the inspection program undertaken by MCO environment team staff does not routinely include contractor facilities. This issue is further discussed in the report.	It is recommended that MCO establish and implement a systematic, risk based environmental audit or inspection program for operational contractors operating under their own management systems to verify that contracted works are being undertaken in an environmentally responsible manner and do not impact on MCO's ability to meet its compliance requirements	Expand inspection checklists to include specific reference to contractor facilities	Trent Cini	31/05/2013	Closed
Environmental Management Strategy	Project Approval SSC1(d)	O	During discussions with site staff, it was identified that Moolarben does have some issues with landowners in relation to ongoing complaints. As a result of these issues, Moolarben is currently developing procedures in consultation with the EPA to provide further guidance to staff on dealing with complaints. These processes should be included in the next review of the EMS.	No recommendation provided	Update EMS to reflect recent consultation with EPA on dealing with complaints	Luke Bowden	31/05/2013	Closed
Environmental Management Strategy	Project Approval SSC1(e)	O	Management roles and responsibilities are detailed in Section 6 of the EMS. Given that this version of the Plan was prepared for the construction phase of the project, it needs to be updated to reflect the management roles and responsibilities associated with operations. Despite the plan needing to be updated, interviews with site staff during the site inspection identified that staff generally have a good understanding of their roles and responsibilities in relation to environmental management. For example, the Production Supervisor was aware of the noise and air criteria for the operations and was familiar with the required environmental controls and reporting processes.	No recommendation provided	Comments Noted. Updated EMS has defined the roles and responsibilities further so no further action is required	NA	NA	Closed

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General	Environmental Protection Licence O1.1(a)	O	Coal handling, movement and processing was observed to be well managed. The pit and haul roads are maintained in a neat and tidy condition. Storage of hydrocarbons and chemicals was identified as an issue in some areas as discussed in relation to condition O5.1.	No recommendation provided	Comments noted. No action required.	NA	NA	Closed
General	Mining Lease 1605 Condition 2 Mining Lease 1606 Condition 2 Mining Lease 1628 Condition 2	NC	Moolarben has generally implemented measures to minimise harm to the environment in terms of air quality, noise, visual amenity, vibration and lighting, and has demonstrated a commitment to improving its environmental performance. During the audit site inspection, it was observed that there were generally good management practices across the site, particularly related to the rehabilitation practices implemented at the site. In terms of environmental controls, the current practices in place for the storage, handling and use of hazardous substances would not be considered to represent all reasonable and feasible measures to minimise harm to the environment from the storage and use of these substances.	No recommendation provided	Comments Noted. Issues have been addressed elsewhere in this action plan	NA	NA	Closed
General	Project Approval S2C2(j)	NC	Non-compliances with the conditions of approval were identified during the audit as noted in this report.	No recommendation provided	Comments noted. See remainder of action plan for actions to address these non-conformances	NA	NA	Closed
Groundwater	General Comment	NA	No comments provided	It is recommended that a formal QA/QC program is developed and implemented for the groundwater monitoring data to ensure that it is suitable for interpretive use in relation to monitoring potential mining-related influences	Update WMP to include the QA/QC process recently implemented at MCO	Trent Cini	31/05/2013	Closed
Groundwater	Project Approval S3C38(d)	O	Water level trigger values provided for private bores based on modelling predictions. No clear methodology provided to assess changes/impacts to springs/seeps/dams.	No recommendation provided	Update WMP to reflect the requirement to engage a hydrologist to review monitoring data and include results in AEMR	Trent Cini	31/05/2013	Closed
Groundwater	Project Approval S3C38(d)	O	Seepage losses to be assessed through monthly water balance calculations on dams, and visual assessment for seepage from dams. External advice to be sought if seepage issues are suspected. No groundwater monitoring included as part of the seepage assessment, which limits the effectiveness of the methodology for identification of groundwater impacts.	No recommendation provided	Update WMP to reflect the requirement to engage a hydrologist to review monitoring data and include results in AEMR	Trent Cini	31/05/2013	Closed
Groundwater	Project Approval S3C38(d)	NC	No methodology provided to assess base flow the Goulburn River and tributaries	No recommendation provided	Engage a hydrologist to review and enhance current monitoring program for base flow to Goulburn River	Luke Bowden	27/09/2013	Active
Groundwater	Project Approval S3C38(d)	O	The indicated approach was annual validation and calibration of the flow model with reporting in AEMR. Groundwater is generally discussed in Section 3.7 of the AEMR (2011-2012). MCO staff indicated that the model was recalibrated during the preparation of the Stage 2 EA report. Details were not available during the audit.	It is recommended that the results of the annual numerical model validation process is reported in the AEMR, with particular emphasis on any changes in the interpreted impact assessment or assessment criteria, to provide greater confidence to stakeholders in relation to the monitoring, data analysis and impact assessment program	Include results from annual groundwater numerical validation process in the 2012-2013 AEMR	Julie Thomas	31/10/2013	Active

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Groundwater	Project Approval S3C39(b)	O	Generic assessment/response framework includes detailed investigation to assess whether, and to what extent, MCO has contributed to any loss to surface water flows, and development and implementation of mitigation and management strategies if required. Stable/rising water levels in alluvium to date suggest negligible potential for base flow impact from MCO operations to date. For the response protocol to be effective, however, a clear procedure for assessing potential base flow impacts to Goulburn River and tributaries needs to be developed.	No recommendation provided	Update WMP to include a clear procedure on assessing potential base flow loss	Trent Cini	31/05/2013	Closed
Groundwater	Project Approval S3C39(d)	O	Generic assessment/response framework in this section considered too generic to be an effective management measure for this Condition.	No recommendation provided	Update WMP to reflect the engagement of suitably qualified personnel to assist in the preparation of mitigation measures	Trent Cini	31/05/2013	Closed
Hazardous Substances Management	Project Approval S2C1 Environmental Protection Licence O5.1	NC	In terms of environmental controls, the current practices in place for the storage, handling and use of hazardous substances would not be considered to represent all reasonable and feasible measures to minimise harm to the environment from the storage and use of these substances. Specifically, it was noted that secondary containment has not been provided to the diesel fill point at the Downer compound, and isolated drums of grease and oil were observed to be stored in unbunded areas.	It is recommended that MCO review the hydrocarbon and chemical storage practices for packaged oils, greases and chemicals stored at the open cut workshop, using the Technical Considerations in Appendix 2 of the 'Storage and Handling Liquids: Environmental Protection, Participant's Manual' (DECC 2007) as a guide	Deliver a Toolbox Talk to the maintenance department on the correct storage of hydrocarbons	Trent Cini	30/06/2013	Closed
Incident Reporting	Project Approval S5C4 Environmental Protection Licence R2.2	NC	For the sample notification reviewed during the audit, a report was noted to be provided on 11/10/11. Whilst the written report was submitted, it was submitted 11 days after the incident which is outside of the 6 day period specified.	No recommendation provided	Comments noted. No action required.	NA	NA	Closed
Independent Environmental Audit	Project Approval S5C6	O	The first independent environmental compliance audit was undertaken by URS in 2009/2010. This current audit was due to be commissioned by September 2012, however Umwelt were not commissioned until November 2012. It is understood that MCO encountered issues in the approval of auditors through DP&I and also contract negotiations with consultants.	No recommendation provided	Comments noted. No action required.	NA	NA	Closed
Lighting Impacts	Project Approval S3C61(b)	O	It was noted during the site inspection undertaken at MCO that lighting plants, when in use, are orientated away from residential receivers and roadways. Moolarben personnel advised that lighting was compliant with relevant Australian Standards, there was however no correspondence to confirm the satisfaction of the Director-General.	No recommendation provided	Discuss with DP&I the process for confirming lighting at MCO is satisfactory	Luke Bowden	31/07/2013	Closed
Noise	Environmental Protection Licence L5.5	O	While the NMP outlines the methodology for conducting the attended noise monitoring, it does not provide any information on the format of, and the information to be contained within, the noise monitoring report.	It is recommended that the NMP be revised to include an outline of the preferred format for the noise monitoring reports and reporting how the monitoring data is to be presented	Update the NMP to include information about compliance with EPA guidelines for reporting	Klay Marchant	31/05/2013	Closed
Noise	Environmental Protection Licence L5.5	O	While the NMP outlines the methodology for conducting the attended noise monitoring, it does not provide any information on the format of, and the information to be contained within, the noise monitoring report.	It is recommended that the attended noise monitoring reports present the information collected during the monitoring program in a format that can be used to inform the public about the performance of the MCO against the noise impact assessment criteria	Investigate additional methods of presenting noise data in the monitoring reports to more easily inform the public on MCO performance	Klay Marchant	31/07/2013	Closed

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Noise	General Comment	NA	No comments provided	It is recommended that MCO either develop and implement a protocol for evaluating the data from real-time noise monitoring system consistent with the requirements of the approved NMP or revise the NMP to reflect the current practice of daily monitoring by MCO staff and seasonal monitoring by an independent consultant	Update NMP to reflect current practice of daily assessment and seasonal monitoring by independent consultant.	Klay Marchant	31/05/2013	Closed
Noise	General Comment	NA	No comments provided	It is recommended that MCO review the attended noise monitoring program/schedule and investigate alternatives that could increase the percentage of valid data recorded during the attended noise monitoring sessions and document this process in the NMP	Update NMP to include process of reviewing weather forecast prior to monitoring	Klay Marchant	31/05/2013	Closed
Noise	General Comment	NA	No comments provided	It is recommended that MCO provide more information to the public through the CCC or other appropriate forum on the investigation into and implementation of the management and control measures identified in the NMP as a part of the continuous improvement program	Discuss methods for communicating with the community at the CCC meeting in June 2013	Luke Bowden	30/06/2013	Closed
Noise	General Comment	NA	No comments provided	It is recommended that MCO provide more information to the public through the CCC or other appropriate forum on the implementation of the real-time response measures and report on the 'clear public benefit' of the application in accordance with Schedule 3 - Specific Environmental Conditions, Condition 9 Continuous Improvement	Discuss methods for communicating with the community at the CCC meeting in June 2013	Luke Bowden	30/06/2013	Closed
Noise	General Comment	NA	No comments provided	It is recommended that MCO measure and report on the 'clear public benefit' of any noise mitigation measures that are implemented and that this information is provided to the local community via the CCC or other appropriate forum	Discuss methods for communicating with the community at the CCC meeting in June 2013	Luke Bowden	30/06/2013	Closed
Noise	General Comment	NA	No comments provided	It is recommended that the NMP is updated to reflect the change in the noise monitoring protocol of the NMP be modified to allow flexibility in the noise monitoring protocol	Investigate additional methods of presenting noise data in the monitoring reports to more easily inform the public on MCO performance	Klay Marchant	31/07/2013	Closed
Noise	General Comment	NA	No comments provided	It is recommended that MCO develop and/or review the reporting protocols for various noise monitoring programs to ensure the information provided by the independent noise consultant(s) is transparent, easy to interpret and suitable for non-technical reader. Through the preparation of 'easy to understand' noise reports, it will be possible to educate the public about the noise impacts associated with the mining operations undertaken by MCO	Investigate additional methods of presenting noise data in the monitoring reports to more easily inform the public on MCO performance	Klay Marchant	31/07/2013	Closed
Noise	General Comment	NA	No comments provided	It is recommended that the findings of the cumulative noise level assessment are included in the AEMR	Include the findings of the cumulative noise level assessment in the 2012-2013 AEMR	Julie Thomas	31/10/2013	Active
Noise	Project Approval S3C10 S3C2 Environmental Protection Licence L5.5	NC O	Table 9 and Figure 1 of the NMP provided information on the monitoring locations. The monitoring locations used at the time of the audit were not consistent with the locations identified in Table 9 and Figure 1. It is understood the NMP review was in progress and that these discrepancies were being addressed.	It is recommended that the NMP include a procedure that allows for the update of the monitoring locations independent of the annual review process	Update the NMP to include a scope for updating/altering monitoring locations when land ownership changes, mining sequences change etc	Klay Marchant	31/05/2013	Closed

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Noise	Project Approval S3C2 Environmental Protection Licence L5.1	NC	Four (4) exceedance recorded and reported during the 2009 - 2010 period One (1) exceedance recorded and reported during the 2010 - 2011 period No exceedances recorded during the 2011 - 2012 period	No recommendation provided	Comments noted. No action required.	NA	NA	Closed
Rehabilitation	General Comment	NA	No comments provided	It is recommended that MCO implement a system to record information regarding the rehabilitation works which have been undertaken including ameliorant application rates, species composition and quantities of species utilised within the rehabilitation, the date the rehabilitation was undertaken	Update LMP to include information collected on rehabilitation activities and the process used to collect this information	Klay Marchant	31/05/2013	Closed
Waste	Project Approval S3C65(c) Environmental Protection Licence O1.1(b)	O	Waste Management Plan - Section 4.4, 4.6 & 4.7 2012 AEMR (Section 2.7) - details that 78.47% of waste is recycled, which complies with management plan target of >70%. Wastes were identified as being generally well managed during the waste audit with waste separation systems observed to be in place, with most bins checked during the audit containing the correct waste stream for that bin. An issue was identified in relation to waste separation and storage at the workshop. This issue had already been identified by the Moolarben environment team and actions were in place to procure additional waste signage and undertake a Toolbox Talk in relation to waste management with all maintenance workshop staff.	No recommendation provided	Comments Noted. As the outstanding actions have now been implemented no further action is required	NA	NA	Closed
Water	General Comment	NA	No comments provided	It is recommended that the volume of water that is being intercepted be verified against the harvestable rights provisions for MCO, with additional water licences acquired or installation of additional clean water management systems undertaken to minimise the inflow of clean water into the pit	This was addressed in response to submissions for Stage 2, which included Stage 1 operations	Luke Bowden	NA	Closed