

**Tarrawonga Coal Mine – Independent Audit Action Plan
February 2012**

DA 88-4-2005 – Non Compliance

Condition	Clause	Audit Finding	Audit Recommendations	Whitehaven Response and Due Date
Schedule 6, Condition 10	Within 1 month of the approval of any management plan/strategy or monitoring program required under this consent (or any subsequent revision of these management plans/strategies or monitoring programs), the completion of the independent audits required under this consent (see conditions 3 2 of schedule 4 and condition 6 of schedule 6), or the completion of the AEMR (see condition 5 above), the Applicant shall: (c) within 12 months of the date of this consent put a copy of the relevant documents on the Applicant's website;	It was noted during the audit that the independent environmental audit undertaken by URS in March 2009 is not available on the Whitehaven website.	Whitehaven should put a copy of the URS Independent Audit undertaken in March 2009 on the Tarrawonga website.	The audit report has been uploaded to the Whitehaven website. No further action required.

DA 88-4-2005 MOD 1 – Non Compliance

Condition	Clause	Audit Finding	Audit Recommendations	Whitehaven Response and Due Date
Schedule 2, Condition 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 project.	The site inspection and audit of compliance documentation found no significant issues relating to environmental management at the site. However several non-conformances have been identified as documented in the compliance checklists and summarised in this report. Tarrawonga has experienced some environmental performance issues relating to air, noise, blasting and water discharge exceedances. Many of these exceedances were during the early stages of operations and Whitehaven has investigated each incident and modified operations accordingly to minimise the potential for future exceedances. Environmental Management Plans have been prepared for a range of environmental issues and evidence was sighted that the plans that have been prepared have generally been implemented. It was noted that although Whitehaven has prepared and submitted revised management plans in accordance with the MOD1 consent requirements, these plans have not yet been approved by DP&I. In this regard, Whitehaven is continuing to operate under the previously approved management plans.	None.	See other conditions.
Schedule 2, Condition 2(c)	The Proponent shall carry out the project generally in accordance with the: (c) conditions of this consent.	A number of non-compliances with the modified Development Consent were identified during the audit as noted in this report.	None.	See other conditions.
Schedule 2, Condition 12	Until they are replaced by an equivalent strategy, plan or program approved under this consent, the Applicant shall continue to implement the existing strategies, plans or programs that apply to any development on site.	The currently approved Noise Management Plan (NMP) and the Road Noise Management Plan state that attended road noise surveys will be conducted on a quarterly basis (until such time as an alternative monitoring frequency/method is approved by DP&I) and that measurements will be taken	Whitehaven should ensure that attended road noise monitoring sessions are undertaken quarterly during the day and evening time periods in accordance with the currently approved Noise Management Plan	Noise monitoring has been undertaken in compliance with the Rocglen Coal Mine Road Noise Management Plan (RNMP) which incorporates a cumulative road noise monitoring program for the Rocglen, Canyon

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		during the day and evening time periods in each quarter. The AEMR for 2009-2010 does not provide any monitoring results for the September 2009 quarter and the AEMR for 2010-2011 does not provide monitoring results for September 2010 and December 2010 quarters. Additionally, no evidence was sighted that would indicate that attended road noise surveys were undertaken for the evening period in any quarter.	and the Road Noise Management Plan until such time as the revised Noise Management Plan (March 2011) is approved.	(Whitehaven) and Tarrawonga Mines. The Plan was approved in late 2008 and specifies that road noise monitoring will be conducted on a 6 monthly basis with measurements taken during the morning (7:00 – 9:30am) or evening (after 6:00pm). On this basis, Whitehaven does not believe this is a non-compliance. The Tarrawonga RNMP will be updated to mirror the Rocglen RNMP. To be submitted to DP&I by the end of March 2012.
Schedule 3, Condition 20	The Applicant shall: (c) regularly assess the real-time air quality monitoring and meteorological forecasting data and relocate, modify and/or stop operations on site to ensure compliance with the relevant conditions of this consent;	Real-time air quality and meteorological data is not yet available. It is noted that Whitehaven is currently in the process of developing and implementing a real-time system in conjunction with the adjoining Boggabri Mine and Maules Creek Project. Note that this condition also requires Whitehaven to assess real-time meteorological forecasting data.	Whitehaven should check whether the proposed real-time system is able to provide meteorological forecasting data and clarify these requirements with DP&I and finalise implementation of the proposed system.	Currently in discussions with EPA and DP&I in relation to siting and management of real-time monitoring. Real time air quality monitor and new meteorological station expected to be installed by the end of April 2012.
Schedule 3, Condition 21	The Applicant shall prepare and implement a detailed Air Quality & Greenhouse Gas Management Plan for the project to the satisfaction of the Director-General. This program must: (a) be prepared in consultation with DECCW, and submitted to the Director-General for approval by the end of March 2011;	The Air Quality & Greenhouse Gas Management Plan was submitted for approval on 31 March 2011 but does not include a GHG management component. Evidence was sighted that Whitehaven sought permission from DP&I to submit the Air Quality & Greenhouse Gas Management Plan on a progressive basis in accordance with Schedule 2 Condition 11 and to provide a revised plan containing the required GHG Management component by 31 Dec 2011. This would allow Whitehaven to incorporate into the Air Quality & Greenhouse Gas Management Plan any strategies identified as part of the Federal Government Energy Efficiency Opportunities Program in which the Tarrawonga operation is required to participate. There was no evidence that permission has been granted.	At this stage it is recommended that Whitehaven proceed with their commitment to complete the GHG Management component of the Air Quality & Greenhouse Gas Management Plan and submit the revised plan to DP&I for approval by 31 January 2012.	The AQGGMP has been updated to incorporate GHG management however submission is pending awaiting discussions with EPA and DP&I regarding notification requirements. To be submitted by the end of March 2012.
Schedule 3, Condition 22	While development is being carried out on site, the Applicant shall ensure that there is a suitable meteorological station operating in the vicinity of the site that: (b) is capable of continuous real-time measurement of temperature lapse rate in accordance with the NSW Industrial Noise Policy (INP).	Measurement of temperature lapse rate in accordance with the INP requires measuring the temperature at two elevated levels over a 50 m height interval (1.5 to 10 m and 50 to 60m) to determine the temperature difference. This requires a tower greater than 50 m in height. It was observed that the meteorological station currently on site would not fulfil this requirement.	It is recommended that Whitehaven follow-up with DP&I to clarify the intent of the requirement and to discuss any implementation issues that may arise as a result of this condition.	Under investigation. Update to be provided by the end of April 2012.
Schedule 3, Condition 25	The Applicant shall ensure that all surface water discharges from the site comply with the relevant discharge limits (both volume and quality) in any EPL.	Management of rainfall runoff appears to be an issue during rainfall events equal to the design rainfall event for the sediment control dams i.e. 5 day 90th percentile design criteria. This issue was also raised during the previous audit. Whitehaven has been addressing this issue through the following mitigation measures: <ul style="list-style-type: none"> • use of a liquid flocculant to lower TSS levels; • pumping to upstream storages, as soon as available in 	Whitehaven should undertake a review of the management procedures for sediment control dams and onsite water storage dams, in order to achieve a balance between operational requirements for stored water and sediment control requirements for available storage capacity.	Whitehaven is in the process of engaging a consultant to undertake a full review of water management at Tarrawonga. Completion of this review, which will include finalising the Site Water Management Plan required under DA 88-4-2005 MOD 1, is expected by the end of April 2012.

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		<p>order to reduce discharge potential;</p> <ul style="list-style-type: none"> • spraying water onto unused roads for evaporation in order to reduce water levels in storage dams and sediment basins; and • Preference to utilise water in discharge dams SB14 and SD16on the southern end of the southern emplacement area to avoid discharge wherever possible. <p>A review of the current Whitehaven surface water and erosion control structures was completed in July 2009 by the Department of Lands Soil Conservation Service. The review concluded that the site has sufficient storage capacity if managed efficiently.</p> <p>It is noted that TSS exceedances in water discharges were reported in the 2009-2010 AEMR and the 2010-2011 AEMR indicating that the issue may be related to the management of the sediment control dams.</p>		
Schedule 3, Condition 26	<p>The Applicant shall prepare and implement a Water Management Plan for the development to the satisfaction of the Director-General. This plan must:</p> <p>(c) include:</p> <ul style="list-style-type: none"> ○ a Site Water Balance; ○ an Erosion and Sediment Control Plan; ○ a Surface Water Monitoring Program; ○ a Groundwater Monitoring Program; and ○ a Surface & Ground Water Response Plan. 	<p>The Water Management Plan was completed and submitted to (then) DoP on 31 March 2011. The Water Management Plan included a Site Water Balance for the modified Development Consent, however the other plans and programs specified in this condition have not yet been completed. For these components of the Water Management Plan, Whitehaven is continuing to operate under the currently approved documents in accordance with Schedule 2 Condition 12. However, the currently approved documents do not cover all the conditions and requirements of the modified Development Consent and no evidence was sighted to indicate that approval had been sought or granted to submit the Water Management Plan on a progressive basis.</p>	<p>Whitehaven should complete the following components of the Water Management Plan as soon as possible and submit to the DP&I for approval:</p> <ul style="list-style-type: none"> • Erosion and Sediment Control Plan; • Surface Water Monitoring Program; • Groundwater Monitoring Program; and • Surface & Ground Water Response Plan. 	See Schedule 3, Condition 25.
Schedule 3, Condition 28	<p>The Erosion and Sediment Control Plan shall:</p> <p>(a) be consistent with the requirements of the Managing Urban Stormwater: Soils and Construction Manual (Landcom 2004, or its latest version);</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>	<p>The Erosion and Sediment Control Plan for the modified Development Consent has not yet been completed and Whitehaven is continuing to operate under the currently approved Erosion and Sediment Control Plan in accordance with Schedule 2 Condition 12. The Erosion and Sediment Control Plan is a required component of the Water Management Plan.</p> <p>Additionally, the currently approved Erosion and Sediment Control Plan does not address part (d) of this condition that requires the Plan to include a description of the location, function, and capacity of the erosion and sediment control structures.</p>	<p>Whitehaven should complete the Erosion and Sediment Control Plan as soon as possible and submit to the DP&I for approval.</p>	See Schedule 3, Condition 25.
Schedule 3, Condition 29	<p>The Surface Water Monitoring Program shall include:</p> <p>(a) detailed baseline data on surface water flows and quality in creeks and other water bodies that could be</p>	<p>Whitehaven is continuing to operate under the currently approved Surface Water Monitoring Program in accordance with Schedule 2 Condition 12. However, the currently approved program does not meet all the conditions and</p>	<p>Whitehaven should complete the Surface Water Monitoring Program as soon as possible and submit to the DP&I for approval.</p>	See Schedule 3, Condition 25.

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	<p>affected by the project;</p> <p>(b) surface water quality and stream health assessment criteria, including trigger levels for investigating any potentially adverse surface water impacts; and</p> <p>(c) a program to monitor:</p> <ul style="list-style-type: none"> o surface water flows, quality, and impacts on water users; o stream health; and o channel stability, <p>in the creeks and other water bodies that could be affected by the development on site, including the Bollol and Driggle Draggie Creeks in the vicinity of the road crossing works.</p>	<p>requirements of the modified Development Consent, specifically:</p> <ul style="list-style-type: none"> • baseline data was not required in the currently approved SWMP but will need to be compiled and included in the new SWMP; • assessment criteria are included in the currently approved SWMP however no trigger levels have been specified for investigating potential issues; and • the currently approved SWMP does not include programs to monitor surface water flows, stream health or channel stability in accordance with this condition. 		
Schedule 3, Condition 30	<p>The Groundwater Monitoring Program must include a program to:</p> <p>(a) detailed baseline data of groundwater levels, yield and quality in the region, and particularly any groundwater bores, springs and seeps (including spring and seep fed dams) that may be affected by mining operations on site;</p> <p>(b) a program to augment the baseline data over the life of the project;</p> <p>(c) groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts;</p> <p>(d) a program to monitor and/or validate:</p> <ul style="list-style-type: none"> o groundwater inflows to the open cut mining operations; o the impacts of the project on the surrounding aquifers and any groundwater bores, springs and seeps on privately-owned land; <p>(e) a program to validate the groundwater model for the project, and calibrate it to site specific conditions.</p>	<p>Whitehaven is continuing to operate under the currently approved Groundwater Monitoring Program in accordance with Schedule 2 Condition 12. However, the currently approved program does not meet all the conditions and requirements of the modified Development Consent, specifically:</p> <ul style="list-style-type: none"> • baseline data was not required in the currently approved GWMP but will need to be compiled and included in the new GWMP; • in the currently approved GWMP trigger levels (except for lead) are expressed as percentage variance from baseline levels, but baseline levels had not yet been established when document was written. The new GWMP should include properly expressed trigger levels that can be used for assessing the groundwater monitoring results and identifying potential impacts; and • the currently approved GWMP does not include a program to validate the groundwater model for the project, and calibrate it to site specific conditions. 	<p>Whitehaven should complete the Groundwater Monitoring Program as soon as possible and submit to the DP&I for approval.</p>	<p>See Schedule 3, Condition 25.</p>
Schedule 3, Condition 31	<p>The Surface and Ground Water Response Plan must describe what measures and/or procedures would be implemented to:</p> <p>(a) respond to any exceedances of the surface water, stream health, and groundwater assessment criteria;</p> <p>(b) compensate landowners of privately-owned land whose water supply is adversely affected by the project; and</p> <p>(c) mitigate and/or offset any adverse impacts on riparian vegetation.</p>	<p>Whitehaven is continuing to operate under the currently approved Groundwater Contingency Plan (GCP) in accordance with Schedule 2 Condition 12. However, the currently approved plan does not meet all the conditions and requirements of the modified Development Consent. Specifically, the currently approved GCP does not include procedures for:</p> <ul style="list-style-type: none"> • responding to exceedances of surface water or stream health criteria; • mitigating and/or offsetting any adverse impacts on riparian vegetation. 	<p>Whitehaven should complete the Surface and Ground Water Response Plan as soon as possible and submit to the DP&I for approval.</p>	<p>See Schedule 3, Condition 25.</p>
Schedule 4, Condition 2	<p>Within 2 weeks of obtaining results showing:</p> <ul style="list-style-type: none"> • an exceedance of the relevant criteria in Schedule 3, 	<p>Audit findings and discussions with Whitehaven confirm that notifications are not being provided to affected</p>	<p>Whitehaven should implement a process to ensure that notification of exceedances is</p>	<p>Confirmation to be sought from OEH and DP&I regarding notification requirements.</p>

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	<p>the Proponent shall notify the affected landowners and tenants in writing of the exceedance, and provide regular monitoring results to each of these parties until the development is complying with the relevant criteria;</p> <ul style="list-style-type: none"> an exceedance of the relevant criteria in Condition 4(b) of Schedule 3, that they are entitled to ask for additional noise mitigation measures to be installed at their residence; and an exceedance of the relevant air quality criteria in Schedule 3, send the affected landowners and tenants (including the tenants of any mine-owned land) a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time). 	landowners and tenants following an exceedance of relevant criteria.	<p>provided to affected landowners and tenants within the required timeframe.</p> <p>Whitehaven should also implement a process to provide regular monitoring results to affected landowners and tenants after an exceedance until the relevant criteria is being met.</p>	<p>Internal checklist to be developed following these discussions.</p> <p>Expect to be implemented by end of March 2012.</p>
Schedule 5, Condition 6	The Applicant shall notify the Director-General and any other relevant agencies of any incident associated with the development as soon as practicable after the Applicant becomes aware of the incident. Within 7 days of the date of the incident, the Applicant shall provide the Director-General and any relevant agencies with a detailed report on the incident.	<p>Evidence was sighted during the audit to indicate that where exceedances of the limits/performance criteria have been detected, these exceedances have generally been reported to both (then) DoP and DECCW. For example, letters dated 19 March 2010 and 10 May 2011 (wet weather discharges) and 3 October 2009 (noise exceedances). However, the notifications are generally not made as soon as practicable after the exceedance had been detected and there was no evidence that they were reported via the Environment Line service as required by the EPL.</p> <p>No evidence was sighted during the audit to indicate that notification was provided to DoP/DP&I or DECCW/OEH for the blast non-compliance that occurred on 1 July 2011.</p>	Whitehaven should implement a process to ensure that notification of exceedances is provided to relevant government agencies within the required timeframe.	<p>Confirmation to be sought from OEH and DP&I regarding notification requirements. Internal checklist to be developed following these discussions.</p> <p>Expect to be implemented by end of March 2012.</p>

DA 88-4-2005 MOD 1 – Area of Concern

Condition	Clause	Audit Finding	Audit Recommendations	Whitehaven Response and Due Date
Schedule 3, Condition 32	<p>By the end of March 2011, the Applicant shall prepare a revised Biodiversity Offset Strategy for the development as a whole to the satisfaction of the Director-General. This strategy must:</p> <p>(a) be prepared in consultation with DECCW;</p> <p>(b) offset all the vegetation clearing associated with the approved development on site;</p> <p>(c) maintain and improve biodiversity conservation values in the region in the medium to long term.</p>	<p>The Biodiversity Offset Strategy was completed and submitted to (then) DoP for approval on 31 March 2011. Whitehaven advised during the audit that, based on their discussions with DP&I and OEH, the Biodiversity Offset Strategy, in its current form, is likely to be rejected as the offsets nominated within the strategy are located within areas that will be disturbed by the proposed TCM Life of Mine project.</p> <p>The Biodiversity Management Plan, Rehabilitation Strategy and Rehabilitation Management Plan are dependent on the completion of the Biodiversity Offset Strategy.</p> <p>Delays in completion of these plans have the potential to affect the management of environmental impacts associated with the Tarrawonga operation and could limit the ability of Whitehaven to achieve continued compliance with a number of modified Development Consent conditions.</p>	Whitehaven should finalise the Biodiversity Offset Strategy for the site in accordance with the Regional Biodiversity Strategy and submit a revised plan to DP&I for approval as soon as possible.	<p>A revised Biodiversity Offset Strategy was submitted to DP&I in November 2011 and was approved on the 17 January 2012 subject to final confirmation of successful retirement of a total of 5,782 biodiversity credits in the Whitehaven Regional Biodiversity Offset Area.</p> <p>The approval letter notes that the development consent also requires that, within 6 months of approval of the BOS:</p> <ul style="list-style-type: none"> A long term security of the offset is provided (condition 33); A biodiversity management plan is submitted for approval (condition 34); and A conservation bond is lodged (condition 35).

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		It is understood from discussions with Whitehaven environmental staff that Whitehaven has been undertaking the preparation of a Regional Biodiversity Strategy to identify and manage appropriate offset areas for its various Gunnedah operations. The proposal was submitted to DECCW in February 2010 and DECCW completed their site inspection in May 2010, however Whitehaven is yet to receive advice as to the determination of the proposal.		These additional requirements are likely to be met on implementation of the Biobanking Agreement for the regional offset area and retirement of biodiversity credits. At the request of the Department, on approval of the Biobanking Agreement a copy of the agreement will be provided to the Department, including associated management and monitoring plans and funding arrangements, to demonstrate that conditions 33-35 have been met. The Rehabilitation Strategy will be updated and submitted by the end of June 2012.

EPL 12365 – Non Compliance

Condition	Clause	Audit Finding	Audit Recommendations	Whitehaven Response and Due Date
R2.1	Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act. Notifications must be made by telephoning the Environment Line service on 131 555.	Evidence was sighted during the audit to indicate that where exceedances of the limits/performance criteria have been detected, these exceedances have generally been reported to both DOP/DP&I and DECCW/OEH. For example, letters dated 19 March 2010 and 10 May 2011 (wet weather discharges) and 3 October 2009 (noise exceedances). However, the notifications are generally not made as soon as practicable after the exceedance had been detected and there was no evidence that they were reported via the Environment Line service. No evidence was sighted during the audit to indicate that notification was provided to DOP/DP&I or DECCW/OEH for the blast non-compliance that occurred on 1 July 2011.	Whitehaven should implement a process to ensure that notification of exceedances is provided to relevant government agencies within the required timeframe.	Confirmation to be sought from OEH and DP&I regarding notification requirements. Internal checklist to be developed following these discussions. Expect to be implemented by end of March 2012.
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.	Evidence was sighted during the audit to indicate that where exceedances of the limits/performance criteria have been detected, these exceedances have generally been reported to both DOP/DP&I or DECCW/OEH. For example, letters dated 19 March 2010 and 10 May 2011 (wet weather discharges) and 3 October 2009 (noise exceedances). However, the notifications are generally not made within 24 hours of detecting an exceedance and there was no evidence that they were reported via the Environment Line service. No evidence was sighted during the audit to indicate that notification was provided to DOP/DP&I or DECCW/OEH for the blast non-compliance that occurred on 1 July 2011.	Whitehaven should implement a process to ensure that notification and reports of exceedances are provided to relevant government agencies within the required timeframe.	Confirmation to be sought from OEH and DP&I regarding notification requirements. Internal checklist to be developed following these discussions. Expect to be implemented by end of March 2012.

Environmental Management Plans

	Clause	Audit Finding	Audit Recommendations	Whitehaven Response and Due Date
	Air Quality and Greenhouse Gas Management Plan	<p>The Air Quality and Greenhouse Gas Management Plan (AQ&GHGMP) was completed and submitted to (then) DoP for approval on 31 March 2011. However, the plan does not include any section on GHG management. Whitehaven sought permission from DP&I to submit the plan on a progressive basis (in accordance with Schedule 2 Condition 11) and to submit a revised AQ&GHG MP containing the GHG Management documentation by 31 Dec 2011. There was no evidence of a reply to this request.</p> <p>Whitehaven is subject to assessment under the Federal Government Energy Efficiency Opportunities (EEO) Program and the first report was due for publishing at the end of December 2011. The completion of the Greenhouse Gas Management component of the AQ&GHGMP was delayed pending completion of the assessment under the EEO program so that any specific measures identified during that process could be incorporated into the revised plan.</p> <p>The air quality assessment criteria in Schedule 3 Condition 18 of the modified Development Consent includes criteria for maximum increase in deposited dust levels. The EIS states that an annual average of 1.3g per m2 per month is a conservative estimate of pre-development background levels of deposited dust for the area surrounding TCM. This figure should be included in the AQ Monitoring Program with the AQ criteria in order to allow TCM to assess the maximum increase in deposited dust levels in accordance with the modified Development Consent.</p>	<p>Update the Air Quality Monitoring and Greenhouse Gas Management Plan to include the required Greenhouse Gas Management component and to reflect any greenhouse gas management measure identified during the EEO assessment.</p> <p>Update the Air Quality Monitoring and Greenhouse Gas Management Plan to include the pre-development background levels of deposited dust for the area surrounding TCM.</p>	<p>The AQGGMP has been updated to incorporate GHG management however submission is pending awaiting discussions with EPA and DP&I regarding notification requirements.</p> <p>To be submitted by the end of March 2012.</p>
	Water Management Plan	<p>The key issue relating to the Water Management Plan is that the following components have not yet been completed for the current consent:</p> <ul style="list-style-type: none"> • Erosion and Sediment Control Plan; • Surface Water Monitoring Plan; • Groundwater Monitoring Program; • Surface and Ground Water Response Plan. <p>Whitehaven is continuing to operate under the currently approved plans and programs in accordance with Schedule 2 Condition 12. However, the currently approved plans and programs do not meet all the conditions and requirements of the modified Development Consent.</p> <p>The issues identified for each of the plans and programs within the Water Management Plan are detailed in the following sections.</p>	See following sections.	See Schedule 3, Condition 25.
	Erosion and Sediment Control Plan	The Erosion and Sediment Control Plan (ESCP) for the current consent has not been completed and Tarrawonga is continuing to operate under the currently approved ESCP. However, the currently approved Erosion and Sediment	<p>Whitehaven should:</p> <ul style="list-style-type: none"> • undertake a review of the management procedures for sediment control dams and storage dams onsite, in order to 	See Schedule 3, Condition 25.

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		<p>Control Plan does not include a description of the location, function, and capacity of the erosion and sediment control structures as required by Schedule 3 Condition 28(d).</p> <p>The audit found that the one of the key non-compliance issues for the Tarrawonga Coal Mine relates to the management of TSS levels in water discharges. Analysis of the water quality monitoring data for the licensed discharge points within the Tarrawonga operation has identified that the management of TSS levels in water discharges is generally only an issue during rainfall events equal to the design rainfall event for the sediment control dams i.e. 5 day 90th percentile design criteria. This issue was also raised during the previous audit. TCM has been addressing this issue through the following mitigation measures:</p> <ul style="list-style-type: none"> • use of a liquid flocculant to lower TSS levels; • pumping to upstream storages, as soon as available in order to reduce discharge potential; • spraying water onto unused roads for evaporation in order to reduce water levels in storage dams and sediment basins; and • Preference given to utilising water in discharge dams SB14 and SD16 on the south-east corner of the southern emplacement area to allow water from the dam to be used for dust suppression. <p>A review of the current TCM surface water and erosion control structures was completed in July 2009 by the Department of Lands Soil Conservation Service. The review concluded that the site has sufficient storage capacity if managed efficiently.</p> <p>It was noted that TSS exceedances in water discharges were reported in the 2009-2010 AEMR and the 2010-2011 AEMR indicating that the issue may be related to the management of the sediment control dams.</p> <p>It was also noted that rehabilitation activities on the northern waste emplacement area have been delayed pending the assessment and determination of the Tarrawonga Life of Mine Project. The delay in rehabilitation activities has the potential to impact on the management of the sediment loads on-site and TSS levels in water discharged from site.</p>	<p>achieve a balance between operational requirements for stored water and sediment control requirements for available storage capacity;</p> <ul style="list-style-type: none"> • include procedures for effective management of sediment and sediment basins in the revised ESCP; • complete and submit a revised ESCP in accordance with Schedule 3 Condition 28 as soon as possible. 	
	Surface Water Monitoring Program	<p>Whitehaven is continuing to operate under the currently approved Surface Water Monitoring Program in accordance with Schedule 2 Condition 12. However, the currently approved program does not meet all the conditions and requirements of the modified Development Consent.</p> <p>In order to meet these conditions outlined in Schedule 3 Condition 29 the revised program would need to include baseline monitoring data, trigger levels for investigating</p>	<p>Whitehaven should complete the Surface Water Monitoring Program as soon as possible and submit to the DP&I for approval.</p>	See Schedule 3, Condition 25.

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		potential issues and programs to monitor surface water flows, stream health or channel stability.		
	Groundwater Monitoring Program	<p>Whitehaven is continuing to operate under the currently approved Groundwater Monitoring Program in accordance with Schedule 2 Condition 12. However, the currently approved program does not meet all the conditions and requirements of the modified Development Consent.</p> <p>In order to meet these conditions outlined in Schedule 3 Condition 30, the revised program would need to include baseline monitoring data, properly expressed trigger levels that can be used for assessing the groundwater monitoring results and identifying potential impacts and a program to validate and calibrate the groundwater model for the project.</p>	Whitehaven should complete the Groundwater Monitoring Program as soon as possible and submit to the DP&I for approval.	See Schedule 3, Condition 25.
	Surface and Groundwater Response Plan	<p>Whitehaven is continuing to operate under the currently approved Groundwater Contingency Plan in accordance with Schedule 2 Condition 12. However, the currently approved plan does not meet all the conditions and requirements of the modified Development Consent.</p> <p>In order to meet these conditions outlined in Schedule 3 Condition 31, the revised program would need to include procedures for responding to exceedances of surface water or stream health criteria and mitigating and/or offsetting any adverse impacts on riparian vegetation.</p>	Whitehaven should complete the Surface and Ground Water Response Plan as soon as possible and submit to the DP&I for approval.	See Schedule 3, Condition 25.
	Biodiversity Offset Strategy	<p>The Biodiversity Offset Strategy was completed and submitted to (then) DoP for approval on 31 March 2011. Whitehaven advised during the audit that, based on discussions with DP&I, the Biodiversity Offset Strategy in its current form is likely to be rejected since the offsets nominated within the strategy are located within areas that will be disturbed by the proposed TCM Life of Mine project.</p> <p>It is understood from discussions with Whitehaven environmental staff that Whitehaven has been undertaking the preparation of a Regional Biodiversity Strategy to identify and manage appropriate offset areas for its various Gunnedah operations. The proposal was submitted to DECCW in February 2010 and DECCW completed their site inspection in May 2010, however Whitehaven is yet to receive advice as to the determination of the proposal.</p> <p>The following plans are dependent on the completion of the Biodiversity Offset Strategy:</p> <ul style="list-style-type: none"> • Biodiversity Management Plan; • Rehabilitation Strategy; and • Rehabilitation Management Plan. <p>Delays in completion of these plans have the potential to affect the management of environmental impacts associated with the Tarrawonga operation and could limit</p>	Whitehaven should finalise the Biodiversity Offset Strategy for the site in accordance with the Regional Biodiversity Strategy and submit a revised plan to DP&I for approval as soon as possible.	<p>A revised Biodiversity Offset Strategy was submitted to the Department of Planning and Infrastructure in November 2011 and was approved on the 17th January 2012 subject to final confirmation of successful retirement of a total of 5,782 biodiversity credits in the Whitehaven Regional Biodiversity Offset Area.</p> <p>The approval letter notes that the development consent also requires that, within 6 months of approval of the BOS:</p> <ul style="list-style-type: none"> • A long term security of the offset is provided (condition 33); • A biodiversity management plan is submitted for approval (condition 34); and • A conservation bond is lodged (condition 35). <p>These additional requirements are likely to be met on implementation of the Biobanking Agreement for the regional offset area and retirement of biodiversity credits. At the request of the Department,</p>

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		the ability of Whitehaven to achieve continued compliance with a number of modified Development Consent conditions.		on approval of the Biobanking Agreement a copy of the agreement will be provided to the Department, including associated management and monitoring plans and funding arrangements, to demonstrate that conditions 33-35 have been met. The Rehabilitation Strategy will be updated and submitted by the end of June 2012.

Key Environmental Issues

	Key Issue	Audit Finding	Audit Recommendations	Whitehaven Response and Due Date
	Water management	<p>During the audit inspection surface water was observed to be generally well managed. Diversion drains and sediment basins were in operation at the time of the audit and the water management system was separating clean and dirty water streams. Diversion drains were generally well vegetated and the large drain on the western side of the northern emplacement had been rock-lined as an erosion and sediment control measure.</p> <p>The northern batter of the northern emplacement area has been reshaped but not topsoiled or revegetated and some minor signs of erosion were observed in this area.</p> <p>Audit findings relating to the management of wet weather discharges are discussed in Section 3.4.2.</p>	None.	See Schedule 3, Condition 25.
	Hydrocarbon and chemical management	<p>Hydrocarbons including oils and greases were generally observed to be stored in impervious bunded areas at the workshop area (Plate 1 in Appendix 5). The bunded areas observed at the workshop during the audit would generally provide suitable secondary containment in the event of a spill with spill kits noted to be available in each bunded area. The main diesel storage tanks sighted at the workshop during the audit were self bunded containers with appropriate vehicle collision protection and impervious bunded areas for refuelling.</p> <p>Waste oil is stored within an impervious metal bund inside a shipping container.</p>	None.	No further action required.
	Noise	<p>Whitehaven has established an attended noise monitoring program. A review of the monitoring data shows that the noise exceedances recorded mostly relate to traffic noise on the private sections of the haul road between Tarrawonga and the Whitehaven CHPP. Whitehaven has addressed this issue through discussions with affected landowners and have negotiated private agreements with them regarding acceptable noise levels from coal trucks on the private sections of the haul road, or have subsequently acquired the affected properties.</p> <p>The actions taken by Whitehaven in responding to both the</p>	None.	No further action required.

		identified exceedances and the complaints from the community, in the auditors opinion, demonstrate a proactive and positive approach to managing noise issues associated with the operations.		
	Air Quality	<p>Whitehaven has an approved Air Quality Monitoring Program in place for the Tarrawonga operations and evidence was sighted during the audit to indicate that the approved plan is generally being implemented. For example, water sprays were in operation at the truck loading facility at the time of audit (Plates 3 and 4 in Appendix 5), watering water carts were in operation at the time of the audit, watering access roads around the site (Plate 5 in Appendix 5), and coal transport trucks were covered prior to leaving site. Dust levels were observed to be well managed during the site inspection (Plate 2 in Appendix 5), with staff interviews indicating a high level of environmental awareness, particularly in relation to dust control.</p> <p>The audit found that there have been recorded exceedances of PM₁₀ criteria at the Tarrawonga operations and that Whitehaven has undertaken an investigation whenever such an exceedance is recorded. When exceedances have occurred, Whitehaven has notified both (then) DoP and DECCW and provided a report on the investigations and the probable cause of the exceedance. The management practices in place at the mine are considered to minimise the potential for ongoing exceedances.</p>	None.	No further action required.
	Coal Transport	<p>Coal transportation was observed to be undertaken along the nominated coal transport route to the Whitehaven CHPP.</p> <p>The coal transport route was generally noted to be free of spilt coal. Loaded trucks observed leaving the site during the audit, and travelling along the coal transport route, had their loads covered (Plate 3 in Appendix 5).</p> <p>Whitehaven has Road Maintenance Agreements in place with Gunnedah Shire Council and Narrabri Shire Council for the maintenance of local roads used for the transportation of coal to the Whitehaven CHPP. These Road Maintenance Agreements include maintenance of the roads associated with the Tarrawonga operations, including Bluevale Road and Hoad Lane.</p> <p>Noise monitoring of the road transport operations is being undertaken and to date no exceedances have been recorded. However the monitoring is not being undertaken in accordance with the currently approved Noise Management Plan (NMP). The NMP states that attended road noise monitoring sessions will be undertaken on a quarterly basis for the day and evening time periods however no monitoring was undertaken for the following quarters:</p>	Whitehaven should ensure that procedures are in place to undertake attended road noise monitoring sessions quarterly for the day and evening time periods in accordance with the approved Noise Management Plan.	See Schedule 2, Condition 12.

		<ul style="list-style-type: none"> • September 2009; • September 2010; and • December 2010. <p>It was also noted that there have been no attended road noise monitoring sessions during the evening periods in any quarter.</p>		
	Waste Management	Waste management on site was generally noted to be undertaken in a manner consistent with the modified Development Consent. Waste bins were sighted at various locations around the site and were observed to be mostly well utilised. In the workshop area, bins were available for oily rags and used filters and waste oils were pumped to the waste oil tank.	None.	No further action required.