



NORTH PARKES

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NORTH PARKES MINES

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29 December 2012

Howard Reed
Manager - Mining
Mining & Industry
Major Projects Assessment
NSW Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Howard

RE: DC06-0026 NORTH PARKES MINES INDEPENDENT AUDIT REPORT

As per the requirements of Development Consent DC06-0026, please find attached the final report on the triennial Independent Environmental Audit of Northparkes Mines (NPM) required under schedule 4, condition 5 of the consent.

No findings of high significance were identified during the audit. A total of six moderate and nine low significance findings were identified. These items are summarised in Table 1, and NPM's response outlined.

A number of recommendations to improve environmental performance were also provided in the report, and NPM's response to these is provided in Table 2.

A copy of the audit report will be placed on NPM's website in accordance with DC06-0026, Schedule 4, Condition 9.

If you have any questions with regard to the audit report, or associated response, please contact Nicole Gregory, Environment Superintendent on (02) 6861 3606 in the first instance.

Yours Sincerely
NORTH PARKES MINES

KERRIE EDWARDS
MANAGER – HEALTH, SAFETY, ENVIRONMENT COMMUNITY AND FARMING

Table 1 Significant Findings of Development Consent DC06-0026

Non-Conformance Issue	Condition Numbers	Description of Condition	Comment	Significance	Recommendation	NPM Response
Revision and approval of management plans	Schedule 2 condition 1 Schedule 4 condition 9	S2 C13 By 30 June 2010, the Proponent shall review and update as necessary the environmental management strategies and monitoring programs in this approval to reflect modification application 06_0026 Mod 1. The plans, strategies and programs shall be prepared in consultation with the relevant authorities, and to the satisfaction of the Director-General. S4 C9 Within 3 months of the approval of any plan/strategy/ program required under this approval (or any subsequent revision of these plans/ strategies/ programs), or the completion of the audits or AEMRs required under this approval, the Proponent shall: a) Provide a copy of the relevant document/s to the relevant agencies; b) Ensure that a copy of the relevant document/s is made publicly available at the Mine; and c) put a copy of the relevant document/s on	The revision and update of applicable management plans was not completed by 30 June 2010. First request for extension of time to submit revised plans, strategies and programs in accordance with Condition 12 of Schedule 2 is a letter dated 14 July 2010. Current DP&I approval status of some management plans is unknown and an email request for confirmation of receipt and approval status was sent on 27 September 2011. A response was received as this report was being finalised indicating that most documents had been received and were in review but a couple had not been received by the Department. NPM subsequently resubmitted these and distributed them for consultation. Revisions of plans/strategies/programs are not always provided to the relevant agencies within 3 months, with NPM indicating major changes to plans would be submitted for approval. Not all approved management plans required by consent are available on NPM website.	Low	During finalisation of the report, NPM completed the following recommendation: Confirm approval status of all management plans, programs and strategies. Once approved supply documents to appropriate agencies and update NPM website to include current management plans. Update HSEQ MS Documentation and Control Procedure to include requirement to distribute Environmental Management Plans to relevant regulatory authorities on revision.	Approval status of Plans confirmed via email communication dated 6 th October 2011 from Department of Planning and Infrastructure. Outstanding documents provided to DPI, as per letter dated 28 October 2011. Currently awaiting final approval of plans. Subsequent to approval, NPM website will be updated with approved documents. HSEQ MS Documentation and Document Control Procedure will be updated to reflect requirements for provide documents for revision of approving parties.

Non-Conformance Issue	Condition Numbers	Description of Condition	Comment	Significance	Recommendation	NPM Response
		the Proponent's website;				
Water discharge incidents	Schedule 3 condition 6	Except as may be expressly provided for by an EPL, the Proponent shall not discharge any water from the site.	The EPL does not permit the discharge of water from the site. Two discharge events occurred in 2010, both reported in 2010 AEMR. A Penalty Infringement Notice was issued in relation to the sediment laden water discharge event in July 2010 under section 64 of the POEO Act for failure to comply with conditions of the site EPL.	Mod-erate	Contingency Plan refers to Operational Water Management Plan (A258054) which is currently under review. Contingencies are in place for extreme rainfall events but failed to prevent discharge events. As such ERM recommends water management contingency planning be reviewed, and that inspection programmes for water controls be enhanced as detailed in later findings.	Discharge events have previously been reported, and actioned. Weekly monitoring of water infrastructure has been established, and further work will occur in 2012 to improve flood risk management.
Incident and exceedance reporting	Schedule 4 Condition 3	Within 7 days of detecting an exceedance of the limits/performance criteria in this approval, or an incident causing (or threatening to cause) material harm to the environment, the Proponent shall report the exceedance/incident to the Department and any other relevant agency.	Incidents related to discharge events and dust were rated as high on NPM's incident reporting system. The sediment laden water discharge event was not reported to the department or the EPA within 7 days of detection. The incident resulted in a Penalty Infringement Notice as discussed above.	Mod-erate	Given recent announcements of impending legislation to require immediate notification of actual or potential material environmental harm NPM should review incident response protocols to ensure the EPA and other relevant agencies are notified immediately of potential environmental impacts, not after the impacts have been assessed.	Presentation regarding changes to legislation has been provided to NPM Management team. Incident reporting procedure is currently being updated to reflect the altered reporting requirements.
Noise	Schedule 3 Condition 18	The Proponent shall ensure that the noise generated by the Project does not exceed 35dB(A) LAeq(15 minute) or 45dB(A) LA1(1 minute) at	One exceedance of criteria was recorded and reported in the 2008 AEMR of approx 4d(BA) at night on September 17 2008. Based on the data in the AEMRs (2008 to 2010)	Low	No specific action is required in relation to this issue as subsequent readings are below criteria, the issue was reported and monitoring is	No action required.

Non-Conformance Issue	Condition Numbers	Description of Condition	Comment	Significance	Recommendation	NPM Response
Overpressure and Vibration monitoring	Schedule 3 Condition 20 Schedule 3 Condition 21 Statement of Commitment 3.5 and 13.2	any privately-owned residence. The Proponent shall ensure that the airblast overpressure level from blasting at the Project does not exceed the criteria in Table 1 at any residence on privately-owned land. The Proponent shall ensure that the ground vibration level from blasting at the Project does not exceed the criteria in Table 2 at any residence on privately-owned land.	this was an isolated exceedance that was reported to the regulators via the AEMR. During open cut mining, one blast monitor was operated at the nearby privately owned residence 'Hubberstone' and was programmed to record ground vibration and airblast overpressure for every blast. The monitor was decommissioned in late October 2010 when surface mining in E22 ceased. Over 2010, 133 blasts were under limits for overpressure (both 115 and 120dB) and ground vibration (5 and 10mm/s) and in fact were not detectable. One blast was not monitored, and this was reported as a non-compliance in the Annual Environmental Management Report (AEMR). NPM considers that this blast was likely to be consistent with other blast results, that is, non-detectable in terms of vibration and overpressure. This incident was discussed with the former Open Cut Superintendent who indicated that this was an oversight by technicians who were filling in for a geologist on leave, and failed to turn on a monitor.	Low	ongoing. No specific action is required in relation to this issue as the incident has been addressed and surface mining has ceased.	No action required.
Blast hours	Schedule 3 Condition 22	The Development Approval requires that all surface blasting on site be restricted	The Northparkes Mines (2009) Management Plan - Surface Mining - Mine Safety Management Plan	Low	No specific action is required in relation to this issue as surface mining has ceased.	No action required.

Non-Conformance Issue	Condition Numbers	Description of Condition	Comment	Significance	Recommendation	NPM Response
	Statement of Commitment 2.2	to between 9am and 5pm Monday to Saturday inclusive. No surface blasting is allowed outside the above hours without the written approval of the Director-General.	restricted blasting to between 9am and 5pm Monday to Saturday. No surface blasting was allowed outside these times without the written approval of the Manager. However there have been some exceedances of these hours. On 13 December 2008 a surface blast was fired at 7:22 pm in the E22 open cut pit outside permitted operating hours for Saturdays (i.e. 9:00am to 5:00pm). On Thursday 9 July 2009 a surface blast was fired at 5:27pm outside permitted blasting times for surface mining (i.e. 9:00am to 5:00pm) in the E22 open cut pit. These instances were reported to the regulator through the AEMR.		there was no significant impact and the issue was reported.	
Dust	EPL Condition 03.1	The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	Community complaints were received by NPM and OEH in September 2011 relating to dust plumes originating from Tailings Storage Facility TSF1. The incident investigation is ongoing but NPM indicate that no active dust management measures exist for TSF1. While no monitoring data was available at the time of the audit to determine compliance with performance criteria contained in the Conditions of consent, NPM have not maintained TSF1 in a condition which minimises or prevents dust emissions. No visible dust was noted during the audit. In July 2010 sediment laden water originating from the clay outer face of the W4 waste rock dump discharged off site due to reduced capacity in sediment drain at toe of	Moderate	Close out TSF 1 dust complaint investigation and implement appropriate mitigation measures to reduce potential dust emissions from TSF1 and TSF2. Ensure adequate dust management measures are available for inactive components of projects. Where no immediate plans are in place to utilise any disturbed area, long term dust control options should be implemented.	Communication regarding this matter has been ongoing with the Office of Environment and Heritage. The capability for short term dust mitigation in the form of water application has been established. Plans for the application of a trial of a dust suppressant polymer as well as advanced, and waiting on appropriate weather to action. Work is ongoing to assess long term dust control options to mitigate future issues.
Sediment discharge	EPL Condition O1.1	Licensed activities must be carried out in a competent manner.		Low	As a result of the incident investigation NPM has reportedly re-established drainage lines, rehabilitated the outer contours of the W4	Discharge events have previously been reported, and actioned as outlined. Weekly monitoring of water infrastructure has been

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			<p>dump that had resulted from the rock dump extending beyond its design footprint. NPM received a Penalty Infringement Notice (PIN), issued by Office of Environment and Heritage (OEH) in relation to this event. OEH indicated in their response to agency consultation that the PIN was for contravening section 64 of the Protection of the Environment Operations Act 1997 through failure to comply with conditions of the site EPL 4784. The 2010 AEMR records this non-conformance as failure to carry out activities in a competent manner.</p>		<p>waste rock dump and reviewed all site water management structures to ensure adequacy and capacity. It is noted that sampling and analysis of water parameters is conducted quarterly covering groundwater, surface water, farm dams, watercourses (field notes were sighted and describe the sampling conditions and water quality). The storage capacity of the ponds and the status of any pumpout is also checked weekly. Furthermore a technical inspection of water systems is conducted weekly. Nevertheless, these inspections apparently did not identify that the waste rock dump had intruded on the water controls, and it is recommended that the inspection process be reviewed to assess whether it is comprehensive and whether the inspections are rigorous.</p>	<p>established, and further work will occur in 2012 to improve flood risk management.</p>
Sediment discharge	EPL Condition R2	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.	Sediment laden water discharge event was not reported to the EPA by phone as soon as practicable after the event was noticed or in writing within 7 days.	Mod-erate	Given recent announcements of impending legislation to require immediate notification of material environmental harm NPM should review incident response protocols to ensure the EPA and other	Presentation regarding changes to legislation has been provided to NPM Management team. Incident reporting procedure is currently being updated to reflect the altered reporting requirements.

Non-Conformance Issue	Condition Numbers	Description of Condition	Comment	Significance	Recommendation	NPM Response
		of the Act.			relevant agencies are notified immediately of potential environmental impacts, not after the impacts have been assessed. Recommendations relating to the stormwater discharge are described in the previous finding.	
Reporting of Incidents	EPL Condition R3.2	Where an authorised officer of the EPA suspects on reasonable grounds that, where this licence applies to premises, and event has occurred at the premises, and the event has caused, is causing or likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event. The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.	EPA Notice to provide information and/or records was received by NPM on 18 August 2010 regarding sediment release event. Response was required by 17 September 2010. NPM Response provided with all requested details in Letter dated 15 October 2010.	Mod-erate	NPM to make resources available to respond appropriately to EPA requests in identified timeframes.	Noted. Incident reporting procedure is in the process of being updated to reflect requirements.
Topsoil Stockpile Height	Statement of Commitment 3.5	The Statement of Commitments within the Environmental Assessment indicates that soil stockpiles should be no greater than 2 metres in height (3 metres	This requirement is carried through to the NPM Topsoil Management Plan. Stockpile design plans provided by NPM to Estcourt TSF construction contractors were reviewed and confirm that height and	Low	NPM Engineering to respond to NPM Environment team's recommendations. It is understood that a formal letter of correction has	Monthly audits are conducted and will assess the ongoing effectiveness of this action.

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		for subsoil) with slopes no greater than 1:4.	slope requirements were conveyed to contractors undertaking the stockpiling. During the site inspection, the stockpile height in some areas appeared to exceed 2 metres, although this was difficult to gauge from the viewpoint of the TSF wall overlooking the stockpile area. NPM enforces compliance with the NPM Topsoil Management Plan through Site Disturbance Permits and Compliance Inspections against those permits. NPM's Compliance Inspection dated September 2011 for the Estcourt TSF stockpiling indicated that the stockpile height and certain other requirements had not been met and that NPM's Environment Department instructed Engineering to correct this. This issue has been raised as a noncompliance but is considered minor given that NPM has controls in place to correct the issue. A number of Disturbance Permits were reviewed and it was noted that follow-up Compliance Inspections were often not performed; it is recommended that a more rigorous programme of inspection be put in place.		already been sent to the contractor. NPM Environment Team to consider whether stockpile requirements can be enforced more effectively with contractors prior to construction. It is recommended that a more rigorous programme of follow-up Compliance Inspections be put in place.	
Vegetation Survey	Statement of Commitments 9.16	The Statement of Commitments within the Environmental Assessment indicates that NPM will undertake a small scale vegetation survey to provide guidance on a suite of species appropriate for rehabilitation within 2 years	DNA Environmental undertook an assessment of vegetation in "reference sites" in January 2010. This document established completion criteria and methodologies for monitoring changes in various aspects of ecosystem function, succession and longterm sustainability. GHD also	Low	No specific action is required in relation to this issue as the reports have been prepared and implemented.	No action required.

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		of E48 approval.	provided a review of surrounding vegetation communities as part of the Vegetation Management Plan for the Offset (February 2010). As the E48 project was approved in Feb 2007, these reports were prepared approximately one year behind the due date but otherwise meet the intent of the condition.			
Aboriginal Heritage monitoring	Statement of Commitments 10.5	The Statement of Commitments within the Environmental Assessment indicates that NPM will involve local Wiradjuri representatives to monitor removal of topsoil material within Zone 1 (Goonumbla Creek), which has been identified as an area of the property which is of higher sensitivity in relation to heritage.	Zone 1 was affected by the E48 construction project (for example, the new overland conveyor runs through the Zone). According to the Annual Environmental Management Report (AEMR) 2007, an area within Zone 1 was disturbed prior to internal approvals and prior to monitoring by Wiradjuri representatives. This was reported to regulators (via AEMR 2007) and internally investigated, and corrective actions were put in place. The topsoil stockpile from the area was later sieved and 23 artefacts including a hand-axe were identified.	Mod-erate	No specific action is required in relation to the incident as the issue has been addressed and corrective actions (e.g. signage, enforcement of permit system) have been put in place to prevent reoccurrence. Issue ranked as moderate as actual damage did occur. It is recommended that the existing map in the Heritage Management Plan, which is based on Paton's 2006 survey, be reviewed to confirm that it locates items identified in subsequent surveys. It is also suggested that the items be mapped on a site plan showing current disturbance so that item location is clearer and potential risk to heritage is easier to identify.	No action required
E48 Mine Water quality monitoring	Statement of Commitments 13.7	The Statement of Commitments within the Environmental Assessment indicates that NPM will Monitor pH / EC of water	OEH response to agency consultation identified that NPM had reported a non-conformance against this condition in May 2011 occurring since operations of E48 mine	Low	NPM should confirm that required monitoring is in place and notify OEH accordingly.	Installation of equipment is currently scheduled for January 2012. Notification will be made to OEH subsequent to completion of

Non-Conformance Issue	Condition Numbers	Description of Condition	Comment	Significance	Recommendation	NPM Response
Review of Water Management Plan	Statement of Commitments 6	The Statement of Commitments within the Environmental Assessment indicates that NPM will ensure the surface infrastructure related to the E-48 project and modification works is incorporated into a comprehensive surface water management system compatible with the existing surface water management system. This includes the commitment to review the Site Water Management Plan in consultation with DWE and DECC	Site water management plan has been reviewed and incorporates the Escort TSF. The plan was submitted to DP&I in June 2011. No evidence of consultation is included in the plan. The legal and other requirements register identifies an action required as "Need to ensure that these plans are provided to DWE and DECC prior to the commencement of construction". The approval status of the Water Management Plan was not known by NPM at the time of the audit.	Low	Confirm approval status of Water Management Plan and consult with DWE (currently referred to as the NSW Office of Water) and DECC (OEH) as to adequacy of the measures relating to Escort construction and operation surface water management infrastructure.	works. Approval status of Management Plans confirmed via email communication dated 6 th October 2011 from Department of Planning and Infrastructure. Outstanding documents provided to DPI, as per letter dated 28 October 2011. Currently awaiting final approval of plans. HSEQ MS Documentation and Document Control Procedure will be updated to reflect requirements to provide documents for review and comment to key stakeholders.

Table 2 Audit recommendations and response

Audit Recommendation		NPM Response and Actions
1	<p>Landscape Plans. There are numerous overlapping and interrelated plans addressing landscape management, closure and rehabilitation, as demonstrated in the reference list of this Report. It is recommended that plans on a given topic be integrated, updated and consulted with regulators where relevant.</p>	<p>Noted. Review of land use management plan, closure and rehabilitation plans is scheduled for 2012. Consultation with relevant authorities will occur as part of this process.</p>

	Audit Recommendation	NPM Response and Actions
2	<p>Mine Closure Plans. There are a number of plans and specialist reports on this topic and there is an opportunity to integrate and simplify the Plans. It appears that Closure Plans have been updated and these should be referred to the regulators for review - this has been raised as a non-compliance against Schedule 2. The document "Management Plan Mine Closure" EMP102.06 dated March 2007 is now outdated. It is recommended that Closure Plans be integrated, updated and consulted with regulators where relevant.</p>	<p>Noted. Review of NPM closure plan is scheduled for 2012.</p>
3	<p>Tailings Storage Facility (TSF) Capping. The EPA (now OEH) requested in comments on the Closure Plan that encapsulation meet permeability of 10⁻⁹ m/s. Current trials in relation to capping of the Tailings Dams are underway. It is recommended that NPM clarify whether this requirement will apply to the tailings dam cap.</p>	<p>Noted. Comments from EPA have been provided to the TSF capping study team for consideration in trial design.</p>
4	<p>Revisions to Management Plans. Revisions are made regularly to Management Plans prepared under the Development Approval. The point at which these revisions should be referred to the regulators for review and approval is unclear. NPM staff indicated that there is an informal policy that minor revisions are managed internally but that major revisions would be referred to the relevant regulators. It is recommended that NPM set a formal internal process (perhaps through Document Control procedures) that is confirmed with the regulators.</p>	<p>NPM HSEQ MS Document control procedure will be updated to reflect requirements for regulatory review of documents.</p>
5	<p>Visual: The Development Approval requires that the Proponent shall minimise the visual impacts of the Project to the satisfaction of the Director-General. A simple assessment of sightlines from the residences and the public road (supported by photographs and a brief covering report) would confirm and document the limited impact of the site on neighbours, and may identify areas where revegetation activities could be focused to manage future impact.</p>	<p>Visual assessment is scheduled for 2012.</p>
6	<p>Lighting: The Development Approval requires that the Proponent shall ensure that no outdoor lights shine above the horizontal. NPM procedures indicate that this issue has been considered in principle but</p>	<p>Noted. Maintenance order for lighting will be amended to reflect requirements for lighting directions.</p>

Audit Recommendation

NPM Response and Actions

there are no specific documents to allow confirmation of implementation. It is recommended that the site assess this issue and adopt implementation measures as required.

7 **Revegetation and Rehabilitation:** The overall pace at which revegetation and rehabilitation should occur in order to manage risk and match likely closure dates is unclear (notwithstanding the Three Year Plan) and a more detailed overall strategy would be useful in the Landscape Plan. Reporting against the Three Year Plan in the AEMR is somewhat hard to follow for external parties – while the completion criteria are provided in detail, a simple assessment of progress against the previous Three Year Plan would be useful, and it is recommended that this be incorporated in future.

Noted. Rehabilitation management plan is scheduled for review and update in 2012 and will incorporate recommendations.

8 **Heritage:** The Aboriginal Heritage Management Plan requires that surface inspections be undertaken prior to disturbance, and that subsurface testing be undertaken prior to disturbance in Zone 1 near Goonumba Creek. Any identified objects must be salvaged, including the already-identified sites A2 and A3. The AHMP appears to permit the destruction of other already-identified materials. However the description of the materials approved for destruction is unclear and it is recommended that this Plan be reworded for clarity.

Noted. Documents to be reviewed and amended to ensure consistent application of requirements.

9 NPM Management Plans indicate that NPM is a relatively low risk environment for acid rock drainage. The Management Plans addressing Non-Mineral Waste describe various controls to manage ARD. However the Plan also notes that salinity and sodicity are more significant issues, and at present monitoring of material does not include evaluation of these issues. NPM's parent company Rio Tinto has recently undertaken an acid rock drainage risk assessment that provides a similar recommendation and also recommends an extensive overhaul of the Plan and monitoring programmes. NPM has developed an action plan to address the identified issues including GIS mapping of nonmineral waste, an inspection plan and a revised monitoring programme. It is

To be actioned as noted.

NPM Response and Actions	Audit Recommendation
	<p>recommended that this action plan be endorsed by senior personnel and that the action plan be subsequently implemented.</p>