APPENDIX 2

Director General's Requirements and Authority Consultation

NSW GOVERNMENT
Department of Planning

Contact: Mike Young
Phone: (02) 9228 6481
Fax: (02) 9228 6466
Email: Mike.Young@planning.nsw.gov.au

Mr Mathew Cooper
Project Director
Underground Project
Mt Arthur Coal Pty Limited
Thomas Mitchell Drive Private Mail Bag 8
MUSWELLBROOK NSW 2333

Our ref: S02/02202

Dear Mr Cooper

Director General's Requirements
Proposed Mt Arthur Coal South Pit Extension Project

The Department has received your application for the proposed Mt Arthur Coal South Pit Extension Project in the Muswellbrook local government area (reference number: 06_0108).

I have attached a copy of the Director General's requirements (DGRs) for the project. These requirements have been prepared in consultation with the relevant government authorities, including the Muswellbrook Council, and are based on the information you have provided to date. I have also attached a copy of the government authority comments for your information.

Please note that under section 75F(3) of the *Environmental Planning and Assessment Act 1979*, the Director-General may alter these requirements at any time.

I would appreciate it if you would contact the Department at least two weeks before you propose to submit your draft Environmental Assessment for the project to determine the:

- fees applicable to the application;
- consultation and public exhibition arrangements that will apply; and
- number and format (hard-copy or CD-ROM) of the Environmental Assessment that will be required.

As you may know, the Department will review the draft Environmental Assessment in consultation with the relevant authorities to determine if it adequately addresses the Director-General's requirements. If the Director-General considers the Environmental Assessment to be inadequate, you will be required to revise it prior to public exhibition.

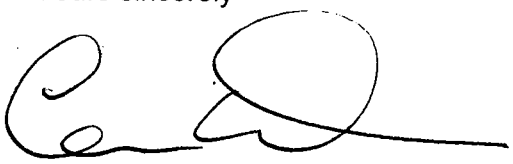
The Director-General's requirements will be placed on the Department's website along with other relevant information which becomes available during the assessment of the project. As a result, the Department would appreciate it if the documents submitted to the Department are in a suitable format for the web, and if you would arrange for an electronic version of the Environmental Assessment for the project to be hosted on a suitable website with a link to the Department's website.

Finally, if your proposal contains any actions that could have a significant impact on Matters of National Environmental Significance, it will require an additional approval under the

Commonwealth *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act). This approval would be in addition to any approvals required under NSW legislation. If you have any questions about the application of the EPBC Act to your proposal, you should contact the Commonwealth Department of Environment and Heritage in Canberra (6274 1111 or http://www.deh.gov.au).

If you have any enquiries about these requirements, please contact Mike Young, Manager of the Department's Mining & Extractive Industries team (02 9228 6481).

Yours sincerely



26.4.06

Chris Wilson
A/Executive Director
as delegate for the Director-General

Director-General's Requirements

Section 75F of the *Environmental Planning and Assessment Act 1979*

Application Number	06_0108
Project	The proposed Mt Arthur Coal South Pit Extension project, which includes: • extending the existing South Pit 2.4 kilometres further south; • producing up to 3 million tonnes of run-of-mine coal a year; and • rehabilitating the site.
Location	Approximately 3km south-west of Muswellbrook, in the Upper Hunter Valley
Proponent	Hunter Valley Energy Coal Pty Ltd
Date of Issue	26 April 2006
Date of Expiration	26 April 2008
General Requirements	The Environmental Assessment (EA) must include • an executive summary; • a detailed description of the project including the: - need for the project; - alternatives considered; and - various components and stages of the project; • consideration of any relevant statutory provisions; • an environmental risk analysis of the project which takes into consideration the issues raised during consultation; • a detailed assessment of the key issues specified below, which includes: - description of the existing environment; - an assessment of the potential impacts of the project, including potential cumulative impacts (particularly on surface and groundwater, flora and fauna, noise, and air quality) that may arise from the combined operation of the mine, together with existing Mt Arthur operations including Bayswater No. 2, the proposed Mt Arthur Coal Underground project, and the neighbouring Drayton Coal Mine and Saddlers Creek Proposal; - a description of the measures that would be implemented to avoid, minimise, mitigate, offset, manage, and/or monitor the impacts of the project; • a draft Statement of Commitments, outlining environmental management, mitigation and monitoring measures; • a conclusion justifying the project, taking into consideration the environmental impacts of the proposal, the suitability of the site, and whether or not the project is in the public interest; • a signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading.
Key Issues	• **Flora and Fauna** – including impacts on critical habitats, threatened species, populations, ecological communities and native vegetation. An offset strategy should be included to compensate for the loss of existing (or previously approved) conservation areas, and to ensure that there is no net loss of flora and fauna values in the area in the medium to long term; • **Surface and Groundwater** - including a site water balance, a salinity budget, and potential impacts on Saddlers Creek. A surface and groundwater contingency strategy must be included as part of the mitigation measures for the project which details the measures proposed to protect the supply of water to landowners and the environment in the region;

	• **Rehabilitation, Final Landform and Final Void Management** – including a justification of the proposed final land use for the site in relation to strategic land use objectives and the synoptic landscape plan for the Upper Hunter Valley area; a detailed description of how the site would be progressively rehabilitated and integrated into the biodiversity offset strategy for the project; and the measures which would be put in place for the long term protection and management of the site (and any off-site biodiversity offset areas) following cessation of mining; • **Noise** – including construction, operation, and on-site and off-site road and rail noise impacts, including impacts adjacent to the Antiene rail spur; • **Blasting and Vibration**; • **Air Quality** – including a detailed greenhouse gas assessment, and consideration of impacts in the vicinity of the Antiene rural residential area; • **Heritage** - both Aboriginal and non-Aboriginal; • **Visual**; • **Traffic and Transport**; and • **Social and Economic**.
References	The Environmental Assessment should take into account appropriate State government technical and policy guidelines. While not exhaustive, guidelines which may be relevant to the project are included in the attached list.
Consultation	During the preparation of the Environmental Assessment, you must consult with the relevant local and State government authorities, service providers, community groups, affected landowners and any affected Commonwealth government authorities. In particular you must consult with: • Department of Environment and Conservation; • Department of Natural Resources; • Department of Primary Industries; • Muswellbrook Shire Council; • Australian Rail Track Corporation; and • NSW Roads and Traffic Authority.
Deemed refusal period	60 days

State Government Technical and Policy Guidelines - For Reference

Aspect	Policy /Methodology
Soil and Water	
	• *Managing Urban Stormwater: Soils & Construction* (Landcom); • *Guidelines for Fresh and Marine Water Quality* (ANZECC); • *Rehabilitation Manual for Australian Streams* (Land and Water Resources Research and Development Corporation); • *NSW State Rivers and Estuaries Policy* (DNR); • the various *State Groundwater Policy* documents (DNR); • *Approved Methods for the Sampling and Analysis of Water Pollutants in NSW* (DEC); • *Environmental Guidelines: Use of Effluent by Irrigation* (DEC);
Flora and Fauna	
	• draft *Guidelines for Threatened Species Assessment* (DEC); • *Threatened Biodiversity Survey and Assessment: Guidelines for Development and Activities* (DEC); • *Guidelines for Developments Adjoining Department of Environment Conservation Land* (DEC); • *NSW Groundwater Dependent Ecosystem Policy* (DNR); • *Policy and Guidelines for Fish Friendly Waterway Crossings* (DPI);
Blasting and Vibration	
	• *Technical Basis for Guidelines to Minimise Annoyance due to Blasting and Ground Vibration* (ANZECC);
Noise	
	• *NSW Industrial Noise Policy* (DEC); • *Environmental Criteria for Road Traffic Noise* (DEC); • *Environmental Noise Control Manual* (DEC);
Air Quality	
	• *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (DEC);
Heritage	
	• draft *Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation* (DEC); • *Assessing Heritage Significance* (NSW Heritage Office); • *NSW Heritage Manual* (NSW Heritage Office); • *Archaeological Assessment Guidelines* (NSW Heritage Office, 1996)
Traffic	
	• *Guide to Traffic Generating Development and Road Design Guide* (RTA); • *RTA Road Design Guide* (RTA); • relevant Austroad standards;
Rehabilitation	
	• *Guidelines for Rehabilitation of Land for Agricultural End Use* (DPI);
Waste	
	• *Environmental Guidelines: Assessment and Classification and Management of Liquid and Non-Liquid Wastes* (DEC).

307.5395/02/04;4
06/778
Brad Parkes

RTA

Manager, Mining & Extractive Industries
Major Development Assessment
NSW Department of Planning
GPO Box 39
SYDNEY NSW 2001

Attention: Mr Mike Young

MT ARTHUR COAL SOUTH PIT EXTENSION PROJECT – MAJOR PROJECT APPLICATION – ENVIRONMENTAL ASSESSMENT REQUIREMENTS (EARS)

Dear Mr Young

I refer to your letter dated 5 April 2006 regarding the proposed development application to be considered under Part 3A of the EP&A Act 1979, forwarded to the RTA for our EARs.

The RTA's primary interests are in the road network, traffic and broader transport issues, particularly in relation to the efficiency and safety of the classified road system, the security of property assets and the integration of land use and transport.

In accordance with the *Roads Act 1993*, the RTA has powers in relation to road works, traffic control facilities, connections to roads and other works on the classified road network. The New England Highway (H9) is part of the National Network and Denman Road (MR 316) is a classified state road. RTA concurrence is required for connections to these roads with Council consent, under section 138 of the Act. Council is the roads authority for all public roads in the area.

Our requirements for the environmental impact assessment primarily relate to traffic generation to / from the site. In this regard the following guidelines would apply:

- Planning NSW EIS Guidelines
  - *Road and Related Facilities*
- Roads and Traffic Authority's *Guide to Traffic Generating Developments*
- EPA's *Environmental Criteria for Road Noise*

The RTA's interests in relation to the road network are to:

- Maintain an efficient and safe road system (includes SEPP 11 considerations)
- Facilitate the integration of land use and transport
- Maintain the integrity and security of the road network, property and assets.

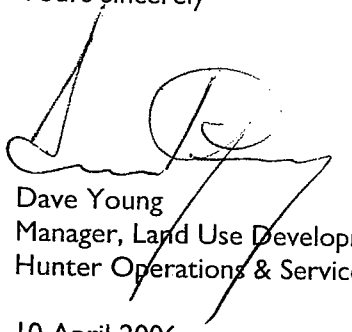
Roads and Traffic Authority
ABN 64 480 155 255
59 Darby Street
Newcastle NSW 2300
Locked Bag 30 Newcastle NSW 2300
DX 7813 Newcastle
T 02 4924 0240
www.rta.nsw.gov.au

The EIS should demonstrate consideration of these issues.

While it is noted that coal transport will be by rail, the impacts of any road traffic generated during the construction and operational phases should be identified, together with any improvements required to the internal and external road network.

If you have any queries please contact me on (02) 4924 0688.

Yours sincerely



Dave Young
Manager, Land Use Development
Hunter Operations & Services

10 April 2006

NSW Government
DEPARTMENT OF NATURAL RESOURCES

Your Ref: S02/02202
Our Ref: ER6918

11 April 2006

Manager - Mining and Extractive Industries
Department of Planning
PO Box 39
SYDNEY NSW 2001

Attention: Michael Moore

Dear Michael

S02/02202 - Proposed Mt Arthur Coal South Pit Extension Project
Major Project Application

I refer to your correspondence of 5 April 2006, in relation to the proposed Mt Arthur Coal South Pit Extension Project. As requested in your letter, the Department of Natural Resources, Hunter Region (DNR) provides the following for inclusion in the environmental assessment (EA) requirements for the project.

A. Relevant Legislation

DNR has received legal advice in relation to the administration of water access rights under the *Water Act 1912* (WA) and *Water Management Act 2000* (WMA) for projects approved under Part 3A of the *Environmental Planning and Assessment Act 1979* (EPAA). This advice has concluded that section 75U of Part 3A of the EPAA does not remove the need for any project subject to that Part to obtain a right to water under water legislation. That is, if the water source is subject to the WMA, then an access licence is required and if the water source is subject to the WA then a Part 2 or Part 5 licence is required.

Any licences required for a project include the right to water and the right to construct and use the work. Under the WA, it is not legally possible to separate these licences into components, to be assessed separately. Similarly, it is not practically possible to separate works approvals and water access licences under the WMA.

The practical approach to this situation is for the Department of Planning and DNR to agree on Project Approval conditions and apply them to both the approval and any water licence required. Therefore, it is important that the Environmental Assessment (EA) address the principles, objects and targets of both the WA and WMA.

B. Relevant Policies

Any mine proposal must address the relevant NSW State Government natural resource management policies, including:

- NSW State Rivers and Estuaries Policy
- NSW Wetlands Management Policy
- NSW Groundwater Policy Framework Document - General
- NSW Groundwater Quantity Management Policy
- NSW Groundwater Quality Protection Policy
- NSW Groundwater Dependent Ecosystem Policy

Hunter Region 26 Honeysuckle Drive Newcastle NSW 2300 PO Box 2213 Dangar NSW 2309
Telephone (02) 4904 2500 Facsimile (02) 4904 2501 Website dnr.nsw.gov.au

C. Relevant Guidelines

The DNR has adopted the following publications as best practice management in the area of stream rehabilitation and groundwater modelling:

- Land and Water Resources Research and Development Corporation. 2000. Rehabilitation Manual for Australian Streams. ISBN 0642 76030 6.
- Middlemis, Hugh. 2001. Groundwater - Groundwater flow modelling guideline. Murray-Darling Basin Commission. ISBN 1876830166.

Also, the following document contains important considerations for assessment of mining operations in the Hunter Valley:

- Healthy Rivers Commission. May 2002. Independent Inquiry into the Hunter River System. Final Report.

D. Key Issues

In order for DNR to complete an assessment under relevant legislation, it is essential that the following issues are included in the EA.

1. Impacts on Surface and Ground Waters

The *Independent Inquiry into the Hunter River System* (Healthy Rivers Commission : May 2002) made a key recommendation (KR 6) in relation to assessment of the cumulative effects of mining in the valley. The Commission recommended that in light of the permanent changes to aquifers and streams caused by mining, that the cumulative impact to these systems are assessed in individual development applications.

On the basis of this recommendation, the EA must include a revised water balance for the Mount Arthur Coal operation, which examines:

- sources of water supply
- location and design specifications for all clean water diversions
- details of internal drainage of the contaminated water circuit
- details in regard to any mine water storage proposed for the development
- discussion of proposed monitoring programs and reporting procedures
- description of the integrated water management system, including an assessment of the water management system under a range of conditions (including 10%, 50% and 90% wet years and severe storm events)

The Healthy Rivers Commission made a further ancillary recommendation (AR 5.5) that water reuse in mining operations should be promoted and receive explicit attention in development applications. Considering this recommendation, the proponent must fully examine water re-use options, including use of excess incidental mine-make water from adjacent operations.

E. Secondary Issues

It is requested that the EA also address the following issue.

1. Riparian Buffer Areas

The EA must include:

- detailed assessment of fracture initiation and propagation between the highwall and the fringe of any affected alluvial aquifer, including justification for any hard rock barrier limits that are established between the proposal and Saddlers Creek
- geomorphic monitoring and contingency plan

- management plans for all riparian areas

If you would like to discuss any matter further, please contact me on 4904 2544.

Yours sincerely

Vicki McBride

Vicki McBride
Acting Resource Access Manager
Hunter Region

NSW DEPARTMENT OF
PRIMARY INDUSTRIES

Our Reference: 05/5463
18 April 2006

Mr Michael Young
Manager, Mining & Extractive Industries
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Dear Mr Young

Mt Arthur Coal South Pit Extension Project
Major Project

I refer to your letter dated 5 April 2006 for the above project requesting environmental assessment requirements (EARs).

As coal is a prescribed mineral under the *Mining Act, 1992*, the proponent must hold an appropriate mining title from the Department of Primary Industries (DPI) in order to mine this mineral. The mining title is subject to standard and special conditions, with the preparation of a Mining Operations Plan (MOP) and Annual Environmental Management Report (AEMR) being specific requirements for any mining lease before operations can commence. Relevant health and safety issues will need to be dealt with in accordance with the requirements of the *Coal Mine Health and Safety Act 2002* and the *Coal Mines Regulation Act, 1982*.

DPI has reviewed the *Preliminary Environmental Assessment – Mt Arthur Coal South Pit Extension Project* dated March 2006 and offers the following comments to be reviewed in the Environmental Assessment (EA).

DPI LEGISLATION REQUIREMENTS

The proposed area is currently within existing Mining Leases (ML1358, ML 1548 & ML1487). Integrated rehabilitation and environmental management reporting is to be captured in the existing Mining, Rehabilitation and Environmental Management Report documents.

The proponent will need to commence early discussions with DPI on the requirements for the preparation and submission of a revised Mining Operations Plan (MOP). The annual reporting will be captured within the existing Mt Arthur Complex Annual Environmental Management Report (AEMR).

Minerals Development
PO Box 344
Hunter Region Mail Centre NSW 2310
516 High Street
Maitland

ABN 51 734 124 190
www.dpi.nsw.gov.au
Tel: 02 4931 6549
Fax: 02 4931 6793

SOILS, LAND CAPABILITY AND AGRICULTURAL SUITABILITY

The EA should clearly define the classes for Land Capability and Agricultural Suitability. The proponent should plan final landform to reinstate the pre-mining Land Capability classes or alternative and the landscape units should be clearly identified in the EA final rehabilitation plans. To efficiently manage soils and land capabilities, the proponent should apply 'Best Practice' for soil handling and management.

SURFACE WATER MANAGEMENT

Water management will need to be assessed and the EA should detail, but not be limited to, the:

- Detailed description of water courses and hydrology study of the impacted catchment areas
- Integration of water sharing and water strategies for external users
- Contingencies for water storages and diversions around the impacted area
- Review of future options for the water currently stored in the Drayton void and potential seepage from Mt Arthur's West Cut Tailings Dam
- Control and management of mine water and runoff water
- Stabilisation of drainage lines

VISUALS

Although considered to have a minor impact, the EA should review the visual impacts associated with the project and detail any proposed mitigation strategies.

FINAL LANDFORM

The proponent should detail the conceptual rehabilitated final landform of the impacted areas. The EA should detail, but not be limited to, the:

- Method of linking the final landform with the pre-existing land use and any offset areas
- Options of restoring and enhancing the natural ecology of the area
- Establishment of a clear set of rehabilitation completion criteria that includes short, medium and long-term ecological criteria

Should you have any enquires regarding this matter please contact Julie Moloney, Senior Project Officer, Minerals Development on (02) 4931 6549.

Yours sincerely

for Garth Holmes
Manager
Minerals Development

Minerals Development
PO Box 344
Hunter Region Mail Centre NSW 2310
516 High Street
Maitland

ABN 51 734 124 190
www.dpi.nsw.gov.au
Tel: 02 4931 6549
Fax: 02 4931 6793

Department of
Environment and Conservation (NSW)

Your reference : S02/02202
Our reference : NEF19180: 270760A10
Contact : Mitchell Bennett (02) 49086806

Mr Mike Young
NSW Department of Planning
PO Box 39
SYDNEY NSW 2001

18 APR 2006

Dear Sir

PROPOSED MT ARTHUR NORTH SOUTH PIT EXTENSION PROJECT – PART 3A ENVIRONMENTAL ASSESSMENT REQUIREMENTS (EARS)

I refer to your letter dated 5 April 2006 asking the Department of Environment and Conservation's (DEC) to provide its Environmental Assessment Requirements (EAR's) for the preparation of an Environmental Assessment (EA) for the above proposal.

The DEC has considered the details of the proposal as provided by the Department of Planning and has identified the information it requires to be covered in the EA. In summary, the DEC's key information requirements for the proposal are:

- An assessment of any potential impacts on threatened species,
- An assessment of any potential impacts on Aboriginal cultural heritage,
- A prediction of the capacity of the existing water management system to incorporate saline water generated by the proposed development,
- A prediction of noise generated by the proposed development, and
- A prediction of the likely air quality resulting from the proposed development.

The proponent should be aware that any commitments made in the EA may be formalised into an environmental protection licence or a variation of their existing licence. Accordingly, pollution control measures should not be proposed if they are impractical, unrealistic or beyond the financial viability of the development.

The EA must provide sufficient information to enable a full assessment of the development against the EPA's statutory responsibilities. In particular, the requirements of Section 45 of the *Protection of the Environment Operations Act 1997* (POEO Act) must be addressed.

The DEC requests that the applicant provide **four (4)** copies of the EA for pre-exhibition review. These documents should be lodged with the Department of Environment and Conservation, PO Box 488G, Newcastle NSW 2300.

Based on the information provided to the DEC, the existing Environment Protection Licences (EPL) for the Bayswater, Drayton and Mt Arthur North Coal Mines will be required to be varied for the proponents to carry out the proposed scheduled development activities. Should development consent be granted, the licence holders will need to make a separate application to the DEC to vary these licences. General information on EPL requirements can

PO Box 488G, Newcastle NSW 2300
117 Bull Street, Newcastle West NSW 2302
Telephone (02) 4908 6800
Facsimile (02) 4908 6810
ABN 30 841 387 271
www.environment.nsw.gov.au

be obtained from the DEC's Environment Line on 131 555 during office hours or can be found at the DEC web-site at: http://www.environment.nsw.gov.au/home.htm.

If you require any further information on this matter please contact me on (02)49086803.

Yours sincerely

MITCHELL BENNETT
Head Regional Operations Unit
Environment Protection and Regulation Division
Department of Environment and Conservation (NSW)

Encl: Attachment 'A' – Environmental Assessment Requirements

ATTACHMENT A

Department of Environment and Conservation Environmental Assessment Requirements for the Mt Arthur Coal South Pit Extension project.

General Information

The following information must be provided in the Environmental Assessment Report (EA Report) to enable the DEC to accurately assess the environmental implications of the proposed Mt Arthur Coal underground project. The EA Report must adequately describe the development proposal and the existing environment including air, noise, waters, soils, flora and fauna characteristics.

In addressing the issues and providing the information outlined below, the EA Report must ensure that those aspects relating to the joint works, facilities and environmental considerations arising from the utilisation of components of the existing coal processing site with those of the proposed underground mines and the existing Mt Arthur open cut mine operations are fully explained.

1. The Proposal

The objectives of the proposal should be clearly stated and refer to:

- the size and type of the operation;
- the anticipated level of performance in meeting required environmental standards and cleaner production principles;
- the staging and timing of the proposal; and
- the proposal's relationship to any other industry or facility.

2. The Premises

The EA Report will need to fully identify all of the processes and activities intended for the site over the life of the development. This will include details of:

- The location of the proposed facility and details of the surrounding environment;
- The proposed layout of the site;
- Appropriate landuse zoning;
- Ownership details of any residence and/or land likely to be affected by the proposed facility;
- Maps/diagrams showing the location of residences and properties likely to be affected and other industrial developments, conservation areas, wetlands, etc in the locality that may be affected by the facility;
- All equipment proposed for use at the site;
- Chemicals, including fuel, used on the site and proposed methods for their transportation, storage, use and emergency management;
- Waste generation and disposal;
- Methods to mitigate any expected environmental impacts of the development.
- Site rehabilitation following termination of the development.

3. Air

The EA Report must include a detailed Air Quality Impact Assessment (AQIA). The AQIA must identify and describe in detail the significant sources of air pollution and activities/processes with the potential to cause fugitive dust emissions and in particular odour emissions beyond the boundary of the development site. The AQIA should cover both the construction and operational phases of the development. The AQIA should take into account cumulative impacts associated with existing developments and any developments having been granted development consent but which have not commenced.

The EA Report should demonstrate that the facility will operate within the DEC's objectives which are to minimise adverse effects on the amenity of local residents and sensitive land uses and to limit the effects of emissions on local, regional and inter-regional air quality.

The AQIA must also include, but not be limited to, the following:

- Provide a description of existing air quality, using existing information and site representative ambient monitoring data. This description should include the following parameters:

  - dust deposition;
  - total suspended particulates;
  - PM_{10} particulate matter.

- Identification and location of all fixed and mobile sources of dust/air emissions from the development including rehabilitation. The location of all emission sources should be clearly marked on a plan for key years of the quarry development. Identify all pollutants of concern and estimate emissions by quantity (and size for particles), source(s) and discharge point(s).

- Details of the project that are essential for predicting and assessing impacts on air quality including:

  - the quantity and physio-chemical characteristics of materials to be handled, stored or transported;
  - an outline of the procedures for material handling, storage and transport;
  - the management of activities and areas with potential for impacts on air quality.

Note: emissions can be classed as either:
- point (eg emissions from stack or vent) or
- fugitive (from wind erosion, leakages or spillages associated with loading or unloading, crushing/screening, conveyors, storage facilities, plant and yard operation, vehicle movements (dust from road, exhausts, loss from load), land clearing and construction works).

- A description of the topography and surrounding land uses.

- Details of the exact locations of dwellings, schools and hospitals etc. Where appropriate provide a perspective view of the study area such as the terrain file used in dispersion models.

- Estimate the resulting ground level concentrations of all pollutants. Use an appropriate dispersion model to predict ambient TSP and PM_{10} dust concentrations and dust

deposition levels. Reference should be made to the EPA's *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in New South Wales.*

- A detailed description of the methodology used to assess the air quality impacts of the development. The use of a particular dispersion model and model parameters used should be justified and discussed. The dispersion model input/output files should be included.

- Air quality impact predictions should include plans showing projected incremental levels of 24-hour average PM_{10} concentrations, annual average dust deposition rates and annual average total suspended particulate concentrations throughout the life of the operation.

- An assessment of cumulative air quality impacts and a description of the methodology used.

- An assessment/scoping of the feasibility of coal-bed methane capture and use.

- An assessment of the potential impacts on air quality other than by dust, for example nitrogen oxide emissions from diesel equipment and/or odour emissions arising from the venting of methane.

- Describe the effects and significance of pollutant concentration on the environment, human health, amenity and regional ambient air quality standards or goals.

- Describe the contribution (if any) that the development will make to regional and global pollution, particularly in sensitive locations.

- An assessment of the impacts on air quality of dust and any other pollutants generated during construction works. In this context, particular attention should be given to:

    - The nature, extent and duration of dust generating activities, e.g. earthmoving equipment, exposed surfaces, material stockpiles, unsealed trafficked areas, spillages etc.

    - Consideration of the location of dust sources, particularly their proximity to sensitive receptors prior to finalisation of any acquisition or similar processes.

- Outline specifications of pollution control equipment (including manufacturer's performance guarantees where available) and management protocols for both point and fugitive emissions. Where possible, this should include cleaner production processes.

- Include details of an air quality monitoring program to determine effectiveness of mitigation and to verify predictions, including provision for investigations in response to complaints.

- Control measures to be implemented to minimize dust generation during construction activities, and on the coal stockpile.

4. Noise

The EA Report must include a comprehensive noise assessment of the existing environment, potential impacts and proposed noise amelioration measures. The *New South*

Wales Industrial Noise Policy (EPA, 2000) provides a guide to the methodology and assessment criteria preferred by the DEC to determine noise planning levels. The EA Report must determine the existing background (L_{A90}) and ambient (L_{Aeq}) noise levels in accordance with the NSW Industrial Noise Policy.

The evaluation should take into account the construction and operational phases of the development over the "operating" hours proposed and take into account adverse weather conditions including temperature inversions. The assessment must identify any noise sensitive locations likely to be affected by activities at the site, such as residential properties, schools, churches, and hospitals.

The project specific noise levels for the site must be determined. For each identified potentially affected receiver, this should include:

- determination of the intrusive criterion for each identified potentially affected receiver,
- selection and justification of the appropriate amenity category for each identified potentially affected receiver,
- determination of the amenity criterion for each receiver,
- determination of the appropriate sleep disturbance limit.

The noise and vibration levels likely to be received at the most sensitive locations (these may vary for different activities at each phase of the development) should be determined. Potential impacts should be determined for any identified significant adverse meteorological conditions. Predicted noise levels under calm conditions may also aid in quantifying the extent of impact where this is not the most adverse condition.

Sound power levels measured or estimated for all plant and equipment should be clearly stated and justified. The expected noise level and noise character (eg: tonality, impulsiveness, vibration, etc) likely to be generated from noise sources during the following phases should be determined:

- site establishment
- construction
- operational phases
- transport including traffic noise generated by the proposal
- other services.

The EA Report should include an assessment of cumulative noise impacts, having regard to existing developments and developments which have received development consent in the area but which have not commenced. Of particular interest is the noise generated due to increased use of the rail loop.

5. Water

The EA Report must provide sufficient information to demonstrate that the proposed development can be operated whilst complying with the *Protection of the Environment Operations Act* (1997), in particular, the protection of water quality, including ground water, during construction, during operation and following closure of the proposed coal stockpile.

The methodology, data and assumptions used to design any pollution control works and assess the potential impact of the proposal on water quality, must be fully documented and justified.

The EA Report must include a water management plan and site water balance (which includes cumulative water balance information for the open cut and underground mines) incorporating the following principles:

- Maximum on-site reuse of wastewater together with the use of control and storage works to avoid any discharge of pollutants from the premises. This must include correct installation and sizing of the wastewater collection and recycling systems;
- Prevention of wet weather overflows of contaminated stormwater by collection and reuse or treatment of contaminated first flush stormwater;
- Segregation of contaminated water from non-contaminated water to minimise the volume of polluted water to be dealt with;
- Spillage controls and bunding;
- Sealing and effectively bunding material storage areas and active areas of the plant to prevent soil and groundwater contamination;
- Effective management of stormwater to segregate surface water runoff from undisturbed areas and disturbed areas;
- Maintenance of sediment and erosion control structures;
- Sealing, kerbing and guttering of trafficable areas; and
- Provision of truck washing facilities capable of washing wheels and under body of vehicles leaving the premises.

If a wastewater discharge is proposed it must be justified and it must be demonstrated that controlled discharges can be managed in compliance with the requirements of the Hunter River Salinity Trading Scheme (HRSTS).

If a discharge under the HRSTS is found to be necessary and the discharge would be via a tributary of the Hunter River, the EA Report must include a tributary impact assessment that addresses the following:

- Impacts on downstream landholders:
    - A list of downstream landholder/tenants including a record of permanent or seasonal activities;
    - A description and list of all crossings, culverts and other in-stream structures.
- Physical and biological impacts:
    - existing flow and stream characteristics, including current bank and bed profiles, potential flow volumes at key points of inflection within the stream course, stability of stream banks and beds and an assessment of soil types.
    - Assessment of likely impacts of proposed discharge including impacts on flow characteristics, potential for erosion of banks, bed or damage to riparian vegetation.
- Proposed measures to:
    - minimise the impacts of discharge on downstream landholders, including a discharge notification procedure;
    - reduce potential erosion hazards at vulnerable points in the stream banks, protect and maintain riparian vegetation and bank stability, and provisions for energy dissipation of discharge waters where necessary.

In cases where more than one mine discharges to a tributary, the EA Report must also address the collective impacts of discharge to that tributary.

If any increase in saline water discharge is likely to occur in the "Upper Sector" of the Scheme's operation, the EA should also consider the likely impact on the application of the sector credit discount factor in this Sector.

6. Fuel and Chemicals Storage

The EA Report must identify any fuel or chemical storage areas to be established on the site and describe the measures proposed to minimise the potential for leakage or the migration of pollutants into the soil/waters or from the site.

7. Waste Management

The EA Report should provide full details and classification of wastes generated from the process and their disposal options. Classification and management of waste should be in accordance with the DEC's *Environmental Guidelines: Assessment Classification & Management of Liquid & Non-Liquid Wastes* (EPA:1999).

The DEC understands that sewage effluent management for this facility is proposed via onsite treatment and disposal. The EA Report must detail how the effluent management facilities will be designed and constructed and provide a comprehensive land capability assessment and water balance if disposal by land irrigation is proposed. Reference should be made to the DEC's *"Environmental Guidelines: Use of Effluent by Irrigation"* (DEC, 2004).

8. Monitoring Programs

The EA Report should include a detailed assessment of any noise, air quality, water quality or waste monitoring required during the construction phase and on-going operation of the facility to ensure that the development achieves a satisfactory level of environmental performance. The evaluation should include a detailed description of the monitoring locations, sample analysis methods and the level of reporting proposed.

9. Contaminated Land

The EA Report must determine whether contaminated soils are likely to be disturbed during the proposed works. If contaminated soils are likely to be disturbed, the EA Report should detail the measures to be adopted to protect human health and the environment, and if necessary remediate or dispose of the contaminated material. The following DEC guidelines may be helpful in assessing any actions required in respect of the proposed works:

- *Contaminated Sites - Guidelines for Consultants Reporting on Contaminated Sites* (EPA 1997);
- *Contaminated Sites - Guidelines for the NSW Site Auditor Scheme* (EPA 1998); and *Contaminated Sites - Sampling Design Guidelines* (EPA 1995).

10. Flora and Fauna

The EA Report must detail the existing environment including discussion on flora and fauna characteristics. The following requirements should be addressed at a level of investigation appropriate to the site's current condition.

Your attention is also drawn to the Commonwealth legislation, the *Environment Protection and Biodiversity Conservation Act 1999.* If any species requiring consideration under this legislation may be affected by the proposal, approval for the works may also be required from the Commonwealth Department of Environment.

A key issue for this proposal is the potential impact that subsidence throughout the catchments of the Hunter River and other watercourses will have on water quality and quantity and ecological communities dependant on ground and surface water flows.

Flora

A comprehensive description of the vegetation of the subject site should be prepared. This will include an assessment of the condition of the plant communities present, including the designation of conservation significance at a local, regional and State level, and an assessment of the likely occurrence of any threatened species, populations and / or ecological communities listed under Schedules 1 or 2 of the *Threatened Species Conservation Act 1995* and any Rare or Threatened Australian Plant (ROTAP) species.

A plan showing the distribution of any threatened or ROTAP species and the vegetation communities on the subject site, and the extent of vegetation proposed to be cleared should be provided. This plan should be at the same scale as the plan of the area subject to development, and preferably showing the footprint of the proposed development superimposed on the vegetation, in order to assist in the assessment of impacts on existing vegetation.

Where the assessment concludes that threatened species, populations or their habitats, or endangered ecological communities exist on or are in close proximity to the subject site, the effect of the proposed development should be determined by an assessment pursuant to Section 5A of the *Environmental Planning and Assessment Act 1979*. An assessment of the impact of the development on the plant communities and / or ROTAP species should also be provided.

A description of the measures proposed to mitigate and / or ameliorate the impact of the development on the plant communities, threatened and ROTAP species.

Fauna

A fauna survey to identify the distribution and abundance of fauna species known or likely to use the subject site should be undertaken. This should include a description of available fauna habitats and an assessment of the conservation status of each of the faunal components at a local, regional and State level.

A plan showing the results of the above survey should be provided. The plan should be at the same scale as (or as an overlay to) the plan of the development footprint and overall site, to assist in the assessment of potential impacts of the proposal on fauna.

An assessment of the potential impact of the development on fauna should be provided.

An assessment of the occurrence or likely occurrence of threatened species or populations, or their habitats, on the subject land should be provided. Where the assessment concludes that threatened species or populations, or their habitats, exist on or in close proximity to the subject site, the effect of the proposal should be determined in accordance with an assessment pursuant to Section 5A of the *Environmental Planning and Assessment Act 1979*.

A description of the measures proposed to mitigate and/or ameliorate the impact of the development on fauna should be provided.

11. Surveys and Assessments

The DEC can provide records of flora and fauna held in:

- The Wildlife Atlas http://wildlifeatlas.nationalparks.nsw.gov.au/wildlifeatlas/watlas.jsp
- Rare or Threatened Australian Plants (ROTAP) database.
- Threatened Species, Populations & Ecological Communities of NSW Catchments www.threatenedspecies.environment.nsw.gov.au

It should be noted that these databases are not comprehensive, should only be used as a guide and do not negate the need for specific site investigations.

Fauna, flora, vegetation and cultural heritage surveys should be undertaken by suitably qualified persons and the qualifications and experience of the persons undertaking the work should be provided. Surveys and assessments should not be confined to the immediate development footprint, but also include any areas where ancillary works may be undertaken, for example, any upgrade in site access roads or other supporting infrastructure.

Dates and times, site locations, survey design and methodology, analysis techniques and weather conditions at the time of the assessments and surveys must be provided. The limitations of surveys should be identified and the results interpreted accordingly.

Conclusions drawn in surveys and assessments should be substantiated by evidence resulting from those surveys and assessments. The document being supported by the surveys and assessments should reflect the conclusions and clearly state where recommendations of the survey and assessments have been incorporated in the proposal.

12. Aboriginal and Cultural Heritage

General Issues

For the purpose of these guidelines Aboriginal heritage is considered to include "Aboriginal objects" and places of significance to Aboriginal communities.

Under the *National Parks and Wildlife Act 1974* (NP&W Act), an "Aboriginal object" is defined as any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of the area by persons of non-Aboriginal extraction, and includes Aboriginal remains. Aboriginal objects are confined to physical evidence. Aboriginal objects are sometimes referred to as Aboriginal sites.

An "Aboriginal place" is a place which has been declared so by the Minister for the Environment because s/he believes that the place is or was of special significance to Aboriginal culture. It may or may not contain physical Aboriginal objects.

It should also be noted that there are places in the landscape which have particular meaning for Aboriginal people, for example, spiritual areas or natural mythological areas. Although these areas are not protected under the NP&W Act, unless they contain physical remains of Aboriginal occupation or have been declared an "Aboriginal place", it is recommended that the potential impact of proposals on such places also be considered in the assessment process.

Should any Aboriginal archaeological sites be present in the study area, the requirements of the NP&W Act with respect to Aboriginal objects should also be considered. Under s.90 of

the NP&W Act, it is an offence to knowingly damage deface or destroy Aboriginal objects without prior permission of the Director-General of the DEC.

Assessment requirements

It should be noted that Aboriginal cultural heritage is ubiquitous in the Lower Hunter/Central Coast area, even in areas which have already been highly modified. If any topsoil disturbance or excavation is proposed then there may be potential to uncover Aboriginal objects.

The presence or absence of Aboriginal objects should be identified and the significance of the area to the local Aboriginal community must be determined. Accordingly a search of the Aboriginal Heritage Information Management System (AHIMS) should be conducted as a first step. Search results can be obtained upon written application to the Registrar, Cultural Heritage Division, on telephone (02) 9585 6471.

An assessment of the archaeological sensitivity of areas of the subject site and identification of significance of the site to the local Aboriginal community should be undertaken by an appropriately qualified person in consultation with the local Aboriginal community. This may require field survey.

Aboriginal objects and places of significance to the Aboriginal community should be detailed on a plan. This plan should be at the same scale as that of the subject site and development footprint, to assist in the assessment of the impact of the proposal on the identified cultural components.

A report discussing the results of survey and consultation, and including a description of measures proposed to mitigate impacts of the development on any identified Aboriginal objects and other recommendations, should be prepared in accordance with the *NPWS Aboriginal Cultural Heritage Standards and Guidelines Kit* and submitted with the EA Report for review. Please note these guidelines are under review but should be used for reference purposes. A contingency plan that details the measures to be taken in the event that Aboriginal objects are discovered during the course of works on the subject site must be prepared.

Details of extensive consultation with the local Aboriginal community must be provided as per the DEC Interim Community Consultation Requirements for Applicants, which may be found on the DEC website at www.nationalparks.nsw.gov.au/npws.nsf/Content/Publications. Please note these guidelines are interim, with a view to being finalised following consultation with external stakeholders in 2006.

NSW DEPARTMENT OF
PRIMARY INDUSTRIES

Our ref: CF 06-089
Your ref: S02/02202

18 April 2006

Michael Moore
Department of Planning
GPO Box 39
SYDNEY NSW 2001
Michael.moore@planning.nsw.gov.au

Dear Michael

Re: Mt Arthur Coal South Pit Extension Project

Thank you for giving the NSW Department of Primary Industries (NSW DPI) the opportunity to provide input into the Director-General's Environmental Assessment Requirements for the above proposal that is being assessed under Part 3A of the Environment Planning and Assessment Act 1979. The Department would like to see the following issues addressed:

- Address all immediate and ongoing impacts on water quality: Any overland flows from the site to the local waterways will need to be treated, in particular the potential water quality impact on Saddlers Creek.

For further information, please contact me on 4916 3905.

Yours sincerely

David Harasti
Conservation Manager
Aquatic Habitat Protection

Aquatic Habitat Protection
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Hunter - Central Rivers CMA CATCHMENT MANAGEMENT AUTHORITY

Mr Mike Young
Manager Mining and Extractive Industries
Department of Planning
GPO Box 39
Sydney NSW 2001

Your ref: S02/02202
Our ref:

Dear Mr Young

Re: Mt Arthur Coal South Pit Extension Project Major Project Application

Thank you for the opportunity to comment on the proposal to extend the South Pit of Mt Arthur Coal's open cut mine and the accompanying *Preliminary Environmental Assessment Report.*

As you would be aware, the Hunter-Central Rivers Catchment Management Authority (CMA) has recently prepared a draft Catchment Action Plan (CAP) that is currently being reviewed by the Natural Resources Commission prior to approval by the Minister.

The draft CAP contains specific policy statements for mining and extractive operations which seek to '*Minimise the impacts of mining and extractive operations on natural resources and ensure appropriate rehabilitation of affected land*'

The CMA has high expectations of mining and extractive operations and seeks to work with industry and regulators to achieve world best practice in natural resource management. The CMA's draft mining policy highlights the need for greater attention to surface and groundwater management of both new and existing operations. This is a matter that the CMA suggests should be given close attention in regard to this proposal.

The CMA suggests in the draft policy that mining development proposals should not be approved until a 'life of mine' Water Management Plan (WMP) is completed and approved by an expert panel. The WMP would show how mining will be conducted so that water resources are managed sustainably for the full lifespan of the mine including after closure.

The CMA therefore considers that any further environmental assessment of this proposal should include the development of a suitable Water Management Plan.

If you have any queries regarding this information, please contact Callaghan Cotter A/g Program Manager, Hunter at the CMA office on 4930 1030.

Yours sincerely

Glenn Evans
General Manager
13 April 2006

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