THE UNITED MINEWORKERS' FEDERATION OF AUSTRALIA

(Division of the Construction, Forestry, Mining and Energy Union)
(Incorporating the Federal & State Registered Unions)

Northern District Branch

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Dear David

RE: REVIEW OF ENVIRONMENT ASSESSMENT –DRAYTON SOUTH COAL PROJECT

Please find attached the CFMEU Northern District Branch's Submission in relation to the abovementioned matter.

The Union welcomes the opportunity to commence on the abovementioned Project.

Should you have any questions concerning the same, please do not hesitate to contact the Union Office.

Yours sincerely

KEENON ENDACOTT
INDUSTRIAL RESEARCH OFFICER

Date: 21/12/12

Mining and Energy Division

Review of Environmental Assessment

Drayton South Coal Project

11-0062

Submission

Construction Forestry Mining and Energy Union (Mining and Energy Division)

Northern District Branch

December 2012

On 4 March 2011 Anglo American Metallurgical Coal Pty Ltd applied to the Minister, Department of Planning seeking approval for the continuation of the existing Drayton Mine through the extraction of coal by both open cut and highwall mining operations in the Drayton South areas.

The Director General made the Environmental Assessment publicly available on the 7 November 2012 at the DP & I Information Centre Sydney, Muswellbrook Shire Council and Nature Conservation Council.

The Union is pleased to take the opportunity to comment on the Drayton South Coal Project and related activities Environmental Assessment.

The Mining and Energy Division is a Division of the CFMEU under the Federal Workplace Relations Act 1996, with over 120,000 members, one of the largest in Australia. The Division covers several industries including the coal industry, coal ports, metalliferous mining industries, electrical power generation, oil and gas and the Nation's small coking industry.

The Northern District Branch of the CFMEU Mining and Energy Division, being the branch that on behalf of the organisation which is making the submission is the principal Union representing coal miners in the Northern District coalfields of New South Wales. The operations is located approximately 10 kilometres north-west of the village of Jerry's Plains and approximately 13 kilometres south of Muswellbrook is wholly within the State's Northern District coalfields.

The Union is familiar with the Drayton facility site and has engaged the services of an Environmental Consultant with extensive experience in local government and environmental assessments on coal mining related projects.

Project Overview

The Project involves:

- The continuation of operations at Drayton Mine as presently approved with minor additional mining areas within the East, North and South Pits;

- The development of an open cut and highwall mining operation extracting up to 7Mtpa of ROM coal over a period of 27 years within the Drayton South area; The utilisation of the existing Drayton Mine equipment fleet with the addition of a highwall miner and coal haulage fleet;
- The continuation of the existing workforce of up to 530 employees and contractors;
- The use of Drayton Mine's final landform voids for rejects and tailings disposal and water storage;
- The utilisation of the existing Drayton Mine infrastructure including the Coal Handling and Preparation Plant, rail loop and associated loading infrastructure, workshops, bath houses and administration offices;
- The construction of a transport corridor between the Drayton South mining area and the existing Drayton Mine;
- The continued utilisation of the Antiene Rail Spur off the Main Northern Railway to transport product coal to the Port of Newcastle for export;
- The realignment of a section of Edderton Road; and
- The installation of further water management and power reticulation infrastructure to support mining in the Drayton South area.

A contractor based workforce of approximately 369 personnel will be required during the peak construction phase.

Following construction within the Drayton South area, there will be a period when mining will occur at the existing approved Drayton Mine and within the Drayton South area concurrently as mining activities are transitioned. During this period, personnel and equipment will be progressively transferred from Drayton Mine to the Drayton South area. This will continue until mining operations are completed at Drayton Mine.

Once a new Project Approval is granted for the Drayton Complex, the existing approval for Drayton Mine and the Antiene Rail Spur will be surrendered.

Stakeholder Engagement

The stakeholder engagement program included consultation with Local, State and Commonwealth government agencies, neighbouring land owners and industries, and the Aboriginal and wider local community.

A number of briefings and presentations have been proved to government agencies throughout the preparation of the Environmental Assessment including a Planning Focus Meeting which was held on 1 June 2011. Such consultation efforts according to the proponent have provided regulators with an understanding of the Project, some of the key findings from the technical studies and an overview of community stakeholder issues raised.

Project briefings were offered to neighbouring landowners and the wider local community via telephone, email and community newsletters. The proponent details that during the planning phase and preparation of the EA, 10 community stakeholders including Coolmore Australia and Darley Australia, accepted the opportunity to be briefed on the Project.

Several working groups have been established with neighbouring enterprises and industries, including Coolmore Australia, Darley Australia, Mt Arthur Coal Mine and Macquarie Generation to address key issues and interactions, and to further develop cooperative landowner relationships. These working groups have facilitated ongoing communication between parties and provided stakeholders with the opportunity to input into the planning of the Project and the preparation of the EA.

Following completion of the issue scoping phase, responses were provided for all issues raised by stakeholders in relation to the Project. Strategies for the management and mitigation of these issues were developed. Where possible, specific issues raised in relation to the Project were addressed with the relevant stakeholders.

A risk assessment was undertaken to identify potential environmental and social issues associated with the Project. The purpose of the risk assessment process was to prioritise and focus the required environmental assessments for the Project in consideration of the Director-General's Environmental Assessment Requirements and the findings from stakeholder engagement.

Air Quality

An air quality impact assessment was undertaken by consultants PAE Holmes. The purpose of the assessment in part was to predict the Project's air quality impacts, including dust, on

receivers in the vicinity of the existing Drayton Mine and Drayton South area, and to recommend measures to mitigate and manage these impacts.

To assess the effect that dust emissions will have on existing air quality, the dispersion model predictions from the indicative worst case modelled years start and end of year 3, 5, 10, 15, 20 and 27 have been compared with relevant air quality criteria. Several iterations of mine plans were modelled throughout the planning phase to incorporate all reasonable and feasible measures for the Project in order to reduce environmental and social impacts.

The results from the dispersion modelling indicate that the Project is predicted to contribute to some exceedances of the relevant criteria for cumulative annual average PM_{10} and TSP matter at one receiver. The same receiver is also predicted to experience exceedances of the relevant criteria for 24-hour average PM_{10} from the Project alone for up to 23 days in a modelled year.

Minor exceedances of the relevant criteria for 24-hour average PM_{10} from the Project alone have also been predicted for another two receivers although the exceedances are only predicted for one day each of the modelled Years 10 and 15. These maximum impacts predicted for the 24-hour average PM_{10} represent the Project's operations under adverse prevailing weather conditions. It is expected that the proactive management of operations would allow effective modifications to activities so that these impacts would not be experienced by receivers.

Cumulative modelling for 24-hour average PM_{10} was undertaken using a Monte Carlo Simulation for Year 10 as this modelled year has the largest predicted impacts for the Project alone. The results show that nine private receivers are predicted to experience exceedances of the assessment criterion (50 $\mu g/m^3$) while one private receiver is predicted to experience an exceedance of the acquisition criteria (150 $\mu g/m^3$) over the life of the Project.

It is noted that the actual number of exceedances per year both as a result of the Project alone and cumulatively cannot be predicted precisely and will depend on actual Project activities, weather conditions, implementation of real time controls and predictive meteorological forecasting and background levels in the future. It is expected that the proactive management of operations would allow effective modifications to activities so that these impacts would not be experienced at the suggested receivers.

No exceedances of the relevant criteria have been predicted at all other private receivers including those in the vicinity of the existing Drayton Mine.

Air quality management and mitigation practices will be implemented to ensure that the Project does not exceed the relevant criteria at all other privately owned receivers.

The proponent will revise the existing Drayton mine air quality management plan to include construction and operation of the Project. The revised air quality management plan will incorporate leading practice dust minimisation management measures. The proponent also details it will develop a leading practice air quality monitoring network surrounding the Drayton Complex in consultation with neighbouring landowners. This will include a real time meteorological monitoring station with predictive software capabilities and a network of real time air quality monitors.

Greenhouse Gas

PAE Holmes completed a greenhouse gas impact assessment for the Project.

The main sources of greenhouse gas emissions from the Project include:

- Electricity consumption;
- Fugitive emissions of carbon dioxide and methane;
- Diesel usage;
- Explosive usage; and the transport and end use of the product coal.

The emissions estimated to result from the Project will not individually have any significant impact on global warming. According to the proponent applying the principles of Ecological Sustainable Development, it is considered that there will be no increase in measurable impact on climate change as a result of the Project.

It is noted that Anglo American will implement all feasible and reasonable measures onsite to minimise the greenhouse gas emissions of the Project and ensure it is energy efficient.

Noise

An acoustics impact assessment was undertaken by Bridges Acoustics in order to predict the Project's noise impacts n receivers in the vicinity of the Drayton Complex, and to recommend measures to mitigate and manage these impacts.

Predicted noise levels for the Project were modelled at sensitive receivers for indicative worst case scenarios for Year 3 start and end, 5,10,15,20 and 27. These representative years were identified as the periods most likely to contain the worst case noise levels. The operations modelled in these years included coal mining activities, coal handling and processing, and coal loading and transportation along the Antiene Rail Spur. Additional model scenarios were used to determine construction and sleep disturbance noise levels to ensure these issues were comprehensively assessed. An analysis was undertaken to investigate various noise management measures to be applied to the Project which showed that those measures proposed in the EA were feasible and reasonable.

The Project is situated in close proximity to a number of existing coal mining and power generation operations, industrial background noise levels for the Antiene area which have previously been measured for the purposes of EA's associated with the Mt Arthur Coal Mine and the existing Drayton Mine.

A long term noise survey (unattended) was conducted between 10 and 20 June 2011 to measure background noise levels for Drayton South area receivers. A short term noise survey (attended) was undertaken to supplement the findings of the long term noise survey. This survey was conducted at the same locations as the long term noise survey and consisted of a series of noise measurements over 15 minute periods.

Receivers surrounding the Drayton Complex were divided into two groups being the Drayton Mine receivers (located to the north) and the Drayton South area receivers (located to the south).

No receivers are predicted to experience significant noise levels of 5 dBA above the intrusive criteria as a result of the Project. Further to this there are no exceedances of the intrusive criteria for any Drayton South area receivers.

If the predicted operational noise level exceeds the intrusive criteria by 2 to 5 dBA, the receiver is deemed to experience moderate noise impacts. There are seven Drayton Mine receivers (390, 398, 401, 402, 403, 411 and 418) that will experience moderate noise impacts at residences. There are a further four Drayton Mine receivers (382, 419, 420 and 421) that will be subject to moderate noise impacts over an area greater than 25% of the property, however, lesser impacts are anticipated at residences.

A receiver is deemed to experience a mild noise impact if the intrusive criteria are exceeded by less than 2 dBA. There are nine Drayton Mine receivers (399, 400, 419, 420, 421, 423, 424 and 425) that will experience mild noise impacts at residences and one receiver (386) that will experience mild noise impacts over an area greater than 25% of the property. Five of these receivers (399, 400, 423, 424 and 425) will also be subject to moderate noise impacts over an area greater than 25% of the property.

Predicted noise levels will generally be slightly lower than the predicted noise levels reported in the Drayton Mine Extension EA for Drayton Mine receivers, as additional noise control measures have been proposed since the 2007 EA was prepared and subsequently included in the noise modelling for the Project.

The predicted construction noise levels will not exceed the day time intrusive criteria adopted for Drayton Mine receivers. However, it will exceed the night time criteria in the absence of noise mitigation measures and impact on a number of Drayton Mine receivers. This excedance is primarily associated with upgrades to the Coal Handling and Preparation Plant. As such the existing Drayton Mine noise management plan will be revised to incorporate construction noise criteria and controls during the Coal Handling and Preparation Plant upgrade activities to ensure the relevant criteria is not exceeded.

Summarily, the predicted construction noise levels will not exceed the day time intrusive criteria adopted for Drayton South area receivers with the exception to residences at receivers 240 and 250. Intermittent exceedances of the criteria at receivers 240 and 250 are predominantly associated with the construction of the Edderton Road realignment. Construction noise levels of 35 to 40 dBA will be experienced by these receivers during an approximate three month period. Construction noise associated with the Edderton Road realignment is not likely to be unacceptable as this work will only be undertaken during the day. This noise will be masked to a certain extent by traffic noise on the Golden Highway and the existing Edderton Road.

The proponent will revise the existing Drayton mine noise management plan for the Project. Ongoing monitoring will be also undertaken to confirm the predicted noise levels of the assessment. This will include the establishment of real-time noise monitoring at representative receiver areas surrounding the "Drayton Complex" to enable ongoing noise management.

Blasting

An acoustics impact assessment was undertaken by Bridges Acoustics. The purpose of this assessment was to predict the Project's blasting impacts on receivers in the vicinity of the Drayton South area, and to recommend measures to mitigate and manage those impacts.

The Project is likely to require an average of up to five blast events per week during daylight hours to prepare overburden for removal and for coal recovery.

The assessment found that blasting associated with the Project is predicted to produce ground vibration and overpressure levels well below the relevant amenity criteria at all privately owned residences and structures with the exception of receiver 226 where it is predicted that the relevant criteria would be exceeded if the Maximum Instantaneous Charge is above 500 kilograms.

The proponent will update the existing blasting management plan to include appropriate management and mitigation measures to ensure that the relevant criteria are met for all privately owned residences, heritage structures and infrastructure.

Visual

A visual impact assessment was undertaken by JVP Visual Planning and Design. The purpose of the assessment was to define the character of the surrounding landscape, assess the visual impacts of the Project and recommend measures to mitigate and manage these impacts. This included an assessment against the gateway criteria contained within the Strategic Regional Land Use Plan (SRLUP) to determine whether the Project would lead to a significant impact on either the Equine or Viticulture Critical Industry Cluster.

The assessment concluded that the visual impact on surrounding receivers will be limited for the majority of the mine life. This is because the operational areas of the Project have been designed

to remain behind existing topography in order to conceal them from views at the most sensitive locations to the south.

The exception is the views that will be available to the Houston visual bund while it is being constructed. The Houston visual bund is required to ensure that longer term views to the operational areas of the Project are screened from view. Receivers located to the south of the Project including residences within Jerry's Plains, part of Coolmore Stud and motorists on the Golden Highway would experience a view of the Houston visual bund while it is being constructed. During this time (estimated to be 16 months) the visual impacts for these areas would be high. These impacts would be reduced as rehabilitation is completed. This is likely to be no more than three to five months following completion of the final stage lift of construction. After this, the visual impact will be reduced to moderate and then low for the remainder of the Project reflecting decreasing visual effect levels.

The majority of lighting utilised at a mine site is associated with the Coal Handling and Preparation Plant, workshops and load out infrastructure, all of which are located at the existing Drayton Mine. Lighting impacts within the Drayton South area will predominantly be caused by lights fitted to mobile equipment operative outside of active mining areas. In most cases, direct light effects will be limited as a result of existing topography and vegetation.

Since the dominant sources of light are located at the existing Drayton Mine, mobile equipment operating within the Drayton South area will not significantly increase the overall diffused light effect.

The proponent details numerous mitigation measures which have been incorporated into the design and operating plans for the Project that will reduce the visual effect and mitigate the visual impact of the Project on sensitive viewing locations. The proponent will also conduct ongoing consultation with stakeholders surrounding the site over the life of the Project. Should any issues arise in relation to visual impacts on surrounding sensitive viewing locations; these will be addressed through consultation with the relevant parties.

Ecology

An ecology impact assessment was undertaken by Cumberland Ecology Pty Ltd.

The biodiversity at Drayton Mine and within the Drayton South area and its surrounding areas have been extensively surveyed to support various project applications for mining and conservation projects. The assessment included a detailed desktop review of previous studies and a comprehensive field study of the Drayton South area and associated areas within Drayton Mine.

A high proportion of the Drayton South area is dominated by extensive areas of native perennial grassland of various diversity and floristic composition that has been derived from the clearing of the original woodland and forest communities. Remnant forest and woodland exist as scattered patches particularly along riparian corridors and in steeper areas across the Drayton South area. The majority of the remnant forest and woodland within the Drayton South area is dominated by Eucalyptus moluccana (Grey Box), which conforms to the Central Hunter Box-ironbark Woodland. The remainder of the area is occupied by smaller patches of other threatened and non-threatened communities.

More than 175 fauna species were recorded within the Drayton South area. A large proportion of the recorded species are represented by avifauna and micro bats, which are highly mobile. Conversely reptiles, arboreal mammals and terrestrial mammals do not possess the ability to disperse as freely and as such are not well represented.

The Project will result in the disturbance of 1 928 hectares of vegetation, including 107 hectares of Box-Gum woodland derived native grassland and 389 hectares of other native forest, woodland and shrub land, progressively over 27 years. It is unlikely to result in significant or long term adverse impacts to Saddlers Creek, the Hunter River or the wider catchment.

The proponent will develop and implement a biodiversity action plan, which will form a component of the existing Drayton Mine flora and fauna management plan. The plan will guide all facets of biodiversity management and mitigation for the Project, including staged disturbance, restoration and rehabilitation activities.

Biodiversity Offset Strategy

As a component of the ecology impact assessment, a biodiversity offset strategy was developed in association with the proponent to compensate for the loss of Box-Gum Woodland and other native vegetation as a result of the Project. The strategy consists of two main components, onsite

offsets and offsite offsets, which work together to ensure that the best compensatory outcomes are achieved with the most efficient utilisation of resources and to meet State and Commonwealth offsetting requirements.

The onsite offsets for the Project include:

- Conservation: Retention of 85ha of existing Central Hunter Box-Ironbark Woodland (EEC) and Cooba Scrub along the primary ridgeline immediately south of the Drayton South disturbance footprint;
- Rehabilitation: Establish rehabilitated communities of Central Hunter Box-Ironbark Woodland (EEC) and Narrabeen Foot slopes Slaty Box Woodland (v) on the Drayton South disturbance footprint; and
- Restoration: Maintain and improve 24ha of existing vegetation that is situated within the immediate vicinity of Saddlers Creek and restore an additional 62 ha of Hunter Floodplain Red Gum Woodland (CEEC) through planting efforts.

The onsite offset component of the biodiversity offset strategy will concentrate on restoration and conservation efforts on available land within the Project Boundary as a priority.

The onsite offsets have been developed to maximise opportunities for conservation, rehabilitation and restoration in site. However, there is little opportunity to expand on Drayton Mine's current offsetting commitments, including the Drayton Wildlife Refuge. With the assistance of consultants, the proponent have identified and secured an offsite biodiversity offset property to ensure that the Project will not result in a net loss in biodiversity. Offsite offsets include the investigation of potential offsite offsets to compensate for the residual ecological impacts of the Project.

Aboriginal Archaeological and Cultural Heritage

An Aboriginal archaeological and cultural heritage impact assessment was undertaken by AECOM.

The archaeological resource within the Project Boundary is comprised of 208 previously recorded sites as per the AHIMS database. Of these sites located within the Project Boundary, 85 sites are situated within the study area. In addition to the previously recorded Aboriginal

Heritage Information Management sites, 160 new archaeological sites were identified and recorded within the study area.

As a result of the Project, a total of 175 archaeological sites will be directly impacted. To manage these impacts the existing Drayton Mine Aboriginal and Cultural Heritage Management Plan will be revised in consultation with registered Aboriginal stakeholders. The revised plan will include detailed salvage methodologies to be carried out prior to commencement of the Project and protection and conservation of archaeological sites that are not impacted by the Project.

Non-Aboriginal Heritage

A non-Aboriginal heritage impact assessment was undertaken by AECOM Australia.

A total of 10 non-Aboriginal heritage items were identified within and adjacent to the Drayton South area, including five items listed on the heritage inventories (Plashett Homestead, Edderton Homestead, Arrowfield Cottage, Strowan Homestead and Woodlands Homestead).

The development of the Project will result in direct and indirect impacts on certain heritage items identified. The fence and Nissan hut with stockyard is situated within the Drayton South disturbance footprint and will be directly impacted and removed by mining activities and construction of associated infrastructure.

Ground vibrations and overpressure associated with blasting have the potential to impact the structural integrity of the other listed heritage items. Findings from the acoustics impact assessment undertaken by Bridges Acoustics concluded that the blast vibration and overpressure generated by the Project will not exceed the recommended criteria at any of these heritage items.

The construction of the Project, including the Houston visual bund, Overburden Emplacement Areas, rehabilitation areas and tree screenings, will modify the existing visual environment and potentially the visual aesthetics of the landscape surrounding certain heritage items.

Due to the proximity of Edderton and Bowfield Homesteads these locations will experience high visual impacts during the early stages of the Project. From Year 10 and for the remainder of the

Project life, the visual impact will be reduced to moderate and then low, with the northern extent of the OEAs rehabilitated and mining advancing further south.

For Strowan Homestead and Arrowfield Cottage views will be available to the construction of the Houston visual bund during its 16 month construction period. For this period there will be a high visual impact at these locations. The visual impacts will be reduced to moderate and then low as progressive rehabilitation is completed and the bund is integrated with the surrounding landscape.

Of the heritage items identified, the stockyard, Woodlands Homestead and Randwick Homestead will avoid being directly or indirectly impacted by the Project.

Surface Water

A surface water impact assessment was undertaken by WRM Water & Environment.

The existing Drayton Mine is located in the upper headwaters of Ramrod Creek, Bayswater Creek, Saddlers Creek and Saltwater Creek.

A computer-based simulation model was used to assess the dynamics of the water balance under varying rainfall and catchment conditions. The model was configured to simulate the operations of all major components in the water management system including both the existing components at Drayton Mine and those proposed to be constructed at Drayton South as part of the Project.

The main features of the proposed water management system include:

- Continued utilisation of the existing water management system and infrastructure at Drayton Mine;
- Removal of the existing mine-water Industrial Dam to allow for additional mining in the East Pit. It is proposed to shift the current functions of the Industrial Dam to the Access Road Dam. Any water remaining in the Industrial Dam at the time of decommissioning will be pumped to other storage, in particular the South Void;
- The construction of two new mine water dams within the Drayton South area (Transfer Dam and Houston Dam). An additional mine water dam (ROM Dam) will be constructed

should the conveyor option be adopted for the haulage of coal from the Drayton South area to the existing Drayton Mine CHPP;

- Highwall dams and drains to collect runoff from undisturbed areas and divert it around the disturbed area. Blakefield Dam, will be constructed to manage the release of the clean highwall dam water into Saddlers Creek;
- Water collected in the active mining areas within the Drayton South area will be pumped to the Transfer Dam or approved water storages at Drayton Mine and used at the CHPP for dust suppression;
- Rejects and tailings from the CHPP are proposed to be co-disposed in the North Void under the base case;
- Runoff from OEAs that has not come in contact with coal or carbonaceous material will be collected in sediment dams. This water will be released to the downstream environment after a period of settlement or pumped into the water management system for reuse; and
- A water supply and discharge pipeline to the Hunter River, which will be linked to the Houston Dam. Water in excess of shite use will be released directly to the Hunter River under the Hunter River Salinity Trading Scheme to allow controlled discharge of mine affected water.

The modelling suggests that there is a 50% change that releases will exceed 740 ML per year on average and a 10% chance they will exceed 1 140 ML per year on average. Average released per release day will be between 25 to 31 ML.

The surface water impact assessment concluded that by implementing an effective water management system as proposed, the Project will not impact on the quality of receiver water or on the adjoining Plashett Dam.

The Project will reduce the Saddlers Creek catchment by up to 14% and the Saltwater Creek catchment will reduce by 11% over the life of the Project. At the completion of mining, the proposed Blakefield, Houston and Transfer Dams will be removed and the final void catchments will be minimised in order to restore catchment resulting in a total 10% and 4% loss of catchment area of Saddlers Creek and Saltwater Creek respectively.

To mitigate the impact of the loss of catchment flows, a comprehensive rehabilitation program is proposed for Saddlers Creek including an extensive restoration program.

The Saltwater Creek channel is already highly modified as a result of Plashett Dam. The loss of additional catchment resulting from the construction of Houston Dam is not expected to have a significant impact on Saltwater Creek.

The Project will have an insignificant impact on the Hunter River flows. Under mining conditions, the Project will reduce the catchment draining to the Hunter River at Liddell by a maximum of 0.14%.

The proponent indicates a revision of the existing Drayton Mine water management system and management plan will be undertaken to encompass the new components, procedures and targets required for the Project. This will include monitoring program for onsite water sources.

Groundwater

A groundwater impact assessment was undertaken by Australasian Groundwater and Environmental Consultants.

The groundwater modelling exercise simulated the existing conditions of the groundwater regime and provided predictions of the potential impacts of future mining activities.

The regional groundwater system within the vicinity of the Drayton South area consists broadly of three aquifer systems including:

- Alluvium along the Hunter River, Saddlers Creek and Saltwater Creek;
- Weathered bedrock; and
- The coal seams of the Permian Wittingham Coal Measures.

The groundwater model predicts that inflows will vary throughout the mine life, which is directly related to the design of the mine plan. As mining progresses and enters into a new strip groundwater inflows will rise, followed by a gradual reduction in inflows.

Inflows into the mining areas will gradually increase from the commencement of mining in the Drayton South area to a maximum of 4.6 ML/day in Year 10. The inflow rate over the life of the

Project averages 477 ML/year. In Year 10 it is anticipated that close to 900 ML/year will be derived from the Permian aquifers, whilst the remainder is a result of rainfall recharge and seepage through the overburden.

Seepage of groundwater from the aquifers intersected during mining will reduce groundwater pressures in the coal seams and overburden/interburden aquifers around the mining areas. This will lower the water table of an unconfined aquifer or depressurise a confined aquifer.

The zone of influence for the shallow regolith / alluvium is predicted to be restricted to the immediate vicinity surrounding the mining areas. This is a maximum distance of approximately 600 metres to the west and south of the mining areas in Year 27. The zone of influence within the shallow alluvium is not predicted to extend into the Hunter River alluvial aquifer; however, it is predicted to extend marginally into the Saddlers Creek alluvium.

The zone of influence for the Permian coal measures is predicted to be restricted to a maximum distance of approximately 1 kilometre to the west and south of the mining areas at Year 27 and extend under Saddlers Creek alluvium. The zone of influence within the coal measures is not predicted to extend beneath the Hunter River alluvium at the end of mining.

The zone of influence migrates southwards towards the Hunter River over time, but not measurably beneath these alluvial lands. The Project is predicted to have only very limited impacts on the alluvial lands associated with the Hunter River.

The vertical leakage fluxes between the alluvial deposits associated with Saddlers Creek and the underlying coal measures will be affected due to the proximity of the Project. The pre-mining net upward seepage flux to the Saddlers Creek alluvium is in the order of 0.31 ML per day. Operations at Mt Arthur Coal Mine are predicted to result in a maximum reduction in net flux to the Saddlers Creek alluvium of 0.18 ML per day. The remaining influx to the Saddlers Creek alluvium of approximately 0.12 ML per day may therefore be reduced to zero as a result of the Project.

The groundwater quality may improve in the Saddlers Creek alluvium as discharge of higher salinity groundwater from the coal measures into the alluvium is predicted to be reduced. This may result in a freshening of groundwater resulting from downward migration of rainfall

recharge and creek recharge. The groundwater quality within the Hunter River alluvium is not expected to measurably change as a result of the Project.

A total of two registered groundwater bores are located within the zone of influence at Year 27. Both of these groundwater bores are located on land owned by the proponent, and will be intercepted by mining.

The final void within the Drayton South area will collect and accumulate water from a number of sources. The post mining equilibrium water level is predicted to reach reduced levell 117 metres after approximately 1 000 years.

It is proposed that rejects and tailings generated at the CHPP from the Drayton South operation will be deposited in the remaining void at Drayton Mine.

Under all scenarios for disposal of tailings in the East Void at Drayton Mine, the cone of depression will be retained and the water table within the void remains below the surrounding groundwater level, therefore it is unlikely that leachate will migrate out of the void.

As detailed previously for other environmental criteria a revision of the existing Drayton Mine water management plan will be undertaken to encompass the new procedures and targets required for the Project.

Traffic and Transport

A traffic and transport impact assessment was undertaken by DC Traffic Engineering for the Project.

The assessment concluded that there are not anticipated to be any significant increases in traffic as a result of the Project. This is largely due to the fact that the existing operations workforce will continue to be utilised by the Project and that mine access during the operations phase will continue to be via the existing Drayton Mine Access Road off Thomas Mitchell Drive.

Traffic modelling shows that when considering future proposed projects that the current configuration of the Denman Road / Thomas Mitchell Drive intersection and the Thomas Mitchell Drive / New England Highway intersection would perform at a poor level of service

during the peak construction and operations phase. However, Mt Arthur Coal Mine has committed to upgrade these intersections as part of their current Project Approval. The planned upgrades will resolve the predicted traffic issues that would have been otherwise experienced at these intersections during construction and peak operations.

Construction works for the Edderton Road realignment are not expected to significantly disrupt traffic. The existing Edderton Road will remain operational throughout the construction period. It will only be closed once the new alignment has been completed.

As part of this assessment the potential impacts on rail traffic were assessed. During peak production the Project will require a total of 308 trains to transport product coal to Newcastle. This equates to two trains per day which is in line with Drayton Mine's existing approval. As such the Project will not result in any additional trains on the Antiene Rail Spur or Main Northern Railway.

Project Justification

Approved mining operations at Drayton Mine are scheduled to continue until the expiry of the current Project Approval in 2017. The Drayton South coal resource was identified in the early 1900's. The Project maximises resource recovery and economic returns from capital already invested in Drayton Mine and minimises environmental costs by utilising existing infrastructure and the final landform at Drayton Mine.

In Summation

Anglo American Metallurgical Coal Pty Ltd, on behalf of Drayton Mine seeks approval for the Drayton South Coal Project under Part 3A of the EP&A Act. The modification relates to the development of an open cut and highwall mining operation extracting up to 7 Mtpa of ROM coal over 27 years.

The technical studies conclude that adverse environmental impacts would be either minimal or manageable. The introduction of new environmental controls and existing environmental management strategies and management plans revised to include the Project should ensure compliance with the most stringent environmental Project targets.

The Project is considered to be consistent with relevant objectives of the EP&A Act, including the principles of Ecologically Sustainable Development. On considering the balance of environment and community impacts, it is considered reasonable to conclude that the benefits of the Project significantly outweigh the impacts. The Union on balance supports the proponent's application 11-0062 and asks for the extension to be granted.

Grahame Kelly
DISTRICT SECRETARY