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 Sir

RE: REVIEW OF ENVIRONMENT ASSESSMENT – ABEL MINE MODIFICATION – MINE PLAN AND COAL PRODUCTION

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

The Union welcomes the opportunity to comment 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: 19 March 2013

Mining and Energy Division

Review of Environmental Assessment

Abel Mine

Modification – Mine Plan and Coal Production

DA 05-0136 (Mod 3)

Submission

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

Northern District Branch

March 2013

On 23 December 2011 Donaldson Coal Pty Ltd (DCPL) applied to the Minister, Department of Planning seeking approval to change the method of mining at the Abel Underground Mine to increase the efficiency of coal recovery, which in turn will increase ROM coal extraction from 4.5 Mtpa to up to 6.1 Mtpa. This Project is sought under Section 75W of the EP&A Act, 1979.

The Director General made the Environmental Assessment publicly available on the 21 February, 2013 at the DP & I Information Centre Sydney, Newcastle City Council, Cessnock City Council, Maitland City Council and Nature Conservation Council.

The Union is pleased to take the opportunity to comment on the Abel Underground Mine Modification 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 Abel facility is located approximately 23 kilometres north-west of the Port of Newcastle and is wholly within the State's Northern District coalfields.

The Union is familiar with the Abel 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.

After reviewing all of the material and taking advice, the Union supports this application to refine the method of mining at the Abel Underground operations as proposed.

Project Overview

The proposed Modification to the Abel Underground Mine would involve the continuation of underground mining within the approved mining area. However, in addition to the approved bord and pillar mining method, it is proposed to also employ a combination of longwall, shortwall and bord and pillar mining. The Modification would also involve an increase in the amount of ROM coal received from the Tasman Underground Mine.

The key components of the proposed Modification include:

- The introduction of longwall mining in a section of the Lower Donaldson Seam.
- The introduction of shortwall mining in a section of the Upper Donaldson Seam, and a section of the Lower Donaldson Seam.
- The extension of mining, using bord and pillar extraction, in a southern section of the Upper Donaldson Seam that overlies the Lower Donaldson Seam within ML 1618.
- Development of the modified mine layout to meet the existing approved subsidence management commitments.
- An extension of the mine life of approximately two years, i.e. until 31 December, 2030.
- Increased annual ROM coal production of up to 6.1 Mtpa.
- An increase in the amount of ROM coal received at the Bloomfield CHPP from the Tasman Underground Mine.
- Increased internal transport of the ROM coal from the Abel Underground Mine and the Tasman Underground Mine to the Bloomfield CHPP.
- Increased throughput of coal at the Bloomfield CHPP and rail loading facility.
- Modifications and upgrades to the Bloomfield CHPP.
- Increased annual and total quantity of fine and coarse rejects from the Bloomfield CHPP disposed at the Bloomfield Colliery and Donaldson Open Cut void.
- Potential upgrades to the integrated water management system of the Abel Underground Mine, Donaldson Open Cut Mine and Bloomfield Colliery.
- Construction and use of an additional downcast ventilation shaft.
- Development and use of in seam gas drainage infrastructure.
- Other associated mine infrastructure, plant equipment and activities.

Stakeholder Consultation

The proponent has consulted with relevant State Government agencies on a regular basis in relation to the current mining operations at the Abel Underground Mine. This modification has been discussed with DP & I during the assessment process for the Modification and the preparation of the EA.

A meeting was held with representatives of the OEH and EPA on 2 February 2012 to provide an overview of the Modification, the proposed subsidence controls and the environmental studies. A further meeting was held with representatives of OEH on 22 October 2012 to provide draft results from specialist's reports.

A briefing on the Modification was provided to representatives of the NSW Division of Resources and Energy on 16 August 2012 and the NSW Office of Water on 15 February 2012.

In addition information has been provided to a range of other State Government agencies. Newcastle, Cessnock and Maitland City Councils were provided with a copy of the Modification description and preliminary EA in December 2011.

The Abel Underground Mine CCC has been established and operates in accordance with the Project Approval 05-0136. Consultation regarding the mining design process and Modification was undertaken in August 2011, October 2011, November 2011, February 2012 and May 2012.

During the preparation of the EA, the proponent produced community information leaflets outlining information on the Modification. These were distributed to the local community in November 2011 and February 2013.

Further consultation detailed within the EA provides evidence of consultation with Aboriginal Stakeholders, Infrastructure Owners, Rail and Downstream Coal Operators, as well as Bloomfield Collieries to which commercial arrangements exist.

Subsidence

A detailed Subsidence Assessment was prepared by Mine Subsidence Engineering Consultants (MSEC 2012) for the Modification.

MSEC concluded that predicted maximum tilts and curvatures for the Modification mine layout are similar in magnitude, or less than, those predicted for the approved mine layout, and therefore, potential subsidence impacts associated with the Modification mine layout would be similar in nature to those associated with the approved mine layout.

The Subsidence Assessment includes detailed subsidence predictions and assessment for key natural and built features in the longwall and shortwall areas.

The existing subsidence management commitment for Schedule 2 streams (Blue Gum Creek, Long Gully, Buttai Creek and Viney Creek), requires limiting mining operations to first workings only beneath Schedule 2 streams, and ensuring that mining causes no subsidence impacts requiring mitigation works. This would be achieved by providing a minimum 40m barrier between the 20 mm line of subsidence and the bank of any Schedule 2 stream.

To maintain the existing subsidence management commitment for Schedule 2 streams, the Modification mine layout has been designed so that longwall and shortwall mining would not occur beneath Schedule 2 streams such that the 20mm line of subsidence would be at least 40 m from the banks of any Schedule 2

streams. There would be no additional potential consequences from subsidence to Schedule 2 steams due to the Modification.

The approved mine plan included mining directly beneath Schedule 1 streams. Therefore, these streams were predicted to experience the full range of subsidence effects due to the approved mine layout.

Predicted tilts and curvatures associated with the Modification mine layout are similar to, or less than, the predicted tilts and curvatures associated with the approved mine layout. Therefore, no additional potential consequences from subsidence to Schedule 1 streams due to the Modification are predicted, in comparison to those associated with the approved mine plan.

Potential consequences from subsidence to Schedule 1 streams would include ponding, flooding, scouring, fracturing, bulking and dilation of bedrock, and diversion of surface water flows.

In relation to cliffs, rock outcrops and steep slopes since the Part 3A EA, additional works have been undertaken to confirm areas of cliffs, rock outcrops and steep slopes using LIDAR survey data. Based on the results of this additional work, areas identified as cliffs, rock outcrops and steep slopes in close proximity to the longwall and shortwall areas have been identified.

The existing subsidence management commitment for cliffs requires limiting mining operations such that not more than 60% of coal is extracted beneath identified cliff areas.

The Modification would involve greater than 60% of coal extraction in the longwall and shortwall areas.

To maintain the existing subsidence management commitment for cliffs, the Modification mine layout has been designed such that there would be no longwall or shortwall mining beneath identified cliff areas.

There would be no additional potential consequences from subsidence to cliffs due to the Modification.

Rock outcrops and steep slopes have been identified above the longwall and shortwall areas.

The magnitude of the predicted mine subsidence effects for the proposed longwall and shortwall mining areas in the Lower Donaldson Seam may be sufficient to result in some fracturing of the rock outcrops, and where the rock is marginally stable, this could result in some instability.

MSEC 2012 notes that, based on previous experience in the NSW Coalfields, only a small percentage of rock outcrops would potentially be impacted by mining, as rock outcrops are generally discontinuous and have small heights.

Subsidence associated with longwall and shortwall mining may result in surface cracks in steep slopes, which could potentially result in soil erosion.

The existing subsidence management commitment for the Blue Gum Creek alluvium requires limiting mining operations to first workings only beneath the Blue Gum Creek alluvium, and ensuring mining causes no subsidence impacts requiring mitigation works.

To maintain the existing subsidence management commitment, the Modification mine layout has been designed so that longwall and shortwall mining would not occur beneath the Blue Gum Creek alluvium, such that more than 20 mm of subsidence would occur within 40 m of the limit of the alluvium boundary.

Rainforest communities have been identified along the upper reaches of Long Gully and Blue Gum Creek.

The existing subsidence management commitment for rainforest areas requires limiting mining operations to first workings only, and ensuring mining causes no subsidence impacts requiring mitigation works.

Again to maintain the existing subsidence management commitment, the Modification mine layout has been designed so that longwall and shortwall mining would not occur beneath rainforest areas such that more than 20 mm of subsidence would occur within 40 m of the limit of identified rainforest areas.

The existing subsidence management commitment for the Pambalong Nature Reserve requires that the Abel Underground Mine does not result in subsidence impacts.

ML 1618 was designed to avoid the Pambalong Nature Reserve; therefore no subsidence impacts are predicted.

A number of privately owned rural properties overlie the underground mine area at the Abel Underground Mine.

The existing subsidence management commitment for principal residences requires limiting mining operations to first workings only, and ensuring mining causes no subsidence impacts requiring mitigation works.

To maintain this commitment, longwall and shortwall mining would not occur within the 26.5° angle of draw at any principal residence without agreement from the relevant landowner.

There would be no additional potential consequences from subsidence to principal residences due to the Modification.

Shortwall mining in the Upper Donaldson Seam beneath principal residences can only occur if an agreement is reached with the relevant landowners. If shortwall mining occurs beneath these residences, curvatures and strains would be expected to result in structural impacts and this would be expected to result in significant serviceability issues.

If an agreement with the relevant landowner is not reached, Shortwall Panels 4 to 7 in the Upper Donaldson Seam would be shortened to maintain the subsidence control zone around these principal residences.

Approximately 33 farm dams are located within or adjacent to the shortwall areas, including approximately 18 located directly above the shortwall panels. In addition other private structures (eg fences, garages etc) are located within or adjacent to the longwall and shortwall areas.

Predicted subsidence effects for the farm dams and other private structures associated with the Modification min layout are similar to those predicted for the approved mine layout. On this basis no additional consequences from subsidence are predicted due to the Modification.

Negligible subsidence impacts associated with the Modification are predicted for the F3 Freeway, Hunter Expressway, TransGrid 330 kV transmission line or disused Richmond Vale Railway Corridor.

No longwall or shortwall mining is proposed near the Black Hill School, Black Hill Church or Black Hill Cemetery.

Consultants MSEC (2012) considers that the Modification mine layout could be developed to meet the existing subsidence management commitments for the Abel Underground Mine, which have been developed to protect key natural and built surface features.

Existing subsidence mitigation measures, management and monitoring commitments for the Abel Underground would continue for the Modification.

Groundwater

A Groundwater Assessment for the Modification has undertaken by RPS Aquaterra (2012).

The groundwater model was used to predict the incremental impacts of the Modification mine layout. To enable this, the groundwater model was run separately for the approved mine layout and the Modification mine layout.

The groundwater inflows to mining areas are predicted to increase during the Modification, reaching a maximum of 6.3 ML per day in 2015.

At the end of mining, the Modification is predicted to result in very limited groundwater drawdown in alluvium in the Abel Underground Mine area compared to the minor drawdown predicted for the approved mine layout. The maximum predicted increase in groundwater drawdown in the alluvium associated with the Modification is predicted to be approximately 1m. The alluvium is predicted to remain partially saturated.

The Modification mine layout has been designed to maintain the existing subsidence management commitments regarding the alluvium associated with Blue Gum Creek.

Recovery of groundwater levels was assessed for 100 years following the completion of mining at the Abel Underground Mine.

There is predicted to be an insignificant effect to groundwater levels in the alluvium post mining.

The Modification layout has been designed to maintain the existing subsidence management commitments for the Abel Underground Mine regarding Schedule 2 streams.

The Modification is predicted to result in very limited incremental changes in st4ream baseflow to/from all streams in the Abel Underground Mine area compared to the approved mine layout.

No impacts to stream baseflows due to the Modification are predicted post mining. Impacts associated with the Modification on flows and groundwater levels in the alluvium within the Abel Underground Mine area are predicted to be insignificant, both during mining and post mining.

Consultants RPS Aquaterra considers it highly unlikely the Modification would result in any additional impact on Ground Dependent Ecosystems in comparison to the approved Abel Underground Mine.

All non-mine owned registered groundwater bores are located outside the extent of predicted drawdown effects from mining. Therefore there are no impacts to groundwater users predicted.

Surface Water

A Surface Water Impact Assessment Review was prepared by Evans and Peck (2012) for the Modification.

There would be limited additional surface infrastructure required for the Modification, and as such, no additional impacts to surface water are expected.

Subsidence effects may lead to potential impacts to catchments and streams, which could provide a pathway for loss of water from the catchment or creek channels, or changes in pooling, which could lead to a change in the seepage and evaporation loss.

MSEC 2012 concluded that changes in subsidence for the Modification mine layout would only occur in the longwall and shortwall mining areas.

The existing subsidence management commitments for Schedule 2 streams would be maintained for the Modification. As such there would be no additional impacts to Schedule 2 streams associated with the Modification in comparison to the approved mine layout.

Potential consequences from subsidence to Schedule 1 streams would include ponding, flooding, scouring, fracturing, bulking and dilation of bedrock and diversion of surface water flows.

Nevertheless, as predicted tilts and curvatures associated with the Modification mine layout are similar to, or less than, those predicted for the approved mine layout, no additional consequences to Schedule 1 streams are predicted.

The surface water management system for the Modification would not require any change to the existing approved licensed discharge limited specified in Donaldson Coal's EPL No: 11080.

Consultants Evans and Peck therefore concluded the Modification would not result in additional impacts to surface water quality compared to those approved for the Abel Underground Mine.

Noise and Vibration

A Noise and Blasting Assessment was undertaken for the Modification by SLR Consulting Australia Pty Ltd.

Heggies Australia Pty Ltd assessed the potential noise impacts of the Abel Underground Mine for the Part 3A EA.

Aspects of the Modification that would potentially result in changes to noise impacts associated with the Abel Underground Mine include:

- Increased ROM coal from the Abel Underground Mine and the Tasman Underground Mine transported to the Bloomfield CHPP;
- Modifications and upgrades to the Bloomfield CHPP, including an additional CHPP module associated feed and product conveyor system;
- Increased rail loadout and transport of product coal;
- Increased quantity of coarse rejects from the Bloomfield CHPP transported to the Bloomfield Colliery for disposal; and
- Construction of the downcast ventilation shaft.

With the adoption of noise mitigation measures it was predicted that operation noise would not exceed the operational noise limits specified in Project Approval 04-0136 at any relevant received.

Existing and proposed mining operations in the vicinity of the Abel Underground Mine include the Bloomfield Colliery, Donaldson Open Cut Mine and the Tasman Underground Mine.

Given the distance that separates the Tasman and Abel Underground Mines cumulative noise impacts from these mines are expected to be negligible.

The Donaldson Open Cut Mine is scheduled to cease operations at the end of 2013.

No exceedances of the Interim Construction Noise Guideline construction noise goals were predicted at any relevant receiver location for the construction activities associated with the modification and upgrades to the Bloomfield CHPP.

Construction of the downcast ventilation shaft would involve 24 hour per day 'raise bore' drilling operations in a fully enclosed acoustic shed. In addition construction activities would involve the clearance, and minor earthworks, which would occur during daytime hours only.

Construction activities are predicted to exceed the ICNG construction noise goals during the daytime at the closest two receiver locations. Construction noise levels are predicted to be below the ICNG high affected noise level of 75 dBA at all receiver locations. Construction noise associated with the downcast ventilation shaft would be managed through the implementation of mitigation methods.

There would be no noise impacts associated with the operation of the downcast ventilation shaft, as there would be no fan or other machinery at the surface.

The increase in rail traffic on the Bloomfield rail loop is predicted to increase the existing daytime equivalent continuous noise level and existing noise levels by less than 0.1 dBA. This increase is negligible and such an increase would not be discernible by receivers near the rail line.

Air Quality

The potential air quality impacts of the Abel Underground Mine were assessed in the Part 3A EA by consultants Holmes Air Sciences. The assessment accounted for potential Modification only impacts, and the potential cumulative impacts of the Modification with other mining and non-mining background sources. It was predicted operations at the Abel Underground Mine would comply with relevant air quality criteria at all relevant receiver locations.

Aspects of the Modification that would potentially result in changes to air quality impacts associated with the Abel Underground Mine include:

- Increased ROM coal from the Abel Underground Mine and the Tasman Underground Mine transported to the Bloomfield CHPP;
- Modifications and upgrades to the Bloomfield CHPP, including an additional CHPP module and associated feed and product conveyor systems;
- Increased rail loadout and transport of product coal; and
- Increased quantity of coarse rejects from the Bloomfield CHPP transported to the Bloomfield Colliery for disposal.

No exceedances of relevant OEH air quality criteria for PM_{10}, TSP and dust deposition were predicted at any of the relevant receiver location due to the operation at Abel Underground Mine, inclusive of the activities associated with the Modification.

No impacts to air quality associated with construction activities for the Modification are predicted.

Ecology

A review of potential ecological impacts associated with the Modification was conducted by Hunter ECO.

An investigation of the construction of the downcast ventilation shaft site was conducted by Hunter Eco in August 2012.

Construction of the downcast ventilation shaft would result in the clearance of approximately 0.16ha of vegetation typical of the Hunter Valley Moist Forest community.

No threatened flora species and no trees with habitat hollows were identified during the site investigation.

The potential impact on habitat of the revised conveyor route would not be significantly different to that of the currently approved route.

The Modification mine layout has been designed to maintain existing subsidence management commitments for key natural surface features including rainforest areas, Schedule 2 streams, the Blue Gum Creek alluvium and cliffs.

Native vegetation overlies sections of the longwall and shortwall mining areas. However, predicted subsidence effects associated with the Modification mine layout are similar to those predicted for the approved mine layout.

As such, the Modification would not result in additional impacts to surface habitat.

Hunter Eco 2012 concluded the potential ecological impacts associated with the construction of the downcast ventilation shaft, revised alignment of the overland conveyor route and changes in mining method in the longwall and shortwall mining areas, and would essentially be the same as the approved impacts described in the Part 3A EA.

Aboriginal Heritage

An Aboriginal Cultural Heritage Assessment for the Modification was prepared by South East Archaeology Pty Ltd.

Open artefact sites are not particularly susceptible to subsidence impacts. Any effects to open artefacts sites due to subsidence are likely to be short-term, minimal and confined to the sediments within the site context rather than directly on the actual artefacts.

Impacts to trees as a result of subsidence are rare and usually occur only when there are very shallow depths of cover or very steeply sloping terrain. Given these conditions are not present in relation to the two possible sacred trees in the Modification area, it is considered unlikely they would be impacted by subsidence.

Subsidence impacts on grinding groove sites have been defined in terms of cracking potential. Fracturing of bedrock has been observed elsewhere where tensile strains are greater than 0.5 mm/m or compressive strains are greater than 2 mm/m.

The likelihood of potential impacts to three grinding groove sites is assessed as unlikely given maximum predicted strains at these sites are less than 0.3 mm/m. Maximum predicted strains at the other four

grinding groove sites range from 0.5mm/m to 4.5 mm/m. MSEC concluded there is a possible chance cracking could occur at these sites.

The downcast ventilation shaft and overland conveyor would be located to avoid impacts to Aboriginal heritage.

Socio-Economics and Justification

The Modification would enable increased efficiency and quantity of coal recovery within the approved mining areas and seams for the Abel Underground Mine, resulting in increased employee numbers, revenue and associated taxes and royalties to the NSW State Government.

The Modification mine layout would meet the existing subsidence management commitments in Project Approval 05_0136; no additional consequences from subsidence to key natural and built surface features are predicted, in comparison to those predicted for the approved Abel Underground Mine.

In addition there would be no additional impacts to groundwater or surface water resources, or ground water dependent ecosystems, due to the Modification.

No exceedances of relevant operational noise or air quality criteria are predicted at receiver locations when considering changes in surface infrastructure and the increased ROM coal production rate, and associated increase in the processing rate at the Bloomfield Colliery, for the Modification.

The Modification would result in minor additional vegetation clearance; however this clearance would not include any TEC's.

Changes in the method of mining associated with the Modification (i.e. shortwall or longwall mining) may increase the potential for impacts to Aboriginal heritage sites with either a low, or low to moderate significance. These potential impacts were reviewed by Aboriginal stakeholders. Mitigation measures for the sites were developed in consultation with these stakeholders.

In Summation

Based on the assessment of potential environmental impacts which has been multi-disciplinary and involved consultation with the DP&I and other relevant stakeholders, the Abel Underground Mine Modification is anticipated to pose negligible additional environmental impacts beyond those already approved under 05_0136.

The Union considers that on balance, this Project is consistent with currently approved Development Consent objectives of the EP&A Act, and therefore supports the proponent's application and ask that the modification be granted in the form sought.

Grahame Kelly
DISTRICT SECRETARY