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EPA Advice on Modification Application

Dear Mr Nevill

Thank you for the request for advice from Public Authority Consultation (PAE-15741751), requesting the review by the NSW Environment Protection Authority (EPA) of the modification application (Mod 9) for the Tarrawonga Coal Mine project major project approval (MP11_0047).

The EPA has reviewed the following documents:

- *Tarrawonga Coal Mine – Waste Tyre Disposal, Modification Report*, Whitehaven Coal, February 2021

The EPA understand the proposal is to enable:

- On-site disposal of end of life heavy mining plant tyres.

Based on the information provided, the proposal will require the site's existing environment protection licence (No 12365) issued under sections 43, 48 and 55 of the *Protection of the Environment Operations Act 1997* (POEO Act) for Mining for coal, Coal works and extractive activities (clauses 28, 10 and 19 of Schedule 1 of the POEO Act respectively) to be varied.

The EPA has the following comments and recommendations:

1. Matters to be addressed with conditions

a. Application of the waste hierarchy

The EPA accepts that at the current time there may be some significant physical and financial barriers to the recycling of end-of-life heavy mining plant tyres. However, the EPA remains committed to the applying the waste hierarchy which is a set of priorities that underpin the objectives of the *Waste Avoidance and Resource Recovery Act 2001*.

The waste hierarchy encourages waste avoidance and reduction as the first priority. Resource recovery including re-use, recycling, reprocessing and energy recycling is considered as the second priority. Waste disposal in an environmentally responsible manner should then only be considered where the first two priorities are not feasible.

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An approval permitting ongoing disposal of end-of-life heavy mining plant tyres, without regular review would not be consistent with the application of the waste hierarchy. Recycling technology is developing at an increasing pace, and it may be that viable recycling opportunities surface during the remaining life of the mine. The EPA therefore recommends that the following condition is added to the project approval should the modification be approved:

E1.1 The proponent must undertake a review of available recycling options for end of life heavy plant tyres at least once every 2 years and provide a report to the EPA that contains (but is not limited to) the following:

- (a) analysis of the current capacity of recycling facilities that can accept end of life mining heavy plant tyres for processing in NSW and other neighbouring states;*
- (b) evidence of made by the proponent in the previous 24 months to actively seek recycling options for end of life heavy mining plant tyres generated at the premises;*
- (c) analysis of any pre-treatment options that can be performed at the premises to reduce the costs associated with the transport and recycling of end of life mining heavy plant tyres;*
- (d) analysis of the specific costs to the licensee associated with the transport and delivery/acceptance of site generated end of life mining heavy plant tyres at the nearest capable recycling facilities;*
- (e) the current costs associated with the continued on-site burial of end of life mining heavy plant tyres;*
- (f) a full cost benefit analysis of continued on-site burial of end of life mining tyres compared to their transport from the site and their recycling/reprocessing.*

b. Limit to the number of and origin of tyres that can be disposed of at the premises in any one year

The proponent has indicated that mining operations at the site generate around 350 tonnes of end of life heavy mining plant tyres each year. The EPA understands that each of these tyres can weigh up to 4.5 tonnes. This suggests the site will generate approximately 78 waste heavy plant tyres each year.

The proponent has also advised that other tyres that have been generated at the site in the past have been stockpiled and that these will be gradually and evenly added to the waste heavy plant tyres generated at the site each years for disposal over the remaining operating life of the mine. The proponent has not provided a tally of the stockpiled waste tyres that it currently holds within the modification report.

The proponent has previously provided information and records to the EPA which indicate it had 135 waste heavy plant tyres stockpiled at the site as at 1 July 2020. In the 8 months to the end of March 2021, the site is likely to have generated a further 52 end-of-life heavy mining plant tyres. This should mean the current inventory of waste tyres sits at around 187.

The EPA understands that the mine is likely to continue operating until 2028 (i.e. another 7 years). This means the approval needs to make provision for the potential disposal of up to 441 tonnes of waste heavy plant tyres (equivalent to 98 tyres at 4.5 tonnes each) per annum for the next 7 years. The EPA therefore recommends that the following condition is added to the project approval should the modification be approved:

L2.4 The Proponent may dispose of up to 441 tonnes of end-of-life mining heavy plant-tyres on the premises in each annual return year period up until 8 January 2023. Should the report provided in accordance with condition E1.1:

- (a) be submitted to the EPA's satisfaction at intervals of 2 years; and*

(b) find that recycling options are not feasible;

then the on-site disposal of end-of life heavy mining plant tyres may continue for the subsequent 2 annual reporting periods.

Only waste tyres generated at the premises may be disposed of in accordance with this condition.

c. Environmental considerations

The proponent appended a copy of a Queensland Government Operational Policy for the *Disposal and storage of scrap tyres at mine sites* to its modification report. The EPA notes that this document applies a range of environmental safeguards around this practice in Queensland. The Whitehaven Mine Tyre Disposal Environmental Procedure provided with the modification report, does not however apply all these safeguards.

These safeguards are designed to minimise the risks of surface or groundwater contamination, fire and associated air pollution or landform instability arising from the disposal of waste tyres at mine sites. The EPA therefore recommends that the following conditions are added to the project approval should the modification be approved:

O5.1 The Licensee is authorised to dispose of heavy plant-tyre waste generated on the premises, in the waste rock/overburden emplacements.

The Licensee must:

- (a) ensure that heavy plant waste tyres are re-used on the premises as much as practical;*
- (b) ensure that any surplus heavy plant waste tyres can be emplaced by being spread out within the waste rock/overburden emplacements and buried as deep as practical, but, covered by at least 20m of inert material beneath any final rehabilitated surface;*
- (c) place heavy plant waste tyres at least 15m away from coarse reject material or tailings emplacement areas;*
- (d) not emplace any heavy plant waste tyres directly on the pit floor, or in a location that is likely to impede or contaminate saturated aquifers;*
- (e) not emplace any heavy plant waste tyres in a position that compromises the stability of the final rehabilitated landform;*
- (f) not place any heavy plant waste tyres within 15 metres of heated or potentially acid forming materials;*
- (g) not place any heavy plant waste tyres in an area likely to leach to any watercourse; and*
- (h) record the co-ordinates (easting, northing and elevation) of each disposal location.*

O5.2 Stockpiles of any heavy plant waste tyres stored at the premises awaiting disposal must:

- (a) be less than 3 metres in height;*
- (b) not cover an area of more than 200 square metres; and*
- (c) not be located within 10 metres of any other flammable or combustible materials.*

d. Reporting

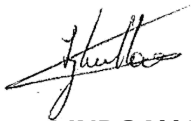
To ensure that the EPA is provided with accurate information that enables it to assess compliance with the conditions recommended above, the following condition is recommended for application to the project approval should the modification be approved:

R5.5 The Proponent must provide the EPA with an Annual Heavy Plant-Tyre Disposal Report. The Report must be submitted with the licence Annual Return each year and must include:

- (a) a plan of the disposed heavy plant waste tyres on the premises for the period that includes:
 - (i) each tyre serial number;*
 - (ii) supplier of each tyre;*
 - (iii) purchase date of each tyre;*
 - (iv) disposal date of each tyre;*
 - (v) co-ordinates (easting and northings) of the location where of each tyre was disposed of by burial in accordance with condition O5.1;*
 - (vi) the Real Level (RL) in metres AHD of each tyre emplacement location;*
 - (vii) the number of tyres buried in within each emplacement location; and*
 - (vii) the cumulative total number and tonnage of tyres disposed of at the premises each year.**

If you have any questions about this request, please contact the undersigned on (02) 6773 7000 or via email at Armidale@epa.nsw.gov.au.

Yours sincerely



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