

17 January 2025

Mr Stephen O'Donoghue  
Director – Resource Assessments  
NSW Department of Planning, Housing and Infrastructure  
4 Parramatta Square, 12 Darcy Street  
PARRAMATTA NSW 2150

Dear Mr O'Donoghue,

**RE: Atlas-Campaspe Mineral Sands Project Modification 6 – Scoping Letter**

### **Introduction**

Tronox Mining Australia Limited (Tronox) is the proponent of the Atlas-Campaspe Mineral Sands Project (the Project) which includes the development of a mineral sands mining operation (the Atlas-Campaspe Mine), together with the construction and operation of the Ivanhoe Rail Facility (a rail loadout facility) in western New South Wales (NSW) (Figure 1).

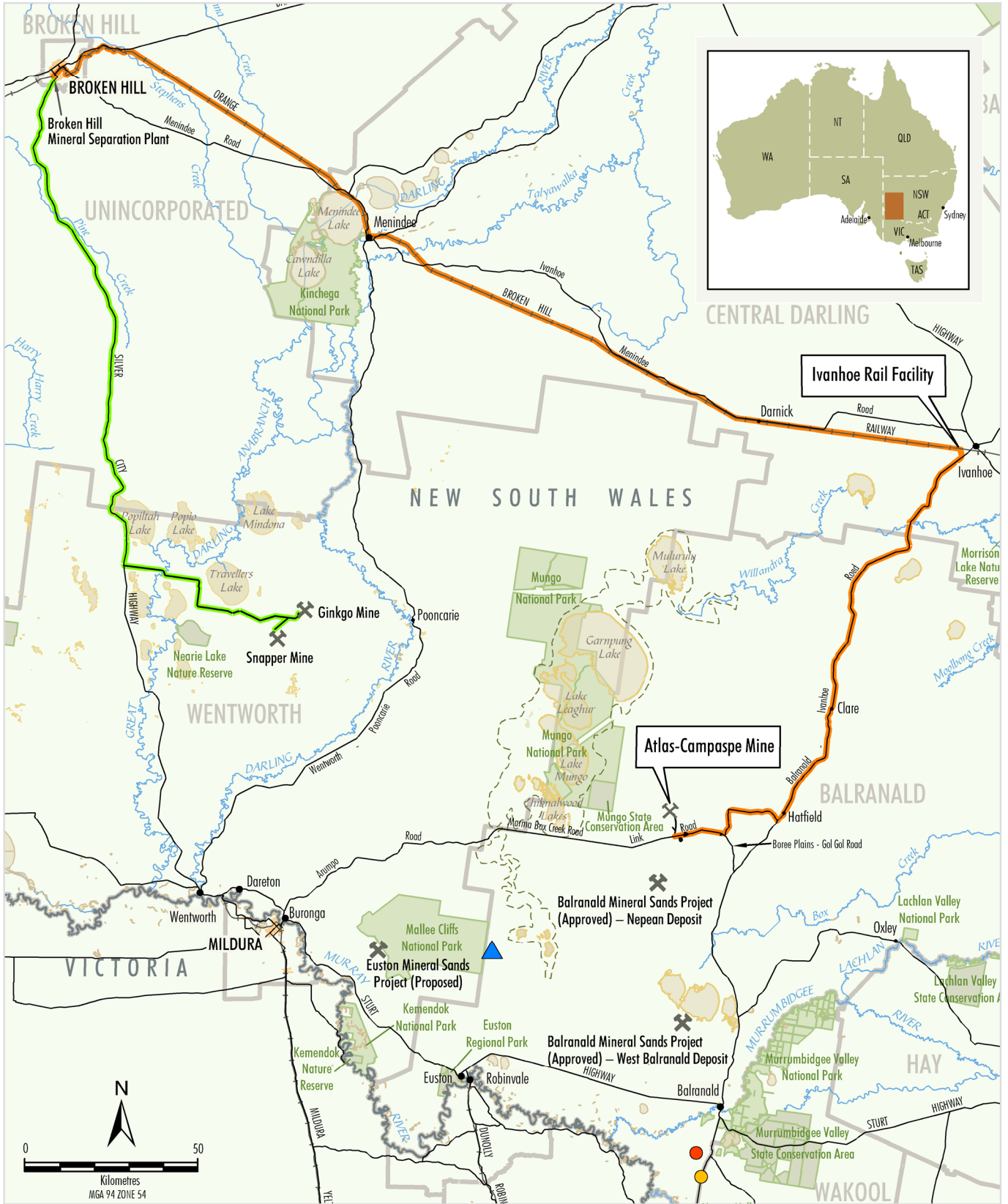
Development Consent (SSD\_5012) was granted for the Project under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) in 2014.

EPBC Approval 2012/6447 was granted for the Project under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) in 2014.

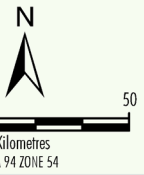
Tronox has identified an opportunity to improve operational efficiency at the Atlas-Campaspe Mine by developing an optimised services corridor alignment between the Atlas and Campaspe deposits (the Modification) (Figure 2).

The purpose of this Scoping Letter is to provide an overview of the Modification to Development Consent (SSD\_5012). In accordance with the *State significant development guidelines – preparing a scoping report* (NSW Department of Planning and Environment [DPE], 2022), this Scoping Letter also identifies the matters that will require further assessment (including the proposed approach to assessment) and describes the community engagement that will be carried out during the preparation of the Modification Report.

This Scoping Letter also seeks confirmation of the approval pathway, assessment scope and consultation requirements.



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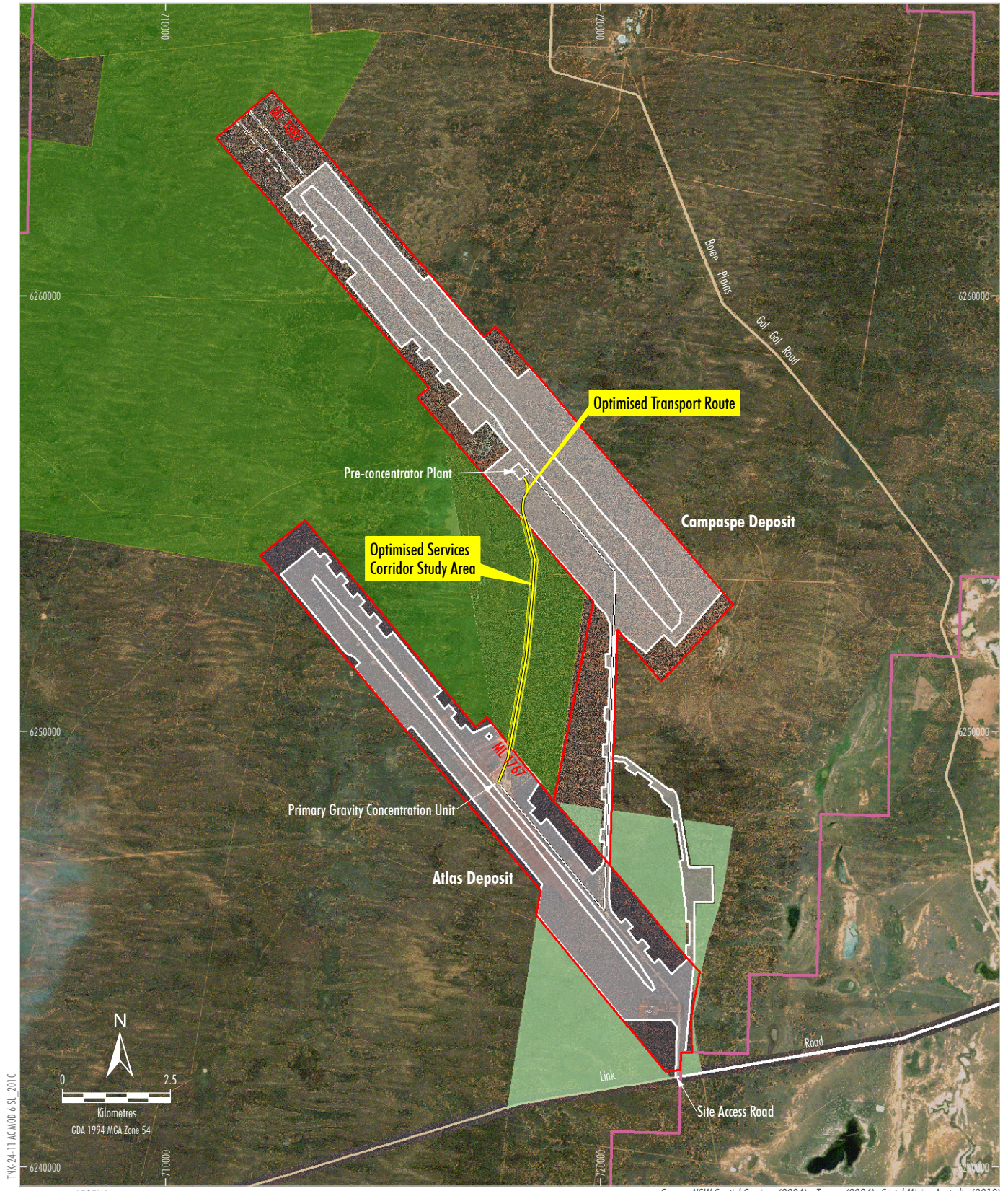


- LEGEND**
- National Park, Regional Park or State Conservation Area
  - Willandra Lakes Region World Heritage Area
  - Local Government Area Boundary
  - Snapper and Ginkgo Mines Haulage Route
  - Atlas-Campaspe Mine Mineral Haulage Route

- Other Key Projects Potentially Relevant to the Project**
- Mine Site
  - Limondale Sun Farm (Approved)
  - Sunraysia Solar Farm (Approved)
  - Euston Wind Farm (Proposed)

Source: NSW Spatial Services (2021); Cristal Mining Australia (2012)

**Figure 1**



Source: NSW Spatial Services (2024); Tronox (2024); Cristal Mining Australia (2012) Orthophoto Mosaic: Tronox (2023); AAM (2011)

- LEGEND**
- Approved Project Components**
  - Mining Lease Boundaries (ML 1762 & ML 1882)
  - Exploration Licence Boundary (EL 5359)
  - Surface Development Area
  - Mine Path Extent
  - Groundwater Borefield Study Area ^
  - Biodiversity Offset Area
  - Vegetation Management Area

- Modification Components**
- Modified Atlas-Campaspe Mine Component
- Optimised Services Corridor Study Area

**TRONOX**  
 M O D I F I C A T I O N 6  
 Approved and Modified  
 General Arrangement

^ The layout of the groundwater borefield would be confirmed based on the outcomes of ongoing hydrogeological test work/design.

**Figure 2**

## Strategic Context

The Atlas-Campaspe Mine component of the Project includes the sequential development of the Atlas and Campaspe deposits. Mining at the Atlas deposit is scheduled to be completed in 2025 and mining at the Campaspe deposit is expected to commence in 2026.

Tronox applied to modify Development Consent (SSD\_5012) under section 4.55(2) of the EP&A Act in July 2024 to allow for changes to the approved Atlas-Campaspe Mine identified during detailed planning conducted in preparation for the development of the Campaspe deposit, including a revised mineral processing methodology (MOD 5). MOD 5 was approved by the Department of Planning, Housing and Infrastructure (DPHI) on 17 December 2024.

The revised processing methodology approved as part of MOD 5 includes a pre-concentrator plant (PCP) at the Campaspe deposit to initially process Campaspe deposit ore to produce a pre-mineral concentrate that would be pumped and/or trucked via the modified transport route to the existing primary gravity concentration unit (PGCU) at the Atlas deposit for further processing (Figure 2).

The proposed Modification would further improve operational efficiency at the Atlas-Campaspe Mine by developing an optimised services corridor alignment between the Atlas and Campaspe deposits. The optimised services corridor would provide a more direct route between the PCP and PGCU which would significantly reduce the length of the transport route (Figure 2).

The Modification would also be consistent with Tronox's decarbonisation map and greenhouse gas emissions reduction targets, as it would result in a reduction in greenhouse gas emissions associated with the transfer of materials from the Campaspe deposit to the Atlas deposit.

## Modification Overview

The Modification would include the following (Figure 2):

- development of an optimised services corridor between the Atlas and Campaspe deposits, including haul road, pipelines, electricity transmission line, soil stockpiles and water management infrastructure;
- transport of pre-mineral concentrate and ore from the PCP to the PGCU via a pipeline and/or truck along the optimised transport route; and
- additional biodiversity offset area(s) to replace the approved biodiversity offset area that would be impacted by the optimised services corridor (location to be determined).

The existing services corridor would remain to provide an alternative access between the Atlas and Campaspe deposits.

The Modification would not change the following Project components:

- mine path;
- mine life;
- mining methods or rate;
- processing methods or rate;
- product transport;
- overburden and process waste management;
- annual maximum water supply/demand; and
- workforce.

A summary of the approved Project and the proposed Modification is provided in Appendix A.

## **Statutory Context**

Tronox proposes a modification to Development Consent (SSD\_5012), which would be sought under section 4.55(2) of the EP&A Act on the basis that the Project incorporating the Modification would be “substantially the same” as the Project originally approved by Development Consent (SSD\_5012).

Tronox intends to refer the Modification to the Commonwealth Minister for the Environment and Water. If the Modification is determined to be a “Controlled Action” requiring approval under the EPBC Act, it is proposed that it be assessed pursuant to the Assessment Bilateral Agreement with the NSW Government (i.e. NSW Government would issue assessment requirements for the Modification for matters relevant to the EPBC Act).

Tronox would subsequently apply for a variation to the existing EPBC Approval (2012/6447) for the Project under section 143(1B) of the EPBC Act to incorporate the modified biodiversity area(s) (approval can be issued under section 143[c][i] of the EPBC Act).

## **Proposed Assessment of Impacts**

Tronox will prepare a Modification Report to address the potential environmental impacts of the Modification in accordance with the *State Significant Development Guidelines* (DPHI, 2024), including *Appendix E – Preparing a Modification Report* (DPE, 2022). The Modification Report will include:

- a description of the Project, an overview of the Modification and an explanation of any interactions with other developments;
- a description of the strategic context in relation to the Project and the Modification;

- a detailed description of the Modification;
- a description of the statutory context of the Modification;
- a summary of the consultation undertaken for the Modification;
- an assessment of the potential environmental impacts of the Modification, including a comparison with potential environmental impacts of the approved Project; and
- a justification for the Modification and an evaluation of merits.

### Proposed Technical Studies

Tronox has reviewed the potential matters impacted by the Modification to identify those requiring further assessment in the Modification Report. The review considered:

- the scale and nature of the likely impacts of the Modification and the sensitivity of the receiving environment;
- whether the Modification is likely to generate cumulative impacts with other relevant future projects in the area;
- the ability to avoid, minimise and/or offset the impacts of the Project to the extent known at the scoping stage; and
- the complexity of the technical assessment of the Modification.

The matters that were identified as requiring further assessment in the Modification Report and the proposed approach to assessing each of these matters are provided below.

### *Biodiversity*

A Biodiversity Development Assessment Report (BDAR) will be prepared to comprehensively assess potential impacts to biodiversity values due to additional surface development and potential indirect prescribed impacts of the Modification in accordance with the NSW *Biodiversity Conservation Act 2016* and the EPBC Act. The BDAR will include an overview of the biodiversity impact avoidance measures implemented as part of the Modification.

In addition, biodiversity surveys will be conducted to characterise the additional biodiversity offset area(s) that would replace the approved biodiversity offset area that would be impacted by the optimised services corridor.

### *Aboriginal Cultural Heritage*

An Aboriginal Cultural Heritage Assessment (ACHA) will be prepared to assess potential impacts on Aboriginal cultural heritage values. The ACHA, including Aboriginal heritage consultation and surveys, would be conducted in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010, Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (Department of Environment, Climate Change and Water, 2010); and *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (Office of Environment and Heritage, 2011).

The Project has previously been subject to Aboriginal cultural heritage surveys and has an approved Heritage Management Plan which is implemented in accordance with the conditions in Development Consent (SSD\_5012). The Heritage Management Plan will be used to inform the preparation of the ACHA and appropriate management measures.

### *Noise and Air Quality*

The potential noise and air quality impacts of the Modification will be assessed using a qualitative assessment approach based on a review of existing noise and air quality assessments for the Project.

### *Visual*

The potential visual impacts of the Modification would be related to night lighting of the optimised services corridor (including lighting on mobile equipment). An assessment of these potential night lighting impacts will be assessed using a qualitative assessment approach.

### *Greenhouse Gas Emissions*

The Modification is expected to result in a reduction to the predicted greenhouse gas emissions for the approved Project. The Modification Report would include a review of greenhouse gas emissions associated with the Modification in consideration of relevant Commonwealth Government and NSW Government legislation and guidance.

### *Other Environmental Aspects*

An assessment of other potential environmental impacts (e.g. land resources, water resources, historic heritage, road transport, community infrastructure, and hazards/risks) will be included in the Modification Report.

## Community Engagement and Proposed Consultation

Tronox has consulted with DPHI on 2 December 2024 to provide an overview of the Modification, proposed approval pathway and the proposed scope of the environmental assessment.

Engagement will continue and will include, but not necessarily be limited to:

- Registered Aboriginal Parties;
- Balranald Shire Council;
- DPHI – Crown Lands;
- Department of Primary Industries and Regional Development, including:
  - NSW Resources; and
  - NSW Resources Regulator.
- NSW Department of Climate Change, Energy, the Environment and Water, including:
  - Biodiversity, Conservation and Science Group; and
  - Heritage NSW; and
  - NSW Environment Protection Authority.
- NSW National Parks and Wildlife Service/Willandra Lakes Region World Heritage Advisory Committee.

## Next Steps

Tronox is seeking the following from DPHI:

- The Modification can be lodged and considered by the DPHI under section 4.55(2) of the EP&A Act.
- Confirmation that the proposed scope of the Modification Report is sufficient.
- Confirmation that the consultation for the Modification is sufficient.

Please do not hesitate to contact me on 0429 162 901 if DPHI requires any further information.

Yours sincerely,

*Toni Munro*

Toni Munro  
Environmental Approvals Principal (APAC)  
Tronox Mining Australia Limited

**APPENDIX A**

**SUMMARY OF THE APPROVED PROJECT AND MODIFIED PROJECT**

**Table A-1  
Comparison of the Existing/Approved and Modified Project**

Project Component	Originally Approved Project	Existing/Approved Project	Modified Project
Project Life	<ul style="list-style-type: none"> <li>Mining operations until 30 June 2034.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>
Tenements	<ul style="list-style-type: none"> <li>Mining Lease Application (MLA) 1.</li> </ul>	<ul style="list-style-type: none"> <li>MLA 1 converted to Mining Lease (ML) 1767 and ML 1882.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>
Mining	<ul style="list-style-type: none"> <li>Dry mining (i.e. dozers and/or loaders and excavators) operation producing approximately 7.2 million tonnes per annum (Mtpa) of ore.</li> </ul>	<ul style="list-style-type: none"> <li>Increase in ore extraction rate up to 10 Mtpa.</li> <li>Option to adopt an alternative mining sequence at the Campaspe deposit.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>
Mineral Concentration and Mineral Product Transport	<ul style="list-style-type: none"> <li>Ore concentrated in the relocatable primary gravity concentration unit (PGCU) (comprising a screen, surge bin and wet concentrator) to produce heavy mineral concentrate (HMC).</li> <li>HMC washed in the salt washing facility prior to processing in the wet high intensity magnetic separator (WHIMS) circuit to produce ilmenite-rich, leucoxene-rich and non-magnetic (containing rutile-rich and zircon-rich) mineral product.</li> <li>Mineral product production up to 546,000 tonnes per annum (tpa).</li> <li>Mineral product transport up to 450,000 tpa.</li> <li>Up to 24 Transport for NSW (TfNSW) approved haulage vehicle trips per day.</li> </ul>	<ul style="list-style-type: none"> <li>Addition of a pre-concentrator plant (PCP) at the Campaspe deposit.</li> <li>PGCU would remain in the existing location at the Atlas deposit.</li> <li>Transfer of pre-mineral concentrate from the PCP to the PGCU (pumped and/or trucked) via the services corridor.</li> <li>Option to not undertake further processing at the WHIMS.</li> <li>Increase in mineral product production and transport up to 665,000 tpa.</li> <li>Increase in TfNSW-approved haulage vehicle trips up to 35 per day.</li> </ul>	<ul style="list-style-type: none"> <li>Transfer of pre-mineral concentrate from the PCP to the PGCU (pumped and/or trucked) via the optimised services corridor.</li> </ul>
Overburden Management	<ul style="list-style-type: none"> <li>Overburden removal ahead of ore extraction areas using conventional truck and shovel methods (e.g. excavators and haul trucks).</li> <li>Overburden replacement, including progressive backfilling of mine voids behind the advancing ore extraction areas or in overburden emplacements adjacent to the mine path using haul trucks.</li> </ul>	<ul style="list-style-type: none"> <li>Option to use an overland conveyor to transfer overburden in addition to haul trucks.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>
Sand Residue and Coarse Reject Management	<ul style="list-style-type: none"> <li>Sand residues and coarse rejects placed in either overburden emplacement cells behind the advancing ore extraction area or in off-path sand residue dams.</li> </ul>	<ul style="list-style-type: none"> <li>Changes to sand residue emplacement locations due to the revised mineral processing methodology and alternative mining sequence at Campaspe deposit (if adopted).</li> <li>Addition of a separate fine residue emplacement area.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>

**Table A-1 (cont.)  
Comparison of the Existing/Approved and Modified Project**

<b>Project Component</b>	<b>Originally Approved Project</b>	<b>Existing/Approved Project</b>	<b>Modified Project</b>
Mineral Separation Plant (MSP) Process Waste Management	<ul style="list-style-type: none"> <li>Broken Hill MSP process waste placed behind the advancing ore extraction areas at either the Ginkgo Mine, Snapper Mine or Atlas-Campaspe Mine.</li> <li>Broken Hill MSP process waste production of up to 50,000 tpa.</li> </ul>	<ul style="list-style-type: none"> <li>No change to Broken Hill MSP process waste management.</li> <li>Increase in Broken Hill MSP process waste production up to 65,000 tpa.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>
Water Supply	<ul style="list-style-type: none"> <li>Water requirements will be supplied by the Atlas-Campaspe Mine borefield.</li> </ul>	<ul style="list-style-type: none"> <li>Addition of a groundwater borefield.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>
Electricity Supply	<ul style="list-style-type: none"> <li>Electricity supplied by diesel generator sets.</li> </ul>	<ul style="list-style-type: none"> <li>Addition of Atlas and Campaspe deposit solar farms and battery energy storage system.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>
Supporting Infrastructure	<ul style="list-style-type: none"> <li>Construction of supporting infrastructure within the approved surface development area.</li> </ul>	<ul style="list-style-type: none"> <li>Relocation of the accommodation camp.</li> <li>Construction and operation of a telecommunications tower.</li> </ul>	<ul style="list-style-type: none"> <li>Development of an optimised services corridor between the Atlas and Campaspe deposits.</li> </ul>
Site Access	<ul style="list-style-type: none"> <li>Access to the Atlas-Campaspe Mine is via the road haulage route.</li> <li>The use of other local roads other than the haulage route by Project-related light vehicles to access site.</li> </ul>	<ul style="list-style-type: none"> <li>The use of the shuttle bus access routes by Project-related shuttle buses and light vehicles to access site.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>
Employment	<ul style="list-style-type: none"> <li>Approximately 300 personnel during peak construction.</li> <li>Approximately 200 personnel during operations.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>
Rehabilitation Works	<ul style="list-style-type: none"> <li>Progressive rehabilitation undertaken as mining advances.</li> </ul>	<ul style="list-style-type: none"> <li>Refined optimised final landform to reflect the revised mineral processing concentration methodology and the alternative mining sequence at Campaspe deposit (if adopted).</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>
Biodiversity Offset Area	<ul style="list-style-type: none"> <li>Approximately 16,540 hectares will be established to offset native vegetation communities cleared for the Project.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>	<ul style="list-style-type: none"> <li>Additional biodiversity offset area that would replace the approved biodiversity offset area that would be impacted by the optimised services corridor.</li> </ul>