



Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L5319/1988/12
Licence Holder	Tronox Management Pty Ltd
ACN	009 343 364
File Number	DER2015/000793
Premises	Cooljarloo Mineral Sands Mine 12051 Brand Highway COOLJARLOO WA 6507 Legal description – Mining tenement M70/1398
Date of Report	24 November 2023
Decision	Amended licence granted

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an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

Licence L5319/1988/12 is held by Tronox Management Pty Ltd (Licence Holder) for the Cooljarloo Mineral Sands Mine (the Premises), located at mining tenement M70/1398, Cooljarloo WA.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. As a result of this assessment, Revised Licence L5319/1988/12 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

2.2 Application summary

On 6 December 2022, Tronox Management Pty Ltd (Tronox, the Licence Holder) applied to the department to amend Licence L5319/1988/12 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act).

Tronox request removal of “0.5%” percent from the description within the authorised waste table which reads “coarse sand containing up to 0.5% monazite” for coarse rejects. They indicate the coarse reject stream is variable (typically 5 – 10% or more) depending on the orebody mined and the processes in the dry separation plant. Tronox indicate the description was erroneously included in the description for coarse rejects. They indicate that this is the description for Heavy Mineral Concentration (HMC), the material that the Cooljarloo Mine supplies to the Chandala Processing Plant and not coarse rejects.

2.3 Stockpiling coarse rejects

Due to the increasing demand for Rare Earth minerals in clean energy technologies Tronox is looking to utilise the monazite from their existing operations to produce several Rare Earth minerals. It is proposed to start stockpiling the current coarse rejects from the existing Chandala Dry Separation plant, currently a waste product, and either utilise this in the future or sell to a third party.

It is expected over the next three years that approximately 27,000 m³ of coarse rejects will be transported to the Mineral Residue Facility (MRF) at the Tronox Cooljarloo Minesite and stockpile it in a separate area at the MRF. Currently, the practice is to transport coarse rejects as a 50:50 mix with tails and blend into the waste at the MRF.

The Tronox long term plan is to stockpile the coarse rejects for three to five years and utilise this in a Rare Earths processing plant possibly located at Chandala in 2027. If the processing plant is not constructed as planned the coarse rejects will be either transported to another Tronox processing plant or sold to a third party. In the event it is not processed or sold it will remain in the MRF, capped, surveyed for radiation clearance and rehabilitated as per any other MRF cell in accordance with the Northern Operations RMP and Cooljarloo Mine Closure Plan.

There will be no changes to the transport of coarse rejects to Cooljarloo, as this material is already being transported along the same route as DG Class 7 – Radioactive, in accordance with WA Radiation Safety (Transport) Regulations.

2.4 Part IV of the EP Act

Tronox are authorised to operate the Cooljarloo mine in accordance the conditions of the environmental operating License L5319/1988/12 and Ministerial Statement 1158 under Part IV of the Environmental Protection Act 1986.

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk assessments* (DWER 2020).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises operation which have been considered in this Amendment Report are detailed in

Table 1 below.

Table 1 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 1: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
MRF leachate (metalloids and increased % radionuclides)	Disposal of coarse rejects containing higher percentage monazite (5 – 10%, possibly higher) into the MRF.	Seepage through base and embankments causing contamination of groundwater, mobilization of radionuclides and poor health of nearby environmental receptors	<ul style="list-style-type: none"> Construction of containment cells at a minimum of 3 m above the water table and at least 100 m away from Mullering Brook Establishment of a compacted clay liner for each cell with a permeability of less than 10⁻⁹ m/s Bunding of the edge of the MRF Capping of the cells with a low permeability layer and at least 2 m of sand or overburden prior to rehabilitation <p>The effectiveness of these controls is verified through the groundwater monitoring program around the MRF.</p>
Contaminated surface water (metalloids and increased % radionuclides in coarse rejects)		Contaminated surface water run off causing contamination, mobilization of radionuclides and poor health of nearby environmental	<p>The Licence Holder has a current suite of controls related to surface water runoff, including;</p> <ul style="list-style-type: none"> Surface water monitoring is conducted at Mount Jetty creek and Mullering Brook to assess water chemistry and sediments.

Emission	Sources	Potential pathways	Proposed controls
		receptors	<ul style="list-style-type: none"> • Prior to any operational discharge to Mullering Brook DWER are consulted, and provision put in place to monitor discharge quality and rate. • Mullering Brook diversions are designed and maintained (e.g., bed and bank erosion is prevented and repaired, and sediment traps maintained) such that erosion and sedimentation issues are considered and minimised. • Stormwater released to Mullering Brook meets the requirements of the Environmental Management Programme.
Dust from MRF containing a higher % of radionuclides		Air/windborne pathway	<ul style="list-style-type: none"> • Progressive capping of cells with overburden to minimise the area of waste exposed at any point in time. • Stabilisation of non-active dumping and open areas with the application of clay fines (or similar) to minimise the area of waste exposed. • Active suppression of dust on working faces and haul roads using water trucks • Sheeting the entrance and exit of the MRF with overburden or similar material to minimise the exposed areas traversed over. • Implementation of speed limits on unsealed roads • Sweeping of bitumen roads leading from the MRF to clean up any mineral residue tracked off the facility. • Covering loads of coarse rejects as soon as practicable after deposition

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 2 below provides a summary of potential human and environmental receptors that may

be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental siting* (DWER 2020)).

Table 2: Sensitive human and environmental receptors and distance from prescribed activity / prescribed premises

Human and heritage receptors	Distance from activity / prescribed premises
Billineue Aboriginal Community (BAC), (population ~43)	SE corner of Mullering Farm, within the prescribed premise. The BAC supplies the licence holder with native seeds for propagation and rehabilitation purposes. ~2.3 km south-east of the MRF (disposal location for coarse rejects)
Mullering Brook (site ID 4640)	Immediately along the southern extent of the MRF (down gradient)
Muralang Pool Camp (site ID 4642), (up-stream of Mullering Brook)	2.5 km east of the MRF (up-stream of site)
Cooljarloo Well (site ID 4639), (nearby Mullering Brook)	3.2 km west of the MRF (down-stream of site)
Environmental receptors	Distance from prescribed activity
Geomorphic wetlands – Cervantes South	A section of Mullering Brook is included within the Geomorphic wetlands layer (also listed as a Heritage receptor) After Mullering Brook the closest point 1.6 km south-west (down-gradient)
Department of Biodiversity, Conservation and Attractions (DBCA) - managed lands and waters: 'Class A' Conservation Reserves	Unnamed Nature Reserve (R40916) 650 m south-west of premises boundary, 5 km south-west of MRF Unnamed Nature reserve is protected under MS1158 condition 6-1 stating that: "The proponent shall implement the proposal to meet the following environmental objectives: (1) avoid where possible, otherwise minimise direct and indirect impacts to surface and groundwater quality and quantity within the revised proposal development envelope delineated in Figure 2 of Schedule 1 during ground disturbing activities and during all phases of mining activities, as far as practicable; and (2) ensure there are no proposal-related groundwater drawdown or proposal-related direct or adverse indirect impacts to the un-named Nature Reserve (No. R 40916)"
DBCA-managed lands and waters: 'Class C' Conservation Reserves	Unnamed Nature Reserve (R41986) Immediately adjacent to eastern site boundary, ~850 m north-east of MRF

<p><u>Threatened and priority ecological communities (TEC)</u></p> <p>Priority 3 - Banksia Dominated Woodlands of the Swan Coastal Plain</p>	<p>Within the prescribed premises boundary</p> <p>Closest point is 140 m east of the MRF</p>
<p><u>Threatened Flora</u></p> <p>Surveys summarised by EPA assessment for MS1158 identified the following threatened species may occur within the vicinity of the site and the proposed Cooljarloo west development envelope:</p> <ul style="list-style-type: none"> • <i>Andersonia gracilis</i> – Vulnerable under the <i>Biodiversity Conservation Act 2016</i> (BC Act) and Endangered under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) • <i>Anigozanthos viridis</i> subsp. <i>terraspectans</i> (Dwarf green kangaroo paw) – Vulnerable under both the BC Act and EPBC Act • <i>Macarthuria keigheryi</i> (Keighery's macarthuria) – Endangered under both the BC Act and EPBC Act <p><i>Paracaleana dixonii</i> (Sandplain duck orchid) – Vulnerable under the BC Act and Endangered under the EPBC Act.</p>	<p>Assessment of threatened flora has taken place as part of the Cooljarloo West proposal (MS1158).</p> <p>Threatened flora are protected under conditions in section 5 of MS1158.</p> <p>Closest surveyed location 2 km west of MRF.</p>
<p><u>Priority Flora</u></p> <p>Surveys summarised by EPA assessment for MS1158 identified 25 priority flora species within the vicinity of and to the west of site.</p> <p>Species considered to be more important by the EPA assessment as compared to the proportion of the regional population present are:</p> <p>Priority 2 - <i>Chordifex reseminans</i></p> <p>Priority 3 - <i>Babingtonia urbana</i> <i>Guichenotia alba</i></p> <p>Priority 3 <i>Stylidium hymenocraspedum</i></p>	<p>Assessment of priority flora has taken place as part of the Cooljarloo West proposal (MS1158).</p> <p>Priority flora are protected under conditions in section 5 of MS1158.</p> <p>Closest surveyed location 300 m east of MRF.</p>
<p>Threatened/Priority Fauna</p>	<p>Area to the west of site includes Carnaby's cockatoo foraging habitat.</p> <p>A total of 18 fauna species of conservation significance have been recorded within and/or in the vicinity of the Premises as part of terrestrial fauna studies since 1986. A summary of species is included within the decision report for the December 2019 licence review.</p>

Proclaimed groundwater area <i>Rights in Water and Irrigation Act 1914 (RIWI Act)</i> Gingin Groundwater Area	6 mbgl – 20 mbgl across premises area. Groundwater salinity in the superficial aquifer ranges from 120 – 18,000 mg/L (HGEO, 2021) Groundwater flow direction is to the south-west
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3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are incomplete they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

The Revised Licence L5319/1988/12 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e., Category 8: Mineral sand mining or processing activities.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 3. Risk assessment of potential emissions and discharges from the Premises operation

Risk Event					Risk rating ¹ C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions ² of Licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
Operation								
<p>Disposal of coarse rejects containing higher percentage monazite (5 – 10%, possibly higher) into the MRF</p> <p>Coarse reject uranium and thorium analysis results recorded between 2017 to 2021 returned an average activity level of 39 ± 18 Bq/g and maximum activity level of 56 ± 18 Bq/g.</p>	<p>MRF leachate (metalloids and increased % radionuclides)</p>	<p>Seepage through base and embankments causing contamination of groundwater, mobilization of radionuclides and poor health of nearby environmental receptors</p>	<ul style="list-style-type: none"> • RIWI Act groundwater area 6 – 20 mbgl • Mullering Brook, along southern boundary of MRF (down-gradient) • Geomorphic wetlands, Cervantes South, closest point 1.6 km south-west (down-gradient) • TEC Banksia Woodland within prescribed premises (closest point 140 m east of MRF) • Threatened and priority flora (closest point 300 m east of MRF) • Muralang pool camp (up-stream of site) • Cooljarloo Well 3.2 km west of MRF 	<p>Refer to Section 3.1</p>	<p>C = Moderate L = Unlikely Medium Risk</p>	<p>Y</p>	<p>Condition 1, 4, and 15</p>	<p>The licence includes conditions related to waste containment infrastructure, including conditions specifically related to managing leachate from the Mineral Residue Facility (MRF).</p> <p>Naturally occurring radioactive material will be managed as per the Radiological Management Plan (RMP) provided to DWER and DMIRS.</p>
	<p>Contaminated surface water (metalloids and increased % radionuclides in coarse rejects)</p>	<p>Contaminated surface water run off causing contamination, mobilization of radionuclides and poor health of nearby environmental receptors</p>	<ul style="list-style-type: none"> • Mullering Brook, along southern boundary of MRF (down-gradient) • Geomorphic wetlands, Cervantes South, closest point 1.6 km south-west (down-gradient) • TEC Banksia Woodland within prescribed premises (closest point 14m east of MRF) • Threatened and priority flora (closest point 300 m east of MRF) • Muralang pool camp (up-stream of site) • Cooljarloo Well 3.2 km west of MRF 	<p>Refer to Section 3.1</p>	<p>C = Moderate L = Unlikely Medium Risk</p>	<p>Y</p>	<p>Condition 4, 15</p>	<p>The licence includes conditions related to waste containment infrastructure, including the Mineral Residue Facility (MRF), specifically related to surface water runoff.</p>

Licence: L5319/1988/12

Risk Event					Risk rating ¹ C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions ² of Licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
	Dust from MRF containing a higher % of radionuclides	Air/windborne pathway	<ul style="list-style-type: none"> Billinue Aboriginal Community 	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 16, 19, 24	The licence includes specific dust management controls for the MRF as well as monitoring and reporting conditions for dust.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

3.3 Detailed risk assessment for radiation risk

3.3.1 Radiation risk assessment

It is expected over the next three years that approximately 27,000m³ of coarse rejects will be transported to the Mineral Residue Facility.

Table 4: Estimated volumes of coarse rejects

Year	Total tonnes	Volume (m ³)
2023	19,872	9,693.5
2024	16,663	8,128.25
2025	19,025	9,280.31

The Coarse Rejects will be stockpiled at the south side of the MRF extension cell 8 which the licence holder states were specifically engineered to effectively contain process wastes and prevent interaction with local groundwaters. The use of this facility to receive coarse rejects is permitted by the current licence L5319/1988/12.

Cell 8 at the Cooljarloo Mineral Residue Facility has been selected as the location of stockpiling due to the following controls and considerations.

- i) Cell 8 construction approved by DWER.
- ii) Cell 8 walls are 3 m high providing a windbreak.
- iii) Dimensions of Cell 8 are as follows:
 - a. Area: 113,762 m²
 - b. Perimeter 1,329.0 m
 - c. Capable of storing 27,000 cubic metres of coarse rejects.
- iv) The Mineral Residue Facility is already a radiation classified area with limited access.
- v) No residential properties close to the mine or MRF
- vi) Limited operational personnel working around the MRF.

3.3.2 Radiological aspects

The mineral in the dredged heavy metal concentrate (HMC) that has the highest content of radionuclides is monazite, a rare earth phosphate containing approximately 0.2% uranium and 6 to 7% thorium. The other mineral sands compounds also contain traces of thorium and uranium but at concentrations, in general, several of orders of magnitude less. Typically, monazite constitutes around 0.5% by weight of the HMC.

Coarse rejects, the waste stream to which the monazite is part of, is directed to the Chandala Dry Separation Plant, and has the highest radionuclide content of any material handled within the current mining operations. Typically, coarse rejects contain around 5 -10 % of monazite and have an activity level of around 39 ± 18 Bq/g, but higher concentrations can be encountered depending on the ore body mined.

The concentrations of thorium and uranium in the coarse rejects stockpiled is detailed below in Table 5.

Table 5: Radioactivity concentrations of the coarse rejects

Material	Min	Max	Average	Std dev.
Uranium (ppm)	153	580	402	176
Thorium (ppm)	2,916	12,000	8,341	3,780
Activity (Bq/g)	14	56	39	189

Both thorium and uranium decay series contain gamma-emitting radionuclides and therefore any naturally occurring radioactive materials containing them in elevated concentrations are a potential source of the external radiation hazard. The external dose rate mainly depends on the specific activity of thorium and uranium, the amount of material and on a geometry factor (distance from a source, the source area, etc.).

The licence holder believes that as there are no members of the public located in the vicinity of the site, the assessment of possible radiation exposure of the ‘critical group’ has not been carried out – as no member of the public is expected to be affected by radiation due to the project. The assessment will be carried out if these circumstances change in the future. The licence holder also indicated that it is not expected that contamination of surfaces will contribute significantly to overall levels of radiation exposure of workers.

3.3.3 Advice from DMIRS and DWER decision

The Department of Mines, Industry Regulation and Safety (DMIRS) was advised of the proposal and advice was provided by DMIRS Mine Safety branch to DWER. DMIRS highlighted that coarse rejects are not intended for “disposal” and are proposed to be stockpiled for potential future feedstock into a monazite splitting facility where rare earths will be separated.

DMIRS state that licence holder has provided a Radiation Management Plan (RMP) for Tronox Northern Operations including the mineral sands mine at Cooljarloo, and the elevation of the 0.5% monazite specification to 5-10% (or more) is addressed suitably in the RMP.

DMIRS therefore has no objection to the proposal.

DMIRS does recommend that the wording in relation to the hosting of monazite be changed from “disposed” to “temporarily stored” (even though the storage may be for several years, or even a decade). Additional detail on DMIRS comment to the application is below in Table 6.

The Delegated Officer agree with DMIRS that the Radiation Management Plan addressed radiological aspects of temporary storage of coarse rejects, including monazite, at the MRF, and that existing licence conditions are adequate and appropriate in managing risks in handling and storing naturally occurring radioactive materials (NORM).

4. Consultation

Table 6 provides a summary of the consultation undertaken by the department.

Table 6: Consultation

Consultation method	Comments received	Department response
Local Government Authority Shire of Dandaragan advised of proposal 13 January 2023	None comment received	N/A

<p>Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal 13 January 2023</p>	<p>DMIRS replied on 25 January 2023 stating that Mines Safety approved the Radiation Management Plan for the Tronox Management – Northern operations, which includes the Cooljarloo MRF, on 19 January 2023.</p> <p>Amongst several other matters, the materials being disposed in the Cooljarloo MRF were extensively addressed.</p> <ul style="list-style-type: none"> • The first issue related to “filter cake” derived from the Tronox Kwinana pigment plant (KPP). DMIRS found it to be mildly radioactive but presents in a form that is not readily dissolved, and based on DMIRS observations, subject to DWER authorisation, Mine Safety would not oppose the disposal of these materials (which had been occurring for many years under the previous State Agreement). • The second issue was on the matter of the disposal of materials from the recently acquired ex-Cristal operations (a mineral sands plant in Bunbury and a pigment plant in the region of Australind-Kemerton). Whilst the materials being disposed of from these sites are similar in nature to those from the KPP, nevertheless, they did not originate from the Tronox northern operations, and as such, it could be argued that disposal was not in keeping with the intent of the tenement conditions or the DWER licence (despite it being listed as an allowable use). Prior to acquisition of the operations, the wastes were disposed of by the previous owners at various facilities, notably Cleanaway Dardanup. <ul style="list-style-type: none"> ○ Given the environmental sensitivities at the Dardanup facility, it may eventuate that disposal of the materials at Cooljarloo is a best-practice outcome for the State, however, DMIRS, the Radiological Council and DWER must come to a joint conclusion that this is the case, and time is required for cross-agency consultation on the matter. ○ In the interim, Mine Safety has resolved that Tronox will remove this material from the RMP, and instead address it in the Radioactive Waste Management Plan for the northern operations, providing Tronox with the opportunity to focus on the materials and their long-term management, whilst giving the agencies time to consult. • Finally, to the use of the MRF to host monazite. Whilst Mine Safety has no objections to this use; DMIRS highlight that it not intended as “disposal”. The monazite, which is a rich source of light rare earths is proposed to be “stockpiled” for potential future feedstock into a monazite splitting facility where the rare earths will be separated. The proposal is similar in nature to that approved by Iluka to store monazite at their Eneabba facility. The elevation of the 0.5% monazite specification to 5-10% (or more) is addressed suitably in the RMP, and as such Mine Safety has no objection to the proposal. • DMIRS does recommend that the wording in relation to 	<p>Noted.</p>
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	the hosting of monazite be changed from “disposed” to “temporarily stored” (even though the storage may be for several years, or even a decade).	
The Licence Holder was provided with draft amendment on 27 September 2023	The Licence Holder requested several extensions to the review period while they consulted with DMIRS. On 13 November the Licence Holder confirmed they had no comment, and the final instrument could be issued.	N/A

5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

5.1 Summary of amendments

Table 7 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 7: Summary of Licence amendments

Condition no.	Proposed amendments
Licence history	Updated to reflect modification of description of coarse rejects in “Authorised waste types” table to remove the statement regarding the percentage of monazite (0.5%) allowable in coarse sand rejects
Table 6: Authorised waste types	Remove the statement regarding the percentage of monazite (0.5%) allowable in coarse sand rejects
L5319/1988/12	Corrected numerous ‘broken’ condition 0 cross-reference links in the licence.

References

1. Tronox Management Pty Ltd 2022, *L5319 Tronox Cooljarloo Mine Site – Licence Amendment Application – 2022-12-06 & supporting documentation*, Kwinana Beach, Western Australia
2. Tronox Management Pty Ltd 2022, *Tronox Radiation Management Plan for Tronox – Northern Operations including Mineral Sands Mine at Cooljarloo and Dry Separation and Synthetic Rutile Plants at Chanala*, Kwinana Beach, Western Australia
3. Tronox Management Pty Ltd 2022, *Tronox Radiation Management Plan for Tronox – Northern Operations Addendum 2 – Coarse Rejects Storage at Cooljarloo*, Kwinana Beach, Western Australia
4. HGEO Pty Ltd 2023, *Tronox Pty Ltd, Cooljarloo Mine Annual Aquifer Review 2022 Report D23206*, Sydney, Australia
5. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
6. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
7. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.

Appendix 1: Application validation summary

SECTION 1: APPLICATION SUMMARY				
Application type				
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L5319/1988/12	
		Relevant works approval number:		<input type="checkbox"/>
Date application received	6/12/2022			
Applicant and Premises details				
Applicant name/s (full legal name/s)	Tronox Management Pty Ltd			
Premises name	Cooljarloo Mine Site			
Premises location	Mining tenement M70/1398 – Brand Highway Cataby			
Local Government Authority	Shire of Dandaragan			
Application documents				
HPCM file reference number:	DER2015/000793-1			
Key application documents (additional to application form):	Tenement registration ASIC extract Letter of authority			
Scope of application/assessment				
Summary of proposed activities or changes to existing operations.	<p><u>Licence amendment</u></p> <p>Authorised waste types in Table 6 for the current licence allows “coarse sand containing up to 0.5% monazite” for disposal. Tronox request the inclusion of a specific percentage of monazite is removed from the “characteristic” description as the percentage of monazite in the coarse reject stream is variable depending on the orebody mined and the processes in the dry separation plant.</p>			

Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 8: Mineral sands mining or processing: premises on which mineral sands ore is mined, screened, separated or otherwise processed.	26,000,000 tonnes per annum	No throughput changes proposed
Assessed activities directly related to the above categories		
Disposal of mineral processing residues (generated from downstream processing and refining of the mined ore) into the Mineral Residue Facility	550,000 tonnes of mineral residue per annual period	No throughput changes proposed
Deposition of stockpiled mineral sands concentrate from Jurien Project (M70/435) at the premises, for dredging and concentrating through the Cooljarloo Concentrator.	Total of 250 kT over 2 years	No throughput changes proposed

Legislative context and other approvals

Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input checked="" type="checkbox"/> This application has not been referred; however a previous ministerial statement exists for the site
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Ministerial statement No: MS 1158 EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input checked="" type="checkbox"/> Expiry: M70/1398 Other evidence <input type="checkbox"/> Expiry:

Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Approval: Expiry date: If N/A explain why? Exempt under the <i>Mining Act 1978</i>
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	CPS No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Application reference No: Licence/permit No: GWL 101017 – exp 29/4/2025 GWL 104551 – exp 29/4/2025 GWL 157540 – exp 29/4/2025 GWL 159548 – exp 29/4/2025
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Name: Jurien Groundwater Area and Gingin Groundwater Area Type: RIWI Act 1914 Groundwater Area Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Regional office: Mid-West
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i>)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<i>Mining Act 1978</i> <i>Dangerous Goods Safety Act 2004</i> <i>Work Health and Safety (Mines) Regulation 2022 (radiation)</i> <i>Radiation Safety Act 1975</i>
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Classification: possibly contaminated – investigation required (PC–IR) Date of classification: 10/7/2018