**OFFICIAL** 



# Works Approval

Works approval number	W6753/2022/1
Works approval holder ACN	Mt Weld Mining Pty Limited 053 160 400
Registered business address	Level 1, Suite 3 5 Tully Road EAST PERTH WA 6004
DWER file number	DER2022/000492
Duration	13/02/2024 to 12/02/2029
Date of issue	13/02/2024
Premises details	Mt Weld Rare Earths Project Elora Road LAVERTON WA 6440
	Legal description - Within Mining Leases M38/58, M38/59, M38/326 M38/327, G38/34 and G38/35. As defined by the Premises Map in Schedule 1

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i> )	Assessed production / design capacity
Category 5: Processing or beneficiation of metallic or non- metallic ore	1,300,000 tonnes per annual period.
Category 52: Electric power generation	22.185 megawatts in aggregate.

This works approval is granted to the works approval holder, subject to the attached conditions, on 13 February 2024, by:

## A/MANAGER, RESOURCE INDUSTRIES REGULATORY SERVICES

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

# Works approval history

Date	Reference number	Summary of changes
		Works approval granted for the construction, commissioning and time limited operations of:
13/02/2024	W6753/2022/1	• The expansion of the existing rare earth processing plant, to process apatite ore and increase design capacity from 443,000 tonnes per annum to 1,300,000 tonnes per annum;
		Recycle water treatment plant and Western borefield water treatment plant; and
		• A new HV gas engine power station.

# Interpretation

In this works approval:

- (a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a condition, each row in a table constitutes a separate condition;
- (d) any reference to an Australian or other standard, guideline, or code of practice in this works approval:
  - (i) if dated, refers to that particular version; and
  - (ii) if not dated, refers to the latest version and therefore may be subject to change over time;
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and
- (f) unless specified otherwise, all definitions are in accordance with the EP Act.

**NOTE:** This works approval requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this works approval.

# Works approval conditions

The works approval holder must ensure that the following conditions are complied with:

# **Construction phase**

#### Infrastructure and equipment

- **1.** The works approval holder must:
  - (a) construct and/or install the infrastructure and/or equipment;
  - (b) in accordance with the corresponding design and construction / installation requirements; and
  - (c) at the corresponding infrastructure location; and

as set out in Table 1.

#### Table 1: Design and construction / installation requirements

ltem	Infrastructure	Design and construction / installation requirements	Infrastructure location
1	RE processing plant expansion Stage 1 – Concentrate dewatering	<ul> <li>Concentrate dewatering circuit, including thickeners and filters, must be installed in accordance with manufacturer's specifications;</li> </ul>	Labelled as 'Stage 1: Concentrate Dewatering', as depicted in Schedule
		<ul> <li>Bunded concrete hardstand must be constructed for the concentrate dewatering circuit, and be graded towards a collection sump and fitted with a pump; and</li> </ul>	1, Figure 2.
		c) Bunding must be constructed with sufficient storage capacity to contain 110% of the largest vessel or 25% of the total stored volume in the bunded area, whichever is greater.	
2	RE processing plant expansion Stage 2 – Comminution circuit	<ul> <li>a) Three-stage comminution circuit must be installed, including a crusher pad, ore crusher (Mineral Sizer), SAG mill and ball mill equipped with hydrocyclone classifiers, floatation cells and fine grinding with hydrocyclone classifiers;</li> </ul>	Labelled as 'Crusher Pad', 'Crushing', 'Grinding and Flotation', 'Ball Mill', as depicted in Schedule 1, Figure 2.
		<ul> <li>b) Comminution circuit must have a design capacity to process no more than 1,300,000 tonnes of ore material per annual period;</li> </ul>	
		<ul> <li>Ore crusher feed bin must be fitted with curtain water spray system;</li> </ul>	
		<ul> <li>d) Transfer points at the (i) primary crusher discharge, (ii) SAG mill feed and (iii) emergency feed to SAG mill feed must be enclosed;</li> </ul>	
		<ul> <li>e) Kibble opening must be equipped with rubber curtain; and</li> </ul>	
		<li>f) Dust suppression must be undertaken using water cart during construction/installation works.</li>	
	RE processing plant expansion Stage 2 –	<ul> <li>Must be constructed to have storage capacity of at least 9,199 m<sup>3</sup>, including sufficient</li> </ul>	Labelled as 'Crusher Pad Run off Pond', as

ltem	Infrastructure	Design and construction / installation requirements	Infrastructure location
	Crusher pad run off pond	capacity to contain a 1% AEP storm event for at least 72 hours while maintaining a minimum freeboard of 300 mm.	depicted in Schedule 1, Figure 2.
	RE processing plant expansion Stage 2 – Floatation circuit	<ul> <li>a) Floatation circuit, including additional flotation tanks and repurposed flotation infrastructure, must be installed in accordance with manufacturer's specifications;</li> </ul>	Labelled as 'Stage 2: Grinding and Flotation', as depicted in Schedule 1, Figure
		<ul> <li>b) Bunded concrete hardstand must be constructed for the flotation circuit, and be graded towards a collection sump and fitted with a pump; and</li> </ul>	2.
		c) Bunding must be constructed with sufficient storage capacity to contain 110% of the largest vessel or 25% of the total stored volume in the bunded area, whichever is greater.	
	RE processing plant expansion Stage 2 – Apatite conversion circuit	<ul> <li>Apatite conversion circuit, including leaching tanks, plate and frame filters, and associated tanks, must be installed in accordance with manufacturer's specifications;</li> </ul>	Labelled as 'Stage 2: Apatite Conversion Circuit', as depicted in Schedule 1, Figure 2.
		<ul> <li>b) Gas scrubber system, capable of extracting and treating off gases and acid mist from leaching tanks and filter feed tanks prior to being emitted, must be installed;</li> </ul>	
		<ul> <li>c) Gas scrubber system must be connected to a waste acid neutralisation tank, where scrubber solution can be bled, neutralised, and stored;</li> </ul>	
		<ul> <li>Bunded concrete hardstand must be constructed for the apatite conversion circuit, and be graded towards a collection sump and fitted with a pump;</li> </ul>	
		e) Bunding must be constructed with sufficient storage capacity to contain 110% of the largest vessel or 25% of the total stored volume in the bunded area, whichever is greater; and	
		f) Pipelines must be installed:	
		<ul> <li>capable of transporting neutralised leach liquor slurry to an operational TSF; and</li> </ul>	
		<ul> <li>within a bunded corridor with sufficient secondary containment to contain any spill for the period between routine inspections; and</li> </ul>	
		<li>iii. equipped with telemetry systems and pressure sensors for leak detection and/or isolation valves.</li>	
	RE processing plant expansion Stage 2 – Stormwater management infrastructure	<ul> <li>a) Drainage systems separating surrounding clean stormwater from potentially contaminated water must be upgraded to accommodate the expanded processing plant footprint.</li> </ul>	Expanded processing plant footprint as depicted in Schedule 1, Figure 2. Plant Run Off Pond
		<ul> <li>Plant Run Off Pond must be deepened to approximately 3.5 m to achieve storage</li> </ul>	labelled as 'Plant Run Off Pond', as depicted

ltem	Infrastructure	Design and construction / installation requirements	Infrastructure location
		capacity of at least 40,861 m <sup>3</sup> , including sufficient capacity to contain a 1% AEP storm event for at least 72 hours while maintaining a minimum freeboard of 300 mm.	in Schedule 1, Figure 2.
3	RE processing plant expansion Stage 3 – Apatite removal circuit	<ul> <li>g) Apatite removal circuit, including leaching tanks, acid regeneration reaction tanks, plate and frame filters, belt filters and associated tanks, must be installed in accordance with manufacturer's specifications;</li> </ul>	Labelled as 'Stage 3: Apatite Removal Circuit', as depicted in Schedule 1, Figure 2.
		<ul> <li>h) Gas scrubber system, capable of extracting and treating off gases and acid mist from leaching tanks and filter feed tanks prior to being emitted, must be installed;</li> </ul>	
		<ul> <li>Gas scrubber system must be connected to a waste acid neutralisation tank, where scrubber solution can be bled, neutralised, and stored;</li> </ul>	
		<ul> <li>j) Bunded concrete hardstand must be constructed for the apatite conversion circuit, and be graded towards a collection sump and fitted with a pump;</li> </ul>	
		<ul> <li>k) Bunding must be constructed with sufficient storage capacity to contain 110% of the largest vessel or 25% of the total stored volume in the bunded area, whichever is greater; and</li> </ul>	
		I) Pipelines must be installed:	
		<ul> <li>capable of transporting neutralised leach liquor slurry to an operational TSF; and</li> </ul>	
		<ul> <li>within a bunded corridor with sufficient secondary containment to contain any spill for the period between routine inspections; and</li> </ul>	
		<li>iii. equipped with telemetry systems and pressure sensors for leak detection and/or isolation valves.</li>	
4	Reagent storage vessels	<ul> <li>a) Storage tanks and containers must be installed to be fit-for-purpose for the hydrocarbon and/or chemical reagent being stored and be designed in accordance with the relevant Australian Standards;</li> </ul>	Labelled as 'Reagent Storage', 'Diesel Storage', 'Diesel', as depicted in Schedule 1, Figure 2.
		<ul> <li>b) Bunded concrete hardstand must be constructed for the reagent storage vessels (or the area where these vessels are located), and be graded towards a collection sump and fitted with a pump; and</li> </ul>	
		c) Bunding must be constructed with sufficient storage capacity to contain 110% of the largest vessel or 25% of the total stored volume in the bunded area, whichever is greater.	
5	Recycle water treatment plant	<ul> <li>Water treatment infrastructure, including chemical softening circuit, clarifier, multimedia filtration, weak acid cation ion exchange unit,</li> </ul>	Labelled as 'RWTP', as depicted in

Item	Infrastructure	Design and construction / installation requirements	Infrastructure location
	(RWTP)	reverse osmosis system and associated tanks, must be installed in accordance with manufacturer's specifications;	Schedule 1, Figure 2.
		<ul> <li>b) Water treatment infrastructure must be installed within secondary earthen bunding and grade towards the surge pond;</li> </ul>	
		c) Tanks must be installed such that overflow is collected by the drainage system to be discharged to the surge pond.	
	Surge pond	<ul> <li>a) Must be constructed to have storage capacity of at least 4,000 m<sup>3</sup>, including sufficient capacity to contain a 1% AEP storm event for at least 72 hours while maintaining a minimum freeboard of 300 mm;</li> </ul>	Labelled as 'Surge Pond', as depicted in Schedule 1, Figure 2.
		<li>b) Pond walls and base must be lined with HDPE;</li>	
		c) Must be equipped with level transmitter capable of monitoring pond water level , and water transfer pump to transfer contents to a Combined Waste Tank.	
6	Western Borefield WTP	<ul> <li>Water treatment infrastructure, including reverse osmosis system and associated tanks, must be installed in accordance with</li> </ul>	Labelled as 'WTP', as depicted in Schedule 1, Figure 2.
7	Carbonatite Borefield WTP (existing)	manufacturer's specifications; e) Water treatment infrastructure must be	
	Recycle WTP (existing)	installed within secondary earthen bunding and grade towards the surge pond.	
8	HV gas engine power station	<ul> <li>a) Up to ten diesel generators, with capacity of up to 1.07 MW individually, must be installed in accordance with manufacturer specifications, with total capacity not exceeding 10.7 MW;</li> </ul>	Labelled as 'Hybrid Power Station' and 'Gas Storage', as depicted in Schedule 1, Figure 2.
		<ul> <li>b) Up to five gas engine generators, with capacity of up to 3.367 MW individually, must be installed in accordance with manufacturer specifications, with total capacity not exceeding 16.835 MW;</li> </ul>	
		<ul> <li>Each gas engine generator must be equipped with an emission stack, with emission outlet at least 6 m above ground level; and</li> </ul>	
		<ul> <li>Natural gas bullet tanks must be installed with double-skinned and vacuum-insulated features, with total storage capacity not exceeding 975 kL.</li> </ul>	

#### **Compliance reporting**

- 2. The works approval holder must within 30 calendar days of each item of infrastructure required by condition 1 being constructed and/or installed:
  - (a) undertake an audit of their compliance with the requirements of condition 1; and

- (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.
- **3.** The Environmental Compliance Report required by condition 2, must include as a minimum the following:
  - (a) certification by a suitably qualified and experienced engineer that the items of infrastructure or component(s) thereof, as specified in condition 1, have been constructed in accordance with the relevant requirements specified in condition 1;
  - (b) as constructed plans or photographs and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1; and
  - (c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

### Environmental commissioning phase

#### **Environmental commissioning plan**

- **4.** The works approval holder must, at least three months prior to the commencement of environmental commissioning for an item of infrastructure identified in condition 8 provide to the CEO an Environmental Commissioning Plan for that item of infrastructure.
- **5.** The Environmental Commissioning Plan required by condition 4 must include, as a minimum, the following:
  - (a) the stages, processes and expected timeframes of environmental commissioning for all items of infrastructure listed under that stage in Table 1, including the commencement date of environmental commissioning;
  - (b) how accidents, incidents or malfunctions and any associated impacts to the environment will be managed during environmental commissioning;
  - (c) start up and shut down procedures and how emissions will be managed during start up and shut down; and
  - (d) procedures for sampling, analysis and characterisation of tailings waste streams during environmental commissioning, as required by condition 9.

#### **Environmental commissioning requirements**

- **6.** The works approval holder may only commence environmental commissioning of an item of infrastructure identified in condition 8 once the Environmental Compliance Report has been submitted for that item of infrastructure in accordance with condition 2 of this works approval.
- 7. The works approval holder must provide notification to the CEO:
  - (a) at the latest, seven days prior to the commencement date of environmental commissioning for each stage of construction; and
  - (b) within seven days after the completion date of environmental commissioning for each stage of construction.
- 8. The works approval holder may only undertake environmental commissioning activities for an item of infrastructure specified in Table 2:
  - (a) in accordance with the corresponding commissioning requirements; and

(b) for the corresponding authorised commissioning duration.

ltem	Infrastructure	Commissioning requirements	Authorised commissioning duration
1	RE processing plant expansion Stage 1 – Concentrate dewatering	<ul> <li>a) Commissioning activities must be undertaken in accordance with relevant Environmental Commissioning Plan as required by condition 4.</li> </ul>	For a period not exceeding 365 calendar days in aggregate.
2	RE processing plant expansion Stage 2 – Comminution circuit RE processing plant expansion Stage 2 – Crusher pad runoff pond RE processing plant expansion Stage 2 – Floatation circuit RE processing plant expansion Stage 2 – Apatite conversion circuit	<ul> <li>a) Commissioning activities must be undertaken in accordance with relevant Environmental Commissioning Plan as required by condition 4;</li> <li>b) Tailings characterisation must be undertaken in accordance with the relevant Environmental Commissioning Plan as required by condition 4 to meet the requirements of condition 9.</li> </ul>	For a period not exceeding 365 calendar days in aggregate.
	RE processing plant expansion Stage 2 – Stormwater management infrastructure		
3	RE processing plant expansion Stage 3 – Apatite removal circuit	<ul> <li>a) Commissioning activities must be undertaken in accordance with relevant Environmental Commissioning Plan as required by condition 4;</li> <li>b) Tailings characterisation must be undertaken in accordance with the relevant Environmental Commissioning Plan as required by condition 4 to meet the requirements of condition 9.</li> </ul>	For a period not exceeding 365 calendar days in aggregate.

#### Table 2: Environmental commissioning requirements

- **9.** During commissioning, the works approval holder must collect representative tailings samples to investigate the behaviour and characteristics of the tailings under a range of conditions. The scope of the investigation must be undertaken by a NATA-accredited laboratory and include, as a minimum:
  - (a) testing using the US EPA LEAF Method 1313 pH-dependent leaching test, coupled with geochemical modelling, on (at the very least) the parameters listed in Table 3; and
  - (b) geotechnical characterisation of tailings, including particle size distribution, volume of solids, settling test (drained and undrained), air drying test and hydraulic conductivity.

#### Table 3: Tailings characterisation parameters

Sample type	Sample requirements	Parameter (Dissolved, mg/L)	Timeframe
Tailings	a) Tailings sampled must be from the		Within 180 calendar

Sample type	Sample requirements	Parameter (Dissolved, mg/L)	Timeframe
leachate	following tailings waste streams:	a) pH	days from the
	i. Apatite pre-floatation tailings;	b) Aluminium (Al)	commencement of the environmental
	ii. REO flotation tailings; and	c) Arsenic (As)	commissioning of the RE processing plant
	<li>iii. Neutralised sulfuric acid waste (from Stage 2 apatite conversion circuit).</li>	d) Cadmium (Cd)	expansion Stage 2.
	b) At least seven representative samples	e) Chromium (Cr)	
	(for each tailings waste stream) must be	f) Copper (Cu)	
	collected and analysed for the corresponding parameters;	g) Lanthanum (La)	
	c) At least 15 sub-samples must be	h) Mercury (Hg)	
	collected and blended to obtain a representative sample; and	i) Manganese (Mn)	
	d) Tailings must only be sampled when the	j) Molybdenum (Mo)	
	RE processing plant is operating at	k) Nickel (Ni)	
	steady state.	I) Lead (Pb)	
	a) Tailings sampled must be from the	m) Selenium (Se)	Within 180 calendar
	following tailings waste streams:	n) Strontium (Sr)	days from the commencement of
	<ul> <li>Neutralised phosphoric acid waste (from Stage 3 apatite removal circuit).</li> </ul>	o) Thallium (TI)	the environmental commissioning of the
	b) At least seven representative samples	p) Thorium (Th)	RE processing plant
	(for each tailings waste stream) must be collected and analysed for the	q) Uranium (U)	expansion Stage 3.
	corresponding parameters;	r) Zinc (Zn)	
	c) At least 15 sub-samples must be	s) Calcium (Ca)	
	collected and blended to obtain a representative sample; and	t) Magnesium (Mg)	
	d) Tailings must only be sampled when the	u) Sodium (Na)	
	RE processing plant is operating at steady state.	v) Potassium (K)	
		w) Carbonate (CO <sub>3</sub> )	
		x) Chlorie (Cl)	
		y) Sulfate (SO <sub>4</sub> )	
		z) Fluoride (F)	

#### **Compliance reporting**

- **10.** The works approval holder must submit to the CEO an Environmental Commissioning Report within 60 calendar days of the completion date of environmental commissioning for an item of infrastructure specified in Table 2.
- **11.** The works approval holder must ensure the Environmental Commissioning Report required by condition 10 of this works approval includes the following:
  - (a) a summary of the environmental commissioning activities undertaken, including timeframes and production capacities/throughput achieved during commissioning;
  - (b) a summary of tailings characterisation results obtained during environmental commissioning under condition 9 (where applicable), including at the very least:
    - (i) an assessment of the sampling and analysis procedure against the procedures specified in the Environmental Commissioning Plan required

by condition 4, as well as the sample requirements specified in condition 9:

- (ii) analytical data of the parameters specified in condition 9 in tabulated form;
- (iii) an assessment of the analytical data, including liquid-solid partitioning curve (as a function of final extract pH), identification of contaminants of potential concern for each tailings waste stream type; and
- (iv) copies of laboratory certificate of analysis.
- (c) an assessment of the environmental performance of the item of infrastructure as constructed or installed against the commissioning targets and objectives specified in the Environmental Commissioning Plan required by condition 4, as well as the condition 8 of this works approval; and
- (d) where they have not been met, measures proposed and/or taken to meet the manufacturer's design specifications and the conditions of this works approval, as well as timeframes for implementing the proposed measures.

## Time limited operation phase

#### Commencement and duration

- **12.** The works approval may only commence time limited operation for an item of infrastructure identified in condition 14:
  - where the item of infrastructure is not authorised to undertake environmental commissioning, the Environmental Compliance Report as required by condition 2 has been submitted by the works approval holder for that item of infrastructure;
  - (b) where the item of infrastructure is authorised to undertake environmental commissioning, the Environmental Commissioning Report as required by condition 10 has been submitted by the works approval holder for that item of infrastructure.
- **13.** The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 14:
  - for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 12 for that item of infrastructure; or
  - (b) until such time as a licence for that item of infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986*, if one is granted before the end of the period specified in condition 12(a).

#### Time limited operation requirements

**14.** During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 4 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirements set out in Table 4.

#### Table 4: Infrastructure and equipment requirements during time limited operations

ltem	Infrastructure	Operational requirements	Infrastructure location
1	RE processing plant	<ul> <li>Collection sump and associated pump must</li></ul>	Labelled as 'Stage 1:
	expansion Stage 1 –	be maintained through regular inspection to	Dewatering

ltem	Infrastructure	Operational requirements	Infrastructure location
	Concentrate dewatering	<ul> <li>prevent overflowing; and</li> <li>b) Bunding must be maintained to capture any spills and leaks within the concentrate dewatering circuit.</li> </ul>	Concentrate', as depicted in Schedule 1, Figure 2.
2	RE processing plant expansion Stage 2 – Comminution circuit	<ul> <li>a) Water spray must be utilised for dust suppression while the comminution circuit is operational;</li> <li>b) Dust suppression must be undertaken, where fugitive dust is visible; and</li> <li>c) Stormwater runoff from the Crusher Pad must be diverted to the Crusher Pad Run Off Pond.</li> </ul>	Labelled as 'Crusher Pad', 'Crushing', 'Grinding and Flotation', 'Ball Mill', as depicted in Schedule 1, Figure 2.
	RE processing plant expansion Stage 2 – Crusher pad run off pond	<ul> <li>a) Minimum freeboard of 300 mm must be maintained at all times; and</li> <li>b) Visual inspection must be undertaken at least quarterly</li> </ul>	Labelled as 'Crusher Pad Run off Pond', as depicted in Schedule 1, Figure 2.
	RE processing plant expansion Stage 2 – Floatation circuit	<ul> <li>a) Collection sump and associated pump must be maintained through regular inspection to prevent overflowing;</li> <li>b) Bunding must be maintained to capture any spills and leaks within flotation circuit.</li> </ul>	Labelled as 'Stage 2: Grinding and Flotation', as depicted in Schedule 1, Figure 2.
	RE processing plant expansion Stage 2 – Apatite conversion circuit	<ul> <li>a) Collection sump and associated pump must be maintained through regular inspection to prevent overflowing;</li> <li>b) Bunding must be maintained to capture any spills and leaks within apatite conversion circuit;</li> <li>c) Gas scrubber system must be operational during apatite conversion process, with scrubber solution neutralised and stored in a waste acid neutralisation tank; and</li> <li>d) Pipelines carrying leach liquor and scrubber solution must be inspected daily for spills or</li> </ul>	Labelled as 'Stage 2: Apatite Conversion Circuit', as depicted in Schedule 1, Figure 2.
	RE processing plant expansion Stage 2 – Stormwater management infrastructure	<ul> <li>a) Drainage systems separating surrounding clean stormwater from potentially contaminated water must be maintained;</li> <li>b) Drainage systems must be visually inspected at least quarterly and after significant rainfall events to confirm access and integrity;</li> <li>c) Minimum freeboard of 300 mm must be maintained at the Plant Run Off Pond at all times; and</li> <li>d) Plant Run Off Pond must be visually inspected prior to significant forecasted rainfall events to confirm adequate storage capacity.</li> </ul>	Expanded processing plant footprint as depicted in Schedule 1, Figure 2. Plant Run Off Pond labelled as 'Plant Run Off Pond', as depicted in Schedule 1, Figure 2.
3	RE processing plant expansion Stage 3 –	a) Collection sump and associated pump must be maintained through regular inspection to	Labelled as 'Stage 3 Apatite Removal Circuit', as depicted in

ltem	Infrastructure	Operational requirements	Infrastructure location
	Apatite removal circuit	prevent overflowing; b) Bunding must be maintained to capture any	Schedule 1, Figure 2.
		spills and leaks within apatite removal circuit;	
		<ul> <li>Gas scrubber system must be operational during apatite conversion process, with scrubber solution neutralised and stored in a waste acid neutralisation tank; and</li> </ul>	
		<ul> <li>Pipelines carrying leach liquor and scrubber solution must be inspected daily for spills or leaks.</li> </ul>	
4	Reagent storage vessels	<ul> <li>Collection sump and associated pump must be maintained through regular inspection to prevent overflowing; and</li> </ul>	Labelled as 'Reagent Storage', 'Diesel Storage', 'Diesel', as depicted in Schedule 1, Figure 2.
		<ul> <li>Bunding must be maintained to capture any spills and leaks within reagent storage vessels.</li> </ul>	
5	Recycle water treatment plant (RWTP)	<ul> <li>Earthen bunding must be maintained to capture any spills and leaks from the RWTP;</li> </ul>	Labelled as 'RWTP', as depicted in Schedule 1, Figure 2.
		<ul> <li>b) Spills and leaks, including tank overflow, must be drained into the surge pond; and</li> </ul>	
		<ul> <li>Pipelines carrying tailings return water and brine must be inspected daily for spills or leaks;</li> </ul>	
	Surge pond	<ul> <li>a) Minimum freeboard of 300 mm must be maintained at all times;</li> </ul>	Labelled as 'Surge Pond', as depicted in Schedule 1, Figure 2.
		b) HDPE liner integrity must be maintained; and	
		<ul> <li>c) Level transmitter must be maintained to monitor pond water level via telemetry.</li> </ul>	
6	Western Borefield WTP	<ul> <li>a) Earthen bunding must be maintained to capture any spills and leaks from the Western Borefield WTP, Carbonatite Borefield WTP</li> </ul>	Labelled as 'WTP', as depicted in Schedule 1, Figure 2.
7	Carbonatite Borefield WTP (existing)	and existing Recycle WTP; and	
	Recycle WTP (existing)	<ul> <li>b) Pipelines carrying brine must be inspected daily for spills and leaks.</li> </ul>	
8	HV gas engine power station	<ul> <li>Maximum cumulative power generation capacity of 22.185 MW from diesel generators and gas engine generators; and</li> </ul>	Labelled as 'Hybrid Power Station' and 'Gas Storage', as
		<ul> <li>b) Gas engine generators and emissions stacks must be maintained in accordance with manufacturer's specifications.</li> </ul>	depicted in Schedule 1, Figure 2.

**15.** During time limited operations, the works approval holder must ensure that the emissions specified in Table 5 are discharged only from the corresponding emission points and only at the corresponding emission point locations.

Emission	Emission point reference	Emission point location
Stack emissions, including carbon monoxide (CO), nitrous oxides (NO <sub>x</sub> ), sulfur oxides (So <sub>x</sub> ) and particulate matter (PM).	HV gas engine power station (11 emission stacks)	Labelled as 'Hybrid Power Station', as depicted in Schedule 1, Figure 2.

#### Table 5: Authorised emission points during time limited operation

#### **Compliance reporting**

- **16.** The works approval holder must submit to the CEO a report on the time limited operations for an item of infrastructure within 30 calendar days of the completion of time limited operation for that item of infrastructure or no later than 90 calendar days before the expiration date of this works approval, whichever is sooner.
- **17.** The works approval holder must ensure the report required by condition 16 includes the following:
  - (a) a summary of the time limited operations, including timeframes, production capacity/throughput and volume of waste material produced during time limited operation;
  - (b) an assessment of the environmental performance of the item of infrastructure as constructed or installed against the condition 14 of this works approval;
  - (c) where they have not been met, measures proposed and/or taken to meet the manufacturer's design specifications and the conditions of this works approval, as well as timeframes for implementing the proposed measures.

### **Records and reporting**

- **18.** The works approval holder must record the following information in relation to complaints received by the works approval holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:
  - (a) the name and contact details of the complainant, (if provided);
  - (b) the time and date of the complaint;
  - (c) the complete details of the complaint and any other concerns or other issues raised;
  - (d) the complete details and dates of any action taken by the works approval holder to investigate or respond to any complaint; and
  - (e) be available to be produced to an inspector or the CEO as required.
- **19.** The works approval holder must maintain accurate and auditable books including the following records, information, reports, and data required by this works approval:
  - (a) the works conducted in accordance with conditions 1, 8, 9 and 14;
  - (b) any maintenance of infrastructure that is performed in the course of complying with this works approval; and
  - (c) complaints received under condition 18.
- 20. The books specified under condition 19 must:

- (a) be legible;
- (b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;
- (c) be retained by the works approval holder for the duration of the works approval; and
- (d) be available to be produced to an inspector or the CEO as required.

# **Definitions**

In this works approval, the terms in Table 6 have the meanings defined.

### Table 6: Definitions

Term	Definition
ACN	Australian Company Number
AEP	Annual Exceedance Probability
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website).
Annual Period	a 12-month period commencing from 1 January until of the 31 December of the immediately following year.
Averaging Period	means the time over which a limit is measured or a monitoring result is obtained
Books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer.
	CEO for the purposes of notification means:
	Director General Department administering the <i>Environmental Protection Act</i> <i>1986</i> Locked Bag 10 Joondalup DC WA 6919
	info@dwer.wa.gov.au
Condition	A condition to which this works approval is subject under section 62 of the EP Act.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V Division 3 of the EP Act.
Discharge	has the same meaning given to that term under the EP Act.
Emission	has the same meaning given to that term under the EP Act.
Environmental Commissioning	means the sequence of activities to be undertaken to test equipment integrity and operation, or to determine the environmental performance, of equipment and infrastructure to establish or test a steady state operation and confirm design specifications.
Environmental Commissioning	means a report on any commissioning activities that have taken place and a demonstration that they have concluded, with focus on emissions and discharges, waste containment, and other

Term	Definition
Report	environmental factors.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure and/or equipment has been constructed and/or installed in accordance with the works approval.
EP Act	Environmental Protection Act 1986 (WA).
EP Regulations	Environmental Protection Regulations 1987 (WA).
Freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point.
HDPE	means high density polyethylene.
ΝΑΤΑ	means in relation to the analysis of a sample that the laboratory is National Association of Testing Authorities (NATA) accredited for the specified analysis at the time of the analysis.
Premises	the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map (Figure 1) in Schedule 1 to this works approval.
Prescribed Premises	has the same meaning given to that term under the EP Act.
RE	means rare earths.
REO	means rare earth oxides.
RWTP	means recycle water treatment plant.
Time Limited Operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject to the relevant conditions.
US EPA LEAF Method 1313	means the United States Environmental Protection Authority Leaching Environmental Assessment Framework (LEAF) Method 1313 – Liquid-Solid Partitioning as a Function of Extract pH Using a Parallel Batch Extraction Procedure.
Works Approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.
Works Approval Holder	refers to the occupier of the premises being the person to whom this works approval has been granted, as specified at the front of this works approval.
WTP	means water treatment plant

#### **END OF CONDITIONS**

# Schedule 1: Maps

### **Premises map**

The boundary of the Prescribed Premises is depicted by the red line as shown in the map below (Figure 1).

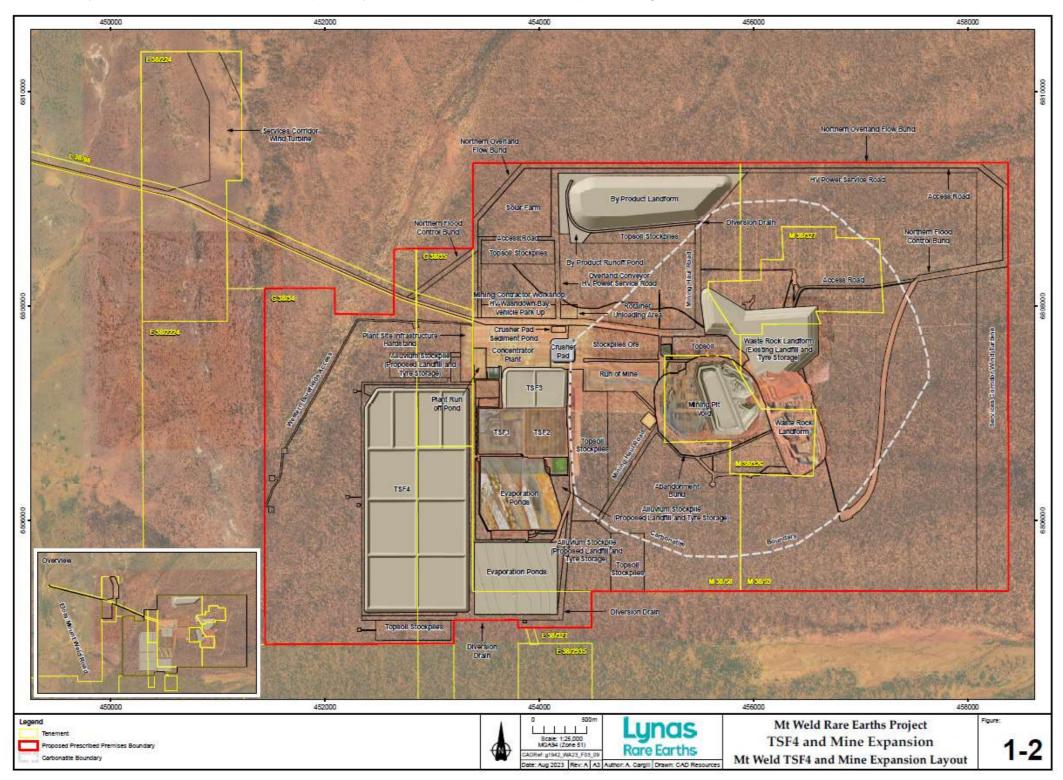


Figure 1: Map of the boundary of the prescribed premises

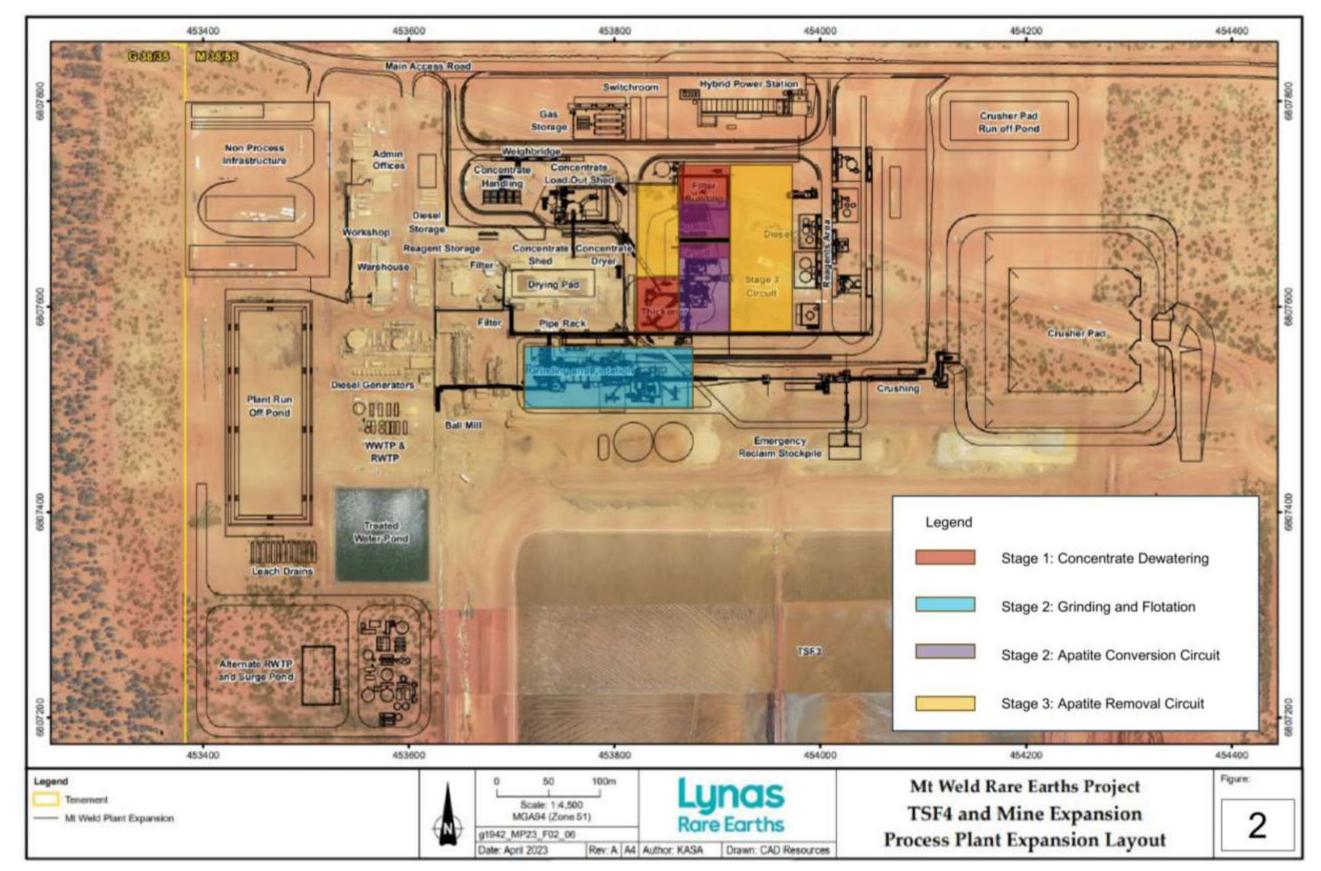


Figure 2: Site and infrastructure layout