Middleback Range News

South Middleback Range
May 2023

Introduction and Purpose of Information Sheet

This information sheet is provided to update stakeholders on activities occurring in the South Middleback Range Mining Area. The update includes improvements made to the facilities and new technologies proposed to be installed at the site.

A key subject that SIMEC Mining is sharing with its stakeholders is on the Magnetite Tailings Storage Facility. And in keeping with SIMEC'S continuous improvement objectives, highlighting its adoption of an advanced quantitative risk assessment (QRA) methodology to assess ongoing dam stability.

Background

The South Middleback Range (SMR) Mining Area (Figure 1) is located approximately 60 km south-west of Whyalla. The Mining area consists of multiple ore deposits, including Cooks North, Iron Chieftain, Iron Knight, and South SMR. The SMR operations are managed in accordance with an approved Program for Environment Protection and Rehabilitation (PEPR), regulated by the Department for Energy and Mining (DEM).

SIMEC monitors for and manages a range of potential impacts including on air quality, amenity, groundwater, surface water and ecology. Daily operations are structured in accordance with good practice management controls, which are tailored to avoid or otherwise mitigate potential impacts to the surrounding environment around the Mine.

Mining and Processing News

Cooks North

Cooks North Project is one of two projects in the Middleback Range that form a critical part of SIMEC Mining's Life of Mine plan to extend the life of hematite mining at SMR until mid-2024.

Figure 1 SMR Mining Area location map

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Cooks North is located in the SMR mining area, approximately 4km north of Iron Knight and approximately 1km from Iron Chieftain.

Mining Lease 6537 was approved on 22 August 2022 with the Program for Environmental Protection and Rehabilitation approval received on 20 March 2023.

While preliminary works have commenced in and around the project area, mining is due to commence in May 2023 including haul road and waste rock dump construction at Cooks North and Cooks Northwest with:

- Cooks North mining activities continuing for approximately 7-9 months; and
- Cooks Northwest mining activities continuing for 1-3 months.

It is anticipated at this stage that mining will end by mid-2024.

Exploration

Exploration activities are currently occurring around Chieftain West, with resource drilling in progress and continuing for the rest of 2023.

Magnetite Expansion Projects

SIMEC Mining is currently in the final stages of feasibility studies being undertaken as part of Phase 1 of the Magnetite Expansion Project (MEP1). These studies include the proposed expansion of the existing Dry Low Intensity Magnetic Separation (DLIMS) plant. The expansion would increase the ore throughput, from 320t/h up to 1200t/h and will be accomplished by incorporating two additional DLIMS towers to the process. Other ancillary infrastructure to support the upgrade will also be required, including water supply, laydown area and stockpile area.

As part of MEP1 feasibility studies, implementation of a new direct reduction (DR) flotation circuit into the existing processing plant has also been investigated. The proposed DR flotation circuit would improve recovery and concentration of iron ore by adding a flotation reagent to remove silica containing minerals from the ore.

Outcomes of both feasibility studies look promising and as such, SIMEC Mining intend to move ahead into detailed design in the latter half of 2023, and subject to statutory approvals construction is expected to commence in early 2024.

Both plants are located within the existing processing area at the SMR Mine site and would not require additional vegetation clearance.

Figure 2 Magnetite Tailings Storage Facility – Aerial view looking north

Spotlight on the South SMR and the Magnetite Tailings Storage Facility

The major infrastructure in South SMR supporting mining includes the Iron Duke crushing and screening plant, magnetite concentrator, dry low intensity magnetic separator (DLIMS) plant and the Magnetite Tailings Storage Facility ("Mag TSF").

The design and construction of the Mag TSF (Figure 2) is aligned with globally recognised standards and guidelines, which require an assessment of the stability of embankments at each stage (development and expansion) and is independently reviewed by experts.

The Mag TSF is designed and supervised by an external TSF engineer (known as an Engineer of Record), and for further technical rigour and due diligence reviews, the design is then reviewed by an independent 3rd Party. The TSF is constructed in alignment with the peer-reviewed design and monitored at critical phases of construction.

Continuous improvement and engineering best practices

To support a best practice engineering and continuous improvement approach for design and construction, a Quantitative Risk Assessment ("QRA") has been developed for the Mag TSF. This advanced process is regarded as highly rigorous and aligned with local and international best practice and is delivered by our accredited Mag TSF Engineer of Record, Golder-WSP. The process involves detailed assessment of risks and likelihood of Mag TSF failure as part of the assessment criteria when finalising designs for the Mag TSF.

The QRA:

- Identifies potential hazards (e.g., seepage, rainfall, etc.) and mechanisms that could cause a failure of the TSF embankment to occur.
- Progressively splits the causes into contributing components, until it is possible to assign a probability (i.e., a likelihood number) to each of the causes.
- Analyses the probability assigned to each cause to find possible failure pathways, which allows the probability of failure to be calculated and assessed.
- The design is adjusted to ensure the probability of failure is sufficiently low to meet all required guidelines.

Environmental and Social Considerations

To support the QRA, potential impacts to the surrounding environment and sensitive receptors (both human and non-human) have been considered in the instance that a hypothetical tailings release incident ("dam break") were to occur. This is documented in a WSP-Golder 'Dam Break Report'. As part of SIMEC's continuous improvement processes and increased alignment with international and local TSF guidelines, key

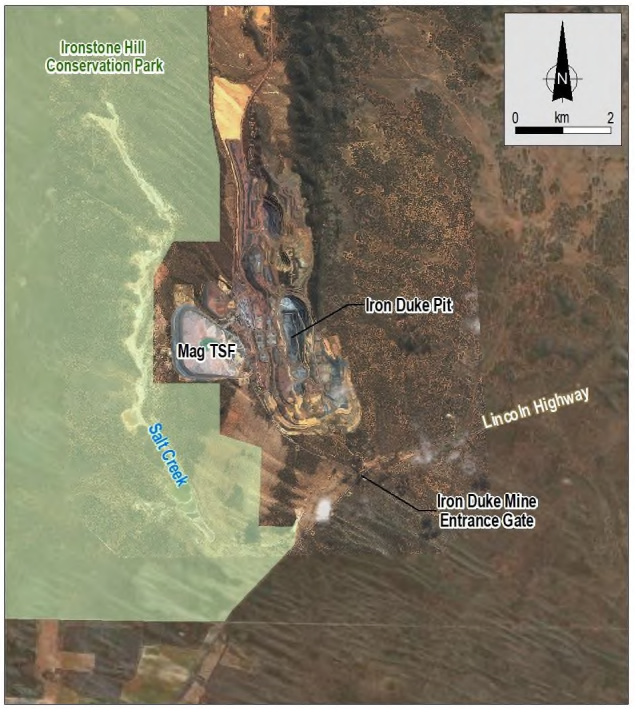

Figure 3 Potentially impacted area

stakeholder input has been sought to understand the value of environmental and social components within the Area of the Mag TSF (Figure 3).

Environmental and social considerations included in the assessment include potential for impact to:

1. Conservation reserve to the west;
2. Natural resources present in the area including significant flora and fauna;
3. Pastoral lands south of the Mag TSF; and
4. Drainage feature, Salt Creek located to the west and south of the Mag TSF.

SIMEC Emergency Response and Preparedness

SIMEC appreciates that landholders and stakeholders may have concerns about what would happen in the highly unlikely event of a tailings release incident. Accredited and Tailings Engineer of Record (WSP-Golder) have developed

Trigger Action Response Plans (TARPs) which includes a *Tailings Storage Facility Safety Emergency Action Plan*, which describes SIMEC's risk management and mitigation measures (Figure 4). The Tailings Operations are regulated against the Mining Act 1971 (SA) and managed in accordance with the requirements under the PEPR approval and site-specific Environmental Management Plans and procedures (Figure 4).

In the highly unlikely event of a TSF release incident, SIMEC will comply with state and local regulations, environmental recovery and rehabilitation obligations and commercial compensation obligations. SIMEC is conscious that stakeholders and landholders have locally relevant knowledge and appreciation of the value of the environment, cultural and natural resources local to the Mag TSF; and will undertake to restore and rehabilitate the affected environment in the highly unlikely event of a Mag TSF release incident.

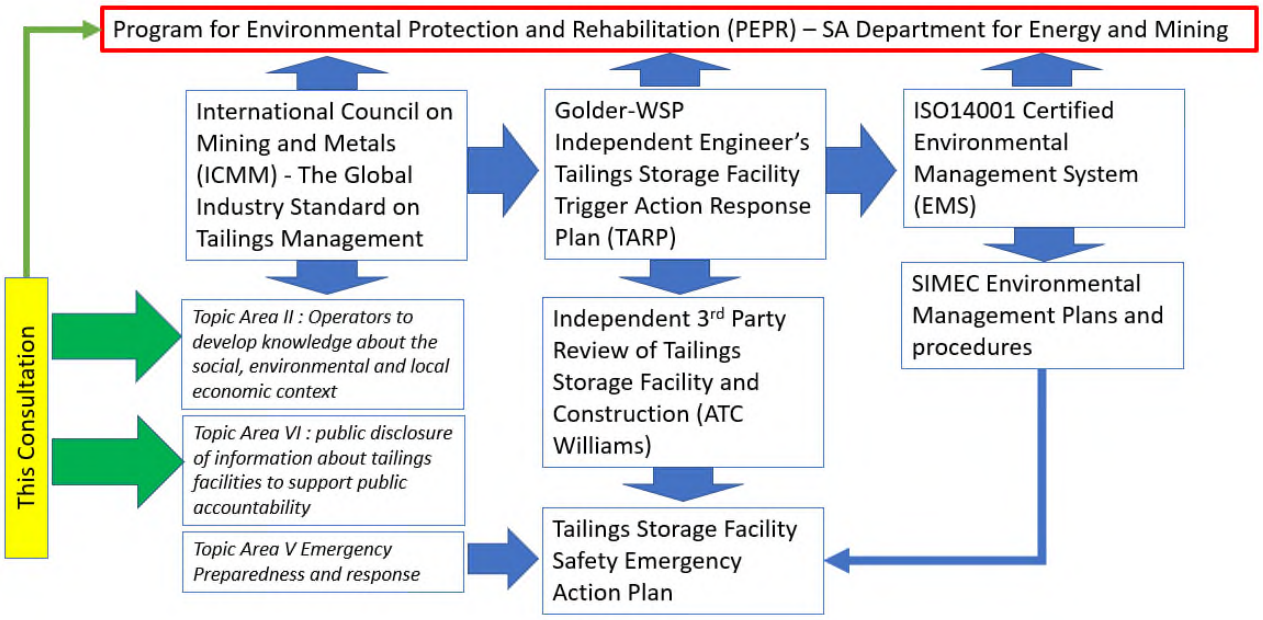

Figure 4 Components of Regulation and International Best Practice for Tailings Storage Facility Design, Construction and Operation

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Engaging Stakeholders

SIMEC Mining is currently undertaking stakeholder consultation to provide transparent, easily understood information about the continuous improvement and engineering best practices being engaged to develop the Mag TSF. This is being undertaken in accordance with the International Council on Mining and Metals' (ICMM) Global Industry Standard on Tailings Management and is described in Figure 4, and to meet Australian and South Australian guidelines. Your input is important to improve our knowledge about the social, environmental and local economic context (Topic Area II) and share information to support public accountability (Topic Area VI).

Further Information

All approved program documentation are available via the Department for Energy and Mining's website - https://www.energymining.sa.gov.au/industry/minerals-and-mining/mining/major-projects-and-mining-activities/major-operating-and-approved-mines/middleback-ranges

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