

DETAILS OF TAILINGS STORAGE FACILITY

Tailings Storage Facility (TSF) Name

Karee Mine K4 Concentrator TSF 1

Operation Marikana

Operational Status Dormant since 2008

Operating Segment RSA - PGM

Location 45km east of the town of Rustenburg in the North West

province – please refer to Figure 1

Latitude, Longitude (decimals) -25.6815, 27.4522

Ore Source Underground

Type of Storage Facility Impoundment (upstream development)

Deposition MethodologySpigotYear of Commissioning1989

Consequence Classification (GISTM, 2020) High

Operating Contractor Fraser Alexander (Pty) Ltd (FAT)

Engineer of Record (EoR) SLR Consulting (Pty) Ltd

Current Maximum Height (m) 37

Final Maximum Height (m) 37

Total Volume Already Deposited (Mm³) 17.0

Life of TSF (year) N/A















TECHNICAL ASPECTS:

Design Criteria

Stability Assessment and Mitigation Measures

Dam Breach Assessment

Area of Inundation

Summary of Human Exposure

DOCUMENTATION:

Site Specific OMS Manual

Design Basis Report (DBR)

Environmental Management System

GISTM and best practice guidelines including Australian National Committee on Large Dams (ANCOLD) (Guidelines on Tailings Dams, July 2019). Site specific design criteria were specified by the EoR. Details are included in the Design Basis Report (DBR).

A detailed stability assessment based on piezocone probing and laboratory test work was conducted in 2022. (SLR Project No: 720.19129.00042 Rev 0, February 2023)

All the FoS are above the recommended limits and thus no mitigation measures were required.

Assessment completed in 2022 (SLR Project No: 720.19129.00011 Rev 1, December 2022)

Has been identified by EoRs – please refer to Figure 2

Consequence classification has been based on Population at Risk (PAR). Communities have been identified and are being engaged through various means including Community Engagement Forums (CEF)

Version 2023 available

Mandatory Code of Practice (MCOP) Document No: SS-ZA-PGM's-MCOP-CON-TLS-0101 is in place (dated September 2022)

Version 2023 available

(SLR Project No: 720.19129.00033 Rev 1, July 2023)

The Environmental Management System is ISO accredited (ISO 14001:2015)

The initial Environmental Management Programme (EMPr) is dated 2014.















Surveillance:

Surveillance Frequency

Daily by the Operator and quarterly reports of critical controls submitted to and reviewed by the EoR

Surveillance Technology/System K2Fly Decipher

Deformation Monitoring Interferometric Synthetic Aperture Radar (InSAR)

Phreatic Surface Levels & Pore Pressure Standpipe piezometers

Measurements

RISK MANAGEMENT /
EMERGENCY PREPAREDNESS:

Risk Assessment (Bowtie) completed with no

untoward risk identified

Risk Management Site specific OMS Manual in place

Site specific Trigger Action Response Plans (TARPs) in place

Critical controls established and implemented

Operating contractor Technical and Operational Risk

Assessment System (TORAS)

Site Specific Emergency Preparedness &

Response Plans (EPRP)

Version 2023 available

Annual emergency mock drill for a catastrophic TSF failure – undertaken on 15 June 2023 with SSW employees and contractors.

Environmental emergency preparedness is managed on site according to ISO14001: 2015.

CLOSURE & POST CLOSURE

Closure Planning

In place - report prepared by Golder Associates (Golder Reference: 20141966-340280-9, June 2021)















Closure Costing

Adequate financial capacity in place Financials prepared by Golder Associates (Golder Reference: 21467970-349390-1, December 2021)

Asset Insurance Cover

In place – July 2023 to June 2024

Independent Reviews:

Independent Tailings Review Board (ITRB)

2026

Future ITRB Review

Performance Reviews

Annual and quarterly reports with inspections completed

by EoR

(SLR Project No: 720.19129.00033 Rev 0, March 2023)

29 June 2023 with no material concerns identified

Dam Safety Review (DSR)

Carried out by an independent third party in 2020. All recommendations at the time have been addressed in the last 2 years.

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(KP Reference: RI301-00877/02 Rev B, 26 August 2022)

Next review scheduled for 2026

















Figure 1: Layout of Karee Tailings Dam Complex















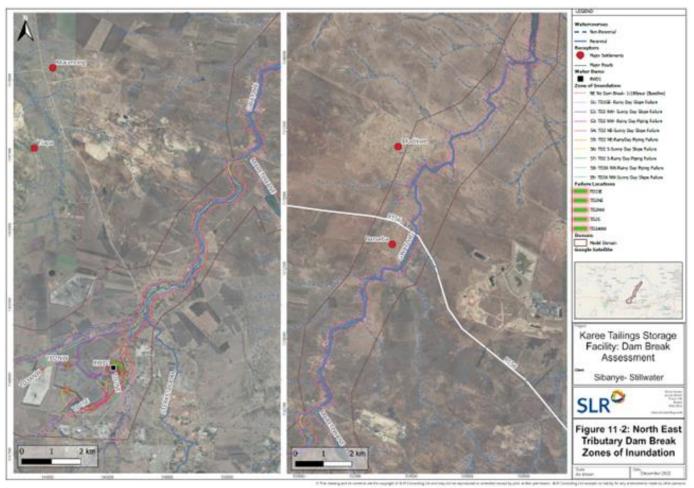


Figure 2: Area of Inundation (North-East tributary)











