

Petra Diamonds Limited (Petra)

GISTM tailings facility disclosure Finsch Diamond Mine No. 1 FRD

GISTM consequence classification: Very High

Tailings facility status: Operational

We set out below the information required to be disclosed pursuant to principle 15.1B of the Global International Standard on Tailings Management (GISTM).

1. Description of Facility

- 1.1. The Finsch Diamond Mine (the Finsch Mine or the Mine) is located near the town of Lime Acres located approx. 165 km northwest from Kimberley in the northern Cape province. The Finsch Mine is operated by an indirectly owned subsidiary of Petra, Finsch Diamond Mine (Pty) Limited (FDM)
- 1.2. The No.1 FRD (Fine Residue Deposit) facility (the Facility) at the Finsch Mine is 1 of 5 fine storage facilities at the Mine. Deposition is through an upstream construction method using spigots to allow for even deposition of fine tailings on the walls of the facility. The coarser fraction of the material settles closer to the point of deposition forming the embankment walls. The fines fraction migrates to the pond area where settling takes place before, the water is decanted through a penstock to be returned to the processing plant.
- 1.3. The diamond recovery process relies on the density differential between diamond and the host rock, and no chemicals are added to the process to assist with extraction. The tailings product is therefore a mixture of water and fine host rock particles.



Figure 1-1: Mine Layout

2. Consequence classification
 - 2.1. Owing to the potential impact on the adjacent community, under the GISTM classification, the Facility is classified as “Very High”.
 - 2.2. The classification of the Facility is based on the GISTM consequence classification matrix where each of the following criteria is rated in five categories from low to extreme, where the highest rating of any of the criteria determines the facility’s consequence classification:
 - 2.2.1. potential population at risk;
 - 2.2.2. potential loss of life;
 - 2.2.3. environmental impact;
 - 2.2.4. health, social and cultural impact; and
 - 2.2.5. risk to infrastructure and economics
 - 2.3. The above risk areas are rated as either low, significant, high, very high or extreme.
3. Risk assessment summary
 - 3.1. Petra’s Enterprise Risk Manage Framework (the ERM) governs the manner in which enterprise risks are measured and managed. The risk assessment process follows a system where the “baseline” risk of each of Petra’s operations are evaluated by the relevant management teams. Due to the inherent high levels of risk associated with tailings facilities, the risks associated with these facilities are evaluated in greater detail.
 - 3.2. An issue-based risks assessment process is then triggered where the inherent risks of the tailings facilities are being evaluated by a multi-disciplinary team. These inherent risks (without controls) are then further evaluated and existing controls are added to determine the level of residual risk with current controls at an estimated effectiveness level. If the residual risks are higher than tolerance levels additional mitigation plans are actioned to further decrease the residual risk.
 - 3.3. Risks associated with Petra’s tailings facilities are evaluated through the life cycle of the facilities and include risks associated with the design, construction, operation and closure of facilities.
 - 3.4. From an ERM perspective, the main unwanted event is the failure of impoundment walls of the Facility. The current controls implemented to mitigate this risk are:
 - 3.4.1. adoption of a groupwide tailings management policy which commits Petra to the implementation of the GISTM principles;
 - 3.4.2. implementation of a groupwide tailings management procedure;
 - 3.4.3. appointment of individuals responsible for the roles of Accountable Executive, Independent Review Board, responsible tailings facility engineers and Engineers of Record;
 - 3.4.4. periodical external reviews of operational and engineering systems;
 - 3.4.5. use of construction methods as approved by the Engineers of Record;
 - 3.4.6. monitoring of facility parameters through a hierarchical inspection process. The results from these inspections are evaluated against trigger action points for parameters such as free board, beach lengths, wall heights, piezometer levels, drain flows etc; and
 - 3.4.7. development of emergency response plans informed by the dam break analysis.
 - 3.5. Material enterprise risks are reviewed quarterly and reported on to Petra’s Executive Committee.

4. Impact assessment
 - 4.1. A failure analysis was conducted on the Facility, with the inundation area determined using flow scenarios such as depth of flow and velocity. The impacted area was evaluated from a human, social and environmental impact perspective. This indicated that the edge of the community at the 5 Mission village falls within the inundation zone. This is the main reason for the consequence classification of the facility.
 - 4.2. Petra has adopted a human rights policy aligned to the United Nation's Guiding Principles. This policy is guiding actions to prevent infringements of human rights. Our Environmental Management policy guides actions towards environmental impact assessment of the inundation area e.g. water quality assessments.
 - 4.3. The potential impacted area forms the basis of identifying potential stakeholders that will be represented in the local disaster forums and communication forums towards the community.
5. History and description of the Facility
 - 5.1. The Facility is located south-east of the plant of the Mine and was constructed when it was established in the late 1960s. The Facility was constructed to contain fine tailings generated during processing of kimberlite ore. The fine tailings from the processing plant are deposited through spigot pipes located on the perimeter of the Facility. The coarser fractions of the slimes settle first to form the outer wall and the finer fraction settles in the dam basin.
 - 5.2. Supernatant water and stormwater are decanted off the deposits through a penstock, which decant into a sump equipped with a pump to return water to the processing plant. In 2008 deposition to this Facility was stopped when construction of a new facility (the Britz FRD) was completed. The Facility was inactive between February 2008 and May 2015, during this period the deposition was directed to the Britz FRD. In June 2015, the Facility was recommissioned to accommodate fine tailings as there was still available capacity.
 - 5.3. This Facility is currently not in use since November 2022.
6. Conclusions and recommendations from independent review
 - 6.1. The following conclusions and recommendations were recorded in the latest 2024 annual performance report from the Engineer of Record:
 - 6.1.1. Freeboard: the annual report from EoR was reported to be above the legal required limit.
 - 6.1.2. Deposition Strategy: the deposition strategy in relation to the Mine is to deposit all tailings material on the Britz FRD and only revert to the eastern facilities in case of operational emergencies which will exclude FRD 1. During the review period, deposition was directed to the old FRDs - specifically FRD3 and the Infill Dam - for approximately one month, while the Britz FRD received deposition for the full 12-month period. The RoR remained below the allowable limit of 1.0 m/year. No significant deposition challenges were encountered during this time.
 - 6.1.3. Slurry Densities: there has been an increase in densities with the improvement initiatives enable pumping capacity further towards the western advancement. The average slurry density over the review period was 1.21 t/m³ which is only marginally above the lower bound target of 1.20 t/m³.
 - 6.1.4. Piezometers: There are 18 VWP's installed on FRD 1 and were monitored from December 2024. The pore pressures in these sections are monitored in real time and stability analysis were conducted along these two sections

6.1.5. Stability Assessment: The stability of FRD1 was assessed for drained, peak undrained and residual undrained strength conditions. The assessment was based on the 2024 CPTu results along 2 cross sections.

The calculated static drained Factors of Safety for both of the cross-sections analysed (Line B and C) were above 1.50. The stability of these lines is considered acceptable and meets the Petra and international slope stability standards for drained conditions.

The calculated peak undrained and residual undrained FoS were below 1.50 for both cross-sections analysed, and hence the dam is not in use to ensure that the dam moved closer to the FoS of 1.5 by being not in use

Further analysis are necessary to determine the required actions to be taken. This process is in progress.

7. Environmental and social monitoring

7.1. Environmental and social monitoring is conducted through Petra's HSEQ system, which complies with the ISO: 45001 and ISO 14001 standards.

7.2. Monitoring activities conducted include monitoring of:

7.2.1. the underground water quality;

7.2.2. quality and quantity of water in the pond that is released to the environment from time to time to manage water level on the Facility;

7.2.3. drain water quality;

7.2.4. surface water quality; and

7.2.5. air quality.

8. Emergency preparedness and response

8.1. A site-specific Emergency Preparedness and Response Plan is in place for the Facility (the Plan).

8.2. The Plan includes:

8.2.1. ranking of potential emergency situations and actions to address the foreseen situations;

8.2.2. a list of resources required to assist with immediate response;

8.2.3. individual responsibility matrix;

8.2.4. establishment of an emergency control centre and associate procedures; and

8.2.5. a list of representatives of down-stream residents.

8.3. In case of an emergency down-stream residents will be informed if evacuation is required through various public forum (including e.g. community policing forums).

8.4. Conceptual long-term recovery plans are in the process of being developed. Detailed planning, however, is only possible after an event occurs.

9. Independent Review Planning

- 9.1. An annual review of the Facility by the Engineer of Record is conducted, which includes a review of progress of previous actions and a record of new conclusions and recommendations. The review for FY 2025 has been completed and the final report is awaited
- 9.2. The Independent Review Board does a further annual review and prepares a report for the accountable executive, FDM's General Manager. The Independent Review Board focussed in FY 2025 on the continuous review assessment to further enforce implementation of GISTM and tracks areas of improvement.
- 9.3. A dam safety review is conducted and reported on a 5 yearly basis as per regulatory requirements and the most recent was conducted in CY2022.
- 9.4. In addition to the above, status updates on the Facility are presented at a quarterly inspection and status monitoring meetings.

10. Financial capacity

- 10.1. Petra is the indirect holder of 74% of FDM, the operator of the Facility, with the balance being owned by an Employee Share Trust and Petra's Black Economic Empowerment partners.
- 10.2. The details of the financial provision which Petra has made in relation to the estimated costs of planned closure, early closure, reclamation and post-closure monitoring and maintenance of the Facility, as well as the adequacy thereof, are as set out in our most recent set of audited financial statements, which are available on Petra's website at:
<https://www.petradiamonds.com/investors/results-reports/>.