



TARKWA

Global Industry Standard on Tailings Management

Annual Disclosure Report

5 August 2023

Creating enduring value beyond mining



safety



integrity



respect



responsibility



innovation



collaborative
delivery



GOLD FIELDS



EXECUTIVE SUMMARY

The International Council on Mining and Metals (ICMM) has made a committed effort to achieve full conformance within three years for tailings facilities classified as "extreme" or "very high" consequences through the Global Industry Standard on Tailings Management (GISTM) launched in August 2020. This ambitious commitment has acted as a catalyst, driving immediate and sustained action by companies to adhere to the Standard. Gold Fields, among others, has made significant progress towards this goal, known as "substantial conformance." Gold Fields considers the introduction of the GISTM as a significant milestone for the mining industry, as it aligns with the aim of achieving safer and more sustainable mining practices. As a member of ICMM, Gold Fields recognizes the Standard as a crucial component of its governance, along with other mine owners who have also adopted it. The GISTM provides a framework that covers six key topics to prioritize safety throughout the lifecycle of a tailings facility, including design, operation, closure, and post-closure.

Gold Fields' core values, including safety, integrity, respect, responsibility, innovation, and collaborative delivery, strongly resonate with the principles and objectives of the GISTM. By prioritizing safety, upholding integrity, respecting stakeholders, taking responsibility for their actions, encouraging innovation, and fostering collaboration, Gold Fields checks that the GISTM becomes an integral part of its operations.

The GISTM brings a crucial "mind-shift" by emphasizing ongoing stakeholder engagement. It highlights the importance of focused and meaningful engagement with affected people throughout the life of the operation and the lifecycle of a TSF.

Implementing the GISTM within the given timeframe has presented considerable challenges due to site-specific factors. Progressing with all 15 Principles, 77 requirements (or 219 requirement parts) simultaneously is challenging, as certain requirements depend on the completion of others. The GISTM requirements cover 40% engineering, 30% governance and management, and 30% environmental and social elements. For example, developing breach analyses requires establishing credible failure modes to determine consequence classifications.

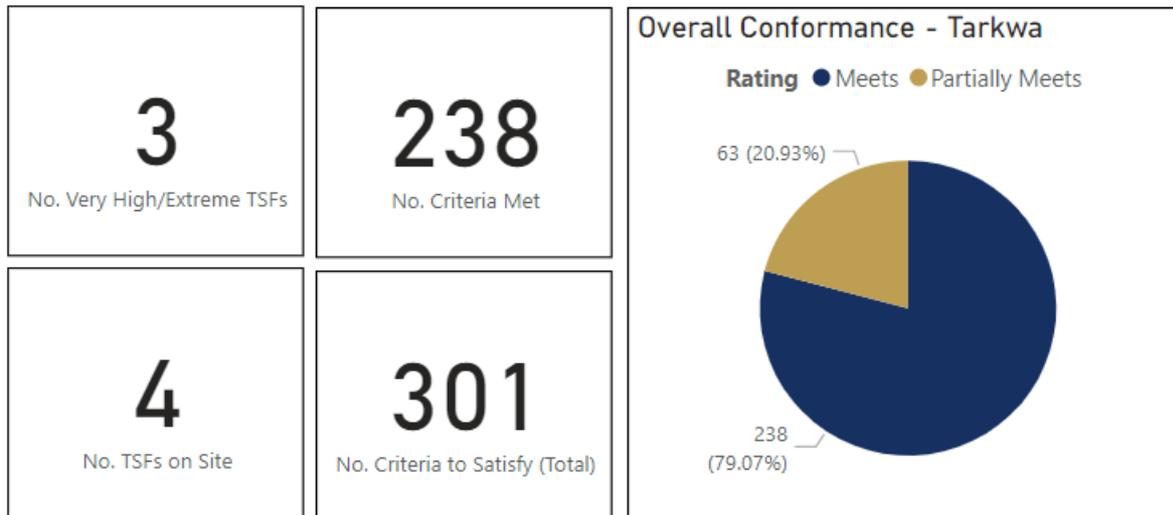
The diligent efforts of the Tarkwa Team have resulted in 79% conformance. Generally, there are 219 requirement criteria to satisfy, per TSF, to achieve full conformance to the GISTM. Some requirement criteria are required at a site level and others apply to each individual TSF.

Assuming the TSFs are treated individually, and as there are three TSFs at the Tarkwa mine with Very High Consequence Classifications, the team set out to satisfy a total of 301 applicable requirement criteria in a three-year period. This accomplishment entails completing 238 out of the 301 requirement parts, a monumental achievement.

The assessment outcome is presented in the Figure below.



Tarkwa - GISTM Self Assessment 2023



It is essential to recognize that all facilities classified as "extreme", and "very high" consequences have the potential to impact over 1000 people living downstream. The GISTM emphasizes meaningful engagement with all project-affected individuals. Closing out all governance, engineering, and technical studies while successfully engaging large communities downstream is a considerable challenge, especially in countries with limited access to technology, internet, education, water, and sanitation.

At Tarkwa, the initial focus was on mitigating dam safety risks, establishing robust governance and management systems, and conducting comprehensive engineering, social, and environmental studies. The next phase of the GISTM journey involves extending meaningful engagement with the community to check that all project-affected people are adequately educated and aware of the facilities.

In addition to social challenges, there are various practical and technical challenges, such as limited access to reliable testing facilities and long lead times for obtaining analytical results. Moreover, there is a scarcity of deep expertise in tailings management within the consulting community, which both ICMM members and other companies rely on for technical advice.

When evaluating performance in tailings management, it is crucial to consider the broader context and the journey towards conformance. Assigning a simplistic percentage score to multifaceted aspects, like human rights due diligence assessments, can oversimplify the evaluation process. Gold Fields acknowledges the limitations of a linear approach and emphasizes demonstrating substantial conformance.

While the Tarkwa TSFs partially conform with the GISTM, all dam safety and environmental-related aspects have been addressed.

Gold Fields recognizes that the Standard sets high expectations and prefers a quality-driven approach rather than mere conformance.

To enhance their tailings management practices, the Global Tailings Management team has collaborated with the Tarkwa Tailings Stewardship team, comprising key stakeholders from various departments, including sustainable development, community relations, mine management, engineer of record, and engineering teams.



Gold Fields has conducted a thorough site-specific human rights due diligence process as part of its commitment to respecting human rights in accordance with the United Nations Guiding Principles on Business and Human Rights (UNGPs). In 2022, Tarkwa diligently implemented mitigation plans based on its most recent human rights due diligence assessment findings. The impacts and mitigation plans are documented in the Tarkwa Operational Risk Register.

This Annual Tailings Disclosure Report has been prepared in three parts.

- Part 1 presents an overview of the mine and its TSFs.
- Part 2 provides a plain language summary, as Principle 15 of the GISTM requires, offering a concise and accessible summary of our tailings management practices.
- Part 3 presents our detailed self-assessment report, which comprehensively analyses our conformance with the GISTM. Contextual information, a justification explaining the level of conformance and an overview of the self-assessment results for the Tarkwa TSFs are included in Appendix A.

These three parts collectively provide a comprehensive understanding of Tarkwa's tailings management approach and GISTM status, ensuring credibility, transparency and accountability in our reporting.

Gold Fields prioritizes transparency in its disclosures to maintain credibility and foster trust with key stakeholders. The GISTM, as a newly introduced governance and management Standard, represents a journey in its implementation and signifies a significant step towards raising the standards in tailings management.



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ABBREVIATIONS

Abbreviation	Description
AE	Accountable Executive
ALARP	As Low As Reasonably Practicable
ANCOLD	Australian National Commission on Large Dams
CIL	Carbon-in-Leach
CMS	Catastrophic Risk Management System
CPTu	Cone Penetrometer Testing with pore pressure measurements
DBA	Dam Breach Analysis
DSR	Dam Safety Review
EMP	Environmental Management Plan
EoR	Engineer of Record
EPRP	Emergency Preparedness and Response Plan
EXCO	Executive Committee
FMEA	Failure Mode and Effects Analysis
FoS	Factor of Safety
GISTM	Global Industry Standard on Tailings Management
HDPE	High-Density Polyethylene
HRIA	Human Rights Impact Assessment
IR	Independent Review
ICMM	International Council on Mining and Metals
ICOLD	International Commission on Large Dams
ITRB	Independent Technical Review Board
KP	Knight Piésold Consulting Ghana
LoM	Life of Mine
mRL	meters Relative Level
OMS	Operations, Maintenance, and Surveillance
PAR	Population at Risk
PFMA	Potential Failure Mode Analysis
PLL	Potential Loss of Life
QRA	Quantitative Risk Assessment
RMP	Risk Management Plan
ROM	Run-of-Mine
RTFE	Responsible Tailings Facility Engineer
SLR	SLR Consulting
SQRA	Semi-Quantitative Risk Assessment
TARP	Trigger Action Response Plan
TGM	Tarkwa Gold Mine
TSF	Tailings Storage Facility
UNGPs	United Nations Guiding Principles on Business and Human Rights
UWA	University of Western Australia



DEFINITIONS

Abbreviation	Description
Consequence Classification	Dam safety requirements typically classify structures based on evaluating the potential downstream consequences of failure in terms of three categories: loss of life, environment and cultural values, and infrastructure and economics.
Credible Failure Mode	Refers to technically feasible failure mechanisms given the materials present in the structure and its foundation, the properties of these materials, the configuration of the structure, drainage conditions and surface water control at the facility throughout its lifecycle. Credible failure modes can and do typically vary during the lifecycle of the facility as the conditions vary. A facility that is appropriately designed and operated considers all of these credible failure modes and includes sufficient resilience against each.
Impact	In this context, impacts are consequences to people, built infrastructure or the natural environment caused by a tailings facility or its failure, including impacts to the human rights of workers, communities, or other rights holders and including sensitive ecological receptors and ecosystem services. Impacts can be positive or adverse, tangible or intangible, direct or indirect, acute, chronic or cumulative, and measurable quantitatively or qualitatively.
Material	Important enough to merit attention or have an effective influence or bearing on the determination in question. All Priority 1 type findings, issues requiring immediate action/remediation, are classified as being material.
Population at Risk	All people who would be directly exposed to floodwaters assuming they took no action to evacuate.
Potential Loss of Life	The part of the population at risk that could lose their lives in the event of a dam breach.
Rainy Day	A rainy-day dam failure or overtopping type failure typically occurs during large flood inflow conditions where the pond water level rises high enough to breach or overtop the dam.
Risk	<p>Risk is a function of three components: The potential <u>hazards or future loading</u>, the dam's <u>performance</u> given that loading and the <u>consequences</u> of a dam breach if the dam does not perform as intended.</p> <ul style="list-style-type: none">• Potential hazards include large regional floods, earthquakes, landslides, rapid pool fluctuations, and other events.• The expected performance of the dam is evaluated based on criteria used at the time of its design, construction documentation, historical performance, site investigations and advanced analysis.• Finally, consequences are estimated based on computer simulations of flood inundation extents, flood wave arrival times, warning times, the time of day at the breach, and other factors.
Sunny Day	Dam failures can occur suddenly, without warning, and may occur during normal operating conditions. This is referred to as a “sunny-day” failure.
Tailings	A by-product of mining consisting of the processed rock or soil left over from the separation of the commodities of value from the rock or soil within which they occur.
Tailings Storage Facility	A facility that is designed and managed to contain the tailings produced by the mine.



STRUCTURE OF THIS REPORT

Annual Tailings Disclosure Report

This Annual Tailings Disclosure report summarises information specifically related to TSFs 1, 2, and 3 at the Tarkwa Gold Mine. These tailings facilities have been classified as having a 'Very High' consequence classification, making them a key focus of this disclosure. In accordance with Principle 15.1 of the GISTM, this report contains the disclosure of relevant information. The document is structured as follows:

- **Part 1**
 - General overview of Gold Fields' approach to Tailings Management and GISTM implementation.
- **Part 2**
 - A plain language summary of the Tarkwa TSFs, including disclosure of information aligned with GISTM Principle 15.1.
 - Confirmation of the commitment to Requirements 15.2 and 15.3
- **Part 3**
 - Tarkwa Self-Assessment Report for TSF 1,2 and 3. Contextual information explaining the level of conformance and an overview of the self-assessment results for the Tarkwa TSFs are included in Appendix A.



PART 1 – GENERAL OVERVIEW

This document has been prepared in response to the criteria described in Principle 15 of the GISTM.

1.1. INTRODUCTION

Background

Gold Fields is dedicated to promoting safe and sustainable mining practices, recognising the importance of the Global Industry Standard on Tailings Management (GISTM). As a member of the International Council on Mining and Metals (ICMM), we embrace this Standard as it aligns with our commitment to responsible tailings facility management. The GISTM serves as a comprehensive framework, guiding us to prioritise safety throughout the lifecycle of our tailings facilities, including design, operation, closure, and post-closure.

The GISTM comprises 77 requirements across six key topic areas: affected communities, integrated knowledge base, design, construction, operation and monitoring of tailings facilities, management and governance, emergency response and long-term recovery, and public disclosure and access to information. Gold Fields is fully committed to implementing the GISTM as part of our membership commitment to the ICMM.

We aim to demonstrate conformance to the GISTM for our priority facilities, which include active operations and legacy tailings facilities with an "extreme" or "very high" consequence classification, by August 2023. We are working towards achieving conformance for all other facilities by August 2025.

In the context of this disclosure report, the Tarkwa TSFs are TSFs with a Very High Consequence Classification. Gold Fields Ghana has made a substantial effort to advance its conformance with the GISTM.

1.2. THE IMPORTANCE OF GISTM IMPLEMENTATION

For Gold Fields

Gold Fields views the introduction of the GISTM as a significant milestone for the mining industry, aligning to achieve safer and more sustainable mining practices. As an ICMM member company, Gold Fields recognises the Standard as a crucial component of its governance alongside other mine owners who have also adopted it.

The GISTM provides a framework encompassing six key topics to prioritise safety throughout the lifecycle of a tailings facility, covering design, operation, closure, and post-closure.

For Key Stakeholders and the Environment

The GISTM creates an essential "mind-shift" by elevating stakeholder engagement from intermittent to ongoing. It emphasises the importance of focused and meaningful engagement with affected people throughout the operation's life and the TSF's life cycle. This includes integrating engagement into the regular routines of tailings and environmental management. The GISTM promotes the involvement of environmental and social practitioners alongside engineering colleagues across the business.

Furthermore, the GISTM encourages knowledge sharing, training, and awareness among a mine's environmental, social, and tailings management teams. The aim is to foster mutual understanding among the respective parties regarding their roles and functions within the site-specific context of their operation and the risks posed.



By implementing the GISTM and incorporating its principles into our operations, Gold Fields strives to safeguard the well-being of our stakeholders and the environment. We recognise the importance of ongoing engagement, continuous improvement, and the responsible management of tailings facilities to achieve a safer and more sustainable mining industry.

Governance for Safer Tailings Facilities

Governance plays a fundamental role in ensuring the safety of our Tarkwa tailings facilities. Topic IV of the GISTM emphasises the need for clear accountability and the involvement of key roles such as an Accountable Executive, a Responsible Tailings Facility Engineer, and an Engineer of Record. Additionally, regular risk management and safety reviews are integral to maintaining a high level of safety and minimising potential risks. Gold Fields is committed to implementing these governance measures to promote transparency, accountability, and continuous improvement in our tailings management practices.

Inclusive Expertise and Collaboration

Engaging the right people with diverse expertise and perspectives is essential to effectively design and operate tailings facilities. Gold Fields recognises the value of involving technical experts in design, operators, environmental, social and water specialists, mine planners, and other stakeholders. By fostering collaboration and taking a holistic approach, we can leverage opportunities that may arise during the facility's lifecycle, such as utilising mine waste for construction or repurposing a portion of the tailings stream for underground backfill. Furthermore, this inclusive approach allows us to identify any necessary deviations from the initial design well in advance, facilitating the implementation of corrective measures.

Implementing a detailed, stringent, regular risk assessment process is the essential counterpoint to the design flexibility discussed earlier. Once the facility is in operation, change is inevitable. The plant will change, and there is likely to be at least some variance in processing rates, throughputs, methods, grinds, water demands and, more broadly, regional hydrogeology and climatic patterns. Therefore, it is critical that the assumptions made during the design are continuously reviewed and assessed in the light of actual conditions.

Continuous Risk Assessment and Adaptation

A comprehensive and regular risk assessment process complements the design flexibility discussed earlier. Once a tailings facility is operational, changes are inevitable. Variations may occur in processing rates, methods, water demands, or even regional hydrogeology and climate patterns. Therefore, it is imperative to continuously review and assess the assumptions made during the design phase, considering actual conditions and adjusting as necessary. Gold Fields is committed to implementing a detailed, stringent risk assessment process to proactively identify and address potential risks associated with our tailings facilities.

Alignment with Gold Fields' Core Values

Gold Fields' core values of safety, integrity, respect, responsibility, innovation, and collaborative delivery resonate strongly with the principles and objectives of the GISTM. By prioritising safety, upholding integrity, respecting stakeholders, taking responsibility for our actions, encouraging innovation, and fostering collaboration, we check that the GISTM becomes an integral part of our operations. We believe that by incorporating these core values into our implementation of the GISTM, we can achieve continuous improvement and contribute to developing a safer and more sustainable mining industry.



PART 2 – PLAIN LANGUAGE SUMMARY

This document has been prepared in response to the criteria described in Principle 15 of the GISTM.

2.1. BACKGROUND

Purpose

This plain language summary aims to provide clear and concise information about the Tarkwa TSFs in an easily understandable way for a wide audience. It is designed to check accessibility to readers with limited knowledge of TSFs, including individuals from various fields. The summary follows the requirements outlined in Principle 15 of the International Council on Mining and Metals (ICMM) Conformance Protocols.

Disclosure Scope

Since the Tarkwa TSFs are existing facilities, this summary will focus on disclosing information related to Requirements 15.1B and 15.1C of the GISTM. Therefore, Requirement 15.1A dealing with new TSFs does not apply to this disclosure.

Furthermore, among the TSFs at Tarkwa Mine, only TSF 1, TSF 2, and TSF 3 are classified as priority TSFs with Very High consequence classifications, as per the GISTM. Conformance with the GISTM by August 2023, is presented in the Tarkwa GISTM Self-Assessment Report, available in Part 3, Appendix A.

TSF 5 at TGM, classified with a High GISTM consequence, will conform by August 2025. Information regarding TSF 5 is not included in this disclosure.

2.2. OVERVIEW OF THE TARKWA MINE AND ITS TSFS

The Tarkwa Mine

Tarkwa Gold Mine (TGM) operates four TSFs: TSF1, TSF2, TSF3, and TSF5. The Life of Mine (LoM) tailings storage is managed through a wall-raising sequence implemented at TSF1, TSF2, and TSF5. TSF3 is currently in the decommissioning phase, with no tailings deposited since September 2019.

Location and Topography

The Tarkwa Mine is situated to the north and northwest of Tarkwa town in the Western Region of Ghana (Figure 1). It is located approximately 50 km north of the port of Takoradi and around 280 km west of the capital city, Accra. The mine's concession spans an area of approximately 2,300 km², extending from Tarkwa town southward for about 25 km, reaching its northeastern limit at Huni Valley.



Figure 1: Tarkwa Gold Mine Locality Map

Tailings Storage Facility (TSF) Overview

The Tarkwa TSFs are geographically limited by the presence of a ridgeline called Phyllite Ridge, which constrains their layout to the south and west. Figure 2 illustrates the TSF Complex layout, including the reference terms for site embankments.

TSF1, TSF2, and TSF3 embankments have been constructed using a combination of spent ore (gravelly soil) or rockfill as a starter embankment, followed by successive upstream raises utilising waste rock.

TGM initiated the commissioning of TSFs 1, 2, and 3 in 2004, 2008, and 2011, respectively. The primary objective was to provide secure tailings containment while implementing cost-effective embankment construction methods employing local borrow material or mine waste material. Whenever feasible, upstream-raised construction techniques were employed. Currently, TSFs 1, 2, and 5 are the operational facilities actively receiving and storing tailings from the processing plant. Additionally, TSF 3 has been closed and is undergoing active rehabilitation.



Figure 2: Layout of Tarkwa TSFs



2.3. GOVERNANCE AND MANAGEMENT APPROACH

Governance Overview

At Gold Fields, we recognise the importance of responsible tailings management and the need to prevent any adverse impacts on human health and safety, well-being, the environment, and infrastructure. Our vision and values guide our commitment to these principles.

To check the effective governance of tailings management, we have developed and implemented a robust tailings management system. This system incorporates good engineering practices and is integrated into our overall mine planning processes.

Gold Fields' corporate policy on Tailings Management is the foundation for establishing all the necessary systems, information, and plans related to the current and future lifecycle phases of our TSFs. We adhere to this policy at an appropriate level of detail to check comprehensive and consistent management.

Key Governance Roles at Tarkwa

We have established key governance roles at the Tarkwa Gold Mine to support our commitment to safe tailings management. All roles are filled:

- **Site-based implementation:**
 - External Engineer of Record for TSFs 1, 2, and 3: SLR Consulting
 - Responsible Tailings Facility Engineer (RTFE) and Deputy appointed at TGM
- **Third-party review:**
 - Independent Reviewer (IR): Golder/WSP Golder (2019 to 2022), Stantec (current)
 - Independent Technical Review Board (ITRB): Comprising suitably qualified and experienced individuals from SRK Consulting, WSP Golder, and the University of Western Australia (UWA)
 - Glocal Engineering: Quarterly environmental and operational reviews.
- **Functional accountability:**
 - Regional Accountable Executive
 - VP: Global Tailings Management
 - Corporate Senior Tailings Engineer
- **Leadership commitment:**
 - The Gold Fields Executive Committee (Exco) and the Board of Directors fully commit to safely managing our TSFs.

These governance roles and commitments demonstrate our dedication to maintaining the highest standards of tailings management. We prioritise transparency and accountability in our practices to check the safety and integrity of our TSFs.



2.4. CONSEQUENCE CLASSIFICATION

Introduction to Consequence Classification

Consequence classification is vital in the GISTM. It involves categorising the potential impacts of a TSF failure based on the severity and extent of the consequences. It is important to note that consequence classification does not consider the likelihood of such an event occurring, and therefore, it should not be considered a measure of risk.

Why Consequence Classification Matters

Consequence classification helps us identify the TSFs that pose the greatest risks to human health and safety, the environment, and infrastructure. By understanding the potential consequences of a TSF failure, we can prioritise our risk mitigation, engineering, governance, and management efforts. This allows us to allocate resources where they are most needed.

Consistent and Systematic Approach

The GISTM provides a framework for consequence classification, ensuring a uniform and systematic approach to assessing and managing risks associated with TSFs. This framework helps us determine the level of design, construction, and operational standards necessary to check the safe and sustainable management of tailings.

Reassessing Consequence Classification

To demonstrate our adherence to the GISTM, we have reassessed the consequence classifications of our TSFs, considering the credibility of potential tailings facility failure scenarios in alignment with the definitions outlined in the GISTM.

Consequence Classification of Tarkwa TSFs

The consequence classification associated with the Tarkwa TSFs, based on the GISTM approach, is presented in Table 1.

Table 1: GISTM Consequence Classification

TSF	GISTM Consequence Classification
1	Very High
2	
3	



2.5. RISK MANAGEMENT AND RISK ASSESSMENT FINDINGS

Risk Management

At Gold Fields, we prioritise risk management to check the safety and integrity of our Tarkwa TSFs. Our Risk Management Plan (RMP) sets out the approach to managing risks associated with the Tarkwa TSFs. This RMP is underpinned by various studies completed by our Engineer of Record (EoR) partner.

This plan incorporates the risks, hazards, and potential failure modes identified through various assessments, including:

- Tarkwa TSF and Tailings Risk Assessment (December 2022)
- Failure Mode and Effects Analysis (FMEA) (August 2021 and May 2023)
- Quantitative Risk Assessment (QRA) (HATS, 2020 and SLR, 2023)
- Human Rights Impact Assessment (SRC, 2023)
- A risk register for risks categorised as Major and above will be included in future updates.

Failure Mode and Effects Analysis (FMEA)

In collaboration with its EoR, Gold Fields conducted an FMEA to identify and evaluate potential failure modes. From these, we selected worst-case credible failure modes that could lead to hypothetical breaches and downstream inundation for further Dam Breach Assessment (DBA).

The FMEA process involved:

- Development of a workbook by the EoR, including:
- Identification of TSF components, Principal Hazards, potential failure modes and initiating events.
- Elimination of non-credible initiating events.
- Preliminary risk rating for credible failure mode scenarios.
- FMEA workshop to finalise the workbook content.
- FMEA report.

After eliminating non-credible or non-critical failure scenarios, the Tarkwa Tailings Stewardship team identified three scenarios for consideration in the DBA. Inundation zones were established for these scenarios, and evacuation routes and muster points were determined accordingly.

Operational Risks

The Tarkwa Tailings Stewardship team attended the annual workshop to update the Tarkwa Operational Risk Register with broader stakeholders across the mine. This operational risk register hosts all the risks associated with mining and includes the risks, controls, and mitigation plans for catastrophic tailings failures and climate change impacts.

Summary of Impact Assessment Relevant to the Tailings Facility

The summary of the Impact Assessment relevant to the tailings facility reveals important findings. Firstly, the consequences mentioned in the assessment do not reflect the current condition of the TSF; instead, they serve as a means to identify potential failure modes and develop appropriate plans and engineering controls to prevent such events. Since Tarkwa is situated in close proximity to communities, protecting the people living downstream becomes a priority.



To evaluate risks comprehensively, the team conducted thorough analyses, including potential failure mode analysis (PFMA), FMEA, and a QRA. Identified gaps were addressed to check that the risks remain within acceptable limits. Various scenarios, such as storm events, climate change, overtopping, and structural failure, were considered, and appropriate controls have been implemented to manage these risks effectively.



2.6. DESCRIPTION OF THE DESIGN

Overview

Background

Gold Fields is dedicated to promoting the safe, stable, and sustainable operation of its TSFs. We uphold the highest standards of tailings management through our Group TSF Management Standard (2022), which outlines our minimum requirements for TSF management.

In supporting our current high level of governance, the AEs and RFTes from the sites must demonstrate at all times that initiatives are in place and progress is made towards implementing the requirements of this Standard.

The Tarkwa Tailings Stewardship team is well supported by an appointed EOR, ITRB, IR and AE.

Alignment with Corporate Values

As we discuss our design approach and overview, we remain guided by our core values, which serve as the foundation of our company's operations:

- **SAFETY:** The safety and well-being of our people and communities are of utmost importance to us. We prioritise safe practices in all aspects of our work.
- **INTEGRITY:** We conduct our business with honesty, fairness, and transparency. The highest ethical standards guide our actions.
- **RESPECT:** We treat all stakeholders with trust, dignity, and respect, valuing diversity and embracing different perspectives.
- **RESPONSIBILITY:** We take personal ownership of our impact on our people, relationships, safety, and environment. We are accountable for our actions.
- **INNOVATION:** We encourage and drive innovation, embracing new ideas and technologies that can propel our business forward.
- **COLLABORATIVE DELIVERY:** We work together as a team to achieve excellent results, valuing input from diverse perspectives and taking pride in our collective achievements.

Conformance-Based Management

In managing our TSFs, we adhere to a conformance-based management approach, ensuring compliance with best practices, guidance and standards. The following categories encompass the framework for our TSF design management:

- **Regulatory requirements:** We comply with the requirements set by relevant regulatory bodies in our countries of operation.
- **Licence and operating conditions:** We meet specific conditions outlined for each TSF during its operation.
- **Technical and industry standards and guidelines:** We adhere to mandatory technical standards for the investigation, design, and operation of TSFs, including guidelines such as the ANCOLD Guidelines and ICOLD bulletins.
- **Peak industry standards and guidelines:** As a member of peak industry bodies, we adopt standards and guidelines developed by these organisations. The GISTM is an example of such a standard.
- **Internal standards:** Gold Fields has an internal standard that covers governance, management, and technical aspects throughout the lifecycle of a TSF.



Design Description

To provide an overview of our design approach, we present key design information for our priority TSFs as of December 2022, as summarised in Table 2.

Table 2: Summary of TSF Status

Parameter	Unit	TSF 1	TSF 2	TSF 3
Engineer of Record		SLR Consulting		
GISTM Consequence Classification		Very High		
Commissioning year	Yr.	2004	2008	2011
Final Permitted Capacity	Mt	90	88	36.2
Final Permitted Elevation	mRL	129	105	80
Current Elevation	mRL	111.5	101	80
Raise Method		Upstream/Downstream*	Upstream/Downstream*	Upstream
Facility Liner Type		Unlined	Unlined	Unlined
Raise Construction Materials		Waste rock/clay zoned		
Current Maximum Height	m	51	47	30
Footprint	Ha	135	190	110
Current Stage/Raise	No	11A	8	3
Next Stage/Raise	No	11B	9	-
Final Permitted Stage/Raise	No	15	9	3
Status		Active deposition	Active deposition	Rehabilitation in progress

*Being transitioned from upstream to downstream raising



TSF 1 Design Summary

Description of TSF 1

TSF 1, commissioned in September 2004, is an essential component of our Carbon-in-leach (CIL) Processing plant. Initially designed as a cross-valley impoundment, it has evolved into an upstream and downstream-raised impoundment through multiple staged raises. Located approximately 1.5 km northwest of the CIL plant site and due south of the North Heap Leach Pad, TSF 1 has undergone a series of developments to meet our evolving needs.

Alignment with Core Values: Safety and Integrity

Safety and integrity are at the forefront of our core values. At the Tarkwa Mine, we are deeply committed to maintaining the highest standards of safety in our operations. By incorporating foundation enhancements and proactive seepage management strategies, we promote the robustness and reliability of the TSF, fostering a secure environment for our workforce and the surrounding communities.

TSF 1 Development Timeline

The chronology of TSF 1 development is as follows:

- **Initial Design (2003):** Knight Piesold (KP) designed the starter facility, consisting of a 2,651 m long Main Embankment and a 171 m long saddle dam. The embankment structure was built as a zoned earthworks system, including an upstream zone with low permeability clay (Zone A), a spent ore transition layer (Zone B) to prevent fines migration, and a downstream shell comprising waste rock (Zone C). The crest elevation of the starter facility embankments was set at 78.0 mRL.
- **First Raise (Stage 2):** The Stage 2 raise, constructed entirely on the crest of the Stage 1 embankment using granular Run-of-Mine (RoM) waste, elevated the embankment to 80.3 mRL. The original design for Stage 3 proposed an upstream raise with spent heap leach material. However, due to challenges encountered during wet season placement and compaction, it was decided to use granular RoM waste, consistent with Stages 1 and 2.
- **Stage 3 Raise:** The Stage 3 raise, an upstream raise to 84.0 mRL, began in August 2007 and concluded in December 2007. The raise was completed using RoM waste rock.
- **Successive Raises:** TSF 1 was raised upstream, utilising RoM waste, from Stage 4 (88.5 mRL) to Stage 9 (105.5 mRL) between September 2009 and December 2017. As the facility was raised, additional saddle dams were constructed to ensure containment. Consequently, the embankments' general elevation is now above the natural ground level along the west, north, and east perimeter. Previously, the downstream slopes were rehabilitated with a 300 mm thick topsoil layer and vegetation. However, this practice was discontinued due to the transition from upstream to centerline wall raises. The eastern embankment will ultimately transition into a downstream raised wall.
- **Stage 10 Wall Raise:** The Stage 10 wall raise, the first expansion project beyond the original design elevation of 105.5 mRL, was completed and commissioned in March 2021. In August 2021, a 2m centerline wall raise was designed and approved (Stage 11A) for construction to increase tailings storage capacity in 2021.
- **Stage 11A Raise:** The Stage 11A raise involved a 2m increase in elevation and the construction of a waste rock toe buttress downstream of the East Embankment to the design elevation of 96 mRL. Construction of the raise and associated buttress works was completed in August 2022, and the facility has since been re-commissioned. The toe buttress has been constructed downstream of the East embankment to further improve its Factor of Safety (FoS). The buttress construction was finished in Q4 2022, reaching the designed elevation of 96 mRL. TSF 1 is transitioning from an upstream to a more robust downstream raised facility.
- **Stage 11B Raise:** The Stage 11B raise design will be submitted to the regulator for approval in Q4 2023.



Aerial Image and Cross-Section

A recent aerial image of TSF 1 is presented in Figure 3, providing an overview of the facility. Additionally, Figure 4 presents a cross-section through TSF 1, illustrating the various raises and stages of the facility.



Figure 3: Aerial Image of TSF 1

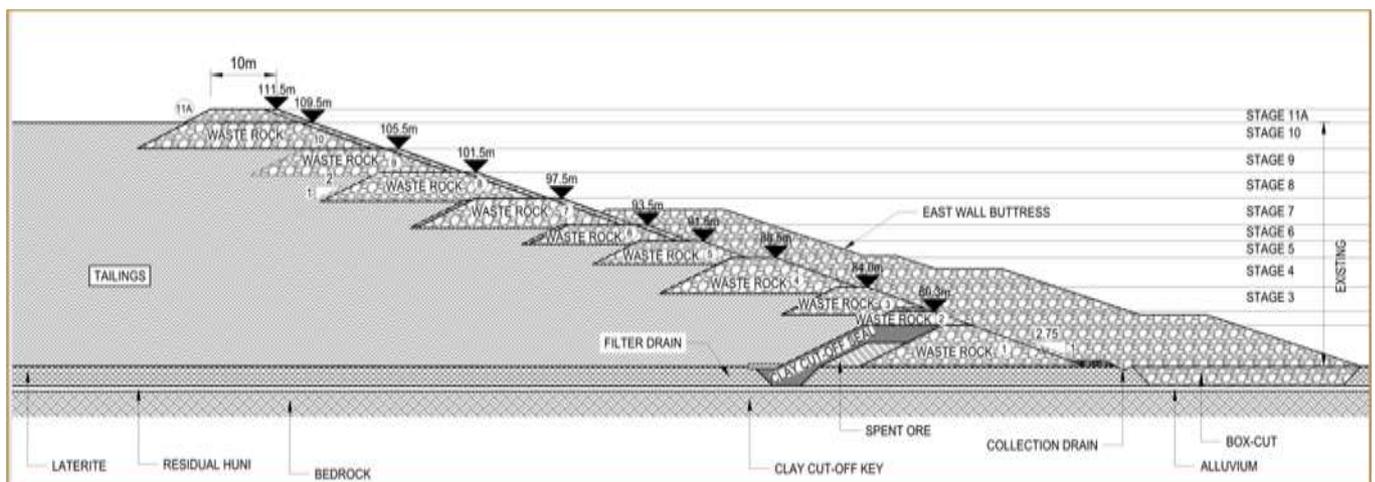


Figure 4: Cross-Section Image of TSF 1



TSF 2 Design Summary

Description of TSF 2

TSF 2 was established at Tarkwa following the approval of the Carbon-in-Leach (CIL) Expansion Project by Gold Fields in 2007. This project aimed to increase plant throughput from approximately 400 ktpm to 1 Mtpm. TSF 2 is located adjacent to and west of TSF 1 on the same northwest-trending phyllite ridge. The facility consists of two limbs: the Northern limb extends from the northwestern corner of TSF 1 to a point southwest of the heap leach ponds area, while the western limb starts at the same point near the heap leach ponds and follows a spur towards the phyllite ridge. TSF 1 and TSF 2 share a dividing wall constructed as part of the TSF 1 wall raise development.

Core Value: Safety

At Gold Fields, safety is our top priority, driving every aspect of our TSF 2 design and management. We are committed to the well-being of our people, the environment, and the surrounding communities. Our core value of safety guides our actions, promoting a culture of accountability and continuous improvement. We adhere to the highest ethical standards, report information accurately, and engage openly with regulators and stakeholders. Through rigorous risk assessments, mitigation measures, and ongoing dam safety reviews, we check the integrity and stability of TSF 2. We take personal responsibility for our impact, actively striving for zero harm and making a positive difference. We create a safe and sustainable future for all by embracing innovation and collaboration. Safety is at the heart of our operations, and we remain dedicated to the responsible management of TSF 2, safeguarding our people, the environment, and the communities we serve.

TSF 2 Development Timeline

The timeline for the development of TSF 2 is as follows:

- **Starter embankment:** The starter embankment of TSF 2 was constructed in two phases:
 - Phase 1 starter embankment, completed in July 2008, comprised compacted spent ore fill with a low permeability clay key and seal, constructed up to 73.3 mRL.
 - Phase 2 starter embankment extension, completed in March 2010, consisted of compacted mine waste rock with a compacted spent ore core zone, constructed up to 80.0 mRL.
- **Initial upstream raise:** The first upstream wall raise (Stage 3) was completed in July 2012, using RoM waste, raising the embankment to 84.0 mRL.
- **Stage 4 and 5 Raises:** During the Stage 4 wall raise to 88.0 mRL, an internal clay key was introduced within the embankment cross-sections from elevation 84.0 mRL. Subsequent upstream wall raises utilised compacted selected waste rock and zoned earth-fill. The downstream portions include selected waste rock, a spent ore transition zone, and an internal low-permeability clay zone. The stage 5 raise, a 4m raise to 92.0 mRL, was completed in September 2016.
- **Stage 6 raise:** The last upstream raise, Stage 6, completed in December 2018, involved a 5 m lift of all the confining embankments to 97.0 mRL.
- **Stage 7 raise:** The Stage 7 wall raise design, completed in February 2021 and approved for construction in June 2021, transitioned the construction methodology from upstream to centerline. This change aligns with Tarkwa's action plan to conform with the Global Industry Standard on Tailings Management (GISTM). Subsequent raises at TSF 2 will be downstream. Stage 7 has been completed, permitted, and is currently being utilised for tailings deposition.
- **Stage 8 raise:** The Stage 8 raise is currently under construction, representing the final step in transitioning TSF 2 from an upstream raised facility to a more robust downstream raised facility. This raise comprise raising the embankment to 105.0mRL.
- **Stage 9 raise:** The Stage 9 raise design is in progress and will be submitted to the regulator for approval in Q4 2023.



Aerial Image and Cross-Section

The latest aerial image of TSF 2 is presented in Figure 5. A cross-section through TSF 2 depicting the different raises and stages is presented in Figure 6.



Figure 5: Aerial Image of TSF 2

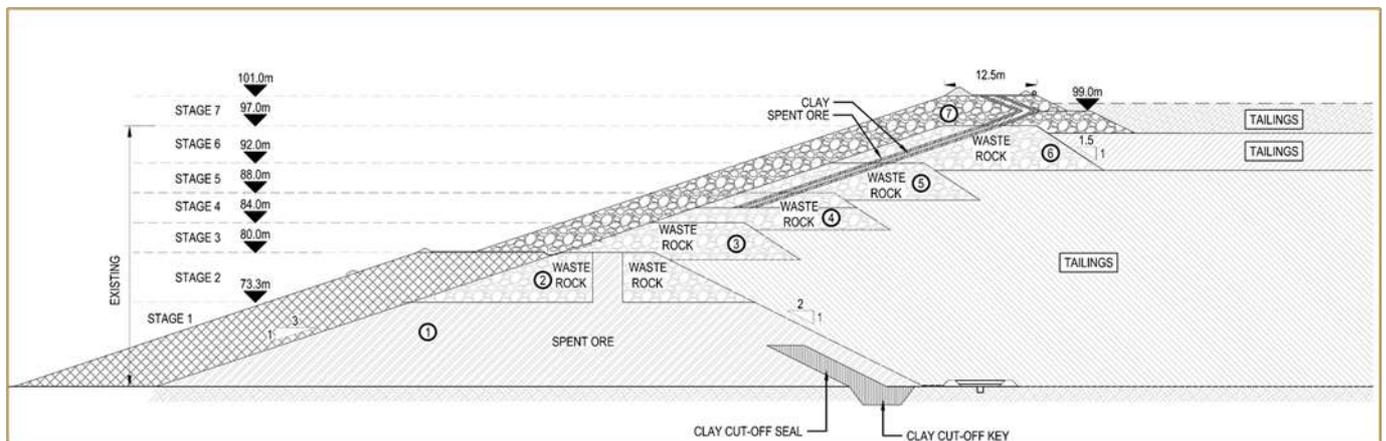


Figure 6: TSF 2 Cross-Section



TSF 3 Design Summary

Description of TSF 3

TSF 3 was strategically developed to address the growing needs of our tailings management system. Its primary purpose is to accommodate a portion of the Life of Mine (LoM) tailings while simultaneously mitigating the overall rate of rise of tailings deposition at the TSF Complex. Situated adjacent to TSF 2 and sharing a dividing wall, TSF 3 benefits from the proximity and synergies between the two facilities. By optimising the utilisation of space and resources, TSF 3 enhances the operational efficiency and long-term sustainability of our tailings storage infrastructure.

Core Value: Safety

At Gold Fields, safety is our core value, permeating every aspect of our TSF management, including the design and development of TSF 3. TSF 3 was established to accommodate a portion of the LoM tailings and reduce the overall rate of rise of tailings deposition at the TSF Complex. It is located adjacent to TSF 2 and shares a dividing wall.

TSF 3 Development Timeline

The development of TSF 3 occurred in multiple stages, as outlined below:

- **Starter Embankments (October 2011):** The initial phase involved constructing the starter embankments, which reached an elevation of 72.5 meters above the relative level (mRL). These embankments were constructed using compacted mine waste rock fill, a spent ore transition layer and a low permeability clay key seal. The Abrewanko stream was diverted behind the south-confining natural ridge as part of this stage.
- **First Upstream Wall Raise (June 2015):** The first upstream wall raise involved raising the existing waste rock, clay, and spent ore zones by 3.75 meters. This stage, known as Stage 1, raised the confining embankments to an elevation of 76.25 mRL.
- **Second and Final Upstream Raise (April 2017):** In April 2017, the second and final upstream raise took place, extending the embankments to an elevation of 80.0 mRL. The waste rock shell, internal clay, and transition zones were extended to reach the final elevation. Downstream slopes have been progressively rehabilitated, with topsoil and dense vegetation established.
- **Final Deposition and Closure (December 2018 - September 2019):** The final deposition along the confining embankments was completed in December 2018, followed by closure deposition to create the final beach surface until September 2019. However, it is important to note that TSF 3 is currently undergoing rehabilitation and is not yet in a safe state of closure.

Aerial Image and Cross-Section

Figure 7 shows a recent aerial image of TSF 3, visually representing its current state. Additionally, Figure 8 presents a cross-section through TSF 3, illustrating its different development raises and stages.



Figure 7: Aerial Image of TSF 3

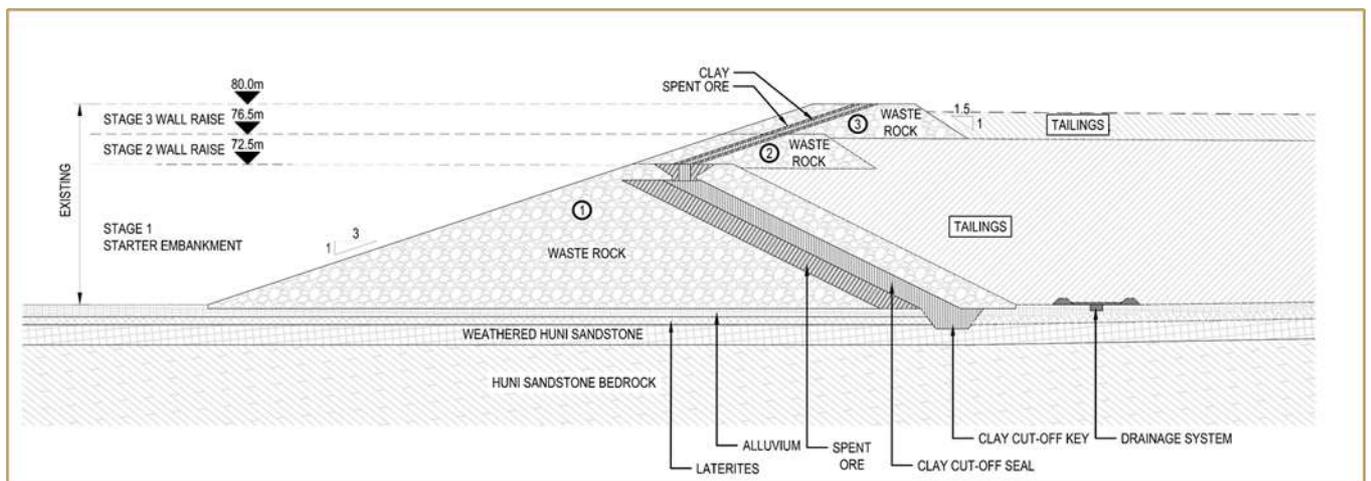


Figure 8: Cross-Section of TSF 3



2.7. SUMMARY OF ANNUAL PERFORMANCE REVIEW

Annual Performance Review (2022)

At Gold Fields, we prioritise the regular and thorough assessment of our TSFs to check their safety and integrity. The most recent annual performance review covers the period from January 2022 to December 2022. This review serves as a comprehensive evaluation of our tailings management practices during that time frame.

Next Annual Performance Review

The next annual performance review will cover the period from January 2023 to December 2023 and will be submitted in March 2024. We are dedicated to conducting regular assessments and providing updates to maintain the highest standards of tailings facility management.

Material Findings and Actions Taken

The annual performance review highlighted Urgent and High findings requiring immediate attention and remediation. These findings are summarised in Table 3. The Urgent findings indicate serious defects or dam safety issues that require immediate action within one month, while the High findings refer to defects or dam safety issues sufficiently serious to necessitate action or remediation within six months.

Table 3: Summary of Urgent and High Findings from the 2022 Annual Performance Review

Status as at	Finding	Action Taken/Planned
May 2023	Urgent	<ul style="list-style-type: none"> Deposition on the TSFs has been adjusted to align with the approved deposition plan. Dewatering bores are being installed on TSFs 1 and 2.
	High	<ul style="list-style-type: none"> Risk assessment related to water quality results is being updated. Measures are being taken to maintain the percent solids of tailings slurry within the design limits. Deposition on the TSFs is being adjusted to align with the approved freeboard requirements. The water balance for the TSF complex is being further refined. Efforts are underway to maintain the required water level in the seepage collection sumps. Additional instrumentation is being installed in critical locations. A geotechnical investigation is being conducted to explore ways of preloading soft tailings well in advance of construction work commencing.

We take these findings seriously and are committed to implementing necessary measures to mitigate risks and enhance the safety of our tailings facilities. Our dedicated team at Tarkwa is actively working on the remediation plans and continuous monitoring to check timely and effective actions.

Quarterly Performance Reviews

In addition to the annual review, we conduct quarterly performance reviews to proactively monitor and address any emerging issues or potential risks. These reviews allow us to stay vigilant and continuously improve our tailings management processes.



Dam Safety Review (DSR)

In Q4 2022, a comprehensive Dam Safety Review (DSR) was conducted by an independent engineer within the EoR firm. The DSR evaluated various aspects of our tailings facilities and identified areas for improvement. The findings of the DSR are integrated into our performance review process to check a holistic approach to safety and risk management.



2.8. SUMMARY OF DAM SAFETY REVIEW FINDINGS

DSR (Dam Safety Review) - 2022

The DSR is a crucial component of our commitment to ensuring the safety and integrity of our TSFs. In line with this commitment, a comprehensive DSR was conducted in the fourth quarter of 2022. The DSR comprised a detailed site visit, interviews with all stakeholders and a review of all design, operations and planning documentation.

Summary of Findings

The DSR identified two categories of findings: **Priority 1** (Serious defect or dam safety issue requiring immediate action/remediation) and **Priority 2** (Defect or dam safety issue sufficiently serious to require action/remediation within 12 months). The key findings are summarised in Table 4.

Table 4: Summary of DSR Findings (2022)

Status as at	Finding	Description	Status
February 2023	Priority 1	<ul style="list-style-type: none"> Provide a Dam Safety Management System for review. Appoint one Engineer of Record firm for the TSF complex. Update the dam breach assessment and establish the Potential Loss of Life (PLL). Undertake the recommendations included in the 2021 Annual Stability report. Update the Operation, Maintenance, and Surveillance (OMS) manual and have one OMS manual for the TSF complex. Check that the Trigger Action Response Plan (TARP) is a live document. Improve spillway maintenance. Review the Action Tracker regularly and promptly address urgent actions. Update the Emergency Response Plan. 	<ul style="list-style-type: none"> Closed out
	Priority 2	<ul style="list-style-type: none"> Reassess spillway designs for TSF2 and TSF3 with updated Probable Maximum Flood (PMF) depth and temporal pattern data. Develop a hydrogeological model to better understand seepage conditions. Update the water balance model with Integrated Tailings Review Board (ITRB) findings. Finalise the Failure Modes and Effects Analysis (FMEA) and conduct a Quantitative Risk Assessment (QRA). 	<ul style="list-style-type: none"> Closed out

The above table summarises the findings from the 2022 DSR, classified as Priority 1 and Priority 2. These findings represent areas of improvement and action required to check the safety and integrity of our TSFs.

Priority 1 findings have all been addressed and closed out, indicating that the necessary actions have been taken to mitigate any serious defects or dam safety issues. These actions include providing a Dam Safety Management



System for review, appointing an Engineer of Record firm for the TSF complex, updating the dam breach assessment and establishing the PLL, implementing recommendations from the 2021 Annual Stability report, updating the OMS manual, ensuring the Trigger Action Response Plan (TARP) remains up-to-date, improving spillway maintenance, reviewing the Action Register regularly, and updating the Emergency Response Plan.

Similarly, the Priority 2 findings have also been closed out, indicating the successful completion of the necessary actions. These actions involved reassessing spillway designs for TSF2 and TSF3 with updated Probable Maximum Flood (PMF) depth and temporal pattern data, developing a hydrogeological model to enhance understanding of seepage conditions, updating the water balance model with ITRB findings, and finalising the FMEA and conducting a QRA.

By promptly addressing these findings and closing them out, we check that our tailings management practices align with the highest safety and environmental stewardship standards.



2.9. SUMMARY OF MATERIAL FINDINGS FROM ESG MONITORING PROGRAMMES

Background

At Gold Fields, we prioritise the safety and well-being of our host communities and the environment. As part of our ongoing efforts, we conduct comprehensive environmental and social monitoring programs to check the sustainable management of our operations. In accordance with Requirement 15.B.7 of the GISTM, we present below the material findings from our ESG monitoring programme.

Mitigation Plans and Human Rights Due Diligence Assessments

In 2022, we diligently implemented mitigation plans to address the findings of our 2021 recent human rights due diligence assessments. These assessments have helped us identify areas where improvements are required to protect human rights across our operations. In 2023 we completed a Human Rights Impact Assessment (HRIA) specifically for Tailings, which also helped us identify areas where improvements are required.

Key Findings from Human Rights Due Diligence Assessments:

Probability of Adverse Human Rights Impact: In 2021, all our operations have been assessed to have a low probability of adverse human rights impact. No operation was identified as having a high probability of adverse human rights impact.

Medium Probability Areas: The assessments highlighted specific areas where we identified a medium probability for adverse impact on human rights. These areas primarily include physical and psychological safety, procurement practices, and gender-related issues. We are committed to addressing these areas and implementing measures to mitigate any potential risks.

Human Rights Training and Empowerment

To check a comprehensive understanding of human rights principles and their application within our company and stakeholder interactions, we launched an updated e-learning human rights training program in 2021. The training equips all our employees with the knowledge and awareness necessary to uphold human rights in their daily work. We proudly report that over 90% of the assigned employees completed the training, demonstrating our commitment to building a human rights-conscious culture within Gold Fields.

Legacy Programs for Host Communities

As part of our broader commitment to our host communities and environmental resilience, we have set a target to implement six legacy programs by 2030. These programs are designed to have a positive and lasting impact beyond the lives of our mines. We have developed a pipeline of projects, and the implementation of the first program is scheduled to commence in 2023. These initiatives exemplify our dedication to creating a sustainable future for our host communities long after our mining activities cease.

Further Information

For a more detailed overview of our environmental and social performance, including material findings and mitigation measures, we invite you to refer to our Integrated Annual Report (IAR) for 2022. The IAR provides comprehensive information on our sustainability efforts and can be accessed at the following link: [iar-2022-full.pdf \(goldfields.com\)](#) and [gold-fields-report-to-stakeholders-2022.pdf \(goldfields.com\)](#).



2.10. SUMMARY VERSION OF THE TAILINGS FACILITY EMERGENCY RESPONSE AND PREPAREDNESS PLAN

Background

At Gold Fields, we prioritise the safety and integrity of our TSFs. As part of our commitment to effective disaster management planning, we have established a Catastrophic Risk Management System (CMS) and Plan for the Tarkwa mine. This system is designed to respond to tailings emergencies and other catastrophic risks.

Engagement and Training

The Tarkwa Tailings Stewardship team actively engages with the host communities, agencies, and authorities on an annual basis. We provide training and conduct emergency response simulations to check effective collaboration and preparedness.

Emergency Preparedness and Response Plan (EPRP)

Our mine-wide Emergency Preparedness and Response Plan (EPRP) serves as the foundation of our CMS. Before introducing the GISTM, we already had a dedicated Tailings EPRP in place. In 2023, we digitised the CMS and updated the mine-wide EPRP to include the Tailings EPRP as a dedicated Annex.

Digitisation and Updates

The digitisation of the CMS allowed us to enhance its effectiveness and efficiency. Additionally, the Tailings EPRP was updated based on tailings facility breach analyses, which involved evaluating the credibility of potential failure modes. These updates check that our emergency response measures align with the latest insights and industry best practices.

Comprehensive Map

As part of the dedicated Tailings EPRP, we have developed a detailed map providing essential disaster management planning information. This map includes normal flood events, abnormal flood conditions, evacuation routes, and muster points. It serves as a vital resource for coordinating emergency responses and safeguarding the well-being of our stakeholders.

Access to the Summary EPRP

To facilitate transparency and public disclosure, a summary of the EPRP will be made available on our website. This summary provides an overview of our approach to tailings facility management and highlights the key aspects of our preparedness and response measures.

Adhering to Our Core Values

In developing and maintaining the Tailings EPRP, we remain steadfast in upholding our company's core values. These values guide our actions and decisions, ensuring we prioritise safety, act with integrity, respect all stakeholders, take responsibility for our actions, embrace innovation, and work collaboratively to deliver excellent results.



2.11. DATES OF THE MOST RECENT AND NEXT INDEPENDENT REVIEWS

Background

The safety and integrity of our TSFs are paramount to us at Gold Fields. As part of our commitment to transparency and continuous improvement, we undergo regular independent reviews of our TSFs.

Dates of the most recent Independent Reviews

The following is a summary of the most recent independent reviews conducted:

ITRB Review:

- The most recent ITRB meeting was held in June 2023.
- The ITRB report resulting from this meeting is scheduled for completion in September 2023.

Third-party Reviews:

- SLR Consulting conducted a DSR in Q4 2022.
- Stantec is currently reviewing the TSF 2 Stage 8 design and the TSF complex water balance.
- WSP Golder reviewed TSF 1 Stage 11B design (Stage 11B not yet constructed) in February 2023.
- Dr David Reid from UWA reviewed the advanced tailings testing campaign approach, scope of work and results in December 2022.
- WSP Golder completed a review of the TSF 1 Stage 11A design in July 2022.
- Golder reviewed TSF 2 Stage 7 design in February 2020.
- Dr David Reid from UWA reviewed TSF 1 Stage 11A CPTu interpretation in November 2021.

Operational Review:

- WSP/Golder reviewed Tarkwa Mine TSF operations in August 2020.
- The next operational review for Tarkwa Mine TSF is scheduled for the second half of 2023.

We value the insights and recommendations provided by these independent reviews, as they help us identify areas for improvement and check the ongoing safety and effectiveness of our TSFs. The next round of reviews will further contribute to our commitment to excellence in tailings management.



2.12. CONFIRMATION OF FINANCIAL CAPACITY FOR CLOSURE

Background

At Gold Fields, we recognise the importance of responsible mine closure in minimising our environmental and social impacts while optimising our liabilities. We understand that a mining company's ability to effectively close its operations is crucial for maintaining a social license to operate and close.

We have included integrating mine closure planning, portfolio management, and liability optimisation into our business activities. We have implemented the following measures to support our commitment:

- Regularly reviewing and updating closure plans for our operations.
- Developing rigorous closure cost estimates, which undergo internal and external annual reviews.
- Setting annual performance targets to check the progressive implementation of rehabilitation plans.

Taking a proactive approach, in 2022, Gold Fields initiated efforts to fund mine closure beyond regulatory requirements. We supplement the funding mandated by regulators to check that we are fully prepared for the inevitable closure of our mines. Additionally, our existing bank confirms, and security agreements remain in place to address potential unplanned closures and fulfil in-country regulatory obligations.

In Ghana, we make provisions for mine closure cost estimates through reclamation security agreements, bonds underwritten by banks, and ongoing funds reserved for this purpose. Similarly, our South African and Ghanaian operations contribute to dedicated environmental trust funds and a bank account to finance final closure and rehabilitation costs.

For more detailed information, please refer to our website section on Integrated Mine Closure under the Sustainability tab on Gold Fields' official website. You can find the link here: [[Integrated mine closure | SUSTAINABILITY | Gold Fields](#)]

Furthermore, you can also access the 2022 Annual Financial Report, including relevant details on mine closure, by downloading the document titled "annual-financial-report-2022.pdf" from our website at [[goldfields.com/pdf/investors/integrated-annual-reports/2022/iar-2022-full.pdf](#)].

In alignment with our core values, including Safety, Integrity, Respect, Responsibility, Innovation, and Collaborative Delivery, we remain committed to diligently planning for the closure of our mining operations, ensuring that we fulfil our environmental and social responsibilities while delivering excellent results as part of the Gold Fields family.

Additional information

For further information, please refer to the following public disclosures:

- [Gold Fields Website | Integrated mine closure | SUSTAINABILITY | Gold Fields](#)
- [2022 Gold Fields Annual Financial Report](#)



2.13. PROVISION OF BREACH ANALYSIS INFORMATION TO AUTHORITIES AND EMERGENCY SERVICES

In accordance with the GISTM, Gold Fields is committed to providing local authorities and emergency services with the necessary information derived from our breach analysis, such as evacuation routes and muster points. This information is essential for enabling effective disaster management planning.

As part of our tailings management practices, we conducted thorough breach analyses to evaluate potential failure modes and assess the risks associated with TSFs 1, 2 and 3. These analyses provide us with critical insights into the behaviour and potential consequences of our tailings facilities.

The information obtained from these breach analyses forms the basis for developing comprehensive disaster management plans. Sharing this information with local authorities and emergency services will allow them access to the necessary data to make informed decisions and take appropriate actions in the event of a tailings emergency.

Through our commitment to transparency and cooperation, we actively engage with local authorities and emergency services to facilitate the exchange of this vital information. By working together, we aim to enhance preparedness, response capabilities, and overall safety for our operations and surrounding communities.



PART 3: GOLD FIELDS SELF-ASSESSMENT REPORT

Part 3 of this Annual Tailings Disclosure Report has been prepared to justify our self-assessment results and conformance levels.

3.1. ABOUT THE GOLD FIELDS SELF ASSESSMENT

In line with our commitment to conforming to the GISTM, the Gold Fields Corporate Tailings Group has prepared this self-assessment report specifically for the Gold Fields Tarkwa mine. This report aims to demonstrate how our operations align with the principles and requirements outlined in the GISTM. Within this section of the report, you will find a detailed account of our documented self-assessment outcome, accompanied by a thorough discussion and justification explaining our assessment ratings.

The GISTM mandates its members to "demonstrate conformance...based on self-assessments at a minimum." Furthermore, it emphasises the importance of engaging third-party auditors to validate self-assessment assertions. Following these guidelines, Gold Fields has engaged a reputable third-party auditor to verify our assumptions and provide additional assurance independently.

At the time of this assessment, the third-party auditors attended the site and presented preliminary findings. The outcome of the audit will be disclosed post-5 August 2023.

To confirm clarity and consistency throughout this assessment, we have adopted specific definitions, providing a clear understanding of the terminology and criteria used in our evaluation process (Table 5).

Please note that we have not claimed conformance with specific requirements of the GISTM where the requirement has not yet been fully implemented, even though a plan is available to achieve full conformance – which is referred to in shorthand as ‘meets with a plan’.

We believe that transparency is crucial in fostering trust and accountability. This report aims to provide our stakeholders and the public with a comprehensive overview of our performance against the GISTM.

Table 5: Definition of Conformance taken from the ICMM April 2023 Clarification

Symbol	Conformance Level	Definition of outcome
	Meets*	Systems and/or practices related to the Requirement have been implemented , and sufficient evidence demonstrates that the Requirement is being met .
	Partially Meets - Some progress has been made on the 'Meets' criteria, but for at least one of them:	<ul style="list-style-type: none"> • Systems and/or practices related to meeting the criterion have been only partially implemented • Gaps or weaknesses persist that may contribute to an inability to meet the intended outcome of the criterion • Insufficient verifiable evidence has been provided to demonstrate that the criterion has been met • A plan is in place to address deficiencies in other criteria
	Does not Meet	Systems and/or practices required to support the requirement implementation are not in place, are not being implemented, or cannot be evidenced.
	Not Applicable	The specific Requirement does not apply to the context of the asset.



3.2. BACKGROUND

Implementation of the GISTM

The ICMM committed to achieving full conformance within three years for tailings facilities classified as "extreme" or "very high" consequences through the GISTM launched in August 2020. This ambitious commitment acted as a catalyst, spurring immediate and sustained action by companies to adhere to the Standard. Gold Fields, among others, has made significant progress towards this goal, referred to as "substantial conformance."

Implementing the GISTM within the given timeframe has presented considerable challenges due to site-specific factors. Progressing all 15 Principles and 77 requirements (or 219 requirement criteria) simultaneously is a significant challenge, as certain requirements depend on the completion of others. The GISTM requirements encompass 40% engineering, 40% governance and management, and 30% environmental and social elements. For example, developing breach analyses necessitates establishing credible failure modes to determine consequence classifications.

Attaining full conformance with the GISTM requires the completion of over 220 physical deliverables and documents, each constituting an independent project.

It is essential to recognize that all facilities classified as having "extreme" and "very high" consequences have the potential to impact over 1000 people living downstream, and the GISTM emphasises meaningful engagement with all project-affected individuals. Closing out all governance, engineering and technical studies and meaningfully engaging the community downstream is quite challenging, particularly in countries with limited access to technology, internet, education, water and sanitation.

Tarkwa's Tailings Storage Facilities

The Tarkwa mine has four TSFs per the plain language summary. In accordance with the GISTM, TSF 1, 2 and 3 have been given a 'Very High' consequence classification.

It is important to note that no new TSFs are being developed at the site.

The Tarkwa Tailings Stewardship Team

The Gold Fields Global Tailings has established the Tarkwa Tailings Stewardship team to enhance our tailings management practices. This team comprises key stakeholders from various departments, including sustainable development, community relations, mine management, engineer of record, and mine engineering teams.

The Tarkwa Tailings Stewardship team is headed by the RTFE at the site, who has a direct line of communication with the Accountable Executive.

Each member of this team contributes equally to the overall management of tailings. Throughout this document, one will notice references to the Tarkwa Tailings Stewardship team, highlighting their collaborative efforts and involvement in tailings management.

Scope of this Self-Assessment

In alignment with our commitment to provide disclosures for TSFs with Very High and Extreme Consequence Classifications, this self-assessment report specifically focuses on TSF 1, 2 and 3 at the Tarkwa mine.

GISTM Internal Self-Assessments

A self-assessment is a first-party confirmation of the existence and integrity of systems and/or practices relating to implementation, to the extent that they are applicable in a given context.



ICMM members are committed to implementing the Standard by 5 August 2023 for operated tailings facilities with 'Extreme' or 'Very High' potential consequences and by 2025 for all other tailings facilities.

The self-assessments have been carried out in accordance with the ICMM Conformance Protocols released in May 2021.

Approach to Implementation

Our approach to implementing the GISTM was focused on two primary objectives. Firstly, we aimed to establish robust governance and management systems and processes to check the effective oversight of our TSFs. Secondly, we sought to expand our knowledge base and gain a comprehensive understanding of the TSF, including its design, history, social and environmental context and associated risks.

Forming a clear picture of the TSF and its corresponding risk profile is a complex task that requires numerous technical studies. These studies have been continuously reviewed and updated as new information became available. This iterative process has allowed us to refine our understanding and improve our risk assessments.

While we have successfully addressed all elements related to material dam safety and the environment, we have also identified areas for further improvement or additional work. This ongoing commitment to improvement reflects our dedication to maintaining the highest standards of tailings management and confirming our facilities' long-term safety and integrity.

It should be noted that the time to complete a site investigation for a site with this complexity can be between 6 and 9 months. Additionally, shipping material samples to international laboratories and completing advanced geotechnical testing can take between 3 and 12 months. The analysis of this comprehensive dataset can take between 3 and 9 months. The reader should be cognisant of this timeline in the context of areas of partial conformance.

Description of our Conformance

Our assessment includes a summary description of our conformance and/or systems and/or practices that promote the implementation of the GISTM. Gold Fields developed a detailed self-assessment template and supporting database to complete the assessment and retain evidence for internal assessment, reporting, and independent validation purposes. In addition, our self-assessment template and database check consistency between regions and operations and allow for internal analysis and benchmarking.

Our disclosures are transparent to maintain our credibility, and we have resisted claiming conformance against uncertain terms or requirements as it will undermine credibility and trust. Implementing the GISTM is a journey, and it is an important step toward raising the bar with respect to tailings management.

Even if full conformance cannot be demonstrated by the established conformance deadlines by Gold Fields or its peers, we believe it is important to recognise the industry's journey to implement the GISTM and the enhancements being made - now and into the future.



3.3. SUMMARY OF THE GOLD FIELDS SELF-ASSESSMENT OUTCOME

Self-Assessment Outcome

It is essential to recognise that all facilities classified as having "extreme" and "very high" consequences have the potential to impact over 1,000 people living downstream, and the GISTM emphasises meaningful engagement with all project-affected individuals. Closing out all governance, engineering and technical studies and meaningfully engaging the community downstream is quite challenging. Particularly in countries with limited access to technology, internet, education, water and sanitation.

At Tarkwa, our focus was to initially mitigate dam safety and environmental risks, establish robust governance and management systems, and conduct comprehensive engineering, social, and environmental studies. The next phase of our GISTM journey involves continuing to engage with the community meaningfully.

Further to the social challenges, various practical and technical challenges exist, such as limited access to reliable testing facilities and long lead times for obtaining analytical results. Additionally, there is a scarcity of deep expertise in tailings management within the consulting community, which both members and other companies rely on for guidance.

It is crucial to consider the broader context and the journey towards conformance when evaluating performance in tailings management. Assigning a simplistic percentage score to multifaceted aspects, like human rights due diligence assessments, can oversimplify the evaluation process. Gold Fields acknowledges the limitations of a linear approach and emphasises demonstrating substantial conformance.

The diligent efforts of the Tarkwa Team have resulted in 79% conformance. Generally, there are 219 requirement criteria to satisfy, per TSF, to achieve full conformance to the GISTM. Some requirement criteria are required at a site level and others apply to each individual TSF.

Assuming the TSFs are treated individually, and as there are three TSFs at the Tarkwa mine with Very High Consequence Classifications, the team set out to satisfy a total of 301 applicable requirement criteria in a three-year period. This accomplishment entails completing 238 out of the 301 requirement parts, a monumental achievement. The assessment outcome is presented in the Figure below.

A summary of the self-assessment outcome is presented in Figure 9. Contextual information, a justification explaining the level of conformance and an overview of the self-assessment results for the Tarkwa TSFs are included in Appendix A.

While the TSFs are currently in partial conformance with the GISTM, all dam safety and environmental-related aspects have been addressed, and the risks associated with the facility are within acceptable limits.

Gold Fields recognises that the Standard sets high expectations and prefers a quality-driven approach rather than mere compliance. This marks a significant step forward in the industry.



Self-Assessment Summary

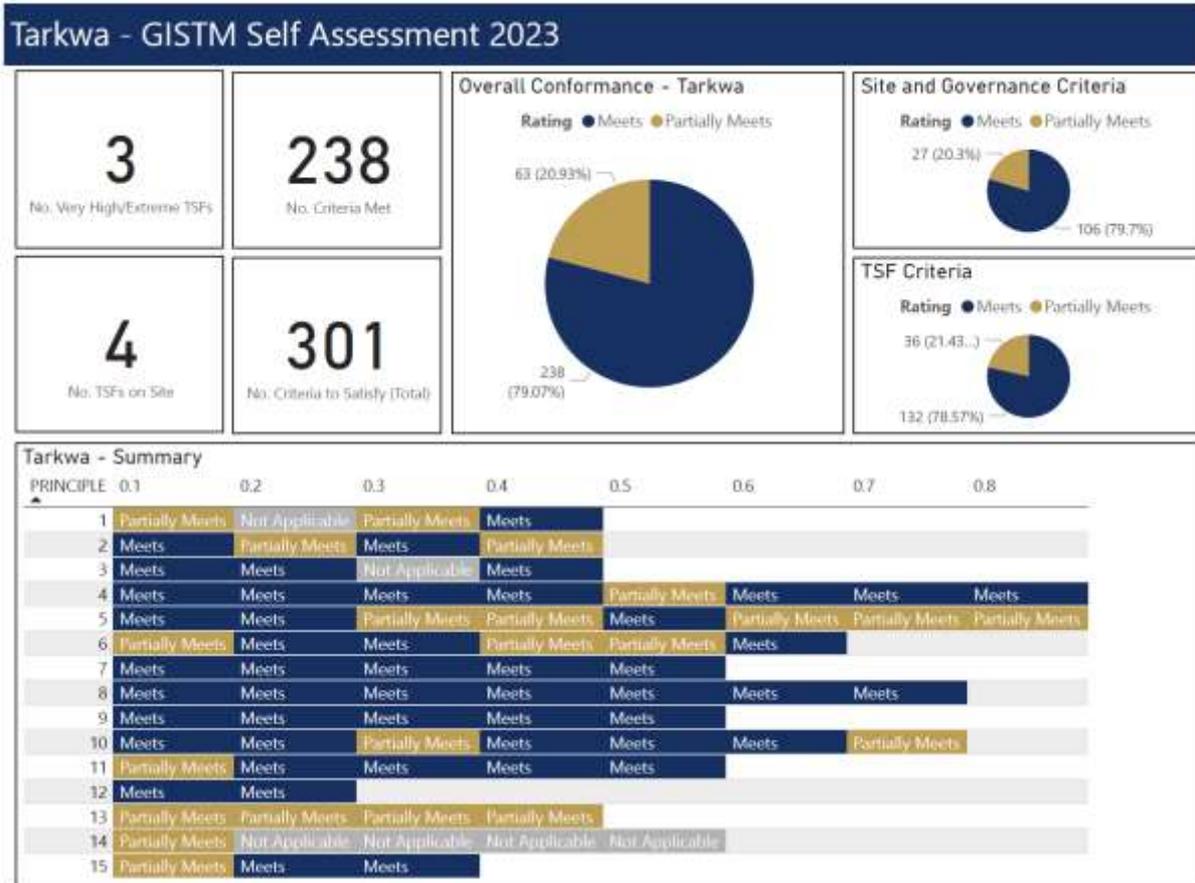


Figure 9: Self-Assessment Result



Appendix A: Self-assessment results and justification per requirement part level



GISTM Principle 01

Respect the Human Rights of Project-Affected People and meaningfully engage them at all phases of the Tailings Facility Lifecycle, including closure.

Principle 01 - Self-assessment Outcome

The Tarkwa mine has three TSFs with a Very High Consequence Classification. A summary of the self-assessment outcome for Principle 01 of the GISTM is presented in Table 6 below. Further information specific to each requirement part is provided in subsequent sections of this report.

Table 6: Principle 01 – Self-Assessment Outcome Summary

Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
1.1	A	The Operator has a policy commitment to respect human rights in accordance with the UNGPs.	✓	✓	✓
	B	The Operator has conducted a site-specific human rights due diligence process to inform management decisions throughout the tailings lifecycle.	⚠	⚠	⚠
	C	The Operator has addressed the human rights risks of tailings facility credible failure scenarios where such scenarios exist for a given facility.	⚠	⚠	⚠
1.2	A	For new facilities, the Operator has identified indigenous or tribal peoples that may be affected by a new tailings facility and understand how the rights of these groups may be impacted, including their land and resource rights and their right to self-determination.	–	–	–
	B	If indigenous or tribal peoples are identified in accordance with requirement 1.2.A, the Operator works to obtain and maintain FPIC from indigenous or tribal peoples in conformance with international guidance and recognised best practice frameworks.	–	–	–
1.3	A	The Operator has identified project-affected people.	✓	✓	✓
	B	The Operator has undertaken meaningful engagement with project-affected people throughout the tailings facility lifecycle to: <ul style="list-style-type: none"> • Share relevant and accessible information about the tailings facility; • Build the knowledge base for the tailings facility, including the social, environmental and local economic context; and, Seek feedback on decisions that may have a bearing on public safety and the integrity of the tailings facility.	⚠	⚠	⚠



1.4	A	An effective operational-level non-judicial grievance mechanism accessible to project-affected people has been developed and implemented.	✓	✓	✓
	B	The grievance mechanism addresses complaints and grievances of project-affected people relating to the tailings facility.	✓	✓	✓
	C	The grievance mechanism provides a remedy following UNGPs 29-31.	✓	✓	✓



Requirement 1.1 - Self-Assessment Rating Justification

Demonstrate respect for human rights in accordance with the United Nations Guiding Principles on Business and Human Rights (UNGP), conduct human rights due diligence to inform management decisions throughout the tailings facility lifecycle and address the human rights risks of tailings facility credible failure scenarios.

For existing facilities, the Operator can initially opt to prioritize salient human rights issues in accordance with the UNGP.

✔ Requirement 1.1.A

Criteria

The Operator has a policy commitment to respect human rights in accordance with the UNGPs.

Discussion

Gold Fields has implemented a comprehensive Human Rights policy that has received the endorsement of the Board at a Corporate level. Additionally, the policy has also been endorsed by the Regional Executive at a regional level.

A hard copy of this policy is prominently displayed at Gold Fields' premises, ensuring easy access for all staff members. Furthermore, a digital copy of the policy is readily available on SharePoint, a centralised platform utilised by the organisation.

Therefore, Gold Fields has ranked this Requirement as "Meets".

Assessment Outcome

- ✔ [Meets this Requirement](#)



🔍 Requirement 1.1.B

Criteria

The Operator has conducted a site-specific human rights due diligence process to inform management decisions throughout the tailings lifecycle.

Discussion

In 2022, the Tarkwa Tailings Stewardship team thoroughly examined existing information regarding human rights due diligence. Subsequently, in 2023, the team sought the expertise of an independent consultant to conduct a comprehensive Human Rights Impact Assessment (HRIA) study. This study involved an extensive field program, town hall meetings, and community gatherings with stakeholders near the mine. The purpose of the study was to re-evaluate the existing conditions in the surrounding communities, verify the validity of the available information and enhance our understanding of the community by updating our knowledge.

In March 2023, the independent consultant visited the site, collaborating with the site team and a representative from the Engineer of Record (EoR) team. The outcomes of this study were documented in a comprehensive report issued in July 2023.

In the third quarter of this year, the independent consultant will participate in a risk workshop alongside the EoR team. This workshop aims to incorporate the insights gained from the study into the Tarkwa TSF risk register. While Gold Fields acknowledges the importance of human rights in day-to-day operations, it is important to note that, at the time of this disclosure, the findings of the updated HRIA have not been fully integrated. Implementing the outcomes of the HRIA is a journey, and it is an important step toward raising the bar with respect to tailings management.

Therefore, Gold Fields has ranked this Requirement as "Partially meets".

Assessment Outcome

- 🔍 Partially Meets this Requirement



🟡 Requirement 1.1.C

Criteria

The Operator has addressed the human rights risks of tailings facility credible failure scenarios where such scenarios exist for a given facility.

Discussion

In the third quarter of this year, the independent consultant will participate in a risk workshop alongside the EoR team. This workshop aims to incorporate the insights gained from the study into the Tarkwa TSF risk register. While Gold Fields has a sound understanding of human rights impacts in the vicinity of the Tarkwa mine, it is important to note that, at the time of this disclosure, the findings of the recent Human Rights Impact Assessment (HRIA) have not been fully integrated. Implementing the outcomes of the HRIA is a journey, and it is an important step toward raising the bar with respect to tailings management.

Therefore, Gold Fields has ranked this Requirement as "Partially meets".

Assessment Outcome

- 🟡 Partially Meets this Requirement



Requirement 1.2 - Self-Assessment Rating Justification

Where a new tailings facility may impact the rights of indigenous or tribal peoples, including their land and resource rights and their right to self-determination, work to obtain and maintain Free, Prior and Informed Consent (FPIC) by demonstrating conformance to international guidance and recognised best practise frameworks.

Requirement 1.2.A

Criteria

For new facilities, the Operator has identified indigenous or tribal peoples that may be affected by a new TSF and understand how the rights of these groups may be impacted, including their land and resource rights and their right to self-determination.

Discussion

As this requirement applies to new facilities and there are no indigenous or tribal communities residing in the vicinity of the Tarkwa mine, **Gold Fields ranks this Requirement as not applicable.**

Assessment Outcome

- **Not Applicable**

Requirement 1.2.B

Criteria

If indigenous or tribal peoples are identified in accordance with (a), the following are demonstrated: The Operator works to obtain and maintain FPIC from identified indigenous or tribal peoples in conformance with international guidance and recognised best practice frameworks.

Discussion

As this requirement applies to new facilities and there are no indigenous or tribal communities residing in the vicinity of the Tarkwa mine, **Gold Fields ranks this Requirement as not applicable.**

Assessment Outcome

- **Not Applicable**



Requirement 1.3 - Self-Assessment Rating Justification

Demonstrate that project-affected people are meaningfully engaged throughout the tailings facility lifecycle in building the knowledge base and in decisions that have a bearing on public safety and the integrity of the tailings facility. The Operator shall share information to support the process.

✔ Requirement 1.3.A

Criteria

The Operator has identified project-affected people.

Discussion

Gold Fields has a well-established relationship with the local communities surrounding the Tarkwa mine, thanks to the dedicated Tarkwa Community Relations and Sustainable Development team. The team actively maintains a comprehensive stakeholder register encompassing various key individuals and groups. These include site personnel, project-affected people, emergency response contacts, and contacts from government and regulatory bodies, among others.

The stakeholder register undergoes regular updates, typically annually, to check accuracy and relevance. Recently, we have taken proactive measures to incorporate the valuable insights gained from studies conducted over the past year into the stakeholder register. By doing so, we strive to check that the register remains up-to-date and reflects the evolving dynamics within the communities.

In addition to the stakeholder register, we have developed a map to represent the stakeholders and their respective locations visually. The stakeholder map was comprehensively updated in April 2023 to incorporate revised muster points, accurately depict the extent of project-affected peoples, and highlight cultural or heritage significance areas.

These robust mechanisms, including the stakeholder register and map, enable us to communicate effectively, engage, and coordinate with the project-affected people and other relevant stakeholders. We remain committed to upholding strong relationships with all stakeholders as an integral part of our sustainable development approach.

Therefore, Gold Fields has ranked this Requirement as "Meets".

Assessment Outcome

- ✔ [Meets this Requirement](#)



🟡 Requirement 1.3.B

Criteria

The Operator has undertaken meaningful engagement with project-affected people throughout the tailings facility lifecycle to:

- Share relevant and accessible information about the tailings facility;
- Build the knowledge base for the tailings facility, including the social, environmental and local economic context; and,
- Seek feedback on decisions that may have a bearing on public safety and the integrity of the tailings facility.

Discussion

The Gold Fields Community Relations, Sustainable Development, and Technical teams are committed to maintaining open lines of communication with the local community members, fostering meaningful engagement, and sharing relevant information about the Tarkwa mine. Regular meetings address a wide range of topics and check effective dialogue.

Regular mine tours are organised to provide community members with firsthand knowledge of the operations, encompassing visits to the mine's TSFs. Furthermore, when modifications or changes are proposed, the team engages with the communities through town hall meetings, encouraging active participation and seeking valuable feedback.

Recognising the importance of community preparedness, the Emergency Response and Community Relations team conducts annual engagement sessions. These sessions provide risk and emergency training to local Emergency Response providers and community members. A variety of emergency scenarios, such as fire, cyanide incidents, explosions, severe weather, and tailings-related events, are explored during these sessions.

While sound community engagement practices are already in place, and the community has been briefed on general tailings-related risks through town hall meetings, Gold Fields acknowledges that there is still progress to be made in ensuring that the community is sufficiently equipped and prepared to respond in the event of a catastrophic tailings scenario.

Therefore, Fields rates this Requirement as "Partially Meets" and has developed a Stakeholder Engagement and Tailings Education Plan specifically tailored for the community.

Progress made against this plan will be reported annually, ensuring transparency and accountability in our commitment to community empowerment and safety.

Assessment Outcome

- 🟡 Partially Meets this Requirement



Requirement 1.4 - Self-Assessment Rating Justification

Establish an effective operational-level, non-judicial grievance mechanism that addresses complaints and grievances of project-affected people relating to the tailings facility and provides remedy in accordance with the UNGP.

✔ Requirement 1.4.A

Criteria

An effective operational-level non-judicial grievance mechanism accessible to project-affected people has been developed and implemented.

Discussion

Gold Fields diligently oversees non-judicial grievances, adhering to the Group Disciplinary and Grievance Policy and guidelines. At the Tarkwa mine, the Sustainable Development (SD) team assumes responsibility for managing an operational-level grievance register. This register serves as a centralised platform for recording and tracking all grievances in alignment with the aforementioned corporate policy.

The SD team is dedicated to ensuring that project-affected individuals have access to a transparent and effective grievance mechanism. By maintaining a comprehensive register, we can accurately document and monitor the progress of grievances, thereby facilitating their resolution promptly. This systematic approach underscores our commitment to addressing concerns and maintaining open communication channels with all stakeholders.

- Furthermore, the operational-level grievance mechanism is designed to uphold the principles of fairness, confidentiality, and accountability. It provides a structured framework for addressing grievances and striving for satisfactory outcomes that address the concerns and needs of project-affected individuals. We recognise the importance of an accessible and responsive mechanism to foster constructive dialogue and promote positive engagement within the community.

Therefore, Gold Fields has ranked this Requirement as "Meets".

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 1.4.B

Criteria

The grievance mechanism addresses complaints and grievances of project-affected people relating to the tailings facility.

Discussion

To effectively address complaints and grievances from project-affected individuals concerning the tailings facility, Gold Fields maintains a structured and comprehensive Grievance Register. This register is a central repository for systematically logging all grievances and complaints. Recent updates have enhanced functionality, allowing for specific categorisation and reporting of tailings-related grievances.

The custodianship of the Grievance Register rests with our dedicated Community Relations and Sustainable Development team. They are responsible for diligently managing and documenting any grievances or complaints related to tailings. In addition, in line with our commitment to transparency and accountability, the team promptly reports these tailings-related issues to the Responsible Tailings Facility Engineer (RTFE) for appropriate attention and action.

Furthermore, the Community Relations and Sustainable Development team annually reports a summary of grievances specific to tailings during the Tarkwa Tailings Stewardship team's Annual General Meeting (AGM). This reporting mechanism aims to foster continuous improvement by integrating the lessons learned from these grievances into plans and operations of the tailings facility.

By systematically recording and reporting tailings-related grievances, we check that concerns and feedback from project-affected individuals are effectively addressed, enhancing our tailings management practices and fostering meaningful engagement with the community.

Therefore, Gold Fields has ranked this Requirement as "Meets".

Assessment Outcome

- ✔ [Meets this Requirement](#)



✔ Requirement 1.4.C

Criteria

The grievance mechanism provides a remedy in accordance with UNGPs 29-31.

Discussion

The grievance mechanism Gold Fields has in place demonstrates a commitment to providing appropriate remedies in accordance with the principles outlined in the United Nations Guiding Principles on Business and Human Rights (UNGP) 29-31. We prioritise addressing grievances fairly and effectively, ensuring that individuals affected by our operations can access suitable remedies.

A significant step towards ensuring the effectiveness of our grievance mechanism was the independent review conducted by the Independent Technical Review Board (ITRB) in June 2023. This review encompassed a comprehensive assessment of the grievance register, evaluating the overall performance and responsiveness of the mechanism. The review findings will further enhance the grievance mechanism and its ability to deliver satisfactory outcomes.

We recognise that providing remedies is a crucial aspect of the grievance mechanism. Through continuous improvement and stakeholder engagement, we strive to provide appropriate remedies to address grievances raised. Our commitment to transparency and accountability is reinforced by the ongoing evaluation and refinement of our grievance mechanism, thereby supporting the well-being and rights of project-affected individuals.

Therefore, Gold Fields has ranked this Requirement as "Meets".

Assessment Outcome

- ✔ Meets this Requirement



GISTM Principle 02

Develop and Maintain an Interdisciplinary Knowledge Base to support Safe Tailings Management throughout the Tailings Facility Lifecycle, including closure.

Principle 02 – Self-Assessment Outcome

The Tarkwa mine has three TSFs with a Very High Consequence Classification. A summary of the self-assessment outcome for Principle 02 of the GISTM is presented in Table 7 below. Further information specific to each requirement part is provided in subsequent sections of this report.

Table 7: Principle 02 – Self-Assessment Outcome Summary

Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
2.1	A	The Operator has documented the site-specific social, environmental and economic context concerning its tailings facility.	✓	✓	✓
	B	The Operator has evaluated uncertainties with climate change that may impact the tailings facility's safety.	✓	✓	✓
	C	The Operator updates site-specific social, environmental and economic information at least five-year intervals and whenever there is a material change to the tailings facility or related environmental, social or economic context.	✓	✓	✓
2.2	A	Detailed site characterisation of the tailings facility site(s) exists and is updated as warranted throughout the lifecycle to reflect material changes in conditions and new knowledge.	✓	✓	✓
	B	Site characterisation is supported by site-specific climate, geomorphology, geology, geochemistry, hydrology, hydrogeology (surface and groundwater flow and quality), and geotechnical and seismicity data.	⚠	⚠	⚠
	C	Tailings characterisation exists, considering the physical and geochemical properties, and it is updated throughout the lifecycle to account for variability in ore properties, processing, and tailings deposition.	⚠	⚠	⚠
2.3	A	Where a tailings facility has a credible failure mode/scenario, there is a documented breach analysis for the tailings facility using a methodology that considers credible failure modes, site conditions and properties of the tailings.	✓	✓	✓
	B	The physical area potentially affected by a failure is estimated and defined.	✓	✓	✓



Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
	C	For facilities with credible failure scenarios involving flowable materials (water and liquefiable solids) and with consequence classification of 'High', 'Very High', or 'Extreme' or greater, the flow arrival times, flow depths, flow velocities, and depth of deposited material are estimated.	✓	✓	✓
	D	For facilities meeting all the conditions of a, b and c, a breach analysis is completed/updated if there is a material change to the tailings facility or to the knowledge base that results in a credible failure scenario that could lead to a flow failure.	✓	✓	✓
2.4	A	Groups most at risk are identified, with consideration of the breach analysis for those facilities with credible failure scenarios as per Requirement 2.3.	✓	✓	✓
	B	Potential human exposure and vulnerability to tailings facility credible failure scenarios are documented.	⊘	⊘	⊘
	C	The assessment of human exposure and vulnerability is updated if there is a material change to the credibility of flow failure potential and the corresponding breach analysis or the knowledge base.	⊘	⊘	⊘



Requirement 2.1 - Self-Assessment Rating Justification

Develop and document knowledge about the social, environmental and local economic context of the tailings facility, using approaches aligned with international best practices. Update this knowledge at least every five years and wherever there is a material change either to the tailings facility or to the social, environmental and local economic context. This knowledge should capture uncertainties due to climate change.

✔ Requirement 2.1.A

Criteria

The Operator has documented the site-specific social, environmental and economic context in relation to its tailings facility.

Discussion

Gold Fields acknowledges the significance of documenting site-specific social, environmental, and economic information in our operations. Our Tarkwa Sustainable Development (SD) and Community Relations team, a vital stakeholder in the Tarkwa Tailings Stewardship team, diligently collects and monitors environmental data routinely, ensuring its accuracy for reporting purposes.

Our dedicated Tarkwa Tailings Stewardship team recently conducted a thorough human rights impact assessment (HRIA) to gather essential social data directly relevant to the site's TSFs. In conjunction with the annual report prepared by our engineer of record (EOR), this assessment provides comprehensive insights into the social, environmental, and economic aspects of the Tarkwa TSFs, fostering a holistic understanding.

Collaboratively, the EOR and Tarkwa Tailings Stewardship team scrutinise and analyse the data, checking the integrity and reliability of the reported information. This information is summarised in our Gold Fields Integrated Annual Report (IAR), a comprehensive overview that checks that stakeholders receive accurate and timely information.

By committing to these practices, Gold Fields demonstrates a strong commitment to documenting the site-specific social, environmental, and economic context tied to the Tarkwa mine's tailings facilities. In addition, these efforts foster transparency, accountability, and responsible practices throughout our organisation.

Therefore, Gold Fields has ranked this Requirement as "Meets".

Assessment Outcome

- ✔ **Meets this Requirement**



✔ Requirement 2.1.B

Criteria

The Operator has evaluated uncertainties with climate change that may impact the tailings facility's safety.

Discussion

In 2022, Gold Fields conducted a comprehensive study to assess climate change's potential implications and physical impacts on the TSFs at the Tarkwa mine. This study involved a detailed analysis of site-specific, regional, national, and international climate data and utilised various statistical methods to estimate projected climate variations until 2080. The study outcomes were documented in a climate baseline and climate change prediction reports.

To check the accuracy and validity of the findings, both reports were reviewed by our Engineer of Record (EoR) partner. These reports served as essential references during the subsequent integration of the findings into our design process and the overall management of the mine-wide water balance.

Gold Fields' commitment to proactively evaluate uncertainties associated with climate change, particularly their potential risks to the Tarkwa mine's TSFs' safety, is demonstrated through this thorough assessment and collaborative approach. By incorporating these climate findings into our design and operational processes, we remain dedicated to mitigating potential challenges stemming from climate change and ensuring the ongoing safety and integrity of the Tarkwa mine's TSFs.

Therefore, Gold Fields has ranked this Requirement as "Meets".

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 2.1.C

Criteria

The Operator updates site-specific social, environmental and economic information at least five-year intervals and whenever there is a material change to the tailings facility or related environmental, social or economic context.

Discussion

Gold Fields takes a comprehensive approach to environmental management when initiating any TSF project at the Tarkwa mine. This involves conducting a thorough Environmental Impact Assessment (EIA) in accordance with the regulatory framework established by the Ghanaian Minerals Commission (MinCom) and Environmental Protection Agency (EPA). The most recent baseline EIA, approved in 2015 for the construction of TSF 5, is a fundamental component of our ongoing environmental management efforts. It is important to note that all TSFs at the Tarkwa mine have received approvals from MinCom and the EPA.

Gold Fields' Sustainable Development (SD) and Community Relations team diligently oversee and report on the baseline EIA annually to check ongoing compliance and monitoring. In addition, the engineer of record prepares an annual report that provides a comprehensive overview of site-specific social, environmental, and economic information related to the TSFs.

We prioritise proactive engagement and transparent communication, exemplified through the Annual General Meeting (AGM) hosted by the Tarkwa Tailings Stewardship team. This forum serves as a platform for interdisciplinary stakeholders to gather and discuss any significant changes or deviations observed in the previous year. This collaborative approach allows us to address variances promptly and effectively.

The Tarkwa Tailings Stewardship team employs the Tarkwa Mine Change Management Procedure to handle any significant changes in the tailings facility or its associated environmental, social, or economic context. This well-defined procedure ensures that the team can proactively address and manage such material changes systematically and efficiently.

By adhering to these rigorous processes, we demonstrate our commitment to meeting the criteria for updating site-specific social, environmental, and economic information. Gold Fields remains dedicated to upholding the highest standards of responsible tailings management and fostering sustainable practices across all our operations.

Therefore, Gold Fields has ranked this Requirement as "Meets".

Assessment Outcome

- ✔ Meets this Requirement



Requirement 2.2 - Self-Assessment Rating Justification

Prepare, document and update a detailed site characterisation of the tailings facility site(s) that includes data on climate, geomorphology, geology, geochemistry, hydrology and hydrogeology (surface and groundwater flow and quality), geotechnical and seismicity. The physical and chemical properties of the tailings shall be characterised and updated regularly to account for variability in ore properties and processing.

✔ Requirement 2.2.A

Criteria

Detailed site characterisation of the tailings facility site(s) exists and is updated as warranted throughout the lifecycle to reflect material changes in conditions and new knowledge.

Discussion

The GISTM (Global Industry Standard on Tailings Management) acknowledges the significance of presenting tailings information in a structured and comprehensive manner. To check the effective management of TSFs, the GISTM has introduced new reporting standards, including the Requirement for a site characterisation report.

The available site information, crucial for developing the site characterisation report, underwent a thorough review by the Independent Technical Review Board (ITRB) in June 2022. During this review, certain gaps were identified. As a result, our team initiated a series of technical studies, geotechnical investigations, and geochemical field campaigns to address these gaps and further enhance our understanding of the site.

Following this Requirement, the Engineer of Record prepared a comprehensive Site Characterisation report. This report encompassed key data related to the site-specific climate, geomorphology, geology, geochemistry, hydrology, hydrogeology (including surface and groundwater flow and quality), geotechnical aspects, and seismicity and was reviewed by the ITRB in June 2023.

To check that the report remains accurate and relevant, it is subject to regular annual updates that capture any material changes in conditions and incorporate new knowledge. By adhering to these reporting standards, we demonstrate our commitment to aligning our tailings management practices with industry best practices, fulfilling the information needs outlined by the GISTM. We aim to provide a comprehensive and up-to-date site characterisation report, enhancing transparency and facilitating effective decision-making in tailings management.

Therefore, Gold Fields has ranked this Requirement as "Meets".

Assessment Outcome

- ✔ Meets this Requirement



🟡 Requirement 2.2.B

Criteria

Site characterisation is supported by site-specific climate, geomorphology, geology, geochemistry, hydrology, hydrogeology (surface and groundwater flow and quality), and geotechnical and seismicity data.

Discussion

The site information available to support the development of a site characterisation report was reviewed by the Independent Technical Review Board (ITRB) in June 2022. As part of this review process, the ITRB identified certain gaps. Consequently, the team initiated a series of technical studies and geotechnical and geochemical field campaigns to address gaps and further enhance our understanding of the site.

On completion of the studies, the Engineer of Record prepared a comprehensive Site Characterisation report, encompassing key data related to the site-specific climate, geomorphology, geology, geochemistry, hydrology, hydrogeology (including surface and groundwater flow and quality), geotechnical aspects, and seismicity. The ITRB reviewed the Site Characterisation report in June 2023. In addition, the following technical reports support the site characterisation report:

- Tarkwa Mine Climate Baseline Report
- Tarkwa Mine Climate Impact Study Report
- Tarkwa Mine Hydrogeological Study Report
- Tarkwa Water Balance
- Tarkwa Site-Specific Seismic Hazard Assessment (SHA) and
- Tarkwa Detailed Design reports for all Tailings Storage Facilities (TSFs).

While significant progress has been made in understanding the Tarkwa Mine, it is important to acknowledge that ongoing studies are underway to complete the characterisation of the site. At the time of this disclosure, field campaigns have been completed, and the engineering design team are awaiting the completion of advanced geotechnical laboratory testing. Shipping and importing the samples to Australia is required as in-country laboratories do not have the accreditation and capability to complete the required test work. Additionally, further work is needed to understand the geomorphological characterisation of the site comprehensively.

Gold Fields maintains a commitment to high conformance standards and transparency. To this end, the team is actively working towards the completion of the following reports:

- Site Investigation and Geotechnical Report: Summarising the geotechnical field campaign conducted in March 2023.
- Geochemical characterisation report: Summarising the geotechnical field campaign conducted in March 2023.
- 3D Hydrogeological model and report

As the studies are progressing, Gold Fields has ranked this Requirement as "Partially Meets".

Assessment Outcome

- 🟡 **Partially Meets this Requirement**



🟡 Requirement 2.2.C

Criteria

Tailings characterisation exists, considering the physical and geochemical properties, and it is updated throughout the lifecycle to account for variability in ore properties, processing, and tailings deposition.

Discussion

As part of our commitment to responsible tailings management, we recognise the importance of tailings characterisation, which includes considering the physical and geochemical properties of the tailings. Therefore, the Tarkwa Tailings Stewardship team provided copies of the existing physical and geochemical data to the Independent Technical Review Board (ITRB) in June 2022. In line with the ITRB's review feedback, the team embarked on a comprehensive site investigation campaign to update the information and address any recommendations made by the ITRB.

Gold Fields require TSFs to be tested via Cone Penetrometer testing on an annual basis.

We remain dedicated to completing the tailings characterisation, incorporating the variability factors and ensuring a robust understanding of the physical and geochemical properties.

It should be noted that the Tarkwa TSFs have been designed with conservative material properties, which have undergone review by an Independent Reviewer from the University of Western Australia and the appointed Independent Technical Review Board. This diligent evaluation checks that our TSFs meet the highest standards of safety and stability, prioritising their long-term integrity.

The site investigation campaign commenced in March 2023, aiming to capture the tailings' physical and geochemical properties. At the time of this disclosure, we are pleased to report that the campaign is progressing well, and laboratory testing is underway to analyse the collected samples.

Gold Fields acknowledges that this Requirement is currently rated as 'Partially meets' since the study is still in progress.

Gold Fields has ranked this Requirement as "Partially Meets".

Assessment Outcome

- 🟡 [Partially Meets this Requirement](#)



Requirement 2.3 - Self-Assessment Rating Justification

Develop and document breach analysis for the tailings facility using a methodology that considers credible failure modes, site conditions, and the properties of the slurry. The results of the analysis shall estimate the physical area impacted by a potential failure. When flowable materials (water and liquefiable solids) are present at a tailings facility with Consequence Classification of 'High', 'Very High' or 'Extreme', the results should include estimates of the physical area impacted by a potential failure, flow arrival times, depth and velocities, and depth of material deposition. Update whenever there is a material change either to the tailings facility or the physical area impacted.

✔ Requirement 2.3.A

Criteria

Where a tailings facility has a credible failure mode/scenario, there is a documented breach analysis for the tailings facility using a methodology that considers credible failure modes, site conditions and properties of the tailings.

Discussion

The Tailings Stewardship team proactively engaged an independent consultant in 2020 to conduct a preliminary breach analysis, utilising available site and tailings characterisation information and coarse survey data. In 2021, the team initiated a series of technical studies and investigations to enhance the knowledge base and improve the accuracy of geotechnical and rheological data used in the dam breach analysis. Additionally, a vendor was engaged in Q4 2021 to provide high-resolution LiDAR data.

In 2022, the team conducted a Failure Mode Evaluation workshop (FMEA) with an interdisciplinary team of subject matter experts, including the Engineer of Record (EOR) partner. The workshop aimed to identify credible failure modes and eliminate the credibility of potential failure modes that could result in the identified inundation extent from the breach analysis. The preliminary dam breach assessment and FMEA outcomes were utilised to define the preliminary Consequence Classification of the TSFs. Subsequently, the dam breach analysis was repeated using high-resolution LiDAR data for three hypothetical failure mode scenarios.

The Independent Technical Review Board (ITRB) reviewed the preliminary dam breach analysis in June 2022 and June 2023 and endorsed the approach taken by the team. Through diligent management and design improvements, the credibility of most failure modes has been effectively mitigated. At the time of this disclosure, there is a documented breach analysis for the Tarkwa TSFs, which uses a methodology that considers credible failure modes, site conditions and properties of the tailings. In addition, a Quantitative Risk Analysis (QRA) is currently underway to assess the likelihood of the hypothetical failure modes occurring.

Our commitment to rigorous analysis and continuous improvement drives our efforts to check the safety and stability of the TSFs. We remain dedicated to enhancing our understanding of potential failure modes and implementing robust risk mitigation measures in line with industry best practices.

Gold Fields has ranked this Requirement as "Meets".

Assessment Outcome

- ✔ **Meets this Requirement**



✔ Requirement 2.3.B

Criteria

The physical area potentially affected by a dam breach is estimated and defined.

Discussion

The Engineer of Record (EoR) has conducted an extensive breach analysis study to assess the potential physical area that could be affected in the event of a dam breach. The findings of this study have been documented in the June 2023 Dam Breach Analysis report. Additionally, we are evaluating the probability of hypothetical failure modes through a Quantitative Risk Analysis (QRA). Despite ongoing evaluations, we actively engage in emergency response planning and stakeholder engagement processes using the available information.

The Independent Technical Review Board (ITRB) has played a pivotal role in ensuring the robustness of our analyses. They independently reviewed the preliminary breach analysis in June 2022 and the final version in June 2023. This independent review process adds credibility and helps validate the accuracy of our estimations.

The inundation maps resulting from the breach analysis have been incorporated into developing the Mine Tailings Emergency Management and Response Plan. Additionally, they have formed the basis of the Tarkwa Stakeholder and Community Relations Engagement plan. We are committed to keeping these maps current by incorporating any new or updated information.

By conducting thorough analyses, engaging independent reviews, and incorporating the results into our emergency management and stakeholder engagement plans, we strive to uphold the highest standards of transparency, safety, and community involvement in our tailings management practices.

Gold Fields has ranked this Requirement as "Meets".

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 2.3.C

Criteria

For facilities with credible failure scenarios involving flowable materials (water and liquefiable solids) and with consequence classification of 'High', 'Very High', or 'Extreme' or greater, the flow arrival times, flow depths, flow velocities, and depth of deposited material are estimated.

Discussion

The Dam Breach Analysis report, conducted by the Engineer of Record (EOR), provides valuable insights into the potential consequences of credible failure scenarios involving flowable materials. The report includes estimations of flow arrival times, flow depths, flow velocities, and the depth of deposited material for the three remaining credible failure modes at our facility. We aim to understand the potential impacts better and enhance our emergency response planning by assessing these parameters. The Dam Breach Analysis report contributes to our commitment to transparency and responsible tailings management.

Gold Fields has ranked this Requirement as "Meets".

Assessment Outcome

- ✔ [Meets this Requirement](#)



✔ Requirement 2.3.D

Criteria

For facilities meeting all the conditions of a, b and c, a breach analysis is completed/updated if there is a material change to the tailings facility or to the knowledge base that results in a credible failure scenario that could lead to a flow failure.

Discussion

The dam breach analysis for our TSFs at the mine has undergone a comprehensive review and update process since 2019, demonstrating our commitment to continuous improvement.

The initial analysis was subject to independent review and subsequent updates. Subsequently, with higher resolution LiDAR data and tailings classification information, the Independent Technical Review Board (ITRB) further refined and reviewed the breach analysis. In addition, a piping analysis was conducted to enhance the accuracy of the analysis and eliminate piping as a credible failure mode.

Our Tarkwa Tailings Stewardship team has embraced the final version of the breach analysis to inform Emergency Management and Response planning and community engagement efforts. We have integrated tailings into the Tarkwa mine change management procedure to check that if there are any material changes to the condition or knowledge base of the TSFs, the inundation study will be promptly updated, reinforcing our commitment to proactive risk management and continuous improvement.

Gold Fields has ranked this Requirement as "Meets".

Assessment Outcome

- ✔ Meets this Requirement



Requirement 2.4 - Self-Assessment Rating Justification

In order to identify the groups most at risk, refer to the updated tailings facility breach analysis to assess and document potential human exposure and vulnerability to tailings facility credible failure scenarios. Update the assessment whenever there is a material change either to the tailings facility or to the knowledge base.

✔ Requirement 2.4.A

Criteria

Groups most at risk are identified, with consideration of the breach analysis for those facilities with credible failure scenarios as per Requirement 2.3.

Discussion

At Tarkwa, we are committed to identifying and prioritizing the safety of groups that may be most at risk, particularly in relation to tailings facility management. Our approach involves a comprehensive analysis that considers credible failure scenarios and evaluates potential human exposure and vulnerability.

To confirm a thorough assessment, our dedicated Tarkwa Tailings Stewardship team has recently completed a series of technical studies and detailed analyses of the TSFs with consideration of hypothetical breach studies. These analyses examined the performance of our TSFs against various factors, such as site conditions and potential risks associated with extreme weather events. The findings from this analysis were then reviewed during the 2023 Annual General Meeting (AGM) focused on tailings.

Our team maintains good relationships with community members living near the mine and annually updates the site stakeholder register. Doing so demonstrates our dedication to prioritizing the safety, well-being, and interests of internal and external stakeholders.

Our efforts in identifying and addressing the needs of local community groups align with industry-leading practices and reflect our commitment to transparent and responsible tailings management. By considering these groups' specific vulnerabilities and concerns, we are better equipped to implement appropriate risk mitigation measures and check the ongoing safety of our operations.

Gold Fields has ranked this Requirement as "Meets".

Assessment Outcome

- ✔ [Meets this Requirement](#)



🔍 Requirement 2.4.B

Criteria

Potential human exposure and vulnerability to tailings facility credible failure scenarios are documented.

Discussion

The completion of the dam breach analysis, led by the Engineer of Record (EoR), has facilitated the documentation of potential human exposure and vulnerability in the event of a credible failure scenario at the tailings facility. The insights gained from this analysis have been integrated into our comprehensive Tailings Annex of the Tarkwa Mine Emergency Preparedness and Response Plan, ensuring that we are well-prepared to safeguard our personnel's and neighbouring communities welfare. The findings have also been instrumental in updating our stakeholder register, allowing us to effectively communicate and engage with the individuals and groups most at risk.

In our commitment to enhancing safety, we have conducted a thorough assessment of the inundation maps to evaluate the vulnerability of the potentially affected population in the event of a failure. This evaluation has informed our emergency muster and evacuation procedures, enabling us to establish designated safe areas and evacuation points.

It is important to note that Ghana's most recent census data dates back to 2011. Considering this, the team has decided to remain partially conformance until updated census data becomes available. This approach aims to ensure we have the most accurate and up-to-date information to provide further assurance regarding the communities downstream of the tailings facility. We are committed to regularly reviewing and updating our data sources to maintain the highest level of accountability and protection for our communities.

We acknowledge the importance of these studies and have, thus, rated this Requirement as "Partially meets", reflecting our dedication to continually improving our understanding and mitigating potential risks. Furthermore, our transparent approach checks that we prioritise the well-being of our employees, neighbouring communities, and stakeholders, aligning with best practices in the industry.

Gold Fields has ranked this Requirement as "Partially Meets".

Assessment Outcome

- 🔍 Partially Meets this Requirement



🟡 Requirement 2.4.C

Criteria

The assessment of human exposure and vulnerability is updated if there is a material change to the credibility of flow failure potential and the corresponding breach analysis or the knowledge base.

Discussion

The initial estimation of the potential population at risk and the extent of inundation was conducted as part of the dam breach analysis study. Since 2019, these assessments have been regularly revised and refined as our knowledge base has evolved and expanded.

In line with our commitment to proactive management, our Tailings Facility Change Management procedure addresses any material changes related to tailings. This procedure checks that any significant changes related to tailings trigger consultation with relevant key stakeholders. We prioritise transparency and collaboration by integrating tailings management within our broader Mine Wide Change Management process.

It is important to note that Ghana's most recent census data dates back to 2011. Considering this, the team has decided to remain partially conformance until updated census data becomes available. This approach aims to ensure we have the most accurate and up-to-date information to provide further assurance regarding the communities downstream of the tailings facility. We are committed to regularly reviewing and updating our data sources to maintain the highest level of accountability and protection for our communities.

We remain dedicated to continuously improving our understanding of potential risks and ensuring our employees, and neighbouring communities' well-being and safety. Through regular updates and ongoing engagement with experts and stakeholders, we strive to uphold the highest standards of responsible tailings management and comprehensively assess human exposure and vulnerability.

Gold Fields has ranked this Requirement as "Partially Meets".

Assessment Outcome

- 🟡 Partially Meets this Requirement



GISTM Principle 03

Use All Elements of the Knowledge Base – Social, Environmental, Local Economic and Technical – to Inform Decisions Throughout the Tailings Facility Lifecycle, Including Closure.

Principle 03 – Self-Assessment Outcome

The Tarkwa mine has three TSFs with a Very High Consequence Classification. A summary of the self-assessment outcome for Principle 03 of the GISTM is presented in Table 8 below. Further information specific to each requirement part is provided in subsequent sections of this report.

Table 8: Principle 03 – Self-Assessment Outcome Summary

Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
3.1	A	To enhance resilience, climate change knowledge is regularly updated and used to evaluate risks and opportunities to the tailings facility lifecycle, per adaptive management principles, aiming to enhance resiliency to climate change.	✓	✓	✓
3.2	A	For new tailings facilities, a multi-criteria Alternatives Analysis is conducted that examines feasible sites, technologies, and strategies for tailings management through the lifecycle, which aims to minimise: Risks to people and the environment. Volumes of tailings and water stored in surface facilities.	–	–	–
	B	For existing facilities that are not in a state of safe closure, there are periodic reviews of the tailings technologies, design and management strategies, and assessments of the potential to implement improvements arising from the reviews.	✓	✓	✓
	C	The ITRB, or senior independent technical reviewer, reviews the analysis for new facilities.	–	–	–
3.3	A	The following are demonstrated for new tailings Facilities: Environmental, social and local economic impact assessments are conducted and inform the existing knowledge base.	–	–	–
	B	The following are demonstrated for new tailings Facilities: Environmental, social and local economic assessments demonstrate that climate change uncertainties are considered in assessing the life of tailings facility impacts and whether there is any potential for a credible failure throughout the tailings facility lifecycle.	–	–	–



Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
	C	The following are demonstrated for new tailings Facilities: Mitigation measures and management plans are developed, documented and implemented to address material chronic and acute impacts.	–	–	–
	D	The following are demonstrated for new tailings Facilities: Management plans are based on the principles and practice of a mitigation hierarchy and management plans for the tailings facility and are updated throughout the tailings facility lifecycle.	–	–	–
3.4	A	As defined by the Operator, material change is consistently applied to trigger updates to the tailings facility's environmental, social and economic assessment.	✓	✓	✓
	B	Tailings facility management is updated in accordance with adaptive management best practices if new data (including climate change knowledge) indicates that the impacts from the tailings facility have changed materially.	✓	✓	✓



Requirement 3.1 - Self-Assessment Rating Justification

To enhance resilience to climate change, evaluate, regularly update and use climate change knowledge throughout the tailings facility lifecycle in accordance with the principles of Adaptive Management.

✔ Requirement 3.1.A

Criteria

To enhance resilience, climate change knowledge is regularly updated and used to evaluate risks and opportunities to the tailings facility lifecycle, per adaptive management principles, aiming to enhance resiliency to climate change.

Discussion

As part of our commitment to adhering to the GISTM, Gold Fields recognizes the importance of enhancing resilience to climate change in our operations. In line with adaptive management principles, we have undertaken several initiatives to update our climate change knowledge and evaluate risks and opportunities to the tailings facility lifecycle.

In 2022, we commissioned a comprehensive Climate Change risk and vulnerability study. This study encompassed the development of a robust climate change risk framework, extensive analysis of available climate data, and the development of a climate change model. Statistical methods were applied to the data, producing a baseline report that provided valuable insights into the current climate conditions.

Furthermore, the study extended its analysis to project climate trends up to 2080, considering various potential scenarios. This forward-looking approach allows us to anticipate and plan for the potential impacts of climate change on our tailings facility.

The assessment was successfully concluded in Q4 2022 and was shared with the Engineer of Record (EOR) for thorough review and comment. We took the EOR's feedback seriously and checked that all their comments were resolved. The study findings were then seamlessly integrated into our mine-wide water balance and TSF design, ensuring that our operational strategies fully incorporate climate change considerations.

We have implemented a rigorous monitoring system to check ongoing awareness and responsiveness to climate change. Climate data is monitored daily, enabling us to track changes and deviations from the projected trends. This climate change review process is conducted on a 3 to 5-year basis, allowing us to identify any potential shifts in climate patterns and update our risk assessments accordingly.

By continuously updating our climate change knowledge and employing adaptive management principles, Gold Fields is committed to enhancing resiliency to climate change and ensuring the long-term sustainability of our tailings facility. In addition, we remain dedicated to operating in a manner that aligns with global industry standards and prioritizes our stakeholders' safety and environmental protection.

Gold Fields has ranked this Requirement as "Meets".

Assessment Outcome

- ✔ **Meets this Requirement**



Requirement 3.2 - Self-Assessment Rating Justification

For new tailings facilities, the Operator shall use the knowledge base and undertake a multi-criteria alternatives analysis of all feasible sites, technologies and strategies for tailings management. The goal of this analysis shall be to: (i) select an alternative that minimises risks to people and the environment throughout the tailings facility lifecycle; and (ii) minimises the volume of tailings and water placed in external tailings facilities.

This analysis shall be an objective constraint analysis reviewed by the Independent Tailings Review Board (ITRB) or a senior independent technical reviewer. The Operator shall periodically review and refine the tailings technologies, design, and management strategies for existing tailings facilities to minimise risk and improve environmental outcomes. An exception applies to facilities demonstrated to be in a state of safe closure.

— Requirement 3.2.A

Criteria

For new tailings facilities, a multi-criteria Alternatives Analysis is conducted that examines feasible sites, technologies, and strategies for tailings management through the lifecycle, which aims to minimise:

- Risks to people and the environment.
- Volumes of tailings and water stored in surface facilities.

Discussion

At the Tarkwa mine, we do not have any new tailings storage facilities currently under development. Therefore, we consider this specific requirement not applicable to our current operations.

However, it is important to highlight that our team is committed to conducting thorough multi-criteria analyses during the planning and early stages of all tailings storage facilities. This commitment is exemplified by the ongoing Multi-Criteria Analysis (MCA) undertaken in the Tarkwa Transformation Pre-Feasibility Study.

By conducting a comprehensive MCA, we aim to evaluate various feasible sites, technologies, and strategies for tailings management. This analysis checks that we make informed decisions to minimize risks to people and the environment throughout the entire lifecycle of our tailings facilities. Furthermore, it allows us to optimize the utilization of resources by minimizing the volumes of tailings and water stored in surface facilities.

Although we do not have new tailings facilities in progress, our dedication to conducting robust analyses and considering alternatives aligns with our commitment to responsible and sustainable tailings management practices.

Gold Fields has ranked this Requirement as "Not Applicable".

Assessment Outcome

- — Not Applicable



✓ Requirement 3.2.B

Criteria

For existing facilities that are not in a state of safe closure, there are periodic reviews of the tailings technologies, design and management strategies, and assessments of the potential to implement improvements arising from the reviews.

Discussion

At Gold Fields, we place great importance on regularly reviewing and refining our tailings technologies, design, and management strategies to check our facilities' ongoing safety and environmental performance. This commitment extends to both new and existing tailings facilities.

We have established a robust review and refinement process for our existing tailings facilities. The Tarkwa Tailings Stewardship team comprises various key stakeholders, including the Group Head of Tailings, the Responsible Tailings Facility Engineer, the sustainable development team, the community relations team, the site safety team, and the Engineer of Record partner. This team meets regularly, with representatives from different stakeholder groups joining as required.

On a day-to-day basis, the TSF is inspected and monitored by TSF shift operators. Their inspections are reviewed by the Responsible Tailings Facility Engineer, who escalates any concerns following the procedure outlined in the Trigger Action Response Plan developed for the TSFs. Additionally, the Engineer of Record partner prepares a monthly dashboard report summarizing key findings related to TSF monitoring and instrumentation. This report is reviewed by the Tarkwa Tailings Stewardship team and discussed in routine project meetings.

Every quarter, the Responsible Tailings Facility Engineer prepares a detailed TSF review report submitted to the VP: Global Tailings Management. This report includes reviewing the TSF's performance in the quarter and broader site-wide criteria such as water quality, environmental incidents, and progress against plans. The Engineer of Record also prepares a quarterly review report which talks about the technical performance of the TSFs with regard to instrumentation. The Group Head of Tailings reviews monthly and quarterly reports and compiles a detailed submission for the Board of Directors and CEO.

The Engineer of Record prepares a summary TSF performance report annually, and the full Tarkwa Stakeholder team holds an Annual General Meeting (AGM) for Tailings. During this meeting, the interdisciplinary team reviews the current projects, designs, and management strategies, identifying opportunities to carry forward into the next year. The Group Tailings Stewardship team also reviews available technologies across the industry annually, ensuring we stay updated with the latest advancements.

It should be noted that the Independent Technical Review Board (ITRB) plays a crucial role in ensuring the ongoing integrity and performance of our tailings facilities. The ITRB also conducts annual reviews of detailed information and documentation. These comprehensive annual reviews allow the ITRB to assess the effectiveness of our tailings technologies, design, and management strategies.

Through these periodic reviews and continuous improvement efforts, we strive to minimize risks, enhance environmental outcomes, and check our tailings facilities' safe and responsible management. We remain committed to maintaining the highest standards of tailings stewardship and fostering a culture of ongoing improvement in our operations.

Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✓ **Meets this Requirement**



— Requirement 3.2.C

Criteria

The ITRB, or senior independent technical reviewer, reviews the analysis for new facilities.

Discussion

At the Tarkwa mine, we currently do not have any new tailings storage facilities under development. Therefore, we consider this specific requirement not applicable to our current operations.

However, it is important to emphasize that our team is committed to conducting thorough multi-criteria analyses during the planning and early stages of all our tailings storage facilities. These analyses involve evaluating various feasible sites, technologies, and strategies for tailings management to minimize risks to people and the environment throughout the entire lifecycle of the facilities.

While we do not have new facilities, we maintain a robust process to check independent technical reviews of all our technical documentation. The Independent Tailings Review Board (ITRB) plays a crucial role in reviewing and providing oversight on the technical aspects related to tailings management. The ITRB reviews all technical documentation annually, ensuring that our operations adhere to the highest safety standards, environmental protection, and risk management.

Gold Fields has ranked this Requirement as “Not Applicable”.

Assessment Outcome

- — Not Applicable



Requirement 3.3 - Self-Assessment Rating Justification

For new tailings facilities, use the knowledge base, including uncertainties due to climate change, to assess the social, environmental and local economic impacts of the tailings facility and its potential failure throughout its lifecycle. Where impact assessments predict material acute or chronic impacts, the Operator shall develop, document and implement impact mitigation and management plans using the mitigation hierarchy.

— Requirement 3.3.A

Criteria

The following are demonstrated for new tailings Facilities: Environmental, social and local economic impact assessments are conducted and inform the existing knowledge base.

Discussion

At Gold Fields, we prioritize the comprehensive assessment and management of environmental, social, and local economic impacts in all aspects of our operations. As part of our commitment to responsible tailings management, we utilize the existing knowledge base, including considerations for uncertainties related to climate change, to assess the potential impacts associated with our tailings facilities.

However, it is important to note that no new tailings facilities are being developed at the Tarkwa mine. Therefore, this specific requirement has been rated 'Not applicable.'

Nevertheless, we remain dedicated to upholding rigorous environmental and social standards throughout our operations and continuously seek opportunities for improvement and have applied these principles to our existing facilities. It is important to note that we conducted an Environmental and Social Impact Assessment (ESIA) for any new TSF.

Gold Fields has ranked this Requirement as "Not applicable."

Assessment Outcome

- — **Not Applicable**



— Requirement 3.3.B

Criteria

The following are demonstrated for new tailings Facilities: Environmental, social and local economic assessments demonstrate that climate change uncertainties are considered in assessing the life of tailings storage facility impacts and whether there is any potential for a credible failure throughout the tailings facility lifecycle.

Discussion

At Gold Fields, we prioritize assessing environmental, social, and local economic impacts throughout the lifecycle of our tailings facilities. As part of our commitment to conforming with the GISTM, we have conducted thorough assessments that explicitly consider climate change uncertainties.

Under Requirement 3.1.A, we have undertaken a comprehensive evaluation of both current climate conditions and projected climate change conditions. This evaluation encompasses a range of climate-related factors, such as temperature changes, precipitation patterns, and extreme weather events. The findings from this evaluation have been reviewed and integrated into the site's water balance and TSF designs and performance criteria. By considering climate change uncertainties, we aim to enhance the resilience of our facilities and minimise potential impacts.

To check a robust assessment, we have also incorporated the climate change information into our TSF Risk Workbook and conducted a Failure Mode Evaluation Assessment (FMEA) tailored to the site. This evaluation process helps identify any credible failure modes that may arise throughout the lifecycle of the tailings facility. By considering the potential impacts of climate change, we are better equipped to anticipate and address risks, thereby enhancing the safety and reliability of our operations.

Our approach emphasizes the importance of considering climate change uncertainties to assess the environmental, social, and economic impacts of our TSFs. By integrating this information into our decision-making processes, we strive to proactively manage and mitigate potential risks while upholding the highest standards of tailings management.

However, it is important to note that no new tailings facilities are being developed at the Tarkwa mine. Therefore, this specific requirement has been rated 'Not applicable.'

Gold Fields has ranked this Requirement as "Not Applicable".

Assessment Outcome

- — Not Applicable



— Requirement 3.3.C

Criteria

The following are demonstrated for new tailings Facilities: Mitigation measures and management plans are developed, documented and implemented to address material chronic and acute impacts.

Discussion

The Sustainable Development and Community Relations teams maintain plans, procedures and registers to promote prompt response, management and mitigation of material and acute, social, environmental and local economic impacts associated with the TSF.

There is a range of forums for risks and impacts to be identified and recorded, such as daily, monthly or quarterly checks by the site team, during interdisciplinary risk assessment workshops held regularly, engagement with the community in person, notification via the grievance management procedure or monitoring of environmental and groundwater data.

The most recent example of implementing risk measures includes incorporating findings from the Human Rights Impact Assessment (HRIA) undertaken by an Independent Human Rights Consultant on behalf of the Tarkwa Tailings Stewardship team. The ITRB reviewed the study findings, which were incorporated into the Tarkwa Action register for consideration in future designs and life of mine TSF studies.

However, it is important to note that no new tailings facilities are being developed at the Tarkwa mine. Therefore, this specific requirement has been rated 'Not applicable.'

Assessment Outcome

- — Not Applicable



— Requirement 3.3.D

Criteria

The following are demonstrated for new tailings Facilities: Management plans are based on the principles and practice of a mitigation hierarchy and management plans for the tailings facility and are updated throughout the tailings facility lifecycle.

Discussion

At Gold Fields, we recognize the importance of addressing and mitigating material chronic and acute environmental, social, and local economic impacts associated with our tailings facilities. Accordingly, we are committed to adhering to the GISTM by developing, documenting, and implementing comprehensive mitigation measures and management plans such as the Tarkwa Tailings Management Plan (TMP) and the Tarkwa Risk Management Plan. (RMP)

Our Sustainable Development and Community Relations teams are vital in promoting prompt response, management, and mitigation of these impacts. They maintain plans, procedures, and registers that outline our strategies and actions to address potential risks and impacts. These measures encompass a wide range of forums for identification and recording, including daily, monthly, or quarterly checks by our site team, regular interdisciplinary risk assessments, direct engagement with the community, utilization of the grievance management procedure, and ongoing monitoring of environmental and groundwater data. We aim to minimize their potential adverse effects by proactively monitoring and addressing these issues.

One notable example of our commitment to implementing risk measures is the recent incorporation of findings from a Human Rights Impact Assessment (HRIA) conducted by an Independent Human Rights Consultant on behalf of our Tarkwa Tailings Stewardship team. The findings of this study have undergone a rigorous review by the Independent Technical Review Board (ITRB) and have been integrated into our Tarkwa Action Register. These findings will inform future designs and the ongoing life of mine storage study, ensuring our operations align with the highest ESG (environmental, social, and governance) standards.

Gold Fields demonstrates our commitment to responsible and sustainable tailings management by systematically documenting and implementing mitigation measures and management plans. In addition, we believe in open and transparent communication and are dedicated to ensuring that our operations have a positive and lasting impact on the environment, local communities, and the broader economy.

However, it is important to note that no new tailings facilities are being developed at the Tarkwa mine. Therefore, this specific requirement has been rated 'Not applicable.'

Gold Fields has ranked this Requirement as "Not Applicable."

Assessment Outcome

- — **Not Applicable**



Requirement 3.4 - Self-Assessment Rating Justification

Update the assessment of the social, environmental and local economic impacts to reflect a material change either to the tailings facility or to the social, environmental and local economic context. If new data indicates that the impacts from the tailings facility have changed materially, including as a result of climate change knowledge or long-term impacts, the Operator shall update tailings facility management to reflect the new data using Adaptive Management best practices.

✔ Requirement 3.4.A

Criteria

As defined by the Operator, material change is consistently applied to trigger updates to the tailings facility's environmental, social and economic assessment.

Discussion

At Gold Fields, we prioritize consistently applying material change to trigger updates to our tailings facility's environmental, social, and economic assessment. We adhere to the GISTM, emphasising the need to adaptively manage our operations in response to new data and evolving contexts.

To check the effective management of changes, we have implemented a robust Change Management Procedure specifically tailored to address tailings-related changes and associated risks. This procedure defines material change and serves as our guiding framework whenever a change is identified throughout the tailings facility's lifecycle. Our Responsible Tailings Facility Engineer (RTFE) is the primary point of contact for all tailings-related changes or consultations. They are supported by the Deputy RTFE, the Engineer of Record (EOR) team, and our corporate team at Gold Fields.

Collaboration and information sharing are key elements of our approach. The interdisciplinary nature of the Change Management Procedure checks that the Sustainable Development and Community Relations team is well-informed when any tailings-related changes occur and vice versa. This enables us to address potential social, environmental, and economic impacts in a comprehensive and coordinated manner.

As an additional layer of protection, our Tarkwa Tailings Stewardship team includes managers from the Sustainable Development and Community Relations departments. These team members meet regularly, with a formal annual session known as the Annual General Meeting (AGM) for Tailings. During this meeting, they discuss any issues or concerns related to their respective areas of expertise, facilitating a proactive approach to managing changes and their associated impacts.

Our commitment to monitoring and adapting to material changes underscores our dedication to responsible tailings management. By regularly updating our assessments in response to new data, including insights from climate change knowledge and long-term impacts, we check that our tailings facility management reflects the most current and relevant information. This approach aligns with Adaptive Management best practices and enables us to continuously improve our environmental, social, and economic performance. At Gold Fields, we strive for transparency and accountability in all our operations, and our adherence to the GISTM is a testament to our commitment. In addition, we remain dedicated to effectively managing and minimizing the impacts of our tailings facilities while fostering sustainable development and long-term stewardship of the areas in which we operate.

Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ **Meets this Requirement**



✓ Requirement 3.4.B

Criteria

Tailings facility management is updated in accordance with adaptive management best practices if new data (including climate change knowledge) indicates that the impacts from the tailings facility have changed materially.

Discussion

At Gold Fields, we are committed to updating our tailings facility management in accordance with adaptive management best practices. This checks that any material changes to our tailings facility's social, environmental, and local economic impacts are promptly assessed and addressed.

To facilitate effective communication and collaboration, we host an Annual General Meeting (AGM) for Tailings, where interdisciplinary stakeholders convene to discuss the status of our tailings operations. During this meeting, each stakeholder is allowed to provide input and share any new data or knowledge relevant to the impacts of the tailings facility. The recommendations arising from these discussions are carefully considered by our Tarkwa Tailings Stewardship team and subsequently incorporated into our future design plans.

In addition, our Tarkwa Tailings Stewardship team meets fortnightly to discuss technical work packages, ensuring regular and proactive engagement on tailings-related matters. The Engineer of Record (EOR) also conducts quarterly site visits alongside the Responsible Tailings Facility Engineer (RTFE) to assess the condition of the facility. If any impacts are identified during these visits, they are managed in accordance with our well-established change management or grievance management procedures. Furthermore, these identified impacts are incorporated into our Tailings Risk Workbook, which forms the basis for ongoing risk assessment and mitigation efforts.

Our approach aligns closely with the methodology outlined in the Gold Fields Tailings Standard, 2023. This standard serves as our guiding framework, ensuring that we adhere to industry best practices and remain proactive in responding to any material changes in the impacts of our tailings facility. In addition, by consistently updating our management strategies and practices, we demonstrate our commitment to mitigating and managing the potential social, environmental, and local economic impacts associated with our operations.

At Gold Fields, we recognize the importance of adaptive management in maintaining the highest standards of tailings facility management. By incorporating new data, including insights from climate change knowledge and long-term impacts, we continuously improve our understanding of the impacts and risks posed by our tailings facility. This commitment to ongoing assessment and adaptation enables us to respond to changing circumstances effectively, minimize potential impacts, and check the long-term sustainability of our operations.

Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✓ Meets this Requirement



GISTM Principle 04

Develop Plans and Design Criteria for the Tailings Facility to Minimise Risk for All Phases of Its Lifecycle, Including Closure and Post-Closure.

Principle 04 – Self-Assessment Outcome

The Tarkwa mine has three TSFs with a Very High Consequence Classification. A summary of the self-assessment outcome for Principle 04 of the GISTM is presented in Table 9 below. Further information specific to each requirement part is provided in subsequent sections of this report.

Table 9: Principle 04 – Self-Assessment Outcome Summary

Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
4.1	A	Determine the consequence of failure classification of the tailings facility by assessing the downstream conditions documented in the knowledge base and adopt: (i) the consequence classification for the highest level in each category in Annex 2, Table 1, or (ii) a more conservative approach by adopting ‘Extreme’ post-closure design loading criteria in Annex 2.	✓	✓	✓
	B	For a(i), base the assessment and selection of classification on credible failure modes/scenarios.	✓	✓	✓
	C	Document the assessment and selection with defensible evidence.	✓	✓	✓
4.2	A	Prepare preliminary designs for the tailings facility, considering the lifecycle stages, using external loading design criteria consistent with the consequence of failure classification based on current conditions and higher Consequence Classifications (including ‘Extreme’).	✓	✓	✓
	B	Adopt (i) the ‘Extreme’ Consequence Classification external loading criteria, or (ii) adopt the current Consequence Classification loading criteria or a higher one, and demonstrate that the feasibility, at a proof-of-concept level, to upgrade to the design for the ‘Extreme’ classification criteria is maintained throughout the tailings facility lifecycle.	✓	✓	✓
	C	If option b(ii) above is implemented, the Consequence Classification is reviewed at the time of the Dam Safety Review (DSR) 1 and at least every five years, or sooner if there is a material change in the social, environmental and local economic context, and complete the upgrade of the tailings	✓	✓	✓



		facility to the new Consequence Classification as determined by the DSR within three years. According to this Standard, this review shall proceed until the tailings facility has been safely closed.			
	D	The process described in a., b., and c. shall be reviewed by the Independent Tailings Review Board (ITRB) or the senior independent technical reviewer as appropriate for the tailings facility Consequence Classification.	✓	✓	✓
	E	Subject to Requirement 4.7, Requirements 4.2 c. and 4.2 d. shall also apply to existing tailings facilities.	✓	✓	✓
4.3	A	Extreme loads are already in place.	✓	✓	✓
	B	Suppose Extreme Consequence Classification external loading criteria are not adopted. In that case, the Accountable Executive shall decide to adopt a design for the current Consequence Classification criteria and maintain flexibility to upgrade the design for the highest classification criteria later in the tailings facility lifecycle.	–	–	–
4.4	A	Select and identify appropriate design criteria to minimise risk for all credible failure modes during each phase of the tailings facility lifecycle.	✓	✓	✓
	B	Document the rationale for the design criteria selected to minimise risk.	✓	✓	✓
4.5	A	Develop and apply design criteria, such as factors of safety for slope stability and seepage management, for each lifecycle phase that considers: <ul style="list-style-type: none"> the estimated operational properties of materials and the expected performance of the design elements, and the quality of the implementation of the risk management systems. 	✓	✓	✓
	B	Account for these design and implementation issues in assessments based on deformation analyses	⚠	⚠	⚠
4.6	A	An assessment of the potential for brittle failure modes is documented, and the analyses are addressed in the Design Basis Report (DBR).	✓	✓	✓



4.7	A	Existing tailings facilities shall conform with the Requirements under Principle 4, except for those aspects where the Engineer of Record (EOR), with review by the ITRB or a senior independent technical reviewer, as appropriate, determines that the upgrade of an existing tailings facility is not required, or viable, or cannot be retroactively applied.	✓	✓	✓
	B	Suppose the condition in (a.) above applies. In that case, the Accountable Executive shall approve and document the implementation of measures to reduce the probability and the consequences of a tailings facility failure to reduce the risk to a level as low as reasonably practicable (ALARP).	–	–	–
	C	The basis and timing for addressing upgrading existing tailings facilities shall be risk-informed and carried out as soon as reasonably practicable.	–	–	–
4.8	A	The EOR shall prepare a Design Basis Report (DBR) that details the design assumptions and criteria, including operating constraints and provides the basis for designing all phases of the tailings facility lifecycle.	✓	✓	✓
	B	The ITRB or senior independent technical reviewer shall review the DBR.	✓	✓	✓
	C	The EOR shall update the DBR whenever there is a material change in the design assumptions, design criteria, design or knowledge base and confirm internal consistency among these elements.	✓	✓	✓



Requirement 4.1 - Self-Assessment Rating Justification

Determine the consequence of failure classification of the tailings facility by assessing the downstream conditions documented in the knowledge base and selecting the classification corresponding to the highest Consequence Classification for each category in Annex 2, Table 1. The assessment and selection of the classification shall be based on credible failure modes and shall be defensible and documented.

✔ Requirement 4.1.A

Criteria

Determine the consequence of failure classification of the tailings facility by assessing the downstream conditions documented in the knowledge base and adopt: (i) the consequence classification for the highest level in each category in Annex 2, Table 1, or (ii) a more conservative approach by adopting 'Extreme' post-closure design loading criteria in Annex 2.

Discussion

In 2020, an independent consultant conducted a preliminary inundation study based on the available information at the time. The primary objective of this study was to identify potential flow paths and areas that could be affected without any engineering controls. In addition, it allowed our team to pinpoint areas requiring further detailed assessment and high-resolution LiDAR data.

Understanding the proximity of nearby communities and recognizing the time-consuming nature of developing comprehensive inundation studies, the Tarkwa Tailings Stewardship team deliberately adopted a cautious approach. Consequently, from the outset, an 'Extreme Consequence Classification' was assigned to TSF 1, 2, and 3. This approach represents the most conservative stance, eliminating the likelihood of most failure modes occurring.

By opting for a conservative approach and diligently communicating the results, we aim to demonstrate our commitment to safety and our responsibility towards nearby communities. We acknowledge the importance of open communication and remain dedicated to the highest safety standards in managing our tailings facilities.

The dam breach studies at Tarkwa have been refined over the past 3 years based on more available information and input from independent review. The most recent study was completed in late 2022, including a refinement of the extent of the inundation zones, failure modes and consequence classifications, yielding a 'Very High' consequence classification.

Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✔ [Meets this Requirement](#)



✓ Requirement 4.1.B

Criteria

For a(i), base the assessment and selection of classification on credible failure modes/scenarios.

Discussion

The Tarkwa Tailings Stewardship team has consistently prioritized safety and responsible management practices for our tailings facility. In 2020, we took a significant step by further enhancing the scope of work and areas of responsibility of our Engineer of Record partners. This marked the beginning of a comprehensive assessment to check the highest level of dam safety and risk mitigation.

To initiate this process, the team established a preliminary consequence classification and conducted an initial inundation study based on the available information at that time. Then, recognising the need for further refinement and closing information gaps, we undertook additional technical studies to enhance our understanding of the facility's behaviour, performance and potential failure modes.

In August 2021, the Engineer of Record facilitated an interdisciplinary Failure Mode Evaluation Assessment (FMEA) workshop. The primary objective of this workshop was to identify and evaluate potential failure modes, allowing us to develop critical controls and comprehensive risk management strategies. This rigorous approach checks that our assessments are based on credible failure scenarios, providing a solid foundation for our decision-making process.

As stated in Requirement 4.1, the Tarkwa Tailings Stewardship team took a deliberate and cautious approach to determine the consequence classification. In alignment with our commitment to safety, an 'Extreme Consequence Classification' was assigned to TSF 1, 2, and 3 from the outset. This conservative stance was chosen to eliminate the likelihood of most failure modes occurring, thereby minimizing risks.

After review and input from the ITRB, the FMEA was further refined, the number of credible failure modes was reduced, the dam breach study was updated, and a consequence classification of "Very High" was assigned to TSFs 1, 2 and 3. This report thoroughly explains the assessment process, the identified failure modes, and the resulting consequence classifications. By adhering to this defensible and well-documented approach, we check the integrity of our decision-making process.

We remain dedicated to transparency, safety, and responsible management practices. We strive to protect the well-being of our operations and neighbouring communities through open communication and robust risk management measures. Our commitment to continuous improvement drives us to adopt the highest standards in tailings facility management.

Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✓ Meets this Requirement



✓ Requirement 4.1.C

Criteria

Document the assessment and selection with defensible evidence.

Discussion

At Gold Fields, we prioritize the safety of our operations and surrounding communities. In line with this commitment, we have taken a conservative approach to the consequence classification of our tailings facility. We aim to check that potential risks associated with tailings management are given the highest level of attention and mitigation.

To meet this objective, we initially assigned the most severe, 'extreme' consequence classification until the knowledge base had reached a level of development where such consequences could be confidently ruled out. This cautious approach demonstrates our dedication to prioritizing tailings risks and proactively addressing potential challenges.

The consequence classification, thoroughly documented in a Dam Breach Assessment report, has undergone independent review by the Independent Tailings Review Board (ITRB). This review process checks the credibility and integrity of the assessment. The ITRB's expertise and impartiality provide an additional layer of assurance in our commitment to responsible tailings management.

Furthermore, the assessment is supported by an inundation study that has been progressively updated as more information becomes available. This study is a valuable tool for understanding the downstream conditions and potential impacts in the event of a failure. The assessment also incorporates high-resolution LiDAR data, which offers a detailed understanding of the topography and surrounding areas.

The selection and classification process of the consequence assessment benefit from the collective expertise and inputs of our interdisciplinary Tarkwa Tailings Stewardship team. This team comprises professionals from various relevant disciplines collaborating to check a comprehensive and well-informed evaluation.

By adopting a conservative approach and supporting our assessments with defensible evidence, we aim to maintain credibility and transparency. Our commitment to responsible tailings management is unwavering, and we believe that open communication and well-documented procedures are essential in maintaining the trust of our stakeholders.

We assure the public that our consequence classification process adheres to leading practice approaches and is continuously reviewed and updated as new information becomes available. Through these efforts, we remain dedicated to the safety of our operations, the well-being of our neighbouring communities, and the responsible management of our tailings facilities.

Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✓ Meets this Requirement



Requirement 4.2 - Self-Assessment Rating Justification

With the objective of maintaining flexibility in the development of a new tailings facility and optimising costs while prioritising safety throughout the tailings facility lifecycle:

a. Develop preliminary designs for the tailings facility with external loading design criteria consistent with both the consequence of failure classification selected based on current conditions and higher Consequence Classifications (including 'Extreme').

b. Informed by the range of requirements defined by the preliminary designs, either: — Implement the design for the 'Extreme' Consequence Classification external loading criteria; or — Implement the design for the current Consequence Classification criteria, or a higher one, and demonstrate that the feasibility, at a proof of concept level, to upgrade to the design for the 'Extreme' classification criteria is maintained throughout the tailings facility lifecycle.

c. If option B.2 is implemented, review the consequence of failure classification at the time of the Dam Safety Review (DSR) and at least every five years, or sooner if there is a material change in the social, environmental and local economic context, and complete the upgrade of the tailings facility to the new Consequence Classification as determined by the DSR within three years. This review shall proceed until the tailings facility has been safely closed according to this Standard.

d. The process described above shall be reviewed by the Independent Tailings Review Board (ITRB) or the senior independent technical reviewer as appropriate for the tailings facility Consequence Classification. Subject to Requirement 4.7, Requirements 4.2.c and 4.2.d shall also apply to existing tailings facilities.

✔ Requirement 4.2.A

Criteria

Prepare preliminary designs for the tailings facility, considering the lifecycle stages, using external loading design criteria consistent with both the consequence of failure classification based on current conditions and higher Consequence Classifications (including 'Extreme').

Discussion

To prioritize safety throughout the lifecycle of our tailings facility, we appointed our Engineer of Record (EoR) partner to undertake a comprehensive Dam Safety Review (DSR) in 2022. This review assessed the design, stability, and performance of TSFs 1, 2, and 3 in detail.

Following the issuance of the DSR report, our Engineer of Record team developed multiple preliminary downstream raise designs for the tailings facilities. These designs were created in accordance with the extreme loading criteria defined by the GISTM. By integrating the extreme loading criteria into the preliminary designs, we check that our TSFs are built to withstand the most severe potential loading conditions.

It is crucial to emphasize that the DSR process and subsequent designs have undergone rigorous review and scrutiny. The Independent Tailings Review Board (ITRB) has carefully assessed the entire process, providing an external review to validate the robustness, credibility, and alignment of our design considerations and decisions with industry best practices.

Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✔ [Meets this Requirement](#)



✔ Requirement 4.2.B

Criteria

Adopt (i) the 'Extreme' Consequence Classification external loading criteria, or (ii) adopt the current Consequence Classification loading criteria or a higher one, and demonstrate that the feasibility, at a proof-of-concept level, to upgrade to the design for the 'Extreme' classification criteria is maintained throughout the tailings facility lifecycle.

Discussion

Gold Fields takes the safety and integrity of our tailings facilities very seriously. In response to the mentioned criteria, we have diligently evaluated the adoption of the 'Extreme' Consequence Classification loading criteria.

Our site seismic hazard assessment supported this decision, which was crucial in determining the appropriate loading criteria. The assessment's findings provided valuable insights into the potential risks associated with our tailings facilities and guided our decision-making process.

Furthermore, we recently updated the inundation study, which assessed the consequences of a hypothetical failure scenario of the TSFs. As a result of this study, the consequence classification of the TSFs changed from Extreme to Very High.

Throughout the tailings facility lifecycle, we remain dedicated to ensuring the feasibility of upgrading to the design for the 'Extreme' classification criteria. Our TSFs are being raised downstream, and we have adequate real estate available to accommodate such a change.

While we have adopted the Extreme consequence classification loading criteria in preliminary modelling, we understand the importance of maintaining this feasibility.

Therefore, Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✔ Meets this Requirement



✓ Requirement 4.2.C

Criteria

If option b(ii) above is implemented, the Consequence Classification is reviewed at the time of the Dam Safety Review (DSR) and at least every five years, or sooner if there is a material change in the social, environmental and local economic context, and complete the upgrade of the tailings facility to the new Consequence Classification as determined by the DSR within three years. According to this Standard, this review shall proceed until the tailings facility has been safely closed.

Discussion

Gold Fields Tarkwa deeply values the safety and well-being of our communities and environment. In line with the mentioned criteria, we have established a longstanding partnership with our Engineer of Record (EOR) partner, who has supported our adherence to the expectations set by the Global Industry Standard on Tailings Management (GISTM).

In 2020, our EOR partner started to formally assist us in meeting the criteria outlined by the GISTM. As part of their responsibilities, the EOR conducted a thorough Dam Safety Review (DSR) for TSF 1, 2, and 3 in 2022. Additionally, a more recent DSR was completed for TSF 5, even though its conformance is not due until August 2025. The DSR findings for each tailings facility have been documented in separate reports.

To check the highest level of accountability and oversight, the Independent Technical Review Board thoroughly reviewed the DSR findings in June 2023. This independent assessment provides an additional layer of assurance regarding the integrity and safety of our tailings facilities. We value the Independent Technical Review Board's expertise and guidance in evaluating our compliance with industry best practices.

The findings of the DSR have been diligently addressed by our Responsible Tailings Facility Engineer (RTFE). The RTFE has taken prompt action to implement the measures identified in the reports, ensuring that any identified risks or areas for improvement are properly managed. The RTFE's actions and progress have been thoroughly reviewed and approved by our Accountable Executive.

We are committed to continually improving our tailings management practices and understand the importance of regular reviews to assess any material changes in the social, environmental, and local economic context. Therefore, as part of our ongoing commitment to safety, we will conduct reviews of the Consequence Classification at least every five years or sooner if there are significant changes. These reviews will be conducted following the Dam Safety Review process and will be completed within three to five years, as specified by the criteria.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✓ Meets this Requirement



✔ Requirement 4.2.D

Criteria

The process described in a., b., and c. shall be reviewed by the Independent Tailings Review Board (ITRB) or the senior independent technical reviewer as appropriate for the tailings facility Consequence Classification.

Discussion

At Gold Fields Tarkwa, we prioritize the independent review and validation of our tailings management processes. In accordance with the specified criteria, the Consequence Classification process has undergone a thorough review by the Independent Tailings Review Board (ITRB).

The Independent Review Board (ITRB) has had two separate opportunities to review the Consequence Classification assigned to our tailings facilities. These reviews took place in June 2022 and June 2023, respectively. We value the expertise and impartiality of the Independent Review Board.

The ITRB has endorsed the assigned classification. This endorsement is an important validation of our commitment to following industry best practices and adhering to the highest safety and environmental stewardship standards.

Gold Fields Tarkwa recognizes the significance of independent oversight in maintaining accountability and transparency. The involvement of the Independent Review Board assures both our stakeholders and the public that our Consequence Classification process is robust, reliable, and aligned with recognized industry guidelines.

We remain committed to upholding the trust placed in us by our stakeholders and will continue to collaborate with the ITRB to check ongoing scrutiny of our tailings management practices. We value their expertise and insights, which enable us to continuously improve our operations and maintain the utmost safety in all aspects of our tailings facilities.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



✔ Requirement 4.2.E

Criteria

Subject to Requirement 4.7, Requirements 4.2 c. and 4.2 d. shall also apply to existing tailings facilities.

Discussion

The TSFs at the Tarkwa mine are active and operational. However, we are continuously exploring opportunities for improvement. We actively engage in a comprehensive life-of-mine transformation study as part of our commitment to responsible mining. This study conceptualises future tailings storage locations and options for future mining activities.

We apply the methodology and approaches described under Requirement 4.2 and Requirement 4.7s and TSF to all our TSF projects, regardless of whether they are new or existing. We firmly believe in consistency and maintaining the highest standards across our operations.

By applying the same rigorous standards and practices to existing and new tailings facilities, we check that all our operations meet or exceed industry guidelines for safety, environmental impact, and social responsibility. Our commitment to responsible tailings management extends beyond specific projects or timelines; it is embedded in our corporate culture and guides our decision-making processes.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 4.3 - Self-Assessment Rating Justification

The Accountable Executive shall take the decision to adopt a design for the current Consequence Classification criteria and to maintain flexibility to upgrade the design for the highest classification criteria later in the tailings facility lifecycle. This decision shall be documented.

✔ Requirement 4.3.A

Criteria

Extreme loads are already in place.

Discussion

The Tarkwa Tailings Stewardship team, led by the Accountable Executive (AE) and the Responsible Tailings Facility Engineer (RTFE), have taken actions to apply Requirement 4.7, Requirements 4.2c and 4.2d to TSF 1,2 and 3, which are existing tailings facilities. Initially, an independent consultant was engaged to conduct a preliminary dam breach study. However, considering the gaps in our knowledge base at that time and the utilization of coarse survey data, the team made a conservative decision to assign an 'Extreme' Consequence Classification to the facilities.

To confirm the accuracy of the assessments, we subsequently engaged the engineer of record to conduct a series of technical studies and repeat the dam breach assessment. As a result of this extensive dam breach study, the consequence classification for TSFs 1, 2, and 3 was reduced to "Very High."

To address potential risks associated with extreme events, we have incorporated extreme loading conditions into the design of our tailings facilities, regardless of the consequence classification. This proactive approach allows us to account for the most severe loading conditions that could impact our facilities and actively mitigate potential risks.

Importantly, this decision to incorporate extreme loads in the design of our tailings facilities is diligently documented in our design reports. Adopting a design considering extreme loading conditions eliminates the need for potential future upgrades as the facility is already designed to the highest classification criteria.

Our proactive and responsible approach, including adopting extreme loading conditions in the design process, is a testament to our commitment to safety.

Therefore, Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✔ Meets this Requirement



— Requirement 4.3.B

Criteria

Extreme Consequence Classification external loading criteria are not adopted. The Accountable Executive shall decide to adopt a design for the current Consequence Classification criteria and maintain flexibility to upgrade the design for the highest classification criteria later in the tailings facility lifecycle.

Discussion

At Gold Fields, the Tarkwa Tailings Stewardship team and appointed Engineer of Record (EOR) have evaluated and adopted extreme loading criteria as part of our design process for the tailings facility at the Tarkwa mine. This proactive measure checks that our design considerations account for the highest Consequence Classification criteria.

Therefore, the requirement to adopt a design for the current Consequence Classification criteria and maintain flexibility for future upgrades to the highest classification criteria does not apply in this context.

By incorporating extreme loading criteria from the outset, we prioritize the safety and resilience of our tailings facility throughout its lifecycle. This approach reflects our unwavering commitment to upholding the highest safety standards, environmental stewardship, and community well-being.

We assure the public that Gold Fields remains dedicated to responsible tailings management practices. Adopting extreme loading criteria in our design process demonstrates our proactive and rigorous approach to addressing potential risks and ensuring the long-term integrity of our operations.

As part of our commitment to transparency, our design considerations and decisions are well-documented and subject to comprehensive internal reviews. In addition, we remain open to external scrutiny and welcome further inquiries regarding our tailings facility design and management practices.

Therefore, Gold Fields has ranked this Requirement as “Not applicable.”

Assessment Outcome

- — Not Applicable



Requirement 4.4 - Self-Assessment Rating Justification

Select, explicitly identify and document all design criteria that are appropriate to minimise risk for all credible failure modes for all phases of the tailings facility lifecycle.

✔ Requirement 4.4.A

Criteria

Select and identify design criteria that are appropriate to minimise risk for all credible failure modes during each phase of the tailings facility lifecycle.

Discussion

Gold Fields recognizes the critical importance of selecting and identifying appropriate design criteria to minimize risks associated with all credible failure modes throughout the entire lifecycle of our tailings facilities. Accordingly, we have taken proactive steps to check the robustness of our design process.

Our Engineer of Record partner has a long-standing history with the Tarkwa mine, but they were formally appointed to undertake additional activities to support GISTM conformance in 2020. As EoR, their technical teams oversee the planning, design, construction, operation, and closure of the tailings facilities at the Tarkwa mine. As part of their comprehensive scope, the EoR team carefully selected and explicitly identified design criteria best suited to effectively manage and minimize potential failure risks.

In 2021, the SLR team completed a site investigation comprising CPT and material testing. The Independent Technical Review Board (ITRB) reviewed the outcome of this campaign in June 2022.

Following the review, the EoR, in collaboration with the Tarkwa Tailings Stewardship team and alignment with the ITRB's recommendations, recognized the need for additional site investigations to further refine and solidify some of the assumed design criteria. This investigation will also enable us to refine the performance criteria for the TSFs and improve the reliability of our assessments.

Therefore, in February 2023, the Tarkwa Tailings Stewardship team, in collaboration with the EoR, initiated a geotechnical and geochemical site campaign to collect material samples currently undergoing comprehensive testing in an advanced geotechnical laboratory. The EoR also completed the development of a Design Basis Report (DBR) in early 2023 containing all design criteria and design basis information in one place (also see Requirement 4.4 d).

We prioritize the diligent collection and analysis of site-specific data and the insights gained from ongoing investigations. This approach checks that our design criteria are accurately tailored to the unique characteristics and challenges of the Tarkwa mine. By continuously advancing our understanding of the geotechnical and geochemical conditions, we can make informed decisions to minimize risks throughout the lifecycle of our tailings facilities.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 4.4.B

Criteria

Document the rationale for the design criteria selected to minimise risk.

Discussion

Ensuring the selection of appropriate design criteria to minimize risks associated with all credible failure modes is paramount to Gold Fields. In addition, we recognize the significance of documenting the rationale behind these design criteria to check transparency and accountability.

To this end, the Engineer of Record (EoR) has documented the Design Basis and Criteria in a standalone document called the 'Design Basis Report' (DBR). The DBR serves as a comprehensive reference that explicitly identifies and outlines the design criteria chosen to effectively mitigate risks across all phases of the tailings facility lifecycle.

We value the insights and expertise of external reviewers in validating our design approach. As such, the DBR has undergone independent review by the Independent Technical Review Board (ITRB) in June 2022 and June 2023. The ITRB, known for its rigorous assessment and impartiality, carefully scrutinized the documented rationale for the selected design criteria. We demonstrate our commitment to transparency and excellence in tailings management by subjecting our design basis to external scrutiny. The independent review process checks that our design criteria are based on sound engineering principles and best practices, providing an added layer of assurance for stakeholders.

The DBR is a foundational document that captures the rationale behind our design criteria and is a valuable resource for ongoing monitoring and evaluation. We recognize the importance of maintaining a robust and up-to-date record of our design approach as it evolves.

At Gold Fields, we are steadfast in our commitment to safety, environmental stewardship, and community well-being. Through transparent documentation and ongoing collaboration with external experts, we aim to achieve the highest standards of responsible tailings management and deliver sustainable outcomes for all stakeholders.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



Requirement 4.5 - Self-Assessment Rating Justification

Apply design criteria, such as factors of safety for slope stability and seepage management, that consider estimated operational properties of materials and expected performance of design elements, and quality of the implementation of risk management systems. These issues should also be appropriately accounted for in designs based on deformation analyses.

✔ Requirement 4.5.A

Criteria

Develop and apply design criteria, such as factors of safety for slope stability and seepage management, for each lifecycle phase that considers:

- the estimated operational properties of materials and the expected performance of the design elements, and
- the quality of the implementation of the risk management systems.

Discussion

At Gold Fields, we prioritize applying robust design criteria throughout the entire lifecycle of our tailings facilities. Our commitment to safety and environmental stewardship drives us to develop and apply design criteria that consider various factors, including the estimated operational properties of materials, the expected performance of design elements, and the quality of implementing our risk management systems.

We adhere to the conditions outlined in The Ghanaian Minerals and Mining Health, Safety and Technical Regulations 2012 (LI.2182). Additionally, we incorporate guidance from internationally recognized leading practices, defined by the Australian National Committee on Large Dams (ANCOLD) and the Global Industry Standard on Tailings Management (GISTM).

The design criteria for TSF 1, 2, and 3 at the Tarkwa mine, including factors of safety for slope stability and seepage management, are comprehensively documented in a Design Basis Report (DBR). The DBR is prepared by our appointed Engineer of Record (EoR) and undergoes review by the Independent Technical Review Board (ITRB). This independent assessment checks that our design criteria are founded on sound engineering principles and align with international standards.

Monitoring and evaluating our design elements' operational properties and performance is paramount. To this end, we employ a proactive approach that includes performance-based design, ongoing monitoring, instrumented measurements, and regular assessments against the conditions specified in the DBR. The EOR prepares a monthly dashboard report that provides a clear overview of instrumentation status and the facility's operational performance concerning expected performance.

Furthermore, we conduct quarterly reviews of the facility's operational performance to check that it operates as originally intended. These comprehensive reviews are part of our commitment to continuous improvement and enable us to address any potential issues or deviations promptly.

Our tailings facilities at the Tarkwa mine are equipped with extensive instrumentation to monitor key parameters closely. In addition, we have developed Trigger Action Response Plans (TARPs) that provide clear protocols to address any escalating unwanted events. Should events identified in the TARPs occur, we have established an Emergency Preparedness and Response Plan (EPRP) and a comprehensive catastrophic risk management plan to initiate appropriate actions and mitigate potential risks.



Gold Fields upholds the highest safety standards, environmental responsibility, and community well-being. By diligently applying design criteria that consider material properties, design performance, and risk management implementation, we aim to check the integrity and resilience of our tailings facilities throughout their lifecycle.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

-  Meets this Requirement



🟡 Requirement 4.5.B

Criteria

Account for these design and implementation issues in assessments based on deformation analyses.

Discussion

Our Engineer of Record (EoR) is currently preparing detailed deformation models for TSF 1, 2, and 3. These models will complement our existing stability models and allow us to analyse the performance of the facilities specifically to deformation. Stability models have been prepared for the TSFs, and designs undergo a thorough review process, including evaluation by the Independent Technical Review Board (ITRB), ensuring that they meet industry standards and best practices. The drive towards deformation modelling is a real step change and step forward in the industry that leans itself away from traditional factors of safety methods.

The deformation models are being developed based on measured material properties obtained through extensive site investigations and testing completed in 2022 and 2023. These investigations involve various methods and sampling techniques to check accurate data collection. It's important to note that conducting comprehensive site investigations, sending samples to advanced testing laboratories worldwide, receiving results, and building comprehensive deformation models require significant time and effort from our global team.

As part of the site investigation field campaign, inclinometers were installed to allow real-time displacement and deformation measurement. These instruments provide valuable data that will allow us to compare the actual performance of the TSFs with the performance predicted by the deformation models. Continuous monitoring enables us to promptly identify any deviations or concerns, allowing us to take proactive measures to maintain the stability and safety of the structures.

This approach enhances our understanding of the TSFs' behaviour and helps us optimize our risk management systems to check the highest level of safety and performance.

At the time of this disclosure, the deformation models were in progress.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets.”

Assessment Outcome

- 🟡 [Partially Meets this Requirement](#)



Requirement 4.6 - Self-Assessment Rating Justification

Identify and address brittle failure modes with conservative design criteria, independent of trigger mechanisms, to minimise their impact on the performance of the tailings facility.

✔ Requirement 4.6.A

Criteria

An assessment of the potential for brittle failure modes is documented, and the analyses are addressed in the Design Basis Report (DBR).

Discussion

Ensuring the integrity and resilience of our tailings facilities is paramount, and we have taken comprehensive measures to address the potential impact of brittle failure modes.

The Engineer of Record for the Tarkwa mine has prepared a detailed Design Basis Report for TSF 1, 2, and 3. This report is a comprehensive reference document outlining the tailings facilities' fundamental principles, design considerations, and risk assessments. As part of this report, the assessment of brittle failure modes has been thoroughly documented.

To check a robust evaluation, the credibility of brittle failure modes was rigorously examined through a Potential Failure Mode Assessment (PFMA). This exercise involved a review of brittle failure mechanisms independently of any specific trigger mechanisms. By adopting a conservative approach, we aim to minimize the impact of brittle failure modes on the overall performance of the tailings facility.

The identification and mitigation of brittle failure modes were incorporated into the design process by applying conservative design criteria, i.e., low residual shear strength ratio values. These criteria are designed to address brittle failure modes proactively, minimizing their potential consequences. For TSFs 1 and 2, toe buttresses were constructed to mitigate the potential risk against brittle failure modes.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 4.7 - Self-Assessment Rating Justification

Existing tailings facilities shall conform with the Requirements under Principle 4, except for those aspects where the Engineer of Record (EOR), with review by the ITRB or a senior independent technical reviewer, determines that the upgrade of an existing tailings facility is not viable or cannot be retroactively applied. In this case, the Accountable Executive shall approve and document the implementation of measures to reduce both the probability and the consequences of a tailings facility failure in order to reduce the risk to a level as low as reasonably practicable (ALARP). The basis and timing for addressing the upgrade of existing tailings facilities shall be risk-informed and carried out as soon as reasonably practicable.

✔ Requirement 4.7.A

Criteria

Existing tailings facilities shall conform with the Requirements under Principle 4, except for those aspects where the Engineer of Record (EOR), with review by the ITRB or a senior independent technical reviewer, as appropriate, determines that the upgrade of an existing tailings facility is not required, or viable, or cannot be retroactively applied.

Discussion

Our top priority is to confirm the safety and integrity of our existing tailings facilities. We adhere to the Requirements under Principle 4, which define the necessary standards for these facilities. At the Tarkwa mine, our TSFs 1, 2, and 3 were originally classified as extreme, and as a result, they were designed to withstand extreme loading conditions and fully satisfy the requirements outlined in Principle 4. These facilities were specifically designed to accommodate the most extreme loading conditions and include allowances for climate change. Therefore, future upgrades are deemed not to be required.

The Responsible Tailings Facility Engineer and the Tarkwa Tailings Stewardship team regularly update the Accountable Executive to promote ongoing accountability. In quarterly meetings, the progress towards the design and management of the facilities is thoroughly discussed, ensuring transparency and oversight by the executive team.

As part of our commitment to continuous improvement in tailings management, two facilities are transitioning from upstream to downstream. This strategic shift demonstrates our heightened dedication to enhanced tailings management practices and underscores our commitment to stewardship.

After completing further technical studies, our facilities have been evaluated and are now rated as having 'Very High' Consequence Classifications. Consequently, the design of these facilities has been enhanced to withstand more robust loading conditions than originally anticipated. These improvements further reinforce the safety measures in place and provide an extra layer of protection.

Therefore, Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✔ [Meets this Requirement](#)



— Requirement 4.7.B

Criteria

Suppose the condition in (a.) above applies. In that case, the Accountable Executive shall approve and document the implementation of measures to reduce the probability and the consequences of a tailings facility failure to reduce the risk to a level as low as reasonably practicable (ALARP).

Discussion

The Accountable Executive (AE) continues to actively approve implementing measures to reduce the probability and consequences of a tailings facility failure, aiming to minimize the risk to a level as low as reasonably practicable. (ALARP) Measures to date include enabling a large, global interdisciplinary team and endorsing the work completed by the Engineer of Record (EoR). Additionally, the AE approved the transition to downstream raising and buttressing efforts for TSF 1 and TSF 2.

However, as extreme loading conditions have been integrated into the design of the facility, an upgrade is not required, and the condition in (a.) above is not applicable.

Therefore, Gold Fields has ranked this Requirement as “Not applicable.”

Assessment Outcome

- — Not Applicable



— Requirement 4.7.C

Criteria

The basis and timing for addressing upgrading existing tailings facilities shall be risk-informed and carried out as soon as reasonably practicable.

Discussion

Our approach to upgrading existing tailings facilities is risk-informed and prioritizes timely action. At the Tarkwa mine, TSF 1 and TSF 2 are operational and transitioning to downstream raised facilities to support future raises. Comprehensive evaluations, including consideration of extreme loading conditions, determined that future upgrades for TSF 1, 2, and 3 are not required.

Nevertheless, it is important to emphasize that all decisions related to tailings management at Gold Fields are based on a thorough assessment of risks. We remain committed to promptly implementing necessary measures and aligning with industry best practices to minimize potential risks as much as reasonably practicable.

Therefore, Gold Fields has ranked this Requirement as “Not applicable.”

Assessment Outcome

- — Not Applicable



Requirement 4.8 - Self-Assessment Rating Justification

The EOR shall prepare a Design Basis Report (DBR) that details the design assumptions and criteria, including operating constraints, and that provides the basis for the design of all phases of the tailings facility lifecycle. The DBR shall be reviewed by the ITRB or senior independent technical reviewer. The EOR shall update the DBR every time there is a material change in the design assumptions, design criteria, design or knowledge base and confirm internal consistency among these elements.

✔ Requirement 4.8.A

Criteria

The EOR shall prepare a Design Basis Report (DBR) that details the design assumptions and criteria, including operating constraints, and that provides the basis for the design of all phases of the tailings facility lifecycle.

Discussion

Our Engineer of Record partner has prepared a comprehensive Design Basis Report (DBR) for TSF 1, 2, and 3. This report is a detailed documentation of the design assumptions, criteria, and operating constraints that form the foundation for designing all phases of the tailings facility's lifecycle.

To check the robustness and credibility of the DBR, it has undergone review by the Independent Tailings Review Board (ITRB) in June 2023.

Through the diligent preparation and review of the Design Basis Report, we strive to establish a solid framework that guides the design and operation of our tailings facilities, fostering safety, sustainability, and responsible practices.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 4.8.B

Criteria

The ITRB or senior independent technical reviewer shall review the DBR.

Discussion

Our Engineer of Record partner has prepared a comprehensive Design Basis Report (DBR) for TSF 1, 2, and 3, covering all stages of the facility's lifecycle. The DBR serves as a crucial document that outlines the design assumptions, criteria, and operating constraints, providing a solid foundation for the design and operation of our tailings facilities. It confirms that our facilities adhere to rigorous standards and best practices, promoting safety, sustainability, and responsible practices.

To maintain the currency and accuracy of the DBR, the team will prepare an update whenever there are material changes in design assumptions, criteria, or knowledge base.

The DBR has undergone a thorough review by the Independent Tailings Review Board (ITRB) in June 2023, which undertakes reviews on an annual basis. This external assessment helps validate our approach, providing valuable insights and recommendations to further strengthen our commitment to safety and responsible tailings management.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



✔ Requirement 4.8.C

Criteria

The EOR shall update the DBR whenever there is a material change in the design assumptions, design criteria, design or knowledge base and confirm internal consistency among these elements.

Discussion

In 2023, our Engineer of Record partner diligently prepared the Design Basis Report (DBR) for TSF 1, 2, and 3. This comprehensive document outlines the design assumptions, criteria, and operating constraints that form the foundation for designing our tailings facilities.

The DBR underwent a thorough review by the Independent Tailings Review Board (ITRB) in June 2023. This external assessment checks the credibility and reliability of our design processes, promoting transparency and accountability.

To maintain the currency and accuracy of the DBR, our team is committed to updating the document whenever there are material changes in design assumptions, design criteria, design, or the knowledge base. This ongoing process ensures that the DBR remains updated and internally consistent, aligning with evolving needs and industry standards.

Whenever a change to the TSF is proposed, the "Management of Change" procedure is triggered, requiring a thorough assessment of the potential impact and implications by all stakeholders. As part of this process, the Design Basis Report (DBR) will be updated in the long term to reflect these changes, ensuring that the DBR remains accurate and aligned with the evolving nature of our TSF.

Therefore, Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✔ Meets this Requirement



GISTM Principle 05

Develop a Robust Design That Integrates the Knowledge Base and Minimises the Risk of Failure to People and the Environment for All Phases of the Tailings Facility Lifecycle, Including Closure and Post-Closure.

Principle 05 – Self-Assessment Outcome

The Tarkwa mine has three TSFs with a Very High Consequence Classification. A summary of the self-assessment outcome for Principle 05 of the GISTM is presented in Table 10 below. Further information specific to each requirement part is provided in subsequent sections of this report.

Table 10: Principle 05 – Self-Assessment Outcome Summary

Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
5.1	A	For new tailings facilities, the design incorporates the outcomes of the alternatives analysis (as per Requirement 3.2).	–	–	–
	B	For expansions to existing facilities, assess the outcomes of periodic reviews of potential refinements to tailings technologies and design approaches (as per Requirement 3.2)	✓	✓	✓
	C	Where the design differs from the alternatives analysis, a rationale incorporates the goal of minimising risks to people and the environment throughout the tailings facility lifecycle.	–	–	–
5.2	A	A robust design that considers the following: – The technical, social, environmental, and local economic context of the tailings facility. – The Consequence Classification, site conditions, water management, mine plant operations, tailings operational and construction issues. – The design demonstrates the feasibility of safe closure of the tailings facility	✓	✓	✓
	B	The design is reviewed and updated as performance and site data become available throughout the tailings facility lifecycle and/or in response to material changes.	✓	✓	✓
5.3	A	A water management plan that considers the knowledge base, the mine plan for the current state of the tailings facility lifecycle, upstream and downstream hydrological and hydrogeological basins, and the potential for climate change.	⚠	⚠	⚠



	B	A water balance model that considers the overall water management plan.	✓	✓	✓
	C	The water management plan and water balance address the safety of the tailings facility and the prevention of unintentional releases.	✓	✓	✓
5.4	A	Potential failure modes to the structure, its foundation, abutments, reservoir (tailings deposit and pond), Reservoir rim, and appurtenant structures are identified, categorized by risk assessments, and addressed through preventative measures incorporated into the design and/or through operational controls.	⚠	⚠	⚠
	B	Risk assessments are used to inform the design to minimise risk to ALARP. Risk assessments should be used to determine whether the potential credible failure mode(s)/scenarios are credible.	✓	✓	✓
5.5	A	Designs are conducted for each stage of construction of the tailings facility, including but not limited to start-up, partial raises and interim configurations, final raise, and all closure stages before construction. The level of detail of the design should be commensurate with the phase of the tailings facility lifecycle.	✓	✓	✓
5.6	A	The closure design meets all the Requirements of the Standard with sufficient detail to demonstrate the feasibility of the closure scenario.	⚠	⚠	⚠
	B	The closure design allows the implementation of elements of the closure design during construction and operation, as appropriate.	⚠	⚠	⚠
	C	The design includes progressive closure and reclamation during operations.	⚠	⚠	⚠
5.7	A	The Accountable Executive (AE) shall confirm that the design satisfies ALARP for a proposed new tailings facility.	–	–	–
	B	Approve additional reasonable steps that may be taken downstream to reduce potential consequences for people and the environment.	–	–	–



	C	Explain and document the decisions with respect to ALARP and additional consequence-reduction measures.	⊖	⊖	⊖
	D	For an existing tailings facility, the Accountable Executive, at the time of every DSR or at least every five years, shall confirm that the design satisfies ALARP.	⊕	⊕	⊕
	E	Seek to identify and implement additional reasonable steps that may be taken to further reduce potential consequences to people and the environment.	✓	✓	✓
	F	Explain and document the decisions with respect to ALARP and additional consequence reduction measures in consultation with external parties as appropriate.	⊕	⊕	⊕
5.8	A	Operators who have a facility with a credible failure mode, as per the breach analysis, have exhausted measures to reduce consequences and cannot avoid pre-emptive resettlement.	⊕	⊕	⊕
	B	The operator has conformed to international standards for involuntary resettlement.	⊖	⊖	⊖



Requirement 5.1 - Self-Assessment Rating Justification

For new tailings facilities, incorporate the outcome of the multi-criteria alternatives analysis including the use of tailings technologies in the design of the tailings facility. For expansions to existing tailings facilities, investigate the potential to refine the tailings technologies and design approaches with the goal of minimising risks to people and the environment throughout the tailings facility lifecycle.

— Requirement 5.1.A

Criteria

For new tailings facilities, the design incorporates the outcomes of the alternatives analysis (as per Requirement 3.2).

Discussion

Gold Fields incorporates multi-criteria analyses at the onset of any new tailings facility project. These analyses help us assess various alternatives and consider different tailings technologies during the design phase.

By incorporating this comprehensive evaluation process, we aim to minimize risks to people and the environment throughout the lifecycle of our tailings facilities. However, since there are no new tailings facilities at the Tarkwa mine, this requirement is not applicable.

Therefore, Gold Fields has ranked this Requirement as “Not applicable.”

Assessment Outcome

- — **Not Applicable**



✔ Requirement 5.1.B

Criteria

For expansions to existing facilities, assess the outcomes of periodic reviews of potential refinements to tailings technologies and design approaches (as per Requirement 3.2).

Discussion

The TSFs at the Tarkwa Mine undergo comprehensive annual reviews by the Independent Technical Review Board, with additional senior independent reviewers as needed. The outcomes of these reviews are integrated into the work plan and action tracker of the Tarkwa Tailings Stewardship team, which is monitored fortnightly.

Furthermore, the Corporate Tailings Group reviews available tailings technologies annually, including ongoing trials at other Gold Fields mines. Any relevant findings from these technological reviews are promptly shared with the Tarkwa Tailings Stewardship team. Based on these practices, Gold Fields confirms that it meets the requirement for assessing potential refinements to tailings technologies and design approaches for expansions to existing facilities.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



— Requirement 5.1.C

Criteria

Where the design differs from the alternatives analysis, a rationale incorporates the goal of minimising risks to people and the environment throughout the tailings facility lifecycle.

Discussion

Since no new tailings storage facilities exist at the Tarkwa mine, a multi-criteria analysis (MCA) has not been conducted specifically for the existing TSFs.

An MCA was performed as part of a mine-wide transformation study, which assessed and evaluated various technologies to minimize future risks associated with tailings. While this MCA is a comprehensive technology review, it is not directly incorporated into the current designs.

Gold Fields has determined that this requirement is not applicable in the context of the current TSF portfolio.

Therefore, Gold Fields has ranked this Requirement as “Not applicable.”

Assessment Outcome

- — Not Applicable



Requirement 5.2 - Self-Assessment Rating Justification

Develop a robust design that considers the technical, social, environmental and local economic context, the tailings facility Consequence Classification, site conditions, water management, mine plant operations, tailings operational and construction issues, and that demonstrates the feasibility of safe closure of the tailings facility. The design should be reviewed and updated as performance and site data become available and in response to material changes to the tailings facility or its performance.

✔ Requirement 5.2.A

Criteria

A robust design that considers the following:

- The technical, social, environmental, and local economic context of the tailings facility.
- The Consequence Classification, site conditions, water management, mine plant operations, tailings operational and construction issues.
- The design demonstrates the feasibility of the safe closure of the tailings facility.

Discussion

Our Engineer of Record (EoR) partner is crucial to the Tarkwa Tailings Stewardship team. Together, we have developed robust designs that carefully consider the tailings facility's technical, social, environmental, and local economic context. Our designs also consider factors such as the Consequence Classification, site conditions, water management, mine plant operations, and tailings operational and construction issues.

Importantly, our designs demonstrate the feasibility of the safe closure of the tailings facility, ensuring long-term environmental and community safety. These designs have been supported by comprehensive technical studies and are documented in a series of approved Design Reports, which comply with local regulatory requirements.

To promote the highest quality and adherence to industry standards, these Design Reports undergo thorough reviews by the interdisciplinary Tarkwa Tailings Stewardship team and the Independent Technical Review Board annually. This collaborative and rigorous approach checks that our designs are continuously evaluated and updated as performance and site data become available or in response to any material changes to the tailings facility.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 5.2.B

Criteria

The design is reviewed and updated as performance and site data become available throughout the tailings facility lifecycle and/or in response to material changes.

Discussion

The Tarkwa Tailings Stewardship team is committed to actively monitoring and maintaining the performance of the tailings facilities. We have established a comprehensive monitoring and reporting system to check ongoing safety and effectiveness.

Regular visual inspections are conducted throughout the tailings facilities, and we have installed a network of instruments to collect site-specific data. The findings from these inspections and detailed analysis of monitoring data are regularly reviewed by our Engineer of Record partner (EoR). The results and insights are documented in a monthly TSF performance monitoring dashboard.

In addition to the monthly dashboard, the Responsible Tailings Facility Engineer prepares a quarterly TSF performance report, which covers a wide range of factors beyond material dam safety monitoring. At the same time, the EoR prepares a separate quarterly report specifically focusing on material dam safety monitoring.

The Tarkwa Tailings Stewardship team carefully examines the monthly dashboards and performance monitoring reports. Should any concerns or material changes be identified, we promptly initiate the "Management of Change" procedure, which allows us to take necessary actions to address the concerns. This may involve updating the design to check continued safety and compliance.

Our approach to tailings management is clearly outlined in the Tarkwa Tailings Management Plan. This plan provides a comprehensive framework for managing and mitigating risks, ensuring the safe and responsible operation of the tailings facilities.

Therefore, Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✔ Meets this Requirement



Requirement 5.3 - Self-Assessment Rating Justification

Develop, implement and maintain a water balance model and associated water management plans for the tailings facility, taking into account the knowledge base, including climate change, upstream and downstream hydrological and hydrogeological basins, the mine site, mine planning and overall operations and the integrity of the tailings facility throughout its lifecycle. The water management programme must be designed to protect against unintentional releases.

Requirement 5.3.A

Criteria

A water management plan that considers the knowledge base, the mine plan for the current state of the tailings facility lifecycle, upstream and downstream hydrological and hydrogeological basins, and the potential for climate change.

Discussion

At Gold Fields, we prioritize responsible water stewardship and have developed a comprehensive Water Stewardship Strategy for 2020-2025. This strategy is supported by three-year water management plans that guide our actions.

Our water stewardship strategy is built on three pillars:

- **Security of supply:** We proactively assess and secure water resources for the entire lifespan of our operations. We integrate water planning into our operational management, make informed decisions based on water security risk profiles, and update plans as needed. Each operation has an integrated life-of-mine water security plan in its business strategy.
- **Water efficiency:** We continuously strive to reduce freshwater demand and optimize water usage. This enables us to prepare for potential water supply challenges and check sufficient supply to our operating areas.
- **Catchment management:** We actively manage external water risks to our business and neighbouring stakeholders. We collaborate with relevant stakeholders to address common challenges and identify opportunities for sustainable water management.

In line with our commitment to water stewardship, we are currently developing a 2030 Water Stewardship Strategy, scheduled for completion in the second half of 2023. This strategy will help us achieve our two water-related ESG targets for 2030.

At a site level, the Tailings Stewardship team works closely with the water stewardship champion to update and enhance our knowledge base. We have conducted comprehensive climate change baseline studies and developed variation models. The engineer of record has reviewed these studies, and the findings have been integrated into the mine-wide water balance model.

Furthermore, our engineer of record partner has prepared a detailed hydrogeological model, supported by a comprehensive site investigation, which underwent a review by the Independent Technical Review Board in June 2023. This model will contribute to improving our knowledge base regarding the tailings facility.

As part of our efforts, we have installed a water clarifier on the tailings storage facilities at Tarkwa. This clarifier enables us to repurpose and reuse water, highlighting our commitment to sustainable water management.



At the time of this disclosure, the water management plan is being updated to incorporate recommendations from the ITRB and the recently completed hydrogeological model.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets.”

Assessment Outcome

-  Partially Meets this Requirement



✔ Requirement 5.3.B

Criteria

A water balance model that considers the overall water management plan.

Discussion

At Tarkwa, a dedicated Water Champion oversees the site-wide water balance. This water balance is developed in accordance with our group-wide strategy, as outlined in Requirement 5.3.A. It has undergone rigorous reviews by the Independent Technical Review Board (ITRB) in June 2022 and June 2023.

The water balance considers the latest information on site conditions and incorporates insights from our recently completed climate change studies. Considering these factors, we check that our water management plan is robust and aligned with our commitment to responsible water stewardship.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



✔ Requirement 5.3.C

Criteria

The water management plan and water balance address the safety of the tailings facility and the prevention of unintentional releases.

Discussion

At Tarkwa, we prioritize the safety of our tailings facility and take proactive measures to prevent unintentional releases. Our water management plan and water balance are integral to this effort.

The Tarkwa Water Balance is regularly calibrated every month by our external engineer of record (EoR) partner. This dedicated resource checks that the water balance is up-to-date, checks that water within the system is effectively managed and reports back to the Tarkwa Tailings Stewardship team. In addition, the annual review by the Independent Technical Review Board (ITRB) provides an extra layer of oversight to prevent unintended releases.

We recently installed a clarifier system at the Tarkwa mine to further enhance our water management practices. This system allows us to recover water from the TSFs and facilitates its reuse and repurposing. These initiatives collectively contribute to the safety and integrity of our tailings facility.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 5.4 - Self-Assessment Rating Justification

Address all potential failure modes of the structure, its foundation, abutments, reservoir (tailings deposit and pond), reservoir rim and appurtenant structures to minimise risk to ALARP. Risk assessments must be used to inform the design.

Requirement 5.4.A

Criteria

Potential failure modes to the structure, its foundation, abutments, reservoir (tailings deposit and pond), Reservoir rim, and appurtenant structures are identified, categorized by risk assessments, and addressed through preventative measures incorporated into the design and/or through operational controls.

Discussion

The potential failure modes related to the structures of our tailings facility have undergone a thorough assessment. In 2021, our Engineer of Record (EoR) partner facilitated a workshop with the Tarkwa Tailings Stewardship team to conduct a comprehensive Potential Failure Modes Analysis (PFMA). This analysis considered all design aspects, including structures, geometry, foundations, abutments, tailings deposit and pond, and other relevant components.

The PFMA was a valuable tool in identifying and prioritizing potential failure modes. The outcomes of the PFMA were carefully reviewed and revised by the Independent Technical Review Board (ITRB) in both June 2022 and June 2023, confirming a robust evaluation process.

While most failure modes have been effectively managed, there are a few remaining modes with controls currently in progress. For example, TSFs 1 and 2 are proactively transitioning to downstream construction. Additionally, the team is working through a quantitative risk analysis (QRA) to better define the likelihood of any failure event occurring quantitatively. It should be noted that we have robust designs in place, which our ITRB has checked. The transition to downstream construction and development of buttress works eliminates potential modes only. These activities have no bearing on our current operational performance.

We have made substantial progress, but at the time of this disclosure, with construction works actively underway, the team has ranked this requirement as “Partially Meets.”

Therefore, Gold Fields has ranked this Requirement as “Partially Meets.”

Assessment Outcome

-  **Partially Meets this Requirement**



✔ Requirement 5.4.B

Criteria

Risk assessments are used to inform the design to minimise risk to ALARP. Risk assessments should be used to determine whether the potential credible failure mode(s)/scenarios are credible.

Discussion

The Tarkwa Tailings Stewardship team has implemented a comprehensive approach to managing tailings risks, outlined in the Tarkwa Tailings Risk Management Plan (RMP). This plan guides our efforts to minimize risks associated with the TSFs.

Our risk management process involves several key steps. First, we identified principal hazards and evaluated potential failure modes through a rigorous assessment. To determine the credibility of potential failure modes, we employed our risk assessment process and captured it in the Potential Failure Modes Analysis (PFMA) register.

We then developed a TSF risk register, which records all risks associated with the TSFs. The TSF risk register is regularly updated and maintained in the Tarkwa TSF Risk Workbook. In December 2022, our interdisciplinary Tarkwa Tailings Stewardship team convened to update the risk register. During this process, we considered material dam safety and broader factors such as human rights, societal considerations, and environmental impacts. We aim to address risks comprehensively and holistically.

To address risk, we established a series of critical controls and created a series of critical control bowties that correspond to Safe Work Instructions, providing clear guidelines for our staff to check that risk levels are kept as low as reasonably practicable (ALARP).

Through our robust risk management practices, we are committed to ensuring that our tailings facility operates with the highest level of safety, minimizing risks to the extent possible and adhering to industry best practices.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 5.5 - Self-Assessment Rating Justification

Develop a design for each stage of construction of the tailings facility, including but not limited to start-up, partial raises and interim configurations, final raise, and all closure stages.

✔ Requirement 5.5.A

Criteria

Designs are conducted for each stage of construction of the tailings facility, including but not limited to start-up, partial raises and interim configurations, final raise, and all closure stages before construction. The level of detail of the design should be commensurate with the phase of the tailings facility lifecycle.

Discussion

Detailed designs for each stage of construction of the tailings facility, including partial raises, interim configurations, and final raises, have been prepared by our Engineer of Record (EoR) partner. These designs have undergone a comprehensive review by the Independent Technical Review Board. (ITRB)

To confirm the adequacy of the designs and address any gaps in historical information, the Tarkwa Tailings Stewardship team commissioned the EoR to conduct new site investigations and perform a Dam Safety Review (DSR). This review focused on assessing the stability of the facility based on up-to-date information and industry standards.

By incorporating these measures, we aim to check that the tailings facility's design aligns with each construction stage's requirements. The level of detail in the design is appropriately tailored to the corresponding phase of the tailings facility's lifecycle. This approach confirms that our construction activities are conducted in a safe and responsible manner, with careful consideration of long-term closure requirements.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 5.6 - Self-Assessment Rating Justification

Design the closure phase in a manner that meets all the Requirements of the Standard with sufficient detail to demonstrate the feasibility of the closure scenario and to allow implementation of elements of the design during construction and operation as appropriate. The design should include progressive closure and reclamation during operations.

🟡 Requirement 5.6.A

Criteria

The closure design meets all the Requirements of the Standard with sufficient detail to demonstrate the feasibility of the closure scenario.

Discussion

A Closure Plan has been prepared for the Tarkwa mine as part of our commitment to responsible mining practices. Our dedicated Sustainable Development Team regularly updates this plan on an annual basis. Each design stage incorporates closure, including raises, interim configurations, and the final raise. Our Engineer of Record (EOR) prepares these designs and is documented in detailed design reports submitted to the regulatory authorities.

A detailed closure design has been prepared for TSF 3, which is currently in the active closure phase. The Independent Technical Review Board (ITRB) and the EOR have recently thoroughly reviewed this design. Based on their recommendations, the closure design is currently being updated to address the recommendations made.

As this closure design is currently under review and the TSF 1 and 2 closure design will also be updated to reflect the recommendations made, **Gold Fields has ranked this Requirement as “Partially Meets.”**

Assessment Outcome

- 🟡 Partially Meets this Requirement



Requirement 5.6.B

Criteria

The closure design allows the implementation of elements of the closure design during construction and operation, as appropriate.

Discussion

At Gold Fields, responsible mining practices are central to our operations, and we prioritize comprehensive closure planning to meet all the requirements of the Global Industry Standard on Tailings Management (GISTM). Our approach to closure phases for (TSFs is designed to check progressive closure and reclamation throughout our operations. This means we proactively plan for the gradual closure and restoration of the site while the mining and operational activities are still ongoing.

Our closure designs provide the necessary information to demonstrate the practicality of a closure scenario and have also received approval from the regulatory authorities. We carefully consider the implementation of closure elements, considering their suitability during both the construction and operation stages of the tailings facility. Factors like embankment slope geometry and long-term stability are among our considerations.

In line with Requirement 5.5.A, we have developed a dedicated Closure Plan specifically tailored to the Tarkwa mine. This plan undergoes regular updates by our dedicated Sustainable Development Team on an annual basis to check its ongoing effectiveness and alignment with best practices.

We incorporate closure considerations into our detailed designs throughout the design process, including raises, interim configurations, and the final raise. Our Engineer of Record (EOR) is responsible for preparing these designs, which are documented in detailed design reports.

Currently, TSF 3 is in the active closure phase, and we have developed a detailed closure design specifically for this facility. This design recently underwent a thorough review by the Independent Technical Review Board (ITRB) and our EOR. Based on their recommendations, we are updating the closure design to address the suggested improvements.

Considering the ongoing review of the closure design and the upcoming updates to TSF 1 and 2 closure designs, Gold Fields has ranked this Requirement as "Partially Meets." We have a robust closure plan and remain committed to actively reviewing and refining our closure designs to check that they align with the highest standards and industry recommendations.

Therefore, Gold Fields has ranked this Requirement as "Partially Meets."

Assessment Outcome

-  Partially Meets this Requirement



🟡 Requirement 5.6.C

Criteria

The design includes progressive closure and reclamation during operations.

Discussion

At Gold Fields, we have developed a dedicated Closure Plan specifically tailored to the Tarkwa mine, as described in Requirement 5.6.C. Our Sustainable Development Team regularly updates this plan to check its ongoing effectiveness and adherence to best practices.

Closure designs are documented in the design reports for embankment raises and interim, developed by our Engineer of Record (EOR) and submitted to the regulator. The designs include considerations for progressive closure and reclamation during operations.

Currently, TSF 3 is in the active closure phase, and we have prepared a detailed closure design specifically for this facility. The Independent Technical Review Board (ITRB) and our Engineer of Record (EOR) thoroughly reviewed the design. Based on their recommendations, we are updating the closure design to address the suggested improvements.

Given the ongoing review and upcoming updates to TSF 1 and 2 closure designs, Gold Fields has ranked this Requirement as "Partially Meets."

We have a robust closure plan and remain committed to actively reviewing and refining our closure designs to check that they align with the highest standards and industry recommendations.

Therefore, Gold Fields has ranked this Requirement as "Partially Meets."

Assessment Outcome

- 🟡 Partially Meets this Requirement



Requirement 5.7 – Self-Assessment Rating Justification

For a proposed new tailings facility classified as ‘High’, ‘Very High’ or ‘Extreme’, the Accountable Executive shall confirm that the design satisfies ALARP and shall approve additional reasonable steps that may be taken downstream, to further reduce potential consequences to people and the environment. The Accountable Executive shall explain and document the decisions with respect to ALARP and additional consequence reduction measures. For an existing tailings facility classified as ‘High’, ‘Very High’ or ‘Extreme’, the Accountable Executive, at the time of every DSR or at least every five years, shall confirm that the design satisfies ALARP and shall seek to identify and implement additional reasonable steps that may be taken to further reduce potential consequences to people and the environment. The Accountable Executive shall explain and document the decisions with respect to ALARP and additional consequence reduction measures, in consultation with external parties as appropriate.

– Requirement 5.7.A

Criteria

The Accountable Executive (AE) shall confirm that the design satisfies ALARP for a proposed new tailings facility.

Discussion

There are no new proposed tailings facilities at the Tarkwa mine, so the Accountable Executive has ranked this requirement as 'Not Applicable' in our operations. However, it's worth noting that the Accountable Executive actively participates in the Tarkwa Tailings Stewardship team and is key in confirming that any future proposed designs uphold a risk profile that is As Low As Reasonably Practicable (ALARP).

Therefore, Gold Fields has ranked this Requirement as “Not applicable.”

Assessment Outcome

- – Not Applicable



— Requirement 5.7.B

Criteria

For a proposed new tailings facility, the Accountable Executive (AE) shall approve additional reasonable steps that may be taken downstream of the TSF to further reduce potential consequences to people and the environment.

Discussion

As there are currently no new proposed tailings facilities at the Tarkwa mine, our team has ranked this requirement as 'Not Applicable'. However, in the event of future facility designs, the Accountable Executive (AE) would approve additional reasonable measures that can be implemented downstream to further mitigate potential consequences to people and the environment. The AE's decisions regarding the As Low As Reasonably Practicable (ALARP) principle and any additional steps taken would also be carefully explained and documented.

Therefore, Gold Fields has ranked this Requirement as “Not applicable.”

Assessment Outcome

- — Not Applicable



— Requirement 5.7.C

Criteria

For a proposed new tailings facility, the Accountable Executive (AE) shall explain and document the decisions with respect to ALARP and additional consequence reduction measures.

Discussion

As there are currently no new proposed tailings facilities at the Tarkwa mine, our team has ranked this requirement as 'Not Applicable'. However, in the event of future facility designs, the Accountable Executive (AE) would commit to explaining and documenting the decisions made regarding the As Low As Reasonably Practicable (ALARP) principle and any additional measures taken to reduce potential consequences to people and the environment.

Therefore, Gold Fields has ranked this Requirement as “Not applicable.”

Assessment Outcome

- — Not Applicable



🟡 Requirement 5.7.D

Criteria

For an existing tailings facility, the Accountable Executive, at the time of every DSR or at least every five years, shall confirm that the design satisfies ALARP.

Discussion

Our Engineer of Record (EoR) partner conducted a Dam Safety Review (DSR) in 2022, and a summary of the findings can be found in the Tarkwa Plain Language Summary section of the Gold Fields Annual Tailings Disclosure report. To check that the design meets the As Low As Reasonably Practicable (ALARP) risk management approach, the EoR is currently finalizing a quantitative risk analysis (QRA) in conjunction with previous technical studies and a failure mode evaluation assessment conducted over the past three years.

We understand the risk status of our TSFs and have implemented robust governance, management, design, and risk systems. The Accountable Executive (AE) has been actively involved, providing support and staying informed routinely. The AE regularly meets with the Tarkwa Tailings Stewardship team and the engineer of record partner every quarter.

As we await the completion of the quantitative risk analysis (QRA), which will be instrumental in documenting that the design satisfies ALARP, this requirement is currently ranked as "Partially meets."

Therefore, Gold Fields has ranked this Requirement as "Partially Meets."

Assessment Outcome

- 🟡 Partially Meets this Requirement



✔ Requirement 5.7.E

Criteria

For an existing tailings facility, the Accountable Executive, at the time of every DSR or at least every five years, shall seek to identify and implement additional reasonable steps that may be taken further to reduce potential consequences to people and the environment.

Discussion

At Gold Fields, we prioritize safety and environmental protection. We conduct regular reviews of our existing tailings facility to maintain these standards. In 2022, our Engineer of Record (EOR) partner conducted a comprehensive Dam Safety Review (DSR) of our Tailings Storage Facilities (TSFs). We requested the EOR to identify and implement additional reasonable measures to further reduce potential consequences for people and the environment. They also assessed the performance of the TSFs considering current site conditions compared to the original design.

We are committed to continuously improving our design to meet the As Low As Reasonably Practicable (ALARP) standard. The Accountable Executive (AE) receives feedback from the EOR, which conducts regular reviews of the TSFs and the Independent Technical Review Board (ITRB), which conducts reviews annually. The AE carefully considers the recommendations from the Tarkwa Tailings Stewardship team and engages with external parties, as needed, to make informed decisions regarding ALARP and additional measures for risk reduction.

Given the active involvement of the AE with the Tarkwa Tailings Stewardship team and the commitment to implementing reasonable steps for risk reduction, this requirement is considered 'Meets'. We prioritize the safety of people and the environment and continually strive to enhance our practices to mitigate the potential impact of TSF failure.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



🟡 Requirement 5.7.F

Criteria

For an existing tailings facility, the Accountable Executive, at the time of every DSR or at least every five years, shall explain and document the decisions concerning ALARP and additional consequence reduction measures, in consultation with external parties as appropriate.

Discussion

As part of our commitment to safety and environmental protection, we regularly review our TSFs. In 2022, we conducted a comprehensive Dam Safety Review (DSR) through our Engineer of Record (EOR) partner to evaluate the performance and condition of each TSF.

Our Accountable Executive (AE) actively collaborates with the Tarkwa Tailings Stewardship team, engaging in quarterly sessions with the EOR and receiving annual recommendations from the Independent Technical Review Board. Together, we strive to identify and implement reasonable measures to minimize potential consequences in the event of a TSF failure.

We rely on detailed technical studies and evaluations to make well-informed decisions, such as the failure mode evaluation assessment (FMEA) and the quantitative risk analysis (QRA). While we are currently awaiting the completion of the QRA conducted by our EOR partner, we have already taken proactive steps to meet the As Low As Reasonably Practicable (ALARP) standard and address recommendations outlined in the FMEA process. Our primary proactive focus has been on transitioning our TSFs downstream to mitigate potential future risks. Construction is actively underway under the supervision of our EOR partner.

Although formal documentation of our decisions regarding ALARP and additional consequence reduction measures are still pending, our team has made substantial progress. We have utilized preliminary assessments to guide our actions and check the ongoing safety and environmental integrity of our TSFs.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets.”

Assessment Outcome

- 🟡 Partially Meets this Requirement



Requirement 5.8 – Self-Assessment Rating Justification

Where other measures to reduce the consequences of a tailings facility credible failure mode as per the breach analysis have been exhausted, and pre-emptive resettlement cannot be avoided, the Operator shall demonstrate conformance with international standards for involuntary resettlement.

🔍 Requirement 5.8.A

Criteria

Operators who have a facility with a credible failure mode, as per the breach analysis, have exhausted measures to reduce consequences and cannot avoid pre-emptive resettlement.

Discussion

The Tarkwa Tailings Stewardship engaged the Engineer of Record to perform an extensive scope of work, including, but not limited to:

- A potential failure mode analysis (PFMA).
- A comprehensive site investigation involving the international shipment of sampled materials. This process can take 3-6 months for a site as complex as Tarkwa.
- Advanced geotechnical testing at international, accredited laboratories can take 3-18 months, depending on the nature and complexity of the testing required.
- Stability modelling based on parameters obtained from material testing can take between 4 and 6 months to develop.
- Deformation analyses performed based on material properties obtained from material testing, which can take between 6 and 12 months to develop.
- The design of critical controls can only be developed upon completion of all technical studies.
- Repeats of the PFMA to screen out the credibility of failure modes following the completion of advanced technical studies.

Since introducing the Global Industry Standard on Tailings Management (GISTM) in 2020, our team has diligently implemented its requirements over three years. We have made remarkable progress in completing the work packages listed and have screened out the majority of failure modes associated with the TSFs at the site. However, we are currently evaluating the remaining three potential failure modes, which will be further defined through a nearing completion quantitative risk analysis (QRA).

Upon receiving the completed QRA, our team will thoroughly review the PFMA to promptly implement measures to eliminate credible failure modes or minimize consequences to promote our community's and the environment's safety.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets.”

Assessment Outcome

- 🟡 **Partially Meets this Requirement**



— Requirement 5.8.B

Criteria

The Operator has conformed to international standards for involuntary resettlement.

Discussion

Regarding our TSFs, we have not encountered any situations requiring voluntary or involuntary resettlement. Therefore, the team has determined that this requirement does not apply to our operations.

Therefore, Gold Fields has ranked this Requirement as “Not applicable.”

Assessment Outcome

- — Not Applicable



GISTM Principle 06

Plan, Build and Operate the Tailings Facility to Manage Risk at All Phases of the Tailings Facility Lifecycle, Including Closure and Post-Closure.

Principle 06 – Self-Assessment Outcome

The Tarkwa mine has three TSFs with a Very High Consequence Classification. A summary of the self-assessment outcome for Principle 06 of the GISTM is presented in Table 11 below. Further information specific to each requirement part is provided in subsequent sections of this report.

Table 11: Principle 06 – Self-Assessment Outcome Summary

Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
6.1	A	The design intent, established in the DBR, is understood and implemented for construction, operation and closure for each phase of the tailings facility lifecycle.	✓	✓	✓
	B	Construction and operating personnel assigned to tailings-related tasks are qualified based on the qualifications defined in the Tailings Management System (TMS).	⚠	⚠	⚠
	C	Throughout the tailings facility lifecycle, the appropriate methodology, equipment and procedures, and data acquisition methods are used and incorporated into the TMS and the Environmental and Social Management System (ESMS) for the mine and associated infrastructure.	✓	✓	✓
	D	The TMS and the ESMS are implemented during construction, operation, and closure.	✓	✓	✓
6.2	A	Quality Control (QC) and Quality Assurance (QA) programmes are established to monitor the quality and adequacy of the construction and operation processes.	✓	✓	✓
	B	A CDIV programme that confirms that the design intent is met if site conditions vary from design assumptions.	✓	✓	✓
6.3	A	Construction Records Reports (CRR) 1,2,3 are up to date and are prepared when there is a material change to the tailings facility, infrastructure, or monitoring system.	✓	✓	✓
	B	The RTFE and the EOR sign the CRRs.	✓	✓	✓
6.4	A	An Operation, Maintenance and Surveillance (OMS) Manual is implemented, covers each tailings facility and includes the	✓	✓	✓



		requirements for the OMS activities necessary for effective risk management based on best practice.			
	B	The OMS is reviewed annually or more frequently if there are any updates following a material change as defined by the Operator.	✓	✓	✓
	C	The OMS provides clear context and includes the inspection, maintenance and monitoring of the requirements identified, including critical controls for safe operation and is reviewed for effectiveness.	✓	✓	✓
	D	The RTFE checks that personnel involved in the TMS have access to the OMS Manual.	✓	✓	✓
	E	The RTFE should provide access to training to all levels of personnel involved in the TMS.	✗	✗	✗
6.5	A	A Change Management System has been established.	✓	✓	✓
	B	The Change Management System includes processes for identifying changes and processes for evaluating, reviewing, approving and documenting changes throughout the facility lifecycle.	✓	✓	✓
	C	The Change Management System addresses and documents material changes to design, construction, operations, or monitoring.	✓	✓	✓
	D	A DAR is periodically prepared and updated by the EOR, addressing the cumulative impact of material changes on the as-constructed facility.	✓	✓	✓
	E	Recommendations from the DAR have been implemented through updates to the construction, operations, design, DBR, OMS Manual and monitoring programme.	✓	✓	✓
	F	The Accountable Executive has approved the DAR	✗	✗	✗
6.6	A	Reviews of new and emerging technologies and approaches for tailings management are carried out considering the tailings facility lifecycle.	✓	✓	✓



	B	Material results of the reviews have been incorporated into refinements of the facility design, construction and operations.	✓	✓	✓
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Requirement 6.1 – Self-Assessment Rating Justification

Build, operate, monitor, and close the tailings facility according to the design intent at all phases of the tailings facility lifecycle, using qualified personnel and appropriate methodology, equipment and procedures, data acquisition methods, the Tailings Management System (TMS) and the overall Environmental and Social Management System (ESMS) for the mine and associated infrastructure.

✔ Requirement 6.1.A

Criteria

The design intent, established in the DBR, is understood and implemented for construction, operation and closure for each phase of the tailings facility lifecycle.

Discussion

At the Tarkwa mine, we prioritize understanding and implementing the design intent established in the Design Basis Report (DBR) for each TSF 1, 2, and 3 lifecycles phase.

To confirm the integrity and effectiveness of our tailings facilities, the Engineer of Record (EoR) has developed a comprehensive DBR that outlines the design intent for the construction, operation, and closure of the facilities. The DBR is a crucial reference document that guides our approach to tailings management and checks consistency throughout the entire lifecycle.

In June 2023, the DBR underwent a thorough review by the Independent Technical Review Board (ITRB). The ITRB, comprised of independent experts in tailings management, provides valuable insights and recommendations to enhance our adherence to the design intent. This collaborative review reinforces our commitment to continuous improvement and the highest safety and environmental stewardship standards.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



🟡 Requirement 6.1.B

Criteria

Construction and operating personnel assigned to tailings-related tasks are qualified based on the qualifications defined in the Tailings Management System (TMS).

Discussion

At Gold Fields, we prioritize the safety and competency of our personnel involved in critical tailings-related roles, and we have implemented measures to check that their qualifications align with the expectations defined in our Tailings Management System (TMS).

Gold Fields has developed a comprehensive Tailings Management System encompassing a Tailings Management policy and the recently launched Gold Fields Tailings Management Standard. This Standard serves as a guideline for personnel working in critical roles related to tailings management and sets clear expectations for their qualifications and competencies.

At the operational level, the Tarkwa Tailings Stewardship team manages the training, competency, and qualification of construction and operating personnel engaged in tailings-related tasks. We have established a detailed competency training matrix to check compliance with the qualifications defined in the TMS.

This matrix outlines the key skills and competencies required of personnel involved in tailings management. It serves as a guide to assess and develop the qualifications of our team members. Currently, the competency matrix is being populated for all personnel involved in tailings management at the Tarkwa mine, and we are actively updating it to align with newly developed tailings training modules and Safe Work Instructions. (SWIs)

By continuously assessing and enhancing the qualifications of our personnel, we aim to foster a culture of expertise and responsibility in tailings management. Our commitment to ongoing training and development checks that our personnel have the necessary knowledge and skills to carry out their roles effectively and safely.

While we acknowledge that our competency matrix is still being implemented, we are confident in our commitment to meeting the qualifications defined in the TMS. We prioritize continuously improving our personnel's qualifications and remain dedicated to aligning with industry best practices in tailings management.

Through these measures, we strive to check that our personnel working on tailings-related tasks at the Tarkwa mine are qualified, competent, and capable of carrying out their responsibilities in accordance with the highest standards of safety, environmental stewardship, and operational excellence.

Therefore, Gold Fields has ranked this requirement as 'Partially Meets.'

Assessment Outcome

- 🟡 Partially Meets this Requirement



✔ Requirement 6.1.C

Criteria

Throughout the tailings facility lifecycle, the appropriate methodology, equipment and procedures, and data acquisition methods are used and incorporated into the TMS and the Environmental and Social Management System (ESMS) for the mine and associated infrastructure.

Discussion

At Gold Fields, we emphasise implementing appropriate methodologies, equipment, procedures, and data acquisition methods throughout every stage of the tailings facility lifecycle at the Tarkwa mine. Our commitment to excellence is demonstrated by integrating these elements into our company-wide Tailings Management System (TMS) and Environmental and Social Management System (ESMS).

To confirm adherence to this commitment, we have developed a comprehensive Tailings Management Standard and guidance framework for Tailings Management at Gold Fields. This standard and Framework, launched in 2023, outlines the methodology, equipment, procedures, and data acquisition methods used throughout any tailings facility's lifecycle. It is a valuable resource for our operations, including Tarkwa, and helps us maintain a consistent approach in tailings management across Gold Fields.

At an operational level, we have implemented a robust Tailings Management Plan, Risk Management Plan, and Operating Manual, which have been translated into a series of Safe Work Instructions (SWIs) for the Tarkwa TSFs. These documents provide detailed guidance to our personnel involved in tailings-related tasks, ensuring they have the necessary knowledge and tools to carry out their responsibilities safely and effectively.

Our Tarkwa Tailings Stewardship team is responsible for implementing the criteria set by the Gold Fields Tailings Management Standard methodologies, following the established procedures, and checking compliance with data acquisition protocols. The team maintain a detailed training and competency matrix to confirm that our personnel are well-equipped to carry out their roles and responsibilities per our high standards.

By incorporating the appropriate methodologies, equipment, procedures, and data acquisition methods into our TMS and ESMS, we are committed to achieving the highest levels of operational excellence, environmental protection, and social responsibility throughout the lifecycle of our tailings facilities.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



✔ Requirement 6.1.D

Criteria

The TMS and the ESMS are implemented during construction, operation, and closure.

Discussion

As described in Requirement 6.1.C, we implement our Tailings Management System (TMS) and Environmental and Social Management System (ESMS) throughout all stages of the Tarkwa TSF's lifecycle. This includes the construction, operation, and closure phases.

Compliance with design intent, qualified personnel, and appropriate methodologies, equipment, and procedures are key components of our approach. Our commitment to effectively implementing these systems checks the highest safety standards, environmental protection, and social responsibility.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 6.2 – Self-Assessment Rating Justification

Manage the quality and adequacy of the construction and operation process by implementing Quality Control, Quality Assurance and Construction vs Design Intent Verification (CDIV). The Operator shall use the CDIV to check that the design intent is implemented and is still being met if the site conditions vary from the design assumptions.

✔ Requirement 6.2.A

Criteria

Quality Control (QC) and Quality Assurance (QA) programmes are established to monitor the quality and adequacy of the construction and operation processes.

Discussion

We have established robust Quality Control (QC) and Quality Assurance (QA) programs to closely monitor the quality and adequacy of our construction and operation processes at the Tarkwa mine. Our Engineer of Record (EOR) partner is crucial in conducting comprehensive QA/QC work.

The EOR team is actively involved in site inspections, ensuring daily oversight during construction activities, and conducting routine reviews of TSF operational performance. These measures check that we adhere to the highest quality standards and maintain the design intent throughout the process.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 6.2.B

Criteria

A CDIV programme that confirms that the design intent is met if site conditions vary from design assumptions.

Discussion

Our Engineer of Record partner conducts thorough Quality Assurance/Quality Control (QA/QC) activities to monitor the construction and operation processes and check that the design intent is consistently achieved. The EOR is present at the site daily during construction, and other team members also make regular visits to assess progress and TSF operational performance.

If any deviations from the original design intent are identified due to site conditions varying from the initial assumptions, our Engineer of Record diligently records these variations in the Constructions Records Report. The Responsible Tailings Facility Engineer then reviews these variances. When necessary, they are captured and managed through our updated Management of Change procedure, which now incorporates changes specific to tailings-related modifications at the Tarkwa mine.

To conclude the construction phase, the Engineer of Record prepares a Constructions Records Report, which assesses whether the design intent has been met. This report includes approval of any variances that were identified and addressed during the construction process.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 6.3 – Self-Assessment Rating Justification

Prepare a detailed Construction Records Report ('as-built' report) whenever there is a material change to the tailings facility, its infrastructure or its monitoring system. The EOR and the Responsible Tailings Facility Engineer (RTFE) shall sign this report.

✔ Requirement 6.3.A

Criteria

Construction Records Reports (CRR) are current and are prepared when material changes to the tailings facility, infrastructure, or monitoring system occur.

Discussion

To confirm comprehensive documentation of the construction process and any material changes to the tailings facility, infrastructure, or monitoring system, our Engineer of Record prepares Construction Records throughout the construction period, which are collated into a Construction Records Report after construction.

Whenever a material change occurs, such as modifications or raises to the TSF, the Responsible Tailings Facility Engineer is promptly notified. This triggers our management of change procedure, which involves notifying all relevant stakeholders. The change is thoroughly addressed and closed out, with a record of the change being documented in the change management register or included in the Construction Records Report.

The Construction Records Report serves as a summary of the construction outcome, providing a certification that the facility has been constructed in accordance with the design. It serves as a valuable record to document the construction process and any significant changes made along the way.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- **✔ Meets this Requirement**



✔ Requirement 6.3.B

Criteria

The RTFE and the EOR sign the CRRs.

Discussion

The Construction Records Report (CRR) is a detailed report prepared by our Engineer of Record (EOR) partner. The report captures any significant changes to the tailings facility, infrastructure, or monitoring system. It is important to note that the CRR is signed by the EOR, indicating their approval of the report.

Additionally, the Responsible Tailings Facility Engineer (RTFE) signs a cover document acknowledging the receipt of the CRR. This confirms that the RTFE is aware of the report and its contents.

This process confirms that all relevant parties are involved in reviewing and acknowledging the construction records, maintaining accountability and transparency in documenting any modifications to the tailings facility.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 6.4 – Self-Assessment Rating Justification

Develop, implement, review annually and update as required an Operations, Maintenance and Surveillance (OMS) Manual that supports effective risk management as part of the TMS. The OMS Manual should follow best practices, clearly provide the context and critical controls for safe operations and be reviewed for effectiveness. The RTFE shall provide access to the OMS Manual and training to all levels of personnel involved in the TMS with support from the EOR.

✔ Requirement 6.4.A

Criteria

An Operation, Maintenance and Surveillance (OMS) Manual is implemented, covers each tailings facility and includes the requirements for the OMS activities necessary for effective risk management based on best practice.

Discussion

The Tarkwa Tailings Stewardship team, in collaboration with the Engineer of Record (EOR) partner, has developed an Operating Surveillance Manual (OSM) for the TSFs at the Tarkwa mine. The manual has been transformed into a series of Safe Work Instructions (SWIs) to enhance usability.

These SWIs provide clear, step-by-step guidance for personnel involved in TSF operations. By following these instructions, individuals can effectively carry out their tasks while adhering to best practices and ensuring safe operations.

This approach checks that the OMS activities, as outlined in the SWIs, align with best practices for effective risk management, contributing to the overall safety and integrity of the TSFs at the Tarkwa mine.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



✔ Requirement 6.4.B

Criteria

The OMS is reviewed annually or more frequently if there are any updates following a material change as defined by the Operator.

Discussion

In May this year, the Tarkwa Tailings Stewardship team transformed the OMS manual into a series of safe work instructions (SWIs). The OMS has undergone thorough reviews by the Independent Technical Review Board in June 2022 and June 2023 to check its effectiveness.

The OMS will be reviewed annually to maintain its relevance and alignment with evolving practices. Additionally, any updates deemed necessary following material changes defined by the Operator will be promptly incorporated into the manual.

This commitment to regular review and updates checks that the OMS remains up-to-date and in line with best practices for effective risk management.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 6.4.C

Criteria

The OMS provides clear context and includes the inspection, maintenance and monitoring of the requirements identified, including critical controls for safe operation and is reviewed for effectiveness.

Discussion

The Tarkwa Tailings Stewardship team has collaborated with the Engineer of Record (EOR) partner to develop and implement an Operations, Maintenance, and Surveillance (OMS) Manual. This manual provides clear context and encompasses the necessary inspection, maintenance, and monitoring requirements, including critical controls for safe operations.

To check its effectiveness, the OMS Manual has undergone comprehensive reviews by the Independent Technical Review Board (ITRB) in June 2022 and June 2023. This rigorous assessment confirms that the OMS is designed to support effective risk management practices.

The OMS comprises a set of Safe Work Instructions (SWIs), which align with the critical control bowties developed as part of the Tarkwa tailings risk management process. These SWIs serve as practical guidelines for personnel involved in the Tailings Management System (TMS). By creating a procedural-based manual linked to the overarching Critical Control bowties, the individual contributions to dam safety are well understood.

Access to the OMS Manual and the necessary training is provided to all levels of TMS personnel, facilitated by the Responsible Tailings Facility Engineer (RTFE) with support from the EOR.

By adhering to these practices and continuously reviewing and updating the OMS Manual, the Tarkwa Mine checks that clear context is provided, critical controls are in place, and inspections, maintenance, and monitoring activities effectively support safe operations.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 6.4.D

Criteria

The RTFE checks that personnel involved in the TMS have access to the OMS Manual.

Discussion

The Responsible Tailings Facility Engineer (RTFE) all personnel involved in the Tailings Management System (TMS), including the Tarkwa Tailings Stewardship team, with access to the Operations, Maintenance, and Surveillance (OMS) Manual.

The OMS Manual is readily available through the online Stewardship Portal, and a physical copy is accessible in the RTFE's office. It has been distributed to the Tarkwa Tailings Stewardship team, so team members can access the necessary resources to implement the TMS effectively.

By facilitating access to the OMS Manual and distributing it to the Tarkwa Tailings Stewardship team, the RTFE promotes a culture of safety and effective risk management throughout the entire TMS

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



🔍 Requirement 6.4.E

Criteria

The RTFE should provide access to training to all levels of personnel involved in the TMS.

Discussion

The Tarkwa Operating and Surveillance Manual (OSM) has recently been transformed into a series of Safe Work Instructions (SWIs) to make it more user-friendly. These SWIs, maintained by the site safety team, serve as clear guidelines for safe operations at the Tarkwa mine. Training programs are being implemented in collaboration with the Responsible Tailings Facility Engineer (RTFE) to check that operators, contractors, and personnel at all levels receive the necessary training.

The SWIs have been integrated into the Tailings Competency Matrix specific to the Tarkwa mine to monitor and track training progress. This matrix enables the RTFE to oversee and evaluate individuals' training and competency levels.

The training program is being rolled out, and the Gold Fields team has categorized this requirement as "Partially Meets" due to its ongoing implementation. It is important to note that rather than simply updating the existing operating manual and providing generic training annually, the team recognized the limitations of this approach. They took the initiative to develop a procedural-based Operating Manual and an operator-focused training approach that includes task-specific training. This comprehensive design significantly improves the development of operating manuals and checks that personnel have the appropriate level of training to operate the facility safely.

These efforts form a crucial component of our tailings training program, enhancing understanding and adherence to safe practices among all personnel.

Therefore, Gold Fields has ranked this requirement as 'Partially Meets.'

Assessment Outcome

- 🟡 Partially Meets this Requirement



Requirement 6.5 – Self-Assessment Rating Justification

Implement a formal change management system that triggers the evaluation, review, approval and documentation of changes to design, construction, operation or monitoring during the tailings facility lifecycle. The change management system shall also include the requirement for the EOR to prepare a periodic Deviance Accountability Report (DAR) that provides an assessment of the cumulative impact of the changes on the risk level of the as-constructed facility. The DAR shall provide recommendations for managing risk, if necessary, and any resulting updates to the design, DBR, OMS and the monitoring programme. The DAR shall be approved by the Accountable Executive.

✔ Requirement 6.5.A

Criteria

A Change Management System has been established.

Discussion

At the Tarkwa Mine, we have an established "Management of Change" procedure that has existed for some time. This procedure was recently updated to focus specifically on tailings, recognizing its importance as a standalone discipline. As part of this update, the Responsible Tailings Facility Engineer (RTFE) and the Engineer of Record (EoR) are consulted whenever TSF changes are initiated.

This change management system confirms that any modifications to the tailings facility's design, construction, operation, or monitoring undergo a thorough evaluation, review, approval, and documentation process.

By implementing this change management system, we prioritize a structured approach to address changes throughout the lifecycle of the tailings facility, ensuring that risks are properly managed and controlled.

Therefore, Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- **✔ Meets this Requirement**



✔ Requirement 6.5.B

Criteria

The Change Management System includes processes for identifying changes and processes for evaluating, reviewing, approving and documenting changes throughout the facility lifecycle.

Discussion

At the Tarkwa Mine, we have a well-established "Management of Change" procedure that has existed for some time. Recently, we updated this procedure to include a specific focus on tailings as a standalone discipline. As part of this update, we added roles such as the Responsible Tailings Facility Engineer (RTFE) and the Engineer of Record (EoR), who are consulted when any changes are initiated.

Our change management system incorporates processes for identifying changes and checks that changes are evaluated, reviewed, approved, and properly documented throughout the facility's entire lifecycle. These processes are followed to maintain a structured and controlled approach to managing changes.

The Corporate Tailings team provided the Tarkwa Tailings Stewardship team reviewed the Change Management Procedure and provided recommendations, which the team integrated into the mine-wide change management procedure. This integration checks consistency and aligns our practices with industry best practices.

Our robust change management system prioritises careful evaluation, review, approval, and documentation of changes throughout the facility's lifecycle to check our operations' ongoing safety and effectiveness.

Therefore, Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 6.5.C

Criteria

The Change Management System addresses and documents material changes to design, construction, operations, or monitoring.

Discussion

At the Tarkwa mine, we have integrated the management of change procedure to address design, construction, operation, or monitoring changes within our tailings management system. These ensure that material changes are properly evaluated, reviewed, approved, and documented.

To facilitate this process, we maintain a change management register that serves as a centralized record of all changes made throughout the lifecycle of the tailings facility. This register allows us to track and document design, construction, operation, or monitoring modifications.

Following this change management system, we fulfil the requirements outlined in 6.5.A and B. It enables us to effectively address and document any material changes to the tailings facility, ensuring transparency and accountability in our operations.

By maintaining a comprehensive change management procedure, we prioritize the evaluation and documentation of changes, helping us manage risks and check our tailings management practices' ongoing safety and effectiveness.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 6.5.D

Criteria

A DAR is periodically prepared and updated by the EOR, addressing the cumulative impact of material changes on the as-constructed facility.

Discussion

At Gold Fields, we have a well-defined approach to deviance accountability as part of our Tailings Management System. This approach is outlined in the Gold Fields Tailings Management Standard and described in the Tarkwa Tailings Management Plan.

The Engineer of Record (EOR) is crucial in documenting deviances in the construction records report and captures the full list in a dedicated Deviance Accountability Report. (DAR) The DAR is a vital component of our accountability framework and undergoes approval by the Accountable Executive.

During the Annual General Meeting for Tailings, the Tarkwa Tailings Stewardship team reviews and discusses the previous year's deviances, ensuring that deviances are properly addressed and managed within our operations.

Deviances reviewed and confirmed by our EoR generally trigger our Management of Change procedure. This procedure outlines the workflow for consulting stakeholders and evaluating and addressing the cumulative impact of material changes.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 6.5.E

Criteria

Recommendations from the DAR have been implemented through updates to the construction, operations, design, DBR, OMS Manual and monitoring programme.

Discussion

Managing deviances is an ongoing, real-time task for the Tarkwa Tailings Stewardship team. We promptly implement updates and changes to the construction, operations, design, DBR, OMS, and monitoring program based on deviances recorded during construction and the Deviance Accountability Report (DAR) recommendations. This proactive approach checks that the necessary actions have been taken to address the identified deviances by the time the DAR is available.

By actively responding to the DAR's recommendations, we continuously enhance the effectiveness of our practices and maintain the integrity of our tailings facility at Tarkwa. Our commitment to managing risks and making appropriate updates demonstrates our dedication to responsible tailings management.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



🟡 Requirement 6.5.F

Criteria

The Accountable Executive has approved the DAR

Discussion

At Tarkwa, we have implemented a robust process to address deviances from design. The Tarkwa Tailings Stewardship team thoroughly reviews these deviances during the Annual General Meeting (AGM) for Tailings, and our site-wide team takes proactive measures to address them.

The Accountable Executive holds quarterly meetings with the Tarkwa Stewardship team to promote accountability. During the Q4 meeting, the Accountable Executive will review the latest Deviance Accountability Report. This report provides a comprehensive assessment of the cumulative impact of changes on the risk level of our tailings facility.

By actively engaging in reviews and discussions, we prioritize transparency and uphold responsible tailings management practices at Tarkwa.

At the time of this disclosure, the Deviance Accountability Report is scheduled to be reviewed by the AE in Q4 of this year.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets.”

Assessment Outcome

- 🟡 Partially Meets this Requirement



Requirement 6.6 – Self-Assessment Rating Justification

Include new and emerging technologies and approaches and use the evolving knowledge in the refinement of the design, construction and operation of the tailings facility.

✔ Requirement 6.6.A

Criteria

Reviews of new and emerging technologies and approaches for tailings management are carried out considering the tailings facility lifecycle.

Discussion

Gold Fields actively review new and emerging technologies and approaches for tailings management as part of our commitment to continuous improvement throughout the tailings facility lifecycle. The Corporate Tailings Group conducts annual global assessments to identify potential technologies applicable to Gold Fields operations, and these findings are recorded in the annual technology review register.

To foster collaboration and knowledge sharing, the Tailings Working Group convenes quarterly meetings to share and discuss information on new technologies. Additionally, during the Annual General Meeting (AGM) for tailings, the Tarkwa Tailings Stewardship team engages in detailed discussions about new and emerging technologies. This inclusive approach allows input from various stakeholders and encourages the exploration of technologies beyond traditional tailings engineering.

In addition to our internal efforts, the tailings team at Gold Fields is encouraged to participate in the wider industry community actively. This includes opportunities to present research papers at international conferences, which contribute to the body of knowledge in tailings management and provide networking opportunities with fellow professionals in the field.

By sharing our research findings and insights at these conferences, we actively contribute to advancing tailings management practices globally. This collaborative engagement allows us to learn from other industry experts, exchange ideas, and stay informed about the latest developments in the field.

By actively seeking advancements and engaging in regular discussions, we stay informed about the latest technologies and approaches for tailings management.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 6.6.B

Criteria

Material results of the reviews have been incorporated into refinements of the facility design, construction and operations.

Discussion

Gold Fields actively promotes the continuous review of new and emerging technologies and approaches for tailings management, as outlined in Requirement 6.6.A. The results of these reviews are shared with our interdisciplinary tailings stewardship teams during quarterly tailings working group sessions.

We have undertaken various initiatives to incorporate the material findings of these reviews into the design, construction, and operation of our tailings facilities. For instance, we are proud to sponsor the Australian Minerals Institute TSF Monitoring Technologies project, which involves actively testing various monitoring technologies at one of our Australian sites. Additionally, we have installed inclinometers at our Tarkwa mine to enhance our monitoring capabilities.

Furthermore, we have adopted the instrumentation monitoring software package, which other operations utilise to optimize the collection of monitoring data, and we have also worked with geographical interface system providers to digitise our stakeholder maps.

These measures demonstrate our commitment to leveraging new technologies and incorporating their findings into refining our facility design, construction, and operations.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



GISTM Principle 07

Design, Implement and Operate Monitoring Systems to Manage Risk at All Phases of the Facility Lifecycle, Including Closure.

Principle 07 – Self-Assessment Outcome

The Tarkwa mine has three TSFs with a Very High Consequence Classification. A summary of the self-assessment outcome for Principle 07 of the GISTM is presented in Table 12 below. Further information specific to each requirement part is provided in subsequent sections of this report.

Table 12: Principle 07 – Self-Assessment Outcome Summary

Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
7.1	A	A comprehensive and integrated performance monitoring programme for the tailings facility and its appurtenant structures has been developed and forms part of the TMS and includes activities for inspection, reviews, and monitoring requirements in alignment with the facility OMS.	✓	✓	✓
	B	The performance monitoring programme identifies and includes the ESMS aspects linked to the tailings facility's performance monitoring.	✓	✓	✓
	C	The performance monitoring programme is integrated and reflects other programmes, such as the OMS manual and is updated in keeping with the principles of Adaptive Management.	✓	✓	✓
7.2	A	A comprehensive and integrated engineering monitoring system has been designed to verify design assumptions and monitor potential failure modes.	✓	✓	✓
	B	Monitoring procedures for non-brittle failure modes are developed and implemented to support the Observational Method.	✓	✓	✓
	C	Conservative design criteria address brittle failure modes.	✓	✓	✓
7.3	A	Performance objectives, indicators and criteria are set that measure the performance of the tailings facility. These are specific and measurable and included in the monitoring programmes.	✓	✓	✓



	B	Inspecting, monitoring, testing, recording, evaluating and reporting data from the monitoring programmes are conducted according to the appropriate frequency.	✓	✓	✓
	C	The monitoring programme is updated throughout the tailings facility lifecycle based on the evaluation of the data to confirm that the performance objectives, indicators and criteria remain effective in managing risk.	✓	✓	✓
7.4	A	The tailings facility performance is assessed by analysing technical monitoring data at a frequency established by the EOR.	✓	✓	✓
	B	The tailings facility technical monitoring data analysis identifies and presents evidence of deviations from the expected performance objectives and deterioration of the tailings facility performance over time.	✓	✓	✓
	C	The tailings facility performance monitoring analysis results are promptly reported to the EOR.	✓	✓	✓
	D	The EOR promptly reviews the tailings facility performance monitoring analysis results and directs that the risk assessment and design be updated if required.	✓	✓	✓
	E	Performance expectations are incorporated into Trigger Action Response Plans or critical controls as criteria to state when action is or is not needed.	✓	✓	✓
7.5	A	The results of the monitoring programmes are reported at a frequency that meets company expectations and regulatory requirements and, at a minimum, is completed annually.	✓	✓	✓
	B	Technical monitoring reports are reviewed and approved by the RTFE and the EOR.	✓	✓	✓



Requirement 7.1 – Self-Assessment Rating Justification

Design, implement and operate a comprehensive and integrated performance monitoring programme for the tailings facility and its appurtenant structures as part of the TMS and for those aspects of the ESMS related to the tailings facility in accordance with the principles of Adaptive Management.

✔ Requirement 7.1.A

Criteria

A comprehensive and integrated performance monitoring programme for the tailings facility and its appurtenant structures has been developed, forms part of the TMS and includes activities for inspection, reviews, and monitoring requirements in alignment with the facility OMS.

Discussion

At Gold Fields, we have developed a comprehensive and integrated performance monitoring program for TSFs 1, 2, and 3 at the Tarkwa mine. This program is an essential part of our Tailings Management System (TMS) and aligns with the principles of Adaptive Management.

Our performance monitoring program includes various activities to check the ongoing assessment and evaluation of the TSF's performance. Here are some key components:

- **Regular Shift Inspections:** Our shift operators conduct inspections of the TSF daily. Any issues or concerns identified during these inspections are promptly reported to their supervisors and the Responsible Tailings Facility Engineer (RTFE).
- **Monthly Instrumentation Data Review:** The Engineer of Record (EOR) reviews the data collected by our site team from the TSF's performance monitoring instrumentation every month. This allows us to monitor and identify discrepancies or variances in the TSF's performance. Criteria monitored include freeboard, deposition, rate of rise, rainfall, piezometer pressures, beach length, inclinometer deformation and factor of safety performance.
- **Quarterly Inspections and Reports:** The EOR conducts comprehensive inspections of the facility every quarter or more frequently if construction quality assurance activities are underway. They prepare a detailed quarterly report highlighting their findings and observations.
- **Internal Quarterly Reporting:** The RTFE also prepares a quarterly report that provides an internal overview of the TSF's performance. This report is distributed to the Group Head of Tailings, ensuring effective communication and oversight.
- **Instrumentation and Measurement:** The Tarkwa Tailings Stewardship team has installed a range of instrumentation across the TSFs. This includes vibrating wire piezometers, inclinometers, standpipe piezometers, surface water and groundwater quality monitoring. Additionally, we utilize InSAR readings to monitor ground movement.
- **Digitization and Automation:** To enhance efficiency and effectiveness, we have engaged a software vendor to digitize the collection of monitoring readings. This allows for automated trigger-level alerts, ensuring timely responses to potential issues.

Through our comprehensive performance monitoring program, we are committed to continuously assessing the performance of our TSFs and ensuring their safe and responsible management. This proactive approach enables us to promptly identify and address potential concerns, aligning with our commitment to sustainable tailings facility operations.

Therefore, Gold Fields has ranked this Requirement as “Meets.”



Assessment Outcome

-  Meets this Requirement



✔ Requirement 7.1.B

Criteria

The performance monitoring programme identifies and includes the ESMS aspects linked to the tailings facility's performance monitoring.

Discussion

Gold Fields has established a comprehensive performance monitoring program for our TSFs at the Tarkwa mine, as outlined in requirement 7.1.A. As part of this program, we have identified and included aspects of our Environmental and Social Management System (ESMS) linked to the tailings facility's performance monitoring.

It is important to note that our sustainable development team is the custodian of the data and information related to these aspects of the ESMS. They play a crucial role as a key stakeholder within the Tarkwa Tailings Stewardship team, overseeing the monitoring and management of these elements.

The Engineer of Record (EOR) receives copies of the environmental monitoring data related to the tailings facility. This data includes various measurements and assessments of environmental parameters surrounding the TSFs. The EOR incorporates a thorough review of this environmental monitoring data as part of the Annual TSF Performance report.

By integrating the ESMS aspects into our performance monitoring program, we check a holistic approach to monitoring the performance of our TSFs and addressing any environmental and social considerations associated with the facilities.

Therefore, Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 7.1.C

Criteria

The performance monitoring programme is integrated and reflects other programmes, such as the OMS and is updated in keeping with the principles of Adaptive Management.

Discussion

Our performance monitoring program for the tailings facility at Tarkwa Mine is fully integrated and aligned with other relevant programs, such as the Tailings Management System (TMS) and the Environmental and Social Management System (ESMS). This integration checks that monitoring activities are consistent and cohesive across our operations. The Tarkwa Tailings Stewardship team, composed of experts, oversees the monitoring program and checks its effectiveness.

The Operating Manual has been transformed into Safe Work Instructions (SWIs) to facilitate efficient implementation. SWIs have been developed to provide detailed guidelines for monitoring tasks and inspections, ensuring standardized procedures are followed.

In case of any observed variances or changes, the RTFE or change initiator will promptly notify the Tarkwa Tailings Stewardship team and raises the matter in project meetings or initiate the management of change procedures when required. This proactive approach enables us to address any deviations from expected performance and implement appropriate actions promptly, in line with the principles of Adaptive Management.

Additionally, the RTFE prepares a quarterly report to summarise integrated TSF performance. This report is distributed to the VP: Global Tailings Management, who will initiate change or action where required.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 7.2 – Self-Assessment Rating Justification

Design, implement and operate a comprehensive and integrated engineering monitoring system that is appropriate for verifying design assumptions and for monitoring potential failure modes. Full implementation of the Observational Method shall be adopted for non-brittle failure modes. Brittle failure modes are addressed by conservative design criteria.

✔ Requirement 7.2.A

Criteria

A comprehensive and integrated engineering monitoring system has been designed to verify design assumptions and monitor potential failure modes.

Discussion

We have designed and implemented a comprehensive and integrated engineering monitoring system for TSF 1,2 and 3 at the Tarkwa mine to check and verify design assumptions and provide for the continuous monitoring of potential failure modes. This monitoring system plays a vital role in upholding the safety and stability of our TSFs.

Per industry best practice, we have adopted the Observational Method for non-brittle failure modes, which allows us to dynamically adjust our strategies based on real-time monitoring data and observations. We have implemented conservative design criteria for brittle failure modes to check a robust and resilient approach.

Our engineering monitoring system encompasses a range of sophisticated instrumentation and technologies that enable us to collect accurate and timely data. This includes monitoring instruments such as vibrating wire piezometers, inclinometers, and standpipe piezometers. These instruments are strategically installed to cover critical areas and provide comprehensive insights into the behaviour and performance of our tailings facility.

Regular assessments and reviews are conducted to verify design assumptions and assess the effectiveness of our monitoring system. Any deviations or potential concerns identified are swiftly addressed by our Tarkwa Tailings Stewardship team, who collaborate closely with the Engineer of Record (EOR) and other stakeholders. This proactive approach allows us to take appropriate measures to mitigate risks and check our facility's safety and stability.

Our EOR has prepared instrumentation and monitoring plans to document the location of installed instrumentation, and the ITRB most recently reviewed the plans in June 2023.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 7.2.B

Criteria

Monitoring procedures for non-brittle failure modes are developed and implemented to support the Observational Method.

Discussion

We have developed and implemented monitoring procedures, such as Safe Work Instructions (SWIs), specifically tailored to support our facility's Observational Method for non-brittle failure modes. These procedures play a critical role in ensuring the effectiveness and reliability of our monitoring efforts.

The Observational Method is essential for monitoring and responding to potential failure modes dynamically and adaptively. It allows us to continuously evaluate and adjust our strategies based on real-time data and observations.

Our monitoring procedures encompass a range of activities, including regular inspections, data collection, and analysis. We have strategically deployed various monitoring instruments and technologies throughout our facility to gather relevant data and monitor key parameters. These instruments may include vibrating wire piezometers, inclinometers, standpipe piezometers, and other specialized equipment. The collected data is then analyzed to assess the performance and behaviour of the tailings facility.

Our Tarkwa Tailings Stewardship team, in collaboration with the Engineer of Record (EOR) and other stakeholders, diligently follows these monitoring procedures to check that any deviations or potential concerns are promptly identified and addressed. This proactive approach allows us to mitigate risks and take appropriate measures to maintain the safety and stability of our operations.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 7.2.C

Criteria

Brittle failure modes are addressed by conservative design criteria

Discussion

We have employed conservative design criteria to address brittle failure modes as part of our comprehensive approach to tailings facility management. These design criteria prioritize safety and reliability by implementing robust engineering standards that exceed minimum requirements. The design criteria are well documented in the Tarkwa Mine Design Basis Report and recent designs prepared specifically for TSF 1,2 and 3.

By adopting conservative design criteria, we check that our facilities are constructed and operated with a sufficient margin of safety. This approach considers potential risks and uncertainties associated with brittle failure modes, such as sudden and catastrophic structural failures.

Our Engineer of Record (EoR) partner, collaborating with industry experts and the Independent Technical Review Board (ITRB), has carefully evaluated and integrated these conservative design criteria into the planning, construction, and ongoing operation of TSF 1, 2 and 3 at Tarkwa. This proactive measure enhances the resilience and stability of the facility, minimizing the potential for brittle failure.

By addressing brittle failure modes through implementing conservative design criteria, we demonstrate our dedication to mitigating risks and ensuring the integrity of our operations.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 7.3 – Self-Assessment Rating Justification

Establish specific and measurable performance objectives, indicators, criteria, and performance parameters and include them in the design of the monitoring programmes that measure performance throughout the tailings facility lifecycle. Record and evaluate the data at appropriate frequencies. Based on the data obtained, update the monitoring programmes throughout the tailings facility lifecycle to confirm that they remain effective to manage risk.

✔ Requirement 7.3.A

Criteria

Performance objectives, indicators and criteria are set that measure the performance of the tailings facility. These are specific and measurable and included in the monitoring programmes.

Discussion

At Tarkwa, we have established clear and measurable performance objectives, indicators, and criteria to assess the performance of our TSFs. These performance elements are an integral part of our monitoring programs, ensuring that we have a systematic approach to measure and evaluate the facility's performance throughout its lifecycle.

To facilitate effective performance management, the Tarkwa Tailings Stewardship team convenes annually for an Annual General Meeting (AGM) dedicated to tailings. During this important gathering, interdisciplinary stakeholders come together to set the performance objectives for the following year based on recent and past learnings. This collaborative approach checks that our objectives align with our diverse team's expertise and perspectives.

Our monitoring programs are designed to capture relevant data daily, monthly, quarterly and annually. This data is then carefully evaluated to assess compliance with the defined performance indicators and criteria set by the Tarkwa Tailings Stewardship team in collaboration with the Engineer of Record. (EoR)

In the realm of geotechnical performance, we utilize up-to-date stability models for our TSFs. These models help us define the indicators and criteria for geotechnical performance, providing a clear framework to evaluate the facility's stability. The criteria include well-defined trigger levels for monitoring instrumentation that serves as benchmarks to assess performance and initiate appropriate actions when necessary.

We understand that performance management is an ongoing process. As part of our commitment to continuous improvement, we regularly update our monitoring programs based on the data obtained. This checks that our programs manage risk effectively throughout the tailings facility's lifecycle.

By setting specific and measurable performance objectives, indicators, and criteria and involving interdisciplinary stakeholders in the AGM, we uphold our commitment to transparency and accountability. Using up-to-date stability models and clear trigger levels further enhances our ability to evaluate and maintain the geotechnical performance of our facilities.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



✓ Requirement 7.3.B

Criteria

Inspecting, monitoring, testing, recording, evaluating and reporting data from the monitoring programmes is conducted according to the established appropriate frequency.

Discussion

At Tarkwa, we prioritize the routine and regular inspection, monitoring, testing, recording, evaluation, and reporting of data from our TSF monitoring programs. This allows us to check the ongoing performance and risk management of our TSFs diligently and systematically.

To achieve this, our TSFs undergo inspections at various frequencies. Daily, weekly, monthly, quarterly, and annual inspections are conducted to cover different aspects of facility performance. Additionally, we conduct emergency inspections promptly whenever necessary, ensuring a comprehensive monitoring approach.

We employ visual observations and instrumentation to record performance monitoring data during these inspections. Our knowledgeable Tarkwa Tailings Stewardship team evaluates this data closely with the Engineer of Record (EOR).

We recently implemented a digital system for capturing and reporting site monitoring and instrumentation data to enhance our monitoring capabilities and enable real-time evaluation and alerts. This technological advancement allows us to continuously monitor the performance of our facilities and receive immediate notifications if any potential issues arise. By embracing this proactive approach, we can swiftly intervene and take corrective actions, minimising potential risks. It's important to note that while the digital system is in its pilot phase, we also continue to utilize physical data capture and transmission methods.

Given the nature of our operations and the importance of maintaining a vigilant approach, monitoring data is recorded throughout each shift. This means monitoring devices, such as vibrating wire piezometers and inclinometers, provide data at near-minute intervals or in real-time. This level of monitoring granularity allows us to detect deviations from expected performance promptly and take swift action when necessary.

At Tarkwa, we remain committed to conducting routine and regular inspections, monitoring, testing, recording, evaluating, and reporting data from our monitoring programs. By adhering to established frequencies and utilizing advanced digital technologies, we continuously evaluate the performance of our TSFs, ensuring effective risk management and maintaining the highest standards of safety and environmental stewardship.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✓ Meets this Requirement



✔ Requirement 7.3.C

Criteria

The monitoring programme is updated throughout the tailings facility lifecycle based on the evaluation of the data to confirm that the performance objectives, indicators and criteria remain effective in managing risk.

Discussion

Our monitoring program is a dynamic and evolving process continuously updated throughout our TSFs lifecycle. We rigorously evaluate the data collected from our monitoring activities to check that our performance objectives, indicators, and criteria effectively manage risk, as described in early requirements.

Based on the insights gained, we make necessary adjustments and refinements to our monitoring programs. This proactive approach enables us to maintain the highest level of effectiveness in managing risk and checks our operations' ongoing safety and sustainability.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 7.4 – Self-Assessment Rating Justification

Analyse technical monitoring data at the frequency recommended by the EOR and assess the performance of the tailings facility, clearly identifying and presenting evidence of any deviations from the expected performance and any deterioration over time. Promptly submit evidence to the EOR for review and update the risk assessment and design, if required. Performance outside the expected ranges shall be addressed promptly through Trigger Action Response Plans (TARPs) or critical controls.

✔ Requirement 7.4.A

Criteria

The tailings facility performance is assessed by analysing technical monitoring data at a frequency established by the EOR.

Discussion

The performance of our tailings facility undergoes thorough assessment through the analysis of technical monitoring data. This critical task is carried out by the Engineer of Record (EOR), who evaluates the information every month, at a minimum. In cases where a discrepancy or concern arises, the frequency of analysis is promptly increased to check a proactive approach to addressing potential issues.

The EOR plays a crucial role in providing comprehensive insights into the performance of the facility. The findings and reports generated by the EOR are then shared with the Tarkwa Tailings Stewardship team, ensuring a collaborative approach to monitoring and managing the facility's performance.

This regular assessment allows us to proactively address potential issues and maintain the highest safety and operational excellence standards.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 7.4.B

Criteria

The analysis of tailings facility technical monitoring data identifies and presents evidence of deviations from the expected performance objectives and deterioration of the tailings facility performance over time.

Discussion

The analysis of technical monitoring data for our tailings facility plays a crucial role in identifying and presenting evidence of any deviations from expected performance objectives and the potential deterioration of TSF performance over time.

The Engineer of Record (EOR) partner diligently carries out this analysis, analyses the information and prepares a comprehensive monitoring dashboard. The dashboard provides a detailed overview of various performance aspects, including stability, freeboard, beach length, and performance under rainfall, and identifies whether pore pressure variations recorded by vibrating wire piezometers are in breach of established trigger levels.

The Tarkwa Tailings Stewardship team actively reviews this dashboard, enabling us to promptly identify and address any performance issues, ensuring our tailings facility's continued safe and efficient operation.

The EOR collates the information in the monthly dashboards and summarises performance in an annual TSF performance report.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 7.4.C

Criteria

The results from the tailings facility performance monitoring analysis are promptly reported to the EOR.

Discussion

We are dedicated to ensuring prompt and efficient reporting of the tailings facility performance monitoring data to the Engineer of Record (EOR). In our pursuit of continuous improvement, our team recognized the need to enhance monitoring data transmission to the EOR, as the existing process was not instantaneous. Previously, the EOR could only review information as it became available, leading to potential delays in analysis.

The Tarkwa Tailings Stewardship team has implemented a digital system for recording and transmitting instrumentation monitoring data to address this issue. This advancement allows for real-time data transmission, and the software package incorporates the ability to pre-define trigger and alert notification levels. When these trigger levels are breached, the system sends immediate alerts, prompting our Tarkwa Tailings Stewardship team and EOR partner to conduct a detailed analysis. This proactive approach checks timely interventions and a comprehensive understanding of the facility's performance.

While the software is in its pilot phase, we maintain our existing means of transmitting information to check continuity and reliability. We recognize the importance of confirming that the software consistently provides the same reliable results before fully transitioning. This ongoing improvement initiative is a significant success story, demonstrating our commitment to enhancing performance monitoring and proactive risk management.

Through these advancements, we continue to reinforce our commitment to transparency, accountability, and continuous improvement in the monitoring and reporting our tailings facility performance.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 7.4.D

Criteria

The EOR promptly reviews the tailings facility performance monitoring analysis results and directs that the risk assessment and design be updated if required.

Discussion

Reviewing and acting on tailings facility performance monitoring analysis results are paramount to us. In line with our commitment to continuous improvement, we have recognized the need to enhance the efficiency of transmitting monitoring data to the Engineer of Record (EOR).

As per Requirement 7.4.c, we acknowledged that the previous transmission process suffered delays, potentially affecting the EOR's review. To overcome this challenge, the Tarkwa Tailings Stewardship team has successfully implemented a digital system for capturing and transmitting instrumentation monitoring data. This state-of-the-art system enables real-time data transmission and incorporates trigger levels and alerts. When these trigger levels are exceeded, immediate alerts are sent, prompting our EOR partner to analyse the data thoroughly.

While the software supporting this advancement is currently in its pilot phase, we have maintained our existing means of transmitting information to check consistency and reliability. We understand the importance of ensuring that the software consistently delivers the same reliable results before fully transitioning.

To fulfil the requirement of prompt review, the EOR diligently assesses the tailings facility performance data and produces comprehensive reports every month. These reports are summarized in the quarterly EOR TSF and annual TSF performance reports. Our Independent Tailings Review Board (ITRB) further reviews the findings and outcomes, an additional measure to check thorough analysis and oversight.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 7.4.E

Criteria

Performance expectations are incorporated into Trigger Action Response Plans or critical controls as criteria to state when action is or is not needed.

Discussion

In close collaboration with our Tarkwa Tailings Stewardship team, our Engineer of Record (EoR) partner developed a Trigger Action Response Plan (TARP) to check effective risk management and operational control of TSFs 1, 2, and 3 at the Tarkwa mine.

The TARP incorporated specific and measurable performance objectives, indicators, criteria, and performance parameters, such as phreatic surface levels and beach lengths, which were carefully chosen to promote effective operational management. These criteria were based on the latest stability models for our TSFs and were designed to align with industry best practices.

Within the TARP, we established clear performance criteria that clearly state when action is or is not needed. This enables us to effectively manage risk and promptly respond to potential deviations or concerns. As outlined in our monitoring programs, regular monitoring and evaluation of the TSFs check that performance is continually assessed and aligned with the established criteria.

Our commitment to maintaining the highest safety standards and environmental stewardship is exemplified by integrating performance expectations into our Trigger Action Response Plan (TARP). In line with this commitment, the Trigger Levels defined in the TARP have been seamlessly incorporated into our digitized monitoring and instrumentation platform. This integration enables real-time communication of alerts, ensuring prompt action when necessary.

By incorporating these performance expectations into our TARP and aligning them with our digitized monitoring system, we check that potential deviations or concerns are identified and communicated in real-time. This proactive approach allows us to respond swiftly, mitigating any risks and ensuring the safety of our operations.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



Requirement 7.5 – Self-Assessment Rating Justification

Report the results of each of the monitoring programmes at the frequency required to meet company and regulatory requirements and, at a minimum, on an annual basis. The RTFE and the EOR shall review and approve the technical monitoring reports.

✔ Requirement 7.5.A

Criteria

The results of the monitoring programmes are reported at a frequency that meets company expectations and regulatory requirements and, at a minimum, is completed annually.

Discussion

The results of our monitoring programs at the Tarkwa mine are reported in accordance with our company's expectations and regulatory requirements. The Gold Fields Tailings Management Standard outlines our commitment to effective monitoring, establishing criteria and expectations for TSF monitoring activities.

To check transparency and timely reporting, the Engineer of Record (EOR) at Tarkwa prepares a monthly dashboard presenting the monitoring data and TSF performance. This comprehensive overview allows us to assess the performance of our TSFs on an ongoing basis. Furthermore, the EOR summarizes the performance in quarterly and annual reports.

The annual report provides a detailed analysis of the monitoring results and is made available to the regulator for review and assessment. Additionally, the Responsible Tailings Facility Engineer (RTFE) at Tarkwa summarizes interdisciplinary TSF performance every quarter. A copy of this report is provided to the Group Head of Tailings, promoting comprehensive oversight across our operations.

At Tarkwa, we are proud to state that our performance monitoring program meets the expectations set by the Gold Fields Tailings Standard. By adhering to these rigorous monitoring practices, we demonstrate our commitment to maintaining the highest standards of safety, environmental stewardship, and regulatory compliance.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 7.5.B

Criteria

Technical monitoring reports are reviewed and approved by the RTFE and the EOR.

Discussion

At the Tarkwa mine, we prioritize the thorough review and approval of technical monitoring reports as part of our commitment to ensuring robust and reliable performance assessment. The Responsible Tailings Facility Engineer (RTFE) and the Engineer of Record (EOR) play integral roles in this process.

To facilitate effective monitoring and reporting, the EOR prepares a monthly dashboard that presents comprehensive TSF monitoring data and performance indicators. This monthly dashboard is a valuable tool for tracking performance trends and identifying potential areas of concern. The RTFE and the EOR diligently review and approve these monthly dashboard reports to check accuracy and reliability.

In addition to the monthly reports, the EOR compiles performance summaries in quarterly and annual reports, which provide a comprehensive overview of the TSF performance over specific timeframes. These reports serve as important references for evaluating our monitoring programs' effectiveness and identifying improvement opportunities. The annual report is available to the regulator for review and assessment, demonstrating our commitment to transparency and regulatory compliance.

Furthermore, the RTFE summarizes interdisciplinary TSF performance on a quarterly basis, providing a concise and consolidated assessment of the TSF's overall performance. A copy of this report is shared with the Group Head of Tailings, confirming that a higher-level review is conducted to validate the findings and recommendations.

At Tarkwa, we prioritize the thorough review and approval of technical monitoring reports by involving key stakeholders, including the RTFE, EOR, and the Group Head of Tailings.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



GISTM Principle 08

The Board of Directors shall adopt and publish a policy on or commitment to the safe management of tailings facilities, to emergency preparedness and response, and to recovery after failure.

Principle 08 Self-Assessment Outcome

The Tarkwa mine has three TSFs with a Very High Consequence Classification. A summary of the self-assessment outcome for Principle 08 of the GISTM is presented in Table 13 below. Further information specific to each requirement part is provided in subsequent sections of this report.

Table 13: Principle 08 – Self-Assessment Outcome Summary

Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
8.1	A	A documented corporate tailings management policy that commits the Operator to the safe management of tailings, development of emergency response plans, and mechanisms for recovery after a failure. This may be a standalone policy or embedded in a document that the Board of Directors adopts.	✓	✓	✓
	B	The policy and its endorsement by the Board of Directors is in writing and is publicly available.	✓	✓	✓
8.2	A	A performance-based TMS follows established Plan-Do-Check-Act processes and is suitable for the organisation and its tailings facilities.	✓	✓	✓
	B	Accountabilities, responsibilities and associated competencies for implementing that framework are defined to support the appropriate identification and management of tailings facility risks.	✓	✓	✓
	C	The governance framework supports the TMS, its relevant critical systems and other related ESMS.	✓	✓	✓
	D	The linkages between the TMS and other systems, such as the ESMS, are clear to ensure effective integrated management of the tailings facility.	✓	✓	✓
8.3	A	For persons responsible for tailings facilities, their performance reviews and/or incentive payments are partly based on public safety and the integrity of the tailings facilities.	✓	✓	✓
	B	Where incentive payments are used, they are based on the degree to which public safety and tailing facility integrity are a component of that role.	✓	✓	✓
	C	As part of executive compensation, long-term incentives consider tailings management, facility performance, and public safety.	✓	✓	✓



Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
8.4	A	Accountable Executive(s) who are directly answerable to the CEO have been identified and assigned the safety aspects of a tailings facility and for avoiding or minimising the social and environmental consequences of a failure.	✓	✓	✓
	B	The accountability referred to in (a) includes developing and implementing a programme of tailings management training and emergency preparedness and response.	✓	✓	✓
	C	The Accountable Executive(s) has regular and scheduled communications with the EOR and Board of Directors, which can be initiated either by the Accountable Executive or the Board.	✓	✓	✓
	D	The process by which the Board of Directors holds the Accountable Executive(s) responsible is documented.	✓	✓	✓
8.5	A	A Responsible Tailings Facility Engineer (RTFE) 1 is appointed.	✓	✓	✓
	B	Roles and responsibilities are clearly defined and documented for the RTFE position, including accountability for the integrity of the tailings facility.	✓	✓	✓
	C	The RTFE liaises with the EOR and internal teams.	✓	✓	✓
	D	The RTFE must know the DBR, relevant design reports, and the tailings facility's construction and operations/performance.	✓	✓	✓
	E	Communication occurs between the RTFE and the Accountable Executive or designee.	✓	✓	✓
8.6	A	Qualification and experience requirements for all personnel with critical safety roles are clearly defined and appropriate to the position's level of responsibility. This includes but is not limited to critical roles such as the RTFE, EOR and Accountable Executives.	✓	✓	✓
	B	Succession plans are developed for safety-critical roles.	✓	✓	✓
	A	For a tailings facility with a consequence classification of failure of 'Very High' to 'Extreme', the Operator has appointed an Independent Tailings Review Board (ITRB)	✓	✓	✓



Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
8.7	B	For a tailings facility with a consequence classification of failure of 'High' or lower in the absence of an ITRB, the Operator has appointed a senior independent technical reviewer.	✓	✓	✓
	C	The ITRB or a senior independent technical reviewer reports to the tailings facility's accountable executive or delegate.	✓	✓	✓
	D	The ITRB or a senior independent technical reviewer is appointed during the early phase of tailings facility site investigation and design engineering (suggested pre-feasibility).	✓	✓	✓
	E	The ITRB members and a senior independent technical reviewer have certified in writing the absence of a conflict of interest with the tailings facility as defined by best practice.	✓	✓	✓



Requirement 8.1 – Self-Assessment Rating Justification

The Board of Directors shall adopt and publish a policy on or commitment to the safe management of tailings facilities, to emergency preparedness and response, and to recovery after failure.

✔ Requirement 8.1.A

Criteria

A documented corporate tailings management policy that commits the Operator to the safe management of tailings, development of emergency response plans, and mechanisms for recovery after a failure. This may be a standalone policy or embedded in a document that the Board of Directors adopts.

Discussion

In 2020, the Board of Directors of Gold Fields adopted a comprehensive policy focusing on the safe management of tailings facilities, emergency preparedness and response, and recovery strategies following any unfortunate failures. This policy reflects our commitment to responsible and sustainable mining practices.

At Gold Fields, we understand the critical importance of tailings management and its potential risks. Therefore, we have taken proactive measures to check that our operations adhere to the highest safety standards. Our tailings management policy serves as a guiding framework to effectively mitigate risks, protect the environment, and prioritize the safety of our employees, communities, and stakeholders.

To check transparency and accessibility, we have made our tailings management policy readily available to the public. It can be accessed on our corporate website, providing a comprehensive overview of our commitment to responsible tailings management. Additionally, we have displayed hard copies of the policy at each operation and operating centre, allowing all stakeholders to access and familiarize themselves with its contents.

Gold Fields recognises that effective emergency preparedness and response plans are vital in safeguarding our operations and surrounding communities. We have integrated these plans into our tailings management policy, demonstrating our dedication to minimizing the potential impact of any unforeseen events. By continually reviewing and updating these plans, we aim to enhance our ability to respond swiftly and effectively, ensuring the safety and well-being of all.

Adopting this documented tailings management policy by the Gold Fields Board of Directors signifies a significant milestone in our ongoing journey towards responsible mining. We remain dedicated to maintaining a transparent and accountable approach to our operations, driven by the highest safety standards and a commitment to environmental stewardship.

For further details on our tailings management policy, please visit our corporate website or contact our Group Tailings team responsible for overseeing its implementation.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ **Meets this Requirement**



✔ Requirement 8.1.B

Criteria

The policy and its endorsement by the Board of Directors is in writing and is publicly available.

Discussion

Gold Fields takes pride in ensuring transparency and accountability in all aspects of our operations. Therefore, we have made our tailings management policy accessible to the public. It is available for viewing and download on our corporate website, allowing stakeholders to gain insight into our commitment to responsible tailings management practices.

Recognizing stakeholders' diverse natures and preferences, we have also taken proactive measures to distribute hard copies of the policy across all our operations and operating centres. This checks that all members of our workforce, neighbouring communities, and interested individuals have convenient access to the policy, regardless of their digital capabilities.

By disseminating the policy across our operations and operating centres, we aim to create a culture of awareness and understanding regarding our commitment to responsible tailings management. By making the policy readily available, we empower our employees and stakeholders to engage with and contribute to our continuous improvement efforts actively.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 8.2 – Self-Assessment Rating Justification

Establish a tailings governance framework and a performance based TMS and check that the ESMS and other critical systems encompass relevant aspects of the tailings facility management.

✔ Requirement 8.2.A

Criteria

A performance-based TMS follows established Plan-Do-Check-Act processes and is suitable for the organisation and its tailings facilities.

Discussion

Gold Fields has established a comprehensive and performance-based Tailings Management System (TMS) that aligns with established Plan-Do-Check-Act (PDCA) processes. This TMS has been implemented across all our regions, reflecting our commitment to ensuring the safe management of tailings facilities.

Our Tailings Group has developed and implemented various components within the TMS to facilitate effective tailings management. These components include a Tailings Management Policy, a Tailings Framework, a Tailings Standard, an Incident Reporting System, and an online platform that serves as a centralized source of information.

At the regional level, our operations maintain a tailored Tailings Management Plan (TMP) and a Trigger Action Response Plan (TARP) and conduct monitoring activities. The PDCA process, embedded in our practices, is explicitly stated in the Gold Fields Tailings Standard. This approach emphasizes continuous improvement and checks that our operations align with international best practices in tailings management.

We have established a robust monitoring system for our TSFs to promote the PDCA process. This monitoring system involves daily assessments by operators, routine inspections by the Responsible Tailings Facility Engineer (RTFE), and monthly or quarterly evaluations conducted by the engineer of record. These regular assessments enable us to identify and promptly address potential issues or deviations.

Our change management procedure is promptly enacted if issues or deviations are detected. We have implemented various reporting practices to check transparency and accountability. These include engineer of record quarterly reviews, inspections conducted by the Group Head of Tailings, quarterly reports presented to the Board, and daily shift inspections. By integrating reporting mechanisms throughout our operations, we foster a culture of continuous monitoring and improvement.

Furthermore, we have established a comprehensive review process to evaluate the operational performance of our site TSFs annually. The engineer of record conducts this review, which includes a thorough assessment of the TSFs' performance and compliance with the established standards and procedures. The findings of this review are distributed to the Tarkwa Tailings Stewardship Team and the Independent Technical Review Board for their review and input.

The Tarkwa Tailings Stewardship Team holds an Annual General Meeting (AGM) for tailings to foster collaboration and check collective decision-making. During this meeting, team members gather to discuss the annual review findings and collectively determine the necessary actions and improvements for the following years. This collaborative approach allows us to benefit from diverse perspectives, share best practices, and strengthen our commitment to responsible tailings management.

The AGM serves as a valuable platform for knowledge exchange, fostering open discussions, and promoting continuous improvement within our tailings management practices. By actively engaging with the Tarkwa



Tailings Stewardship Team and the Independent Technical Review Board, we check that our decisions and actions align with industry best practices and the expectations of our stakeholders.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

-  Meets this Requirement



✓ Requirement 8.2.B

Criteria

Accountabilities, responsibilities and associated competencies for implementing that framework are defined to support the appropriate identification and management of tailings facility risks.

Discussion

Gold Fields has developed robust tools and mechanisms to check clear accountabilities, responsibilities, and associated competencies for implementing our tailings management framework. These tools support the appropriate identification and management of tailings facility risks while promoting a culture of safety and responsible practices.

One of the key tools we have implemented is the RACI (Responsible, Accountable, Consulted, Informed) matrix specifically designed for the Tarkwa Tailings Stewardship Team. This matrix clearly defines the roles and responsibilities of team members involved in tailings management. It outlines who is responsible for specific tasks, who is accountable for their execution, who should be consulted for their expertise, and who should be informed of progress and outcomes.

The Tarkwa Tailings Stewardship Team is an interdisciplinary group comprising various stakeholders, including the Responsible Tailings Facility Engineer (RTFE), Safety team, Community Relations team, and Sustainable Development team. Each team member's role and responsibilities are clearly outlined in the RACI matrix, ensuring a comprehensive understanding of their specific contributions to safe tailings management.

In addition to the RACI matrix, Gold Fields has developed a comprehensive training and competency matrix directly linked to tailings operational procedures. This matrix checks that individuals involved in tailings management possess the necessary skills, knowledge, and competencies to fulfil their roles effectively. We prioritize ongoing training and development to enhance the expertise of our team members and maintain a high level of competency across all relevant disciplines.

In line with our commitment to excellence in tailings management, the Gold Fields Corporate Tailings Group has established the Gold Fields Tailings Standard. This comprehensive standard serves as a guiding framework, outlining the overarching responsibility and accountability criteria that our operations must adhere to. Developed in alignment with industry best practices and the Global Industry Standard on Tailings Management, this standard checks that our approach to tailings management meets the highest international standards.

By implementing these tools, we strive to create a shared responsibility and accountability culture where all team members understand their specific roles and contribute to effectively identifying and managing tailings facility risks. Regular communication, collaboration, and continuous improvement are integral components of our approach, enabling us to enhance our capabilities and adapt to emerging challenges.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✓ **Meets this Requirement**



✓ Requirement 8.2.C

Criteria

The governance framework supports the TMS, its relevant critical systems and other related ESMS.

Discussion

At Gold Fields, we have established a governance framework that underpins our commitment to responsible tailings management. This framework strongly supports our Tailings Management System (TMS), its relevant critical systems, and other related Environmental and Social Management Systems (ESMS). We prioritize the safe management of tailings and the protection of our stakeholders and the environment.

The Gold Fields Tailings Management System (TMS) is documented in our 'Tailings Framework' document, which serves as a cornerstone for our approach. The 'Tailings Framework' document defines and describes all the essential elements of our tailings management system, ensuring consistency and effectiveness across our site, regional, and corporate operations.

This comprehensive document outlines the necessary components, processes, and procedures that guide our practices in managing tailings. It encompasses key aspects such as risk identification and assessment, monitoring and reporting, emergency response planning, and mechanisms for recovery in the event of failure. By following the guidelines and principles outlined in the 'Tailings Framework' document, we check that our TMS is implemented and executed to mitigate risks and safeguard the well-being of our employees, communities, and the environment.

Our governance framework extends beyond the 'Tailings Framework' document and incorporates a range of critical systems and processes. We integrate tailings management into our broader ESMS, recognizing the interconnectedness of environmental, social, and governance considerations. Doing so checks that our approach to tailings management aligns with industry best practices, international standards, and regulatory requirements.

A demonstration of collaboration within our governance framework can be seen in the close partnership between our Tailings and Environmental disciplines, particularly in incident reporting. Recognizing the interconnected nature of these functions, we prioritize open collaboration and coordination between the two groups.

We have established specific guidelines for environmental and tailings-related incidents to check effective incident reporting. This collaboration involves ongoing communication and information sharing between the Tailings and Environmental teams. If incidents occur, both groups work together to check that all relevant information is captured, analysed, and appropriately reported. This collaborative effort helps us comprehensively understand the incident, its potential impacts, and the necessary mitigation measures.

The governance framework establishes clear accountabilities and responsibilities, promoting a culture of ownership and transparency. It checks that relevant teams and individuals understand their roles and actively contribute to implementing and continuously improving our tailings management practices. Regular monitoring, auditing, and reporting mechanisms are embedded within the framework to assess performance, identify areas for enhancement, and maintain compliance.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✓ Meets this Requirement



✔ Requirement 8.2.D

Criteria

The linkages between the TMS and other systems, such as the ESMS, are clear to ensure effective integrated management of the tailings facility.

Discussion

At Gold Fields, we recognize the importance of effective integration and clear linkages between our Tailings Management System (TMS) and other critical systems, such as our Environmental and Social Management Systems (ESMS). This integration checks our tailings facilities' comprehensive and coordinated management, safeguarding the environment and stakeholders.

To establish these linkages, we have developed three central documents that serve as key references for understanding the integration of our TMS with other systems. Firstly, our Gold Fields Tailings Standard consolidates industry best practices, including the Global Industry Standard on Tailings Management (GISTM) and international design criteria. This standard provides a comprehensive framework for the safe and responsible management of tailings facilities and outlines the requirements for effective integration with other systems.

Secondly, our Gold Fields Tailings Framework is crucial in defining how our Tailings Management System (TMS) components work together and integrate with other systems. This document serves as a guiding resource for our teams, outlining the processes, procedures, and responsibilities for tailings management across our operations. The Tailings Framework checks that our efforts are aligned and integrated across all relevant disciplines by clearly articulating the linkages between the TMS and other systems.

Additionally, our Tailings Incident guideline integrates with our Gold Fields Environmental Incident Reporting guideline, establishing a seamless connection between incident reporting for tailings-related events and broader environmental incidents. This integration enhances our ability to capture and analyse relevant data, facilitating a comprehensive understanding of incidents and enabling us to take prompt and appropriate actions.

By clearly defining these linkages in our central documents, we promote a holistic approach to tailings management that recognizes the interconnectedness of various systems within our operations. This integrated approach enables us to effectively identify, assess, and manage risks associated with our tailings facilities, fostering a culture of proactive risk mitigation and continuous improvement.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 8.3 – Self-Assessment Rating Justification

For roles with responsibility for tailings facilities, develop mechanisms such that incentive payments or performance reviews are based, at least in part, on public safety and the integrity of the tailings facility. These incentive payments shall reflect the degree to which public safety and the integrity of the tailings facility are part of the role. Long-term incentives for relevant executive managers should take tailings management into account.

✔ Requirement 8.3.A

Criteria

For persons responsible for tailings facilities, their performance reviews and or incentive payments are based partly on public safety and the integrity of the tailings facilities.

Discussion

At Gold Fields, we prioritize public safety and the integrity of our tailings facilities as fundamental components of our performance evaluation and incentive programs. We recognize that the responsibility for tailings management lies with specific individuals within our organization, and it is crucial to align their performance reviews and incentive payments with these critical aspects.

We have incorporated these objectives into our short-term and long-term incentive plans (LTIPs) to check accountability and drive performance in tailings management. As part of our ongoing commitment to continuous improvement, we have recently updated our incentive plans to reflect strategic initiatives, including our commitment to effective tailings management.

At Gold Fields, every employee participates in creating a balanced scorecard (BSC) annually. The BSC serves as a framework for setting goals and evaluating performance, aligning with our corporate strategic objectives. As we strive to fully conform with the Global Industry Standard on Tailings Management (GISTM) across all our operations, our commitment to conformance becomes a measurable criterion within the individual BSCs.

By incorporating tailings management as a specific goal and performance indicator in the BSCs of relevant employees, we check that public safety and the integrity of our tailings facilities are given due consideration in their performance evaluations. This approach emphasizes the importance of effective tailings management and motivates individuals to prioritize these critical aspects within their roles.

Furthermore, our long-term incentive plans for executive managers also consider the strategic significance of tailings management. This checks that our top leadership is incentivized to promote and uphold best practices in tailings management, fostering a culture of responsible stewardship and long-term sustainability.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 8.3.B

Criteria

Where incentive payments are used, they are based on the degree to which public safety and tailing facility integrity are a component of that role.

Discussion

At Gold Fields, we have implemented a company-wide approach to check conformance with the Global Industry Standard on Tailings Management (GISTM). We believe that upholding the highest standards of tailings management is a collective effort that spans all regions where we operate. As such, our incentive programs are designed to reward and recognize the performance of each region in alignment with these global standards.

Our incentive plans have recently been updated to incorporate strategic initiatives, including our steadfast commitment to tailings management. We understand the critical role that regional performance plays in achieving our overall objectives, and we have tailored our incentive structure accordingly.

We utilise a balanced scorecard approach to drive adherence to the GISTM and encourage continuous improvement. Each region establishes its own performance goals and criteria that reflect its specific challenges and opportunities. These goals are aligned with the corporate strategic objectives and the requirements set forth by the GISTM.

By applying incentives at the regional level, we foster a sense of ownership and responsibility within each region. This approach empowers regional teams to prioritize tailings management and actively contribute to achieving our company-wide goals. We believe that localized accountability is essential in driving meaningful change and ensuring the safe and responsible management of our tailings facilities.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 8.3.C

Criteria

As part of executive compensation, long-term incentives consider tailings management, facility performance, and public safety.

Discussion

Our incentive plans have been carefully designed to align with our strategic initiatives, including our commitment to tailings management. We recognize the significant influence that key roles within our organization, such as the accountable executive, group head, tailings group members, and responsible tailings facility engineers, have on the strategic implementation of the Global Industry Standard on Tailings Management (GISTM).

Our incentives are applied to check a consistent and company-wide approach based on each region's performance in conforming to the GISTM. This approach allows us to emphasize the importance of tailings management across all operating regions. We foster a culture of accountability and continuous improvement throughout our organisation by aligning our incentive structure with our commitment to the highest public safety and facility integrity standards.

Our long-term incentive plans form an integral part of executive compensation. They provide the necessary incentives and rewards for our accountable executives, reflecting their performance and contributions towards tailings management, facility performance, and public safety. These incentives serve as a means to encourage long-term commitment and dedication to the responsible management of our tailings facilities.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 8.4 – Self-Assessment Rating Justification

Appoint one or more Accountable Executives who is/are directly answerable to the CEO on matters related to this Standard. The Accountable Executive(s) shall be accountable for the safety of tailings facilities and for avoiding or minimising the social and environmental consequences of a tailings facility failure. The Accountable Executive(s) shall also be accountable for a programme of tailings management training, and for emergency preparedness and response. The Accountable Executive(s) must have scheduled communication with the EOR and regular communication with the Board of Directors, which can be initiated either by the Accountable Executive(s), or the Board. The Board of Directors shall document how it holds the Accountable Executive(s) accountable.

✔ Requirement 8.4.A

Criteria

Accountable Executive(s) who are directly answerable to the CEO have been identified and assigned the safety aspects of a tailings facility and for avoiding or minimising the social and environmental consequences of a failure.

Discussion

At Gold Fields, we recognize the critical importance of an identified and accountable leadership role for tailings management. In alignment with industry best practices and our commitment to safety and environmental stewardship, we have appointed Accountable Executives who directly report to the CEO.

Our company's Regional Executive Vice-presidents (EVPs) have been assigned the role of Accountable Executives for tailings management. These individuals possess extensive experience and expertise in our operations and have established relationships with various levels of the organization, from operational teams to the Board of Directors. They assume direct responsibility for the safety of our tailings facilities and are dedicated to avoiding or minimizing the social and environmental consequences of a potential tailings facility failure.

As part of their accountabilities, the Accountable Executives oversee a comprehensive program of tailings management training throughout our organization. They are also responsible for ensuring emergency preparedness and response plans are in place to address potential incidents effectively. Regular communication with the Engineer of Record (EOR) and the Board of Directors is a key aspect of their role, allowing for the exchange of critical information and insights. The Board of Directors, in turn, documents the mechanisms through which they hold the Accountable Executives accountable.

By entrusting this important role to our regional executives, we check that tailings management remains a top priority across our operations. These individuals bring a wealth of knowledge and a deep understanding of our company's operations, enabling them to effectively champion safety and environmental sustainability in managing our tailings facilities.

We remain committed to maintaining open lines of communication, fostering a culture of collaboration and transparency. Our Accountable Executives work closely with all relevant stakeholders to drive continuous improvement in our tailings management practices, always striving to uphold the highest standards of safety, social responsibility, and environmental stewardship.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✓ Requirement 8.4.B

Criteria

The accountability referred to in (a) includes developing and implementing a programme of tailings management training and emergency preparedness and response.

Discussion

At Gold Fields, we prioritize our accountability for tailings management, which encompasses crucial aspects such as training, emergency preparedness, and response. The Accountable Executive, responsible for overseeing tailings management within their region, can delegate specific responsibilities to other stakeholders as needed.

At our Tarkwa mine, the Engineer of Record (EOR) conducts tailings emergency response training for our operators, ensuring their preparedness to handle any emergencies related to tailings. The Tarkwa Tailings Stewardship team meets with the EOR partner every fortnight to facilitate continuous collaboration and learning. These meetings focus on developing tailings plans, designs, and monitoring activities, providing valuable exposure and on-the-job training in tailings management.

Gold Fields is developing a comprehensive corporate-wide training program for all employees to strengthen our commitment to tailings management. This program, scheduled for delivery throughout Q3 2023, will complement the training activities already provided by the EOR. By offering this training at a corporate level, we demonstrate our dedication to fostering a culture of safety and responsible tailings management across our organization.

Regarding emergency preparedness and response, our executives have taken proactive measures to enhance our catastrophic risk management program and reporting. We are implementing EMQnet software to improve our catastrophic risk management approach in collaboration with an independent supplier and consultant. Furthermore, the consultant has been engaged to upgrade our site-wide Emergency Management and Response Plans, incorporating tailings into a comprehensive site-wide plan. In May 2023, the consultant visited our site and conducted a desktop drill using the EMQnet software, simulating a tailings failure scenario. The Accountable Executive for the Ghana region fully supports these initiatives and checks appropriate resourcing and oversight.

Our Accountable Executive and the entire Gold Fields team remain steadfast in our commitment to improving tailings management practices continuously. We strive to maintain open lines of communication, foster collaboration, and implement innovative solutions to check our tailings facilities' safety, integrity, and responsible management.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✓ [Meets this Requirement](#)



✔ Requirement 8.4.C

Criteria

The Accountable Executive(s) has regular and scheduled communications with the EOR and Board of Directors, which can be initiated either by the Accountable Executive or the Board.

Discussion

The Accountable Executive holds regular and scheduled meetings with the Engineer of Record (EOR) and our Board of Directors.

These meetings offer an opportunity to discuss tailings management, safety measures, and relevant updates. Additionally, the Accountable Executive maintains ongoing communication with the CEO, fostering a strong partnership and alignment on critical matters.

By establishing these scheduled meetings, we check that the Accountable Executive remains connected and engaged with key stakeholders, allowing for timely updates, proactive decision-making, and alignment with corporate objectives. This structured approach enables open dialogue and the exchange of valuable insights, supporting our commitment to safety, environmental responsibility, and the effective management of tailings facilities.

To further support the Accountable Executive in their role, the Group Head of Tailings provides quarterly independent submissions to the Board. These submissions are based on thorough reviews conducted by the Engineer of Record and the responsible tailings facility engineer. By incorporating these technical perspectives, we check that the Accountable Executive receives comprehensive and sound guidance on tailings management.

The Group Head of Tailings plays a critical role in assessing the performance and integrity of our tailings facilities. Their quarterly submissions provide valuable insights into the effectiveness of our tailings management practices, highlighting any areas that require attention or improvement. This rigorous review reinforces our commitment to safety, environmental stewardship, and avoiding social and environmental consequences of tailings facility failure.

By maintaining a close working relationship between the Accountable Executive, the Group Head of Tailings, and the Board of Directors, we create a robust framework for oversight and decision-making. This collaborative approach ensures our tailings management strategy integrates technical expertise and sound engineering practices.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 8.4.D

Criteria

The process by which the Board of Directors holds the Accountable Executive(s) responsible is documented.

Discussion

The role of the Tarkwa Accountable Executive is documented and officially outlined in a comprehensive role description. This document serves as a guiding framework that clearly defines the specific responsibilities and obligations of the Accountable Executive. Furthermore, the appointment of the Accountable Executive is confirmed and formalized through an official letter that emphasizes the significance of their role within our organization.

At Gold Fields, we prioritize transparency and effective governance. The Board of Directors plays a crucial role in ensuring accountability and oversight. The process by which the Board holds the Tarkwa Accountable Executive responsible is diligently documented and aligned with our commitment to best practices.

The Board's endorsement of the Gold Fields Tailings Standard further underscores the importance of the Accountable Executive role. This standard serves as a foundational reference point for tailings management, outlining the required measures for ensuring the safety of our tailings facilities, minimizing social and environmental impacts, implementing comprehensive training programs, and establishing robust emergency preparedness and response protocols.

Through regular and scheduled communication, the Board of Directors actively engages with the Accountable Executive, fostering a collaborative relationship that supports accountability and enables effective decision-making. This process ensures that the Accountable Executive(s) are responsible for their actions while providing valuable feedback, guidance, and support.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



Requirement 8.5 – Self-Assessment Rating Justification

Appoint a site-specific Responsible Tailings Facility Engineer (RTFE) who is accountable for the integrity of the tailings facility, who liaises with the EOR and internal teams such as operations, planning, regulatory affairs, social performance, and environment, and who has regular two-way communication with the Accountable Executive. The RTFE must be familiar with the DBR, the design report and the construction and performance of the tailings facility.

✔ Requirement 8.5.A

Criteria

A Responsible Tailings Facility Engineer (RTFE) is appointed to the role.

Discussion

At the Gold Fields' Tarkwa mine, we have appointed a qualified and dedicated Responsible Tailings Facility Engineer (RTFE). This individual plays a critical role in ensuring the integrity and safety of our tailings facility. The RTFE is a key point of contact, liaising with various internal teams such as operations, planning, regulatory affairs, social performance, and environment. The RTFE checks that all relevant stakeholders are engaged and informed by fostering effective communication and collaboration.

The RTFE holds a pivotal position within the Tarkwa Tailings Stewardship team, which comprises the RTFE, Community Relations, Sustainable Development, Safety, Closure Management, Engineer of Record, and Group Head of Tailings. This team, consisting of local and international experts, provides comprehensive support to the RTFE from technical and operational perspectives. This collaborative approach checks that all aspects of tailings management are thoroughly addressed.

To facilitate transparent and accountable governance, the RTFE maintains a direct line of communication with the Accountable Executive, Group Head of Tailings, Engineer of Record, and Independent Technical Review Board. This two-way communication checks that information flows efficiently and that key decisions are made with full consideration of technical expertise and operational realities.

The RTFE's involvement spans the entire lifecycle of the tailings facility. From developing the Design Basis Report prepared by the Engineer of Record in June 2023 to the subsequent design and construction reports, the RTFE actively reviews and provides insights. By embedding themselves in all aspects of tailings management, the RTFE checks a comprehensive understanding of the facility's design, construction, operation, monitoring, and management.

To maintain alignment and foster ongoing collaboration, the RTFE fortnightly facilitates regular project meetings with the Tarkwa Tailings Stewardship team. These meetings provide an opportunity to update and synchronize the team on all relevant aspects of planning, design, construction, operation, monitoring, and management. This iterative process allows us to address emerging challenges, share best practices, and check that the team is well-informed and aligned.

Every quarter, the RTFE prepares a comprehensive operational review report. This report, submitted to the Group Head of Tailings, provides a comprehensive assessment of the facility's performance, highlighting achievements, identifying areas for improvement, and proposing relevant recommendations. This regular reporting mechanism ensures we maintain a robust and transparent accountability system, allowing for continuous improvement in our tailings management practices.

Gold Fields remains committed to the highest standards of tailings management. By appointing a Responsible Tailings Facility Engineer and implementing robust communication channels and reporting mechanisms, we



reinforce our dedication to safety, environmental stewardship, and responsible operations. Through effective collaboration and continuous improvement, we strive to check the integrity and sustainability of our tailings facilities to benefit our communities, the environment, and all stakeholders involved.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

-  Meets this Requirement



✔ Requirement 8.5.B

Criteria

Roles and responsibilities are clearly defined and documented for the RTFE position, including accountability for the integrity of the tailings facility.

Discussion

At Gold Fields, we recognize the importance of clearly defining and documenting roles and responsibilities, particularly for the position of Responsible Tailings Facility Engineer (RTFE). The RTFE holds a critical role in ensuring the integrity and reliability of our tailings facility, and we have taken significant steps to establish a robust framework for accountability.

The role of the RTFE is explicitly outlined in the Gold Fields Tailings Standard, a comprehensive document that serves as our guiding framework for tailings management. This standard provides a detailed description of the RTFE's responsibilities, including their accountability for maintaining the integrity of the tailings facility. Adhering to this standard checks a consistent and well-defined approach to tailings management across our operations.

In addition to the Tailings Standard, we have developed a comprehensive job description for the RTFE position. This document outlines the specific duties, qualifications, and expectations for the role, ensuring clarity and alignment in understanding the responsibilities associated with the position. By providing a detailed job description, we set clear expectations and provide a solid foundation for effective performance in the role.

Furthermore, the appointment of the RTFE is confirmed and documented through a formal letter. This letter confirms the individual's appointment to the role, further reinforcing the clarity and transparency in the process. It checks that the RTFE and relevant stakeholders know the appointment and the significance of the position.

By clearly defining the role of the RTFE in the Gold Fields Tailings Standard, providing a comprehensive job description, and confirming the appointment through a formal letter, we demonstrate our commitment to accountability and transparency. These measures establish a strong foundation for effective tailings management and check that the RTFE is well-positioned to fulfil their responsibilities in upholding the integrity and safety of our tailings facility.

Gold Fields remains dedicated to continuous improvement and the highest standards of tailings management. Through clearly defined roles and responsibilities, we strive to maintain a robust system of accountability and foster a culture of safety, environmental stewardship, and responsible operations across our organization.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 8.5.C

Criteria

The RTFE liaises with the EOR and internal teams.

Discussion

The Responsible Tailings Facility Engineer (RTFE) at Gold Fields operates within a robust support structure that checks effective collaboration and expertise sharing. As the lead engineer in the Tarkwa Tailings Stewardship team, the RTFE receives significant support from a diverse and highly skilled local and international tailings team.

Given the complex nature of our operations at the Tarkwa mine, which involves multiple operational TSFs, ongoing construction of buttresses to facilitate downstream raising, and exploration of the life of mine transformation concepts, the RTFE's role demands higher support. The expertise and contributions of the local and international tailings teams are instrumental in providing this support.

Of particular importance is the involvement of the Engineer of Record (EOR), who has been integrated into Gold Fields as an extension of our team. The EOR provides technical support and oversight for tailings management activities. On a daily basis, the EOR actively participates in monitoring activities, construction quality assurance, and site investigations. Their technical knowledge and experience greatly contribute to the integrity and safety of our tailings facilities.

To check seamless coordination and knowledge sharing, the RTFE and the Tarkwa Tailings Stewardship team maintain regular engagement with the EOR. During fortnightly meetings, the EOR collaborates with the team to discuss various aspects of tailings management. This includes leading technical studies, sharing insights, addressing challenges, and providing guidance to check compliance with best practices and regulatory requirements.

The involvement of the EOR and the close collaboration with the Tarkwa Tailings Stewardship team enable a comprehensive and well-rounded approach to tailings management. By tapping into the technical expertise and experience of the EOR and leveraging the support of the wider tailings team, we can effectively address the complexities and demands associated with our tailings facilities.

Gold Fields is committed to maintaining high technical support and oversight for our RTFEs. By nurturing a culture of collaboration and knowledge sharing, we strive to continuously enhance our tailings management practices, ensuring the safety, integrity, and responsible operation of our tailings facilities.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



✓ Requirement 8.5.D

Criteria

The RTFE must know the DBR, relevant design reports, and the tailings facility's construction and operations/performance.

Discussion

As the head of the Tarkwa Tailings Stewardship team, the Responsible Tailings Facility Engineer (RTFE) plays a crucial role in overseeing the comprehensive management of the tailings facilities at the Tarkwa mine. One of the key responsibilities of the RTFE is to thoroughly understand the Design Basis Report (DBR), relevant design reports, and the tailings facility's construction and operations/performance.

Collaboration and coordination with various interdisciplinary stakeholders, both local and international, are essential aspects of the RTFE's role. Together with these stakeholders, the RTFE works diligently to drive the implementation of relevant designs, monitor construction activities, and optimize the operational performance of the TSFs at the Tarkwa mine. This collaborative approach checks that all stakeholders are actively involved in the decision-making process and are well-informed about the progress made in tailings management.

To maintain the highest standards of tailings management, deliverables associated with the Tarkwa mine's TSFs are subject to thorough review. The RTFE and the interdisciplinary stakeholders present on-site carefully evaluate these deliverables to check compliance with industry best practices, regulatory requirements, and our internal standards. Additionally, the Group Head of Tailings and the wider tailings team provide additional expertise and oversight, contributing to a robust and comprehensive review process.

In addition to the ongoing collaboration and coordination with various stakeholders, the Responsible Tailings Facility Engineer (RTFE) at the Tarkwa mine maintains a strong reporting mechanism to check the continuous monitoring of the TSFs operational performance. This reporting process is vital in keeping the entire team well-informed and up to date.

On a quarterly basis, the RTFE diligently prepares a comprehensive report on the operational performance of the TSFs. This report provides a detailed analysis of key metrics, performance indicators, and notable observations or trends. By reporting directly to the Group Head of Tailings, the RTFE checks that the highest level of oversight is maintained, allowing for timely identification of any areas that require attention or improvement.

Furthermore, the Tarkwa mine receives a monthly summary of monitoring results from the Engineer of Record (EOR) to support the ongoing monitoring efforts. These monitoring results provide valuable insights into the performance of the TSFs, including factors such as stability, seepage, and other critical parameters. Regularly receiving this summary allows the RTFE and the Tarkwa Tailings Stewardship team to stay informed about the current state of the TSFs and take necessary actions based on the findings.

The combination of quarterly operational performance reporting by the RTFE and the monthly monitoring results received from the EOR checks a comprehensive and proactive approach to managing the TSFs.

This diligent and collaborative approach confirms that all stakeholders within the Tarkwa Tailings Stewardship team are fully engaged and informed about the intricacies of tailings management. The RTFE and the entire team can drive continuous improvement, identify enhancement areas, and address emerging challenges by actively participating in the review and decision-making processes.

Gold Fields remains committed to upholding the highest standards of tailings management at the Tarkwa mine.



Through the collective efforts of the RTFE, the interdisciplinary stakeholders, and the support of the Group Head of Tailings and the broader tailings team, we check that the design, construction, and operational performance of our TSFs is carefully managed and aligned with our commitment to safety, environmental responsibility, and community well-being.

Assessment Outcome

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

-  Meets this Requirement



✔ Requirement 8.5.E

Criteria

Communication occurs between the RTFE and the Accountable Executive or designee.

Discussion

Effective communication and collaboration between the Responsible Tailings Facility Engineer (RTFE) and the Accountable Executive, or their designated representative, is a key priority at the Tarkwa mine. Recognizing the importance of maintaining a strong line of communication, regular quarterly meetings are facilitated by the RTFE, bringing together the Accountable Executive, the Engineer of Record, and the Group Head of Tailings. Additionally, Tarkwa Tailings Stewardship team members are invited to attend these sessions, ensuring a comprehensive and inclusive discussion approach.

These scheduled meetings serve as a platform for open dialogue, enabling timely updates, information sharing, and swift resolution of potential issues or concerns. The RTFE is vital in facilitating effective communication channels between all stakeholders involved in tailings management, promoting collaboration and alignment across the team.

By fostering regular and structured communication, the RTFE checks that the Accountable Executive, as well as the Engineer of Record and the Group Head of Tailings, are kept well-informed about the ongoing activities, challenges, and progress related to the tailings facilities. This proactive approach allows for effective decision-making, timely interventions, and the implementation of necessary measures to maintain the safety, integrity, and environmental performance of the TSFs.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 8.6 – Self-Assessment Rating Justification

Identify appropriate qualifications and experience requirements for all personnel who play safety-critical roles in the operation of a tailings facility, including, but not limited to, the RTFE, the EOR and the Accountable Executive. Check that incumbents of these roles have the identified qualifications and experience, and develop succession plans for these personnel.

✔ Requirement 8.6.A

Criteria

Qualification and experience requirements for all personnel with critical safety roles are clearly defined and appropriate to the position's level of responsibility. This includes but is not limited to critical roles such as the RTFE, EOR and Accountable Executives.

Discussion

The qualifications and experience requirements for personnel in safety-critical roles, including the Responsible Tailings Facility Engineer (RTFE), Engineer of Record (EOR), and Accountable Executives, are clearly defined and aligned with the level of responsibility associated with each position. We have developed the Gold Fields Tailings Standard, consolidating the criteria outlined by the Global Industry Standard on Tailings Management (GISTM), ANCOLD, and other international best practices.

This comprehensive document is a central reference point, ensuring a consistent and standardized approach to tailings management across all Gold Fields operations worldwide. Within the Gold Fields Tailings Standard, specific roles such as the Accountable Executive, RTFE, and EOR are outlined, providing a clear understanding of their responsibilities and expectations.

Role-specific job descriptions have been developed to further emphasize the qualifications and experience required for these critical roles. These descriptions outline the specific competencies, knowledge, and skills necessary to fulfil the responsibilities associated with each position. We also have a robust training and competency matrix in place at the Tarkwa mine, known as the Tarkwa Training Competency Matrix. This matrix not only defines the qualifications and training competencies required for each role but also serves as a tool to track and monitor the current training status of individuals and completed training programs.

By implementing these rigorous qualification and experience requirements, along with clear job descriptions and a comprehensive training framework, Gold Fields checks that individuals in safety-critical roles possess the necessary expertise to fulfil their responsibilities effectively. We also prioritize succession planning to check a seamless transition and continuity of expertise in these key positions, thereby safeguarding the safety and environmental performance of our tailings facilities.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 8.6.B

Criteria

Succession plans are developed for safety-critical roles.

Discussion

Gold Fields has developed a succession plan for safety-critical roles in the Tarkwa Tailings Stewardship team to check the continuity of sound tailings management. The plan is designed to provide adequate coverage and support for key positions, including the Engineer of Record (EOR), Responsible Tailings Facility Engineer (RTFE), and Accountable Executive.

The succession plan for the EOR includes an Alternate Engineer of Record and two deputy Engineers of Records, who are well-versed in the technical aspects and responsibilities of the role. This checks that multiple individuals can assume the EOR position if needed. Similarly, the RTFE is supported by a site tailings engineer who serves in a deputy capacity, providing additional expertise and support.

In addition, the Group Head of Tailings, who oversees the overall tailings management function, is supported by a Senior Tailings Engineer. This checks that a qualified individual is ready to step in if necessary.

In cases where the Accountable Executive position needs to be temporarily filled, the role can be formally reassigned to the company CEO until a suitable replacement is identified. This checks continued leadership and accountability for our tailings facilities' safety and environmental performance.

The succession plans are documented in the Tarkwa Tailings Management Plan (TMP), which serves as a guide outlining the strategies, protocols, and procedures for effective tailings management. By having these plans in place, we can mitigate potential disruptions and maintain the highest safety and environmental stewardship standards throughout our operations.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



Requirement 8.7 – Self-Assessment Rating Justification

For tailings facilities with Consequence Classification of 'Very High' or 'Extreme', appoint an Independent Tailings Review Board (ITRB). For all other facilities, the Operator may appoint a senior independent technical reviewer. The ITRB or the reviewer shall be appointed early in the project development process, report to the Accountable Executive and certify in writing that they follow best practices for engineers in avoiding conflicts of interest.

✔ Requirement 8.7.A

Criteria

For a tailings facility with a consequence classification of failure of 'Very High' to 'Extreme', the Operator has appointed an Independent Tailings Review Board (ITRB).

Discussion

In line with our commitment to maintaining the highest standards of safety and environmental stewardship, Gold Fields has appointed an Independent Tailings Review Board (ITRB) for the tailings facilities at the Tarkwa mine. The decision to establish the ITRB is based on the classification of the facilities as having a consequence classification of 'Very High', signifying the potential severity of the consequences of failure.

The ITRB was formally established in early 2022, and its inaugural meeting marked the beginning of their involvement. The ITRB visited the mine site for five days, met with the Tarkwa Tailings Stewardship team, and conducted comprehensive assessments of the tailings storage facilities. This included visiting the TSFs, allowing the board to gain firsthand insights into their design, construction, and ongoing operations.

Furthermore, as part of our commitment to knowledge sharing and community engagement, the ITRB took the opportunity to present to students at the Tarkwa School of Mines, sharing their expertise and raising awareness about tailings management best practices.

Following their initial review, the ITRB provided a summary recommendation report to our team. This report provided valuable input for ongoing improvements and decision-making regarding our tailings facilities.

In June 2023, the ITRB returned to the site for a second session, repeating the review process and providing further insights and recommendations. Their ongoing involvement and independent perspective ensure that we continually evaluate and enhance our tailings management practices to meet or exceed industry best practices.

We demonstrate our commitment to transparency, accountability, and continuous improvement by appointing an Independent Tailings Review Board. We value the expertise and guidance provided by the ITRB, and their participation strengthens our overall approach to tailings management at the Tarkwa mine.

Therefore, Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 8.7.B

Criteria

For a tailings facility with a consequence classification of failure of 'High' or lower in the absence of an ITRB, the Operator has appointed a senior independent technical reviewer.

Discussion

Under our commitment to maintaining robust safety measures, we have implemented a rigorous review process for our tailings facilities at the Tarkwa mine. While the classification of the Tarkwa TSFs falls under the "Very High" consequence category, which necessitates the presence of an Independent Tailings Review Board (ITRB), it is important to note that irrespective of consequence classification, we have appointed a senior independent technical reviewer.

We engage with independent technical reviewers on an ad hoc basis. These reviewers offer expertise in specific areas and support our internal teams in evaluating material properties and design components. We believe in leveraging external perspectives to enhance our tailings facilities' overall robustness and integrity.

It is worth highlighting that all individuals appointed as part of the review process, whether members of the Independent Technical Review Board or independent technical reviewers, must adhere to the highest standards of professional conduct and ethics. They certify in writing that they follow best practices for engineers, ensuring the avoidance of conflicts of interest.

At Gold Fields, we ensure safety and environmental responsibility in our tailings management practices. Through the involvement of independent experts and the adoption of comprehensive review processes, we prioritize the protection of our employees, neighbouring communities, and the environment surrounding our operations.

Therefore, Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 8.7.C

Criteria

The ITRB or a senior independent technical reviewer reports to the tailings facility's accountable executive or delegate.

Discussion

At Gold Fields, we prioritize robust governance and accountability in our tailings management practices. To facilitate effective reporting and communication channels, the Independent Technical Review Board (ITRB) and Independent Reviewers are formally appointed by the Tarkwa Responsible Tailings Facility Engineer, acting on behalf of the Accountable Executive. Throughout the selection process and scope development, the Group Head of Tailings also plays a vital role in ensuring alignment with the overarching Gold Fields framework.

Upon completing the ITRB review annual visit, the Board convenes a meeting with the Tarkwa Mine Management and Tailings Stewardship team. This gathering serves as a platform for the ITRB to present their insightful recommendations and findings, providing valuable guidance for the team to incorporate into their future actions and initiatives.

When the Accountable Executive cannot attend the meeting, the RTFE and Site Management team checks that the recommendations are received. This checks that the insights and expertise provided by the ITRB, or senior independent technical reviewer are effectively communicated to the responsible party overseeing the safety and integrity of our tailings facilities.

At Gold Fields, we believe in fostering a culture of transparency, accountability, and continuous improvement. By engaging independent experts and establishing clear reporting lines to the Accountable Executive and RTFE, we remain committed to upholding the highest safety standards, environmental stewardship, and responsible tailings management across our operations.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



✓ Requirement 8.7.D

Criteria

The ITRB or a senior independent technical reviewer is appointed during the early phase of tailings facility site investigation and design engineering (suggested pre-feasibility).

Discussion

Gold Fields acknowledges the importance of independent technical review and oversight in ensuring the robustness and safety of tailings storage facilities. Following best practices and industry standards, we have appointed an Independent Technical Review Board (ITRB) for our tailings facilities with an Extreme and Very High Consequence classification.

The ITRB comprises highly experienced professionals with extensive expertise overseeing, designing, constructing, and managing tailings storage facilities. They bring valuable insights and independent perspectives to the project development process. The inaugural ITRB meeting was conducted in June 2022, followed by another meeting in June 2023, demonstrating our commitment to regular engagement and ongoing review.

It is important to note that the tailings storage facilities at the Tarkwa mine are currently active and operational. Consequently, the ITRB reviews existing site conditions, new technical studies, and work packages. Their role is to provide valuable insights and recommendations to enhance the design, construction, and management of our tailings facilities on an annual basis.

In 2022, Gold Fields initiated a Tarkwa Transformation Study to evaluate potential life-of-mine options for tailing storage at the Tarkwa mine. This study is part of a comprehensive Pre-feasibility Study for the site. As part of the process, the ITRB was provided with key documents from the transformation study and offered the opportunity to contribute their expertise and guidance.

Gold Fields recognizes the significance of independent technical review and values the expertise and oversight provided by the ITRB. We remain committed to transparent and responsible practices, ensuring the highest safety and environmental stewardship standards in our tailings management. By engaging an independent technical reviewer early in the project development process, we adhere to industry best practices and proactively mitigate potential risks.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✓ Meets this Requirement



✔ Requirement 8.7.E

Criteria

The ITRB members and a senior independent technical reviewer have certified in writing the absence of a conflict of interest with the tailings facility as defined by best practice.

Discussion

At Gold Fields, we emphasise the integrity and objectivity of our Independent Tailings Review Board (ITRB) members and senior independent technical reviewers. As part of their commitment to upholding the highest professional standards, they have provided written certification of their independence and the absence of any conflicts of interest with the tailings facility, as defined by industry best practices.

The certification of the absence of conflict of interest is a critical component of our comprehensive approach to ensuring transparency and impartiality in the review process. By adhering to the guidelines and protocols outlined in industry best practices, our ITRB members and senior independent technical reviewers confirm that their assessments, recommendations, and findings are free from any biases or influences that could compromise the integrity of the review.

This written certification is included in the findings report prepared by the Independent Technical Review Board. It reinforces our commitment to maintaining the highest levels of professional conduct and reinforces our stakeholders' confidence in the integrity and independence of our tailings management processes.

At Gold Fields, we recognize the significance of an impartial and objective review process in ensuring our tailings facilities' safety, environmental sustainability, and responsible management. We remain dedicated to engaging highly qualified and independent experts who adhere to best practices, providing valuable insights and guidance for our ongoing commitment to continuous improvement and excellence in tailings management.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



GISTM Principle 09

Appoint and Empower an Engineer of Record.

Principle 09 Self-Assessment Outcome

The Tarkwa mine has three TSFs with a Very High Consequence Classification. A summary of the self-assessment outcome for Principle 09 of the GISTM is presented in Table 14 below. Further information specific to each requirement part is provided in subsequent sections of this report.

Table 14: Principle 09 – Self-Assessment Outcome Summary

Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
9.1	A	For all operating tailings facilities and closed facilities with consequence categories of ‘High’, ‘Very High’ and ‘Extreme’, an engineering firm with the design and construction expertise for tailings facilities of comparable complexity has been engaged.	✓	✓	✓
	B	The appointed Engineer of Record (EOR) has experience and expertise commensurate with the complexity of the tailings facility and the consequence class, and the Operator has approved the appointment.	✓	✓	✓
	C	A DOR, if appropriate, either due to the selection of an EOR internal to the Operator or other circumstances, is appointed that meets the essential qualifications and requirements of the EOR.	–	–	–
9.2	A	An EOR is always appointed and in place throughout the tailings facility lifecycle. The appointed EOR may change during the tailings facility lifecycle.	✓	✓	✓
	B	The EOR is appointed through a written agreement that clearly describes their authority, role and responsibilities throughout the tailings facility lifecycle and during the change of ownership of mining properties.	✓	✓	✓
	C	The written agreement clearly describes the obligations of the Operator to the EOR to support the effective performance ¹ of the EOR during the tailings facility lifecycle.	✓	✓	✓
9.3	A	A programme is established to manage the quality of all engineering work and interactions between the EOR, the RTFE and the Accountable Executive.	✓	✓	✓



Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
	B	The established programme is implemented to manage the quality of all engineering work and the interactions between the EOR, the RTFE and the Accountable Executive.	✓	✓	✓
	C	The programme, developed by the Operator, covers the involvement of the EOR, the RTFE and the Accountable Executive in the tailings facility lifecycle as necessary to confirm that both the design implementation and the design intent are met.	✓	✓	✓
9.4	A	The Accountable Executive considers the risks and associated potential impacts with a tailings facility in selecting the EOR.	✓	✓	✓
	B	The Accountable Executive shall decide the selection of the EOR, but not decided by procurement personnel.	✓	✓	✓
	C	EOR selection is consistent with Requirement 9.1.	✓	✓	✓
9.5	A	A succession plan is in place when it is necessary to change the EOR1 (whether a firm or within a firm, or an in-house employee)	✓	✓	✓
	B	The succession plan includes the comprehensive transfer of data, information, knowledge and experience with the construction procedures and materials.	✓	✓	✓



Requirement 9.1 – Self-Assessment Rating Justification

Engage an engineering firm with expertise and experience in the design and construction of tailings facilities of comparable complexity to provide EOR services for operating the tailings facility and for closed facilities with 'High', 'Very High' and 'Extreme' Consequence Classification that are in the active closure phase. Require that the firm nominate a senior engineer, approved by the Operator, to represent the firm as the EOR and verify that the individual has the necessary experience, skills and time to fulfil this role. Alternatively, the Operator may appoint an in-house engineer with expertise and experience in comparable facilities as the EOR. In this instance, the EOR may delegate the design to a firm ('Designer of Record') but shall remain thoroughly familiar with the design in discharging their responsibilities as EOR. Whether the EOR or the DOR is in-house or external, they must be competent and have experience appropriate to the Consequence Classification and complexity of the tailings facility.

✔ Requirement 9.1.A

Criteria

For all operating tailings facilities and closed facilities with consequence categories of 'High', 'Very High' and 'Extreme', an engineering firm with the design and construction expertise for tailings facilities of comparable complexity has been engaged.

Discussion

Gold Fields understands the importance of enlisting an engineering firm with the requisite expertise and experience to guarantee the safe and responsible management of our tailings facilities. With this in mind, we have formally appointed an Engineer of Record (EOR) firm for TSF 1, 2, and 3 and a second EOR firm for TSF 5 at the Tarkwa mine. Both EOR firms bring extensive experience and expertise to the table, and their involvement spans various stages of tailings management, including planning, design, construction, operation, and closure.

Both EORs have a longstanding history of collaboration with the Tarkwa mine and bring a wealth of knowledge and expertise. Comprising local and international professionals, the firm possesses advanced capabilities in supporting Gold Fields in designing, constructing and monitoring tailings facilities of comparable complexity.

Our EOR teams are actively involved in various technical studies and initiatives, ranging from design considerations and construction of buttresses to enable downstream raising to life-of-mine transformation studies and tailings reduction strategies. They play a crucial role in ensuring that our tailings management practices align with the industry's best standards, including the requirements set forth by the Global Industry Standard on Tailings Management.

By engaging experienced EOR firms, we can leverage their technical proficiency, multidisciplinary approach, and extensive track record in delivering complex projects. This strategic partnership enables us to continually enhance our tailings facilities' safety, efficiency, and environmental performance.

At Gold Fields, we remain committed to upholding the highest standards in tailings management and continually seek opportunities to collaborate with industry-leading experts who share our dedication to responsible mining practices. By engaging knowledgeable and competent EOR firms, we further strengthen our capabilities in designing and operating tailings facilities that meet the highest safety standards, environmental stewardship, and regulatory compliance.

Therefore, Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✔ **Meets this Requirement**



✔ Requirement 9.1.B

Criteria

The appointed Engineer of Record (EOR) has experience and expertise commensurate with the complexity of the tailings facility and the consequence class, and the Operator has approved the appointment.

Discussion

At Gold Fields, we prioritize the selection of an Engineer of Record (EOR) with the necessary experience and expertise that aligns with the complexity and consequence classification of our tailings facilities. To check this, our Gold Fields Tailings Group has developed a comprehensive Gold Fields Tailings Standard, which incorporates key criteria from international best practices, including the Global Industry Standard on Tailings Management.

This standard is a reference document outlining the qualifications and experience requirements for the EOR role. It provides clear guidelines to guarantee that the appointed EOR possesses the necessary skills, knowledge, and proficiency commensurate with the specific tailings facility's complexity and consequence class. These requirements are further detailed in our site-specific training and competency matrix, which provides a comprehensive overview of the qualifications and training needed for each critical role, including the EOR.

The appointment of the EOR for the Tarkwa mine has undergone a thorough approval process. The Group Head of Tailings, in alignment with the requirements specified in the Gold Fields Standard, has approved the selection of the EOR through an official letter. This selection process adheres to the guidelines and criteria outlined in the Gold Fields Standard, which has received approval from our Board of Directors.

At Gold Fields, transparency and accountability are of utmost importance to us. In line with our commitment to openness, copies of the Engineer of Record's (EOR) curriculum vitae (CVs) have been made readily available to support the rigorous selection process. These CVs provide detailed information about the qualifications, expertise, and experience of the EOR candidates. By making this information accessible, we aim to check that the selection of the EOR is based on a comprehensive evaluation of their capabilities and suitability for the role. This practice underscores our commitment to maintaining a robust, transparent process in tailings management operations.

By establishing these stringent requirements and approval procedures, we check that the EOR possesses the necessary competence and expertise to fulfil its critical role in tailings facility design, construction, and ongoing management. We are committed to upholding the highest standards of engineering excellence and continuously improving our tailings management practices to safeguard the environment, communities, and operations.

At Gold Fields, we prioritize the safety, sustainability, and responsible management of our tailings facilities, and the appointment of a qualified and experienced EOR is an integral part of our commitment to maintaining the highest standards in tailings management.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



— Requirement 9.1.C

Criteria

A DOR, if appropriate, either due to the selection of an EOR internal to the Operator or other circumstances, is appointed that meets the essential qualifications and requirements of the EOR.

Discussion

At Gold Fields, our approach to tailings facility management is guided by industry best practices and a commitment to ensuring the highest standards of safety and expertise. In accordance with these principles, an Engineer of Record (EOR) has been appointed for TSF 1, 2, and 3, and a second EOR firm has been appointed to manage TSF 5.

Given the presence of an EOR, the need for a Designer of Record (DOR) is not applicable in this context. The appointment of the EORs signifies the presence of a qualified and experienced engineer who will oversee and take responsibility for the design and construction of the tailings facilities.

Our rigorous selection process checks that the EORs possess the necessary competence and experience commensurate with the complexity and consequence classification of the tailings facility. This approach aligns with our commitment to upholding the highest standards in tailings management and underscores our dedication to the safety and integrity of our operations.

Therefore, Gold Fields has ranked this Requirement as “Not applicable.”

Assessment Outcome

- — Not Applicable



Requirement 9.2 – Self-Assessment Rating Justification

Empower the EOR through a written agreement that clearly describes their authority, role and responsibilities throughout the tailings facility lifecycle, and during change of ownership of mining properties. The written agreement must clearly describe the obligations of the Operator to the EOR, to support the effective performance of the EOR.

✔ Requirement 9.2.A

Criteria

An EOR is appointed and in place at all times throughout the tailings facility lifecycle. The appointed EOR may change during the tailings facility lifecycle.

Discussion

At Gold Fields, we prioritize appointing an Engineer of Record (EOR) throughout the entire lifecycle of our tailings facilities. The EOR plays a crucial role in ensuring the effective and responsible management of our tailings operations. As mentioned in Requirement 9.1, an EOR has been appointed for TSF 1, 2, and 3, and a second EOR firm has been appointed for TSF 5 at the Tarkwa mine. Both EOR firms bring extensive experience and expertise to the table, and their involvement spans various stages of tailings management, including planning, design, construction, operation, and closure.

Throughout the lifecycle of the tailings facility, it is important to note that the appointed EOR may change under certain circumstances. However, regardless of any potential changes, Gold Fields remains dedicated to the principles outlined in the written agreement with the EOR. This agreement clearly defines the authority, role, and responsibilities of the EOR, and it outlines the Operator's obligations in supporting the effective performance of the EOR. Our commitment to transparency and accountability checks that the transition between EORs, if necessary, is carefully managed, focusing on maintaining seamless continuity and the highest level of technical expertise at all times.

By adhering to these practices and engaging with qualified EORs, Gold Fields upholds its commitment to responsible tailings management and demonstrates our dedication to our operations' long-term safety, sustainability, and success.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



✔ Requirement 9.2.B

Criteria

The EOR is appointed through a written agreement that clearly describes their authority, role and responsibilities throughout the tailings facility lifecycle, and during change of ownership of mining properties.

Discussion

At Gold Fields, we recognize the importance of establishing clear guidelines and responsibilities for our Engineer of Record (EOR) to check effective performance throughout the entire lifecycle of our tailings facilities, including periods of change in ownership of mining properties. Both EORs for the Tarkwa mine have been formally appointed through comprehensive written agreements to facilitate this. These agreements provide a framework that defines the authority, role, and obligations of the EOR while also outlining the corresponding commitments of the Operator. Through this approach, we strive to promote transparency, accountability, and the successful execution of our tailings management practices.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ [Meets this Requirement](#)



✔ Requirement 9.2.C

Criteria

The written agreement clearly describes the obligations of the Operator to the EOR, to support the effective performance of the EOR during the tailings facility lifecycle.

Discussion

At Gold Fields, we prioritize the establishment of clear and comprehensive written agreements that define the obligations of the Operator to the Engineer of Record (EOR) throughout the entire lifecycle of our tailings facilities. These agreements have been prepared to align with the criteria outlined in the Gold Fields Tailings Standard and the Global Industry Standard on Tailings Management. They have undergone a thorough legal review to check their compliance and effectiveness.

By adhering to these agreements, we actively support both EORs at the Tarkwa mine in ensuring our tailings facilities' safe and responsible operation. We remain committed to upholding the highest standards of tailings management practices and fostering a collaborative partnership with our EORs to achieve these objectives.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 9.3 – Self-Assessment Rating Justification

Establish and implement a programme to manage the quality of all engineering work, the interactions between the EOR, the RTFE and the Accountable Executive, and their involvement in the tailings facility lifecycle as necessary to confirm that both the implementation of the design and the design intent are met.

✔ Requirement 9.3.A

Criteria

A programme is established to manage the quality of all engineering work and interactions between the EOR, the RTFE and the Accountable Executive.

Discussion

At Gold Fields, we have established a comprehensive program to check the quality management of all engineering work and facilitate effective interactions between the Engineer of Record (EOR), the Responsible Tailings Facility Engineer (RTFE), and the Accountable Executive (AE).

The cornerstone of this program is the Tarkwa Tailings Management Plan (TMP), which has been developed in strict adherence to the Gold Fields Tailings Standard and the requirements outlined by the Global Industry Standard on Tailings Management (GISTM).

As part of the program, regular quarterly meetings are held, bringing together the RTFE, AE, and EOR to discuss and address all aspects of tailings management. These meetings serve as a platform for collaborative decision-making and check that the implementation of the design aligns with the intended objectives. By fostering open communication and coordination, we prioritize the effective management of our tailings facilities and uphold the highest standards of safety and environmental stewardship.

In addition to the established program, regular and proactive collaboration is fostered among key Tarkwa stakeholders involved in tailings management. The Responsible Tailings Facility Engineer (RTFE) and Engineer of Record (EOR) actively engage with the Tarkwa Tailings Stewardship team, Group Head of Tailings, and the Group Tailings team on a fortnightly basis at a minimum, ensuring consistent communication and alignment. These meetings are essential forums to inform all stakeholders about the status and progress of tailings-related work packages and projects. By convening regularly, we check that everyone stays updated with the latest developments and can promptly address any emerging challenges or opportunities.

Furthermore, to maintain a robust quality control process, all documentation submitted by the EOR undergoes a thorough review by the Group Head of Tailings and the Group Tailings team, in close collaboration with the Tarkwa Tailings Stewardship team. This review checks that all deliverables meet the highest standards and adhere to the defined design parameters, reinforcing our commitment to responsible tailings management.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ **Meets this Requirement**



✔ Requirement 9.3.B

Criteria

The established programme is implemented to manage the quality of all engineering work and the interactions between the EOR, the RTFE and the Accountable Executive.

Discussion

The established program to manage the quality of engineering work and facilitate interactions between the Engineer of Record (EOR), Responsible Tailings Facility Engineer (RTFE), and the Accountable Executive is fully implemented and has been in operation for three years. This program was initiated concurrently with introducing key tailings roles, including the RTFE and Accountable Executive, to check effective oversight throughout the tailings facility lifecycle. Regularly scheduled meetings are held on a quarterly basis, providing a platform for comprehensive discussions and updates on all pertinent aspects of tailings management.

Furthermore, as part of our commitment to maintaining rigorous quality standards, all technical documentation provided by the EOR undergoes thorough review by the Group Head of Tailings, and in certain cases, by the Independent Technical Review Board or appointed Independent Reviewer. This stringent review process confirms that the design implementation aligns with the intended objectives and conforms to best practices in tailings management.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 9.3.C

Criteria

The programme, developed by the Operator, covers the involvement of the EOR, the RTFE and the Accountable Executive in the tailings facility lifecycle as necessary to confirm that both the implementation of the design and the design intent are met.

Discussion

The Operator has developed and implemented a comprehensive program that encompasses the involvement of the Engineer of Record (EOR), Responsible Tailings Facility Engineer (RTFE), and the Accountable Executive (AE) throughout the entire tailings facility lifecycle.

This program checks that the design implementation and intent are effectively addressed. Regular quarterly meetings are conducted among the RTFE, AE, and EOR to facilitate communication and collaboration. In support of these meetings, the EOR prepares a quarterly monitoring report, while the RTFE compiles a quarterly performance report for technical review by the Group Head of Tailings.

Annually, the EOR provides an annual performance report summarizing the overall performance and progress against the original design intent. These reports play a vital role in monitoring and tracking progress throughout the lifecycle of the tailings facility. Additionally, upon completion of any construction activity, the Engineer of Record provides a "Construction Design Intent Verification" note for the record, affirming that the construction has been carried out in accordance with the design intent.

This process is described within the Tarkwa Tailings Management Plan, further reinforcing our commitment to upholding design integrity and ensuring responsible tailings management practices.

Therefore, Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✔ Meets this Requirement



Requirement 9.4 – Self-Assessment Rating Justification

Given its potential impact on the risks associated with a tailings facility, the selection of the EOR shall be decided by the Accountable Executive and informed, but not decided, by procurement personnel.

✔ Requirement 9.4.A

Criteria

The Accountable Executive considers the risks and associated potential impacts with a tailings facility in selecting the EOR.

Discussion

At Gold Fields, the Engineer of Record (EOR) selection is a carefully considered process that aligns with the requirements outlined in the Gold Fields Tailings Standard. The ultimate responsibility for tailings management at the Tarkwa mine rests with the Accountable Executive, who works closely with the interdisciplinary Tarkwa Tailings Stewardship team and the Group Head of Tailings to make informed decisions regarding selecting the EOR.

Given the significant potential impact and risks associated with tailings facilities, particular attention is given to the EOR's ability and experience in effectively managing these risks and mitigating potential impacts.

Considering the Very High consequence classification assigned to the Tarkwa mine's TSFs, the selection of the EOR is based on their demonstrated expertise and track record in addressing the specific challenges and complexities involved. This checks that the EOR is well-equipped to navigate and manage the risks associated with the tailings facility, ultimately contributing to the safe and responsible operation of the site.

Therefore, Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✔ Meets this Requirement



✓ Requirement 9.4.B

Criteria

The selection of the EOR shall be decided by the Accountable Executive and informed, but not decided, by procurement personnel.

Discussion

The Tarkwa mine has appointed two Engineer of Record (EOR) firms. One firm is responsible for the design and oversight of TSF 5, which is outside the scope of this report. The other firm is entrusted with the design and oversight of TSF 1, 2, and 3. These EOR firms have maintained a close and longstanding relationship with the mine.

To support the implementation of the engineering aspects of the Global Industry Standard on Tailings Management (GISTM), which was released in 2020, the EOR firms were formally engaged. The endorsement for their appointment to support GISTM implementation was provided by the Group Head of Tailings. The selection process was conducted based on their extensive years of experience in tailings engineering and successful track record in delivering projects with similar technical complexity.

The decision to appoint the EOR firms was made by the Accountable Executive and Mine Management following a comprehensive review conducted by the Tarkwa Investment Committee. As per the specified criteria, the selection of the EOR firms was the responsibility of the Accountable Executive, with procurement personnel being informed about the decision without having a decisive role in the selection process.

The primary focus behind the appointment of the EOR firms was to manage the risks associated with our tailings facilities effectively. Their intimate knowledge of the site and their expertise in tailings engineering were critical factors in their selection. We remain fully committed to upholding the highest standards of safety and environmental practices, aligning ourselves with the principles outlined in the GISTM.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✓ Meets this Requirement



✔ Requirement 9.4.C

Criteria

EOR selection is consistent with Requirement 9.1.

Discussion

Currently, the Tarkwa mine has two appointed Engineer of Record (EOR) firms. One firm is responsible for the design and oversight of TSF 5, which is beyond the scope of this report. The other firm has been entrusted with the design and oversight of TSFs 1, 2, and 3, which carry a Very High Consequence Classification.

The appointment of both EOR firms was based on their proven expertise and extensive experience in designing and constructing tailings facilities of comparable complexity. This selection process aligns with the requirements outlined in Requirement 9.1, which emphasize engaging an engineering firm with the necessary skills and experience to provide EOR services for tailings facilities with High, Very High, and Extreme Consequence Classifications, particularly those in the active closure phase.

To fulfil their obligations as EORs, the engineers appointed from each firm have undergone a thorough assessment and approval process by the Group Head of Tailings. It has been verified that these individuals possess the required experience, skills, and availability to fulfil their roles effectively.

We want to emphasize that both EORs have demonstrated competence and relevant experience suitable for their respective tailings facilities' Consequence Classification and complexity. The selection of these EOR firms, particularly for tailings facilities with a Very High Consequence Classification, was conducted carefully considering their track record, expertise, and experience in managing similar complex projects.

At the Tarkwa mine, we remain unwavering in our commitment to upholding the highest standards of safety and environmental practices. We check that our tailings facilities are operated and managed with utmost diligence. Our continuous efforts are dedicated to safeguarding the well-being of our workforce, protecting the environment, and mitigating risks associated with tailings management.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



Requirement 9.5 – Self-Assessment Rating Justification

Where it becomes necessary to change the EOR (whether a firm or an in-house employee), develop a detailed plan for the comprehensive transfer of data, information, knowledge and experience with the construction procedures and materials.

✔ Requirement 9.5.A

Criteria

A succession plan is in place when it is necessary to change the EOR (whether a firm or within a firm, or an in-house employee)

Discussion

The Tarkwa Tailings Stewardship team, comprising various key stakeholders, including the EOR partner, recognizes the importance of ensuring continuity and a seamless transition in case of a necessary change in the EOR position, whether it involves a firm or an in-house employee.

To facilitate a smooth succession process, the EOR project team at Tarkwa includes multiple alternate EORs actively involved in the project. These alternate EORs are well-versed in the project requirements and possess the expertise to fulfil the responsibilities of the EOR role, should the need arise. Furthermore, the project team has designated two individuals to formally serve as deputies, ensuring a dedicated support structure is in place.

In line with our commitment to comprehensive planning, Gold Fields has developed detailed 'welcome packs' for the EOR position and has incorporated the succession plan into the overarching Tarkwa Tailings Management Plan (TMP), which encompasses all project team roles. Integrating the succession plan into our management framework checks a systematic approach to transferring critical data, information, knowledge, and experience pertaining to construction procedures and materials.

Additionally, as part of our commitment to transparency and best practices, the EOR has provided a detailed succession plan outlining the steps and measures to be taken during a transition. This plan checks that the incoming EOR is equipped with the necessary insights and resources to continue the management and oversight of the tailings facility seamlessly.

By proactively establishing and integrating a comprehensive succession plan, we demonstrate our dedication to effective risk management and preserving the highest standards of tailings stewardship. This commitment extends beyond the individual holding the EOR position, ensuring the continued success and resilience of our tailings management practices at Tarkwa.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✓ Requirement 9.5.B

Criteria

The succession plan includes the comprehensive transfer of data, information, knowledge and experience with the construction procedures and materials.

Discussion

As part of Gold Fields' commitment to effective tailings management and operational excellence, we have implemented a company-wide Tailings Management System (TMS).

The TMS comprises various components, including a Tailings Policy, Tailings Standard, Tailings Framework, training materials, references, and incident reporting guidance. At the operational level, the TMS encompasses a Tailings Management Plan (TMP), Tailings Risk Management Plan, and related design and technical studies. These documents and resources are hosted on an internally developed cloud-based system, providing accessibility to all Gold Fields employees and granting access to external stakeholders when necessary. Within this system, the "Tailings Management Hub" is a centralized source for all general tailings-related information, while the Tarkwa Tailings Stewardship team portal is a dedicated platform for individual operations.

Data, information, knowledge, and documentation relevant to tailings management are stored within the Tarkwa Tailings Stewardship portal, integrated with existing Environmental and Social Management Systems (ESMS) and site-level document control systems. This comprehensive and centralized approach checks that all necessary information is readily available, enabling a smooth transition between EOR partners or employees, should the need arise.

The Succession Plan for the EOR role at the Tarkwa mine is embedded within the Tailings Management Plan (TMP), which serves as a comprehensive guide. This plan includes a checklist for transferring data, information, and knowledge, ensuring that critical insights related to construction procedures and materials are systematically passed on to the incoming EOR. Integrating the succession plan into the broader tailings management framework checks that the transfer process is thorough, organized, and aligned with our commitment to operational excellence.

Gold Fields has actively engaged the alternate EORs and designated deputies within the project team to facilitate a seamless transition. These individuals have been involved in the project from an early stage and have had the opportunity to visit the Tarkwa mine site, gaining firsthand experience and fostering relationships with site stakeholders. This proactive approach checks that succession planning is well-prepared and that the incoming EOR is equipped with the necessary knowledge and understanding of site-specific conditions.

Gold Fields demonstrates its commitment to effective risk management, safety, and environmental stewardship by implementing a robust and integrated Tailings Management System. We remain dedicated to transparency and accountability in all aspects of our operations, and the comprehensive transfer of data and knowledge during a change in the EOR position is a vital component of our tailings management practices.

Therefore, Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✓ [Meets this Requirement](#)



GISTM Principle 10

Establish and Implement Levels of Review as Part of a Strong Quality and Risk Management System for All Phases of the Tailings Facility Lifecycle, Including Closure.

Principle 10 Self-Assessment Outcome

The Tarkwa mine has three TSFs with a Very High Consequence Classification. A summary of the self-assessment outcome for Principle 10 of the GISTM is presented in Table 15 below. Further information specific to each requirement part is provided in subsequent sections of this report.

Table 15: Principle 10 – Self-Assessment Outcome Summary

Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
10.1	A	A risk assessment process is in place for the tailings facility and is based on an up-to-date knowledge base for the tailings facility.	✓	✓	✓
	B	The risk assessment is updated at least every three years and more frequently whenever there is a material change to the tailings facility or the social, environmental and local economic context.	✓	✓	✓
	C	Risk assessment scope to include the full potential area of influence of the tailings facility and to actively incorporate industry experience in risk assessment.	✓	✓	✓
	D	Sources of risk are regularly identified, assessed and managed at all phases of the tailings facility lifecycle, including projected climate change impacts under a range of credible future climate scenarios.	✓	✓	✓
	E	A multi-disciplinary team is qualified to undertake the risk assessment specific to the phase of the tailings facility lifecycle (i.e., construction, operation, suspension, expansion, closure) and can apply best practice methodology in a cross-functional manner.	✓	✓	✓
	F	Following review by the ITRB or senior independent technical reviewer, action plans are prepared, implemented and reported when risk assessments identify unacceptable tailings facility risks.	✓	✓	✓
10.2	A	The TMS and components of the ESMS are reviewed sufficiently often to check that the tailings facility management system is effective and applicable to the risks across the full lifecycle of the facility.	✓	✓	✓



Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
	B	The outcomes of the TMS and ESMS reviews are documented and reported to the Accountable Executive, Board of Directors and project-affected people.	✓	✓	✓
	C	The review shall be undertaken by senior technical reviewers with the appropriate qualifications, expertise and resources.	✓	✓	✓
	D	The review is conducted at least every three years for tailings facilities with 'High', 'Very High' or 'Extreme' Consequence Classifications.	✓	✓	✓
10.3	A	Internal audits are completed frequently to check consistent implementation of established requirements related to company procedures, guidelines and corporate governance requirements consistent with the TMS and aspects of the ESMS relating to tailings facility risks.	⚠	⚠	⚠
10.4	A	An annual tailings facility review is conducted throughout the construction and operational periods to assess condition and performance. The reviews are performed by the EOR or the senior independent technical reviewer, as assigned for the tailings facility, and the review is documented. Reviews may be conducted more frequently if required by identified issues or the implementation of necessary corrective measures.	✓	✓	✓
10.5	A	DSRs are conducted and documented: — every five years for tailings facilities with 'Very High' or 'Extreme' Consequence Classifications. — every 10 years for all other facilities, or, — more frequently as recommended by the ITRB	✓	✓	✓
	B	DSRs include the tailings facility's technical, operational and governance aspects and shall be completed according to best practice.	✓	✓	✓
	C	DSR individuals cannot conduct consecutive DSRs on the same tailings facility.	✓	✓	✓



Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
	D	DSR individuals certify in writing that they follow best practices for engineers in avoiding conflicts of interest.	✓	✓	✓
10.6	A	For tailings facilities with 'Very High' or 'Extreme' Consequence Classifications, the ITRB, reporting to the Accountable Executive, provides ongoing senior independent technical review of the planning, siting, design, construction, operation, water and mass balance, maintenance, monitoring, performance and risk management at appropriate intervals across all phases of the tailings facility lifecycle.	✓	✓	✓
	B	For tailings facilities with other Consequence Classifications, a senior independent technical reviewer can perform this review alternatively.	–	–	–
	C	The ongoing reviews are conducted at appropriate intervals across all phases of the tailings facility lifecycle.	✓	✓	✓
10.7	A	Process and governance mechanisms have been established for closure planning and cost estimating.	✓	✓	✓
	B	A closure plan for the tailings facility has been established, and associated closure cost estimates have been prepared.	⚠	⚠	⚠
	C	Closure cost estimates are reviewed periodically, and public disclosure is made annually to confirm that adequate financial capacity (including insurance, to the extent commercially reasonable) is in place to meet the closure requirements and the expected timing for the tailings facility in its current state.	✓	✓	✓
	D	If any of an Operator's assets involving a tailings facility changed Ownership since the last review, the Operator must provide documentation that they assessed and took into account the capability of an acquirer to maintain this Standard (subject to provisions of local/national regulations).	–	–	–



Requirement 10.1 – Self-Assessment Rating Justification

Conduct and update risk assessments with a qualified multi-disciplinary team using best practice methodologies at a minimum every three years and more frequently whenever there is a material change either to the tailings facility or to the social, environmental and local economic context. Transmit risk assessments to the ITRB or senior independent technical reviewer for review, and address with urgency all unacceptable tailings facility risks.

✔ Requirement 10.1.A

Criteria

A risk assessment process is in place for the tailings facility and is based on an up-to-date knowledge base for the tailings facility.

Discussion

At the Tarkwa mine, we have established a robust risk management framework to check the effective identification and mitigation of risks associated with our tailings facilities. Our Tailings Risk Management Plan (RMP) serves as a guiding document that outlines our approach to addressing risks comprehensively. Within the RMP, we employ best practices such as conducting regular risk assessments with a qualified multi-disciplinary team. These risk assessments are carried out at a minimum every three years, with more frequent assessments triggered by material changes to the tailings facility or the social, environmental, and local economic context.

In December 2022, the Tarkwa Tailings Stewardship team hosted a comprehensive risk workshop, expanding the scope beyond material dam safety risks. This workshop encompassed human rights, environmental, societal, and governance risks, which various individual departments historically managed.

The outcome of the December 2022 workshop is documented in a TSF Risk Workbook, which serves as a centralized source of information related to the risks associated with our TSFs at the Tarkwa mine. This workbook is updated annually and continuously evolves as new information and data become available, ensuring an up-to-date knowledge base for our risk assessment process. By centralizing the risk assessment process, we have fostered cross-functional collaboration, allowing interdisciplinary stakeholders to contribute their expertise to all areas and aspects of TSF risk management.

In July 2023, we updated our TSF Risk Workbook following the launch of the Gold Fields quantitative tailings risk matrix and completion of a revised Failure Mode and Effects Analysis (FMEA.)

The risk assessments are transmitted to our Independent Technical Review Board (ITRB) or senior independent technical reviewer for review to promote a thorough evaluation. This external review process helps validate our risk assessments and provides valuable insights and recommendations. We prioritize addressing any unacceptable tailings facility risks identified through these assessments with utmost urgency.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ [Meets this Requirement](#)



✔ Requirement 10.1.B

Criteria

The risk assessment is updated at least every three years and more frequently whenever there is a material change either to the tailings facility or to the social, environmental and local economic context.

Discussion

At Gold Fields, we prioritise conducting regular and comprehensive risk assessments for our tailings facilities. We recognize the importance of maintaining an up-to-date understanding of the risks associated with our operations and the surrounding social, environmental, and local economic context.

To promote effective risk management, we follow best practices by conducting and updating our risk assessments at least every three years. However, we also understand that certain circumstances may necessitate more frequent updates. We immediately conduct an updated risk assessment whenever there is a material change to the tailings facility or the social, environmental, and local economic context.

Our risk assessments are conducted by a qualified multi-disciplinary team, utilizing industry-leading methodologies and best practices. The findings and results of these assessments are then transmitted to our Independent Technical Review Board (ITRB) or senior independent technical reviewer for a comprehensive and independent review. We value the expertise and insights these external reviewers provide, as it helps us check the robustness and accuracy of our risk assessments.

Recently, in July 2023, we updated our centralized risk workbook to reflect the latest findings and insights. Completing further technical studies prompted this update, the launch of a new quantitative risk matrix, and the FMEA update. These enhancements give us a more refined and comprehensive understanding of the risks associated with our tailings facilities.

At Gold Fields, we take the responsibility of managing risks associated with our tailings facilities seriously. We are committed to conducting regular and timely risk assessments to identify, evaluate, and address unacceptable risks with utmost urgency.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✓ Requirement 10.1.C

Criteria

Risk assessment scope to include the full potential area of influence of the tailings facility and to actively incorporate industry experience in risk assessment.

Discussion

At Gold Fields, we understand the critical importance of conducting comprehensive risk assessments encompassing our tailings facilities' full potential area of influence. Our approach to risk assessment goes beyond the immediate dam safety considerations and includes a wide range of factors that may impact the environment, society, and governance.

In December 2022, the Tarkwa Tailings Stewardship team organized a dedicated risk workshop to identify and evaluate all potential risks associated with our tailings facilities. During this workshop, we examined risks not only during typical operational conditions but also during extreme scenarios. The extreme scenarios encompassed hypothetical failures of the TSF, leading to the assessment of worst-case inundation scenarios.

The workshop's scope was carefully designed to include a comprehensive range of risks, including those unrelated to dam safety. We actively considered human rights considerations, environmental risks, and societal and governance factors. By incorporating these aspects into our risk assessment, we aim to check a holistic and thorough understanding of the risks associated with our operations.

The outcome of the risk workshop was documented in a Tailings Facility Risk Workbook, which serves as a centralized repository for all identified risks. This workbook enables us to capture and track risks associated with our tailings facilities. It was most recently updated in July 2023 to incorporate new insights and findings.

At Gold Fields, we recognize the value of industry experience in conducting risk assessments. We actively incorporate industry best practices and insights into our risk assessment processes. By leveraging the knowledge and expertise gained from the broader industry, we enhance the rigour and accuracy of our risk assessments.

Our risk assessments are conducted by a qualified multi-disciplinary team, ensuring a comprehensive evaluation of the potential risks. We follow best practice methodologies and adhere to stringent standards to check the objectivity and reliability of our risk assessment outcomes.

We transmit our risk assessments to the Independent Technical Review Board (ITRB) or senior independent technical reviewer for a thorough review. This external validation process further enhances the robustness of our risk assessments.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✓ Meets this Requirement



✓ Requirement 10.1.D

Criteria

Sources of risk are regularly identified, assessed and managed at all phases of the tailings facility lifecycle, including projected climate change impacts under a range of credible future climate scenarios.

Discussion

At Gold Fields, we strongly emphasise identifying, assessing, and managing sources of risk throughout all phases of the tailings facility lifecycle. Our approach checks that potential risks are thoroughly evaluated and appropriately addressed to enhance the safety and resilience of our operations.

The Tarkwa Tailings Stewardship team has developed a comprehensive TSF risk workbook that encompasses the entire lifecycle of our tailings facilities, including the planning, design, construction, operation, closure, and rehabilitation stages. By considering risks at each phase, we proactively manage potential challenges and implement appropriate risk mitigation measures.

As an example of our commitment to robust risk assessment, we recognize the significance of evaluating the projected impacts of climate change on our tailings facilities. Gold Fields initiated a climate change and physical resilience study for the Tarkwa mine in 2022 to address this. This study involved an analysis of available climate records from the mine, government agencies, and national and international sources.

Using statistical analysis and modelling techniques, our team developed a climate change model to project fluctuations and climate metrics variations up to 2080. This model formed the basis of our assessment of potential climate change impacts on the TSF. By understanding and integrating these projections, we can effectively evaluate the associated risks and implement appropriate measures to enhance the resilience of our facilities.

The climate change and physical resilience study outcomes were shared with our engineer of record partner at Tarkwa, and this valuable information was incorporated into our design considerations and site-wide water balance assessments. By integrating these findings into our engineering and operational processes, we check that our facilities are designed and managed with a comprehensive understanding of the potential climate change-related risks.

To maintain the currency of our risk assessments, regular updates and revisions are conducted by a qualified multi-disciplinary team using best practice methodologies. We adhere to a minimum three-year review cycle and conduct more frequent assessments whenever material changes to the tailings facility, or the social, environmental, and local economic context occur. These risk assessments undergo an objective review process by the Independent Technical Review Board (ITRB) or a senior independent technical reviewer.

At Gold Fields, our commitment to proactive risk assessment and management underscores our dedication to the safety of our operations, the protection of the environment, and the well-being of the communities in which we operate.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✓ Meets this Requirement



✔ Requirement 10.1.E

Criteria

A multi-disciplinary team is qualified to undertake the risk assessment specific to the phase of the tailings facility lifecycle (i.e., construction, operation, suspension, expansion, closure) and can apply best practice methodology in a cross-functional manner.

Discussion

Our risk assessments for the tailings storage facilities at the Tarkwa mine are undertaken by the dedicated Tarkwa Tailings Stewardship team, which is supported by external consultants when necessary. This team comprises representatives from various departments, including safety, community relations, sustainable development, management, and key roles such as the Responsible Tailings Facility Engineer, Group Head of Tailings, and the Engineer of Record partner. In our commitment to comprehensive risk assessment, we also involve members from corporate community relations, water management, and sustainable development teams in updating our TSF risk workbook.

Recognizing the interconnected nature of tailings management, we emphasise collaboration among cross-functional groups. By harnessing diverse expertise and perspectives, we check that our risk assessments benefit from a holistic understanding of the different phases of the tailings facility lifecycle, including construction, operation, suspension, expansion, and closure. This multidisciplinary approach allows us to apply best practice methodologies in a cross-functional manner, incorporating the most relevant knowledge and expertise throughout the risk assessment process.

At Tarkwa, we foster a culture of collaboration and knowledge sharing among our teams, promoting open communication and active participation from all stakeholders involved in tailings management. This collaborative approach checks that our risk assessments are comprehensive, rigorous, and aligned with industry best practices.

By leveraging our multidisciplinary team's collective expertise and experience, we demonstrate our commitment to robust and responsible risk assessment practices. Our efforts are focused on ensuring the safety and integrity of our tailings facilities while protecting the well-being of our communities and the environment in which we operate. We continuously strive to enhance our risk assessment capabilities and apply best practices to address the unique challenges and opportunities in each phase of the tailings facility lifecycle.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement



✓ Requirement 10.1.F

Criteria

Following review by the ITRB or senior independent technical reviewer, action plans are prepared, implemented and reported when risk assessments identify unacceptable tailings facility risks.

Discussion

At the Tarkwa mine, we prioritize identifying and managing tailings facility risks. Following a rigorous review process conducted by the Independent Technical Review Board (ITRB) or senior independent technical reviewer, we take immediate action when unacceptable risks are identified in our risk assessments.

To check the effective implementation of action plans, the Tarkwa Tailings Stewardship team integrates the required actions into our project planning register, allowing us to track and monitor progress fortnightly. This register is a centralized tool where all necessary steps and tasks are documented. By incorporating these actions into our project planning, we ensure they receive the necessary attention and are integrated into our operational processes.

In addition to the project planning register, the Responsible Tailings Facility Engineer (RTFE) maintains an Action Register. This register serves as a comprehensive record of actions to address risks. It allows us to document and monitor the actions to mitigate these risks, ensuring accountability and transparency in our risk management practices.

To check ongoing oversight and progress, the ITRB conducts annual site visits. During these visits, they review the progress made against the actions identified in the previous year. This regular review helps us maintain accountability and ensures the necessary measures are implemented to address unacceptable risks.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✓ Meets this Requirement



Requirement 10.2 – Self-Assessment Rating Justification

Conduct regular reviews of the TMS and of the components of the ESMS that refer to the tailings facility to assure the effectiveness of the management systems. Document and report the outcomes to the Accountable Executive, Board of Directors and project-affected people. The review shall be undertaken by senior technical reviewers with the appropriate qualifications, expertise and resources. For tailings facilities with 'High', 'Very High' or 'Extreme' Consequence Classification, conduct the review at least every three years.

✔ Requirement 10.2.A

Criteria

The TMS and components of the ESMS are reviewed sufficiently often to check that the tailings facility management system is effective and applicable to the risks across the full lifecycle of the facility.

Discussion

Gold Fields has emphasised developing a robust and comprehensive Tailings Management System (TMS) to check the effective management of our tailings facilities. The TMS includes a Tailings Management Policy, Tailings Standard, Tailings Management Framework, guidance notes, and training resources. At the operational level, we have prepared Tailings Management Plans, Tailings Risk Management Plans, and other technical documentation to support our management practices.

To assure the effectiveness and applicability of our management systems, Gold Fields is committed to conducting regular reviews of the TMS and its components that pertain to the tailings facility. These reviews are undertaken by senior technical reviewers who possess the appropriate qualifications, expertise, and resources. The review is conducted at least every three years for tailings facilities classified as having 'High,' 'Very High,' or 'Extreme' consequences.

Our most recent review was conducted in 2020, and we are actively preparing for the upcoming tri-annual review in 2023. Gold Fields has appointed a third-party consultant with a global footprint to conduct the review to check an independent and comprehensive assessment. The scope of this review is twofold: first, to assess the operational compliance of the TSFs across the Gold Fields portfolio, and second, to evaluate the status of the TSFs against the Gold Fields Tailings Standard. By benchmarking against our rigorous standards, we gain valuable insights into any gaps or areas for improvement within our Tailings Management System and the components of our Environmental and Social Management System (ESMS).

Our TMS is accessible through a cloud-based system, enabling all Gold Fields employees to access relevant information and resources. Additionally, we can provide access to external vendors as needed, ensuring transparency and collaboration in our management practices.

Gold Fields recognizes the importance of documenting and reporting the outcomes of these reviews to our Accountable Executive, Board of Directors, and project-affected stakeholders. By undertaking regular reviews and continuously improving our TMS and ESMS, we demonstrate our commitment to effective tailings facility management across the entire lifecycle. Through these comprehensive reviews, we aim to maintain the highest governance and management standards, ensuring our operations' safety, environmental sustainability, and social responsibility.

The 2023 global tri-annual review findings will be diligently reported to the Board of Directors and Accountable Executives of Gold Fields. This responsibility falls under the purview of the Group Head of Tailings, who oversees the tailings management function within the organization. The Group Head of Tailings will compile and present the review outcomes in the quarterly tailings board report. This reporting mechanism checks that the Board and



Accountable Executives know the findings, progress, and actions taken to enhance our tailings management systems. By providing this transparent and structured reporting framework, Gold Fields demonstrates our commitment to accountability, continuous improvement, and the highest standards of tailings facility management.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

-  Meets this Requirement



✓ Requirement 10.2.B

Criteria

The outcomes of the TMS and ESMS reviews are documented and reported to the Accountable Executive, Board of Directors and project-affected people.

Discussion

Gold Fields places great importance on regular reviews of our Tailings Management System (TMS) and components of our Environmental and Social Management System (ESMS) that pertain to our tailings facility. These reviews are crucial in ensuring the effectiveness of our management systems and maintaining the highest standards of safety and environmental stewardship.

We have conducted tri-annual reviews of our Gold Fields tailings management system to fulfil this requirement. The first review took place in 2017, followed by another in 2020. For our upcoming review in 2023, we have engaged the services of a reputable third-party consultant to provide an independent assessment. These reviews are conducted by senior technical experts with the qualifications, expertise, and resources to evaluate our management systems thoroughly.

The outcomes of the past tri-annual reviews have been diligently documented and reported to our senior management, executives, and Board of Directors. These reports have provided valuable insights into the performance and effectiveness of our tailings management practices. Additionally, for the 2023 review, we have expanded the reporting audience to include the Accountable Executive for Tarkwa, the Tarkwa Tailings Stewardship team, and project-affected people. This checks that the findings are shared with key stakeholders directly interested in managing our tailings facilities.

To check effective communication and engagement, our community relations team at the Tarkwa mine will integrate the communication of review findings into their ongoing consultations with the community. We believe in transparent and open dialogue, and sharing the outcomes of these reviews is an essential part of our commitment to community engagement.

The outcomes of the tri-annual reviews conducted in 2017, 2020, and the upcoming 2023 review will be thoroughly documented in separate reports. These reports serve as a comprehensive record of our review process, capturing the findings, recommendations, and actions taken to address any identified areas for improvement. By documenting and reporting the outcomes, we check transparency and accountability within our organization and assure project-affected people, our stakeholders, and the wider community.

Gold Fields remains committed to continuously improving our tailings management practices through regular reviews and ongoing monitoring. We will use the findings from these reviews to inform our decision-making processes, implement necessary enhancements, and reinforce our commitment to the responsible management of our tailings facilities.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✓ Meets this requirement



✔ Requirement 10.2.C

Criteria

The review shall be undertaken by senior technical reviewers with the appropriate qualifications, expertise and resources.

Discussion

At Gold Fields, we recognize the critical importance of conducting thorough and unbiased reviews of our Tailings Management System (TMS) and the relevant components of our Environmental and Social Management System (ESMS). These reviews serve as a crucial mechanism for assessing the effectiveness of our management systems and ensuring the highest standards of safety and environmental stewardship.

In accordance with the requirement outlined in 10.2.b, we have engaged an independent third-party consultant to undertake a tri-annual review. The consultants are carefully selected based on their expertise, qualifications, and experience in tailings management and related disciplines. Their independence checks an objective evaluation of our systems, free from potential conflicts of interest.

The senior technical reviewers assigned to conduct these reviews possess the appropriate qualifications, expertise, and resources to evaluate our TMS and ESMS thoroughly. They bring a wealth of knowledge and experience in tailings facility management, engineering, environmental science, and other relevant fields. This checks that the reviews are conducted by professionals who deeply understand the complexities and intricacies of tailings management.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this requirement



✔ Requirement 10.2.D

Criteria

The review is conducted at least every three years for tailings facilities with 'High', 'Very High' or 'Extreme' Consequence Classifications.

Discussion

At Gold Fields, we prioritize our tailings facilities' safety and environmental integrity. As part of our commitment to continuous improvement, we regularly review our Tailings Management System (TMS) and the relevant components of our Environmental and Social Management System (ESMS). These reviews play a crucial role in assessing the effectiveness of our management systems and ensuring that we meet the highest safety and sustainability standards.

In line with this commitment, Gold Fields has established a comprehensive framework for conducting these reviews. As outlined in our recently released Gold Fields Tailings Management Standard, which consolidates guidelines from reputable organizations such as the Australian National Committee on Large Dams (ANCOLD), the Mining Association of Canada (MAC), the South African National Standards on Mine Residue (SANS), and the Global Industry Standard on Tailings Management (GISTM), we have committed to conducting tri-annual reviews of our facilities across our global portfolio.

To check the robustness and objectivity of these reviews, we engage senior technical reviewers with the appropriate qualifications, expertise, and resources. Their extensive knowledge and experience in tailings management, engineering, and related fields enable them to evaluate our TMS and ESMS comprehensively. This rigorous review process allows us to identify areas for improvement and implement necessary measures to enhance the safety and environmental performance of our tailings facilities.

As part of our commitment to transparency and accountability, the outcomes of these tri-annual reviews are documented and reported to key stakeholders, including the Accountable Executive, the Board of Directors, and project-affected people. This reporting mechanism communicates the findings, recommendations, and actions to address any identified gaps or risks effectively. By involving project-affected people, we recognize the importance of their input and strive to address their concerns in our ongoing efforts to strengthen our management systems.

We conduct these reviews at least every three years. This heightened frequency reflects our recognition of the potential risks associated with these facilities and our commitment to proactive risk management.

Therefore, Gold Fields has ranked this Requirement as "Meets."

Assessment Outcome

- ✔ Meets this requirement



Requirement 10.3 – Self-Assessment Rating Justification

Conduct internal audits to verify consistent implementation of company procedures, guidelines, and corporate governance requirements consistent with the TMS and aspects of the ESMS developed to manage tailings facility risks.

Requirement 10.3.A

Criteria

Internal audits are completed frequently to check consistent implementation of established requirements related to company procedures, guidelines and corporate governance requirements consistent with the TMS and aspects of the ESMS relating to tailings facility risks.

Discussion

At Gold Fields, we prioritize consistently implementing established requirements across our operations, encompassing company procedures, guidelines, and corporate governance. To check this consistency, we have established a Gold Fields Internal Audit (GFIA), an independent function responsible for assuring the effectiveness of our governance, risk management, and control processes.

GFIA strictly complies with the Institute of Internal Auditors' International Standards for the Professional Practice of Internal Auditing. This commitment confirms that our internal audit function maintains integrity, objectivity, and independence in its assurance responsibilities.

We have implemented a robust quality assurance program to strengthen further the quality and effectiveness of our internal audit function. This program includes conducting thorough quality review assessments to evaluate GFIA's performance and adherence to professional standards. In 2020, we underwent an External Quality Assurance review, assessing our compliance with the International Professional Practices Framework and the Code of Ethics the Institute of Internal Auditors set forth.

The External Quality Assurance review results affirmed GFIA's dedication to professionalism, adherence to international standards, and ethical conduct in its operations. It recognized the effectiveness of our internal audit function in providing independent assurance of our governance, risk management, and control processes.

While we have focused on building and developing a robust Tailings Management System (TMS), it is essential to highlight that the recently released Tailings Management Standard plays a vital role in this system. The standard outlines the criteria that guide our operations in accordance with industry best practices. While many components of our TMS, including Tailings Management policies and aspects of our Environmental and Social Management System (ESMS), are audited, we must note that, as of this disclosure, the internal audit specifically addressing the Tailings Standard is yet to be conducted.

Given that the Tailings Standard was released in January 2023, our team has evaluated this requirement as partially meeting our current status. However, we are fully committed to conducting an internal audit shortly to assess our compliance with the Tailings Standard. We strive to continuously enhance our practices and check alignment with the highest industry standards in tailings management.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets.”

Assessment Outcome

-  **Partially Meets this Requirement**



Requirement 10.4 – Self-Assessment Rating Justification

The EOR or senior independent technical reviewer shall conduct tailings facility construction and performance reviews annually or more frequently, if required.

✔ Requirement 10.4.A

Criteria

An annual tailings facility review is conducted throughout the construction and operational periods to assess condition and performance. The reviews are performed by the EOR or the senior independent technical reviewer, as assigned for the tailings facility, and the review is documented.

Reviews may be conducted more frequently if required by identified issues or the implementation of necessary corrective measures.

Discussion

At Gold Fields, we prioritize our tailings facilities' safety and environmental integrity. As part of our commitment to continuous improvement, we regularly review our Tailings Management System (TMS) and the relevant components of our Environmental and Social Management System (ESMS). These reviews play a crucial role in assessing the effectiveness of our management systems and ensuring that we meet the highest safety and sustainability standards.

In line with this commitment, Gold Fields has established a comprehensive framework for conducting these reviews. As outlined in our recently released Gold Fields Tailings Management Standard, which consolidates guidelines from reputable organizations such as the Australian National Committee on Large Dams (ANCOLD), the Mining Association of Canada (MAC), the South African National Standards on Mine Residue (SANS), and the Global Industry Standard on Tailings Management (GISTM), we have committed to conducting tri-annual reviews of our facilities across our global portfolio.

To check the robustness and objectivity of these reviews, we engage senior technical reviewers with the appropriate qualifications, expertise, and resources. Their extensive knowledge and experience in tailings management, engineering, and related fields enable them to evaluate our TMS and ESMS comprehensively. This rigorous review process allows us to identify areas for improvement and implement necessary measures to enhance the safety and environmental performance of our tailings facilities.

As part of our commitment to transparency and accountability, the outcomes of these tri-annual reviews are documented and reported to key stakeholders, including the Accountable Executive, the Board of Directors, and project-affected people. This reporting mechanism communicates the findings, recommendations, and actions to address any identified gaps or risks effectively. By involving project-affected people, we recognize the importance of their input and strive to address their concerns in our ongoing efforts to strengthen our management systems.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ Meets this requirement



Requirement 10.5 – Self-Assessment Rating Justification

Conduct an independent DSR at least every five years for tailings facilities with ‘Very High’ or ‘Extreme’ Consequence Classifications and at least every 10 years for all other facilities. For tailings facilities with complex conditions or performance, the ITRB may recommend more frequent DSRs. The DSR shall include technical, operational and governance aspects of the tailings facility and shall be completed according to best practices. The DSR contractor cannot conduct consecutive DSRs on the same tailings facility and shall certify in writing that they follow best practices for engineers in avoiding conflicts of interest.

✔ Requirement 10.5.A

Criteria

The TMS and components of the ESMS are reviewed sufficiently often to check that the tailings facility management system is effective and applicable to the risks across the full lifecycle of the facility.

DSRs are conducted and documented:

- Every five years for tailings facilities with ‘Very High’ or ‘Extreme’ Consequence Classifications.
- every 10 years for all other facilities, or,
- more frequently as recommended by the ITRB

Discussion

At Gold Fields, we place significant importance on ensuring the effectiveness and applicability of our Tailings Management System (TMS) and components of our Environmental and Social Management System (ESMS) throughout the entire lifecycle of our tailings facilities. To achieve this, we conduct regular and independent Dam Safety Reviews (DSRs) to assess the facilities' technical, operational, and governance aspects.

Our Engineer of Record Partner, who possesses extensive expertise in dam safety, has undertaken a comprehensive DSR for all the TSFs at the Tarkwa mine site. The purpose of the DSR is to evaluate the material dam safety risks associated with the facilities. The outcomes of the DSR were documented in a detailed report, which serves as a valuable reference for our ongoing tailings management efforts.

The findings and recommendations from the DSR were shared with our dedicated Tarkwa Tailings Stewardship team. These insights have played a crucial role in informing our decision-making processes and enhancing the design of our tailings facilities to address any identified risks and improve safety measures.

By conducting these regular DSRs, we check that our TSFs at the Tarkwa mine site meet the highest safety standards and align with industry best practices. It demonstrates our commitment to proactive risk management and our dedication to safeguarding the environment, communities, and operations.

Gold Fields remains committed to upholding the principles of transparency, accountability, and continuous improvement in our tailings management practices. We will continue to monitor and review our TMS and ESMS components regularly to check their ongoing effectiveness and suitability, considering each facility's unique characteristics and requirements.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 10.5.B

Criteria

DSRs include the tailings facility's technical, operational and governance aspects and shall be completed according to best practice.

Discussion

At Gold Fields, we prioritize evaluating our tailings facilities thoroughly to ensure the highest safety and performance standards. To achieve this, we conduct independent Dam Safety Reviews (DSRs) that comprehensively assess critical aspects, including technical, operational, and governance considerations.

Our Engineer of Record (EoR) partner is responsible for undertaking these DSRs, adhering strictly to best practices and industry standards. They possess the necessary expertise and experience to evaluate the performance and integrity of our tailings facilities thoroughly. During the DSR process, our partner reviews the technical design and specifications, operational practices, and governance framework associated with the tailings facility.

The DSRs are conducted in accordance with established best practices, ensuring a robust and comprehensive evaluation of all relevant aspects. These practices encompass internationally recognized guidelines and standards that govern dam safety and tailings management. By adhering to these best practices, we demonstrate our commitment to maintaining the highest level of safety, operational efficiency, and environmental stewardship across our tailings facilities.

To check objectivity and avoid conflicts of interest, it is important to note that our EoRs cannot conduct consecutive DSRs on the same tailings facility. This requirement promotes independent assessments and reinforces our commitment to transparency and accountability in our dam safety practices.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ [Meets this Requirement](#)



✔ Requirement 10.5.C

Criteria

DSR individuals cannot conduct consecutive DSRs on the same tailings facility.

Discussion

At Gold Fields, we are committed to ensuring integrity and independence in our tailings facilities' Dam Safety Reviews (DSRs). As outlined in the Global Industry Standard on Tailings Management (GISTM) and our internal Gold Fields Tailings Standard, we strictly adhere to the requirement that the same individuals cannot conduct consecutive DSRs on the same tailings facility.

We engage a diverse team of experts and professionals to conduct our DSRs to guarantee an unbiased assessment and avoid potential conflicts of interest. Our EoR has prepared DSRs for our tailings storage facilities at the Tarkwa mine site within the past three years.

By adhering to this requirement, we check that multiple perspectives and expertise are applied during the evaluation process, promoting a comprehensive and robust review. This approach supports transparency, objectivity, and accountability in assessing our tailings facilities' technical, operational, and governance aspects.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 10.5.D

Criteria

DSR individuals certify in writing that they follow best practices for engineers in avoiding conflicts of interest.

Discussion

At Gold Fields, we strongly emphasise ensuring the highest standards of professional conduct and integrity in our tailings facilities' Dam Safety Reviews (DSRs). As part of this commitment, the Engineer of Record firm who performed the DSRs for the TSFs at the Tarkwa mine, adhered to a comprehensive set of terms and conditions specifically designed for the nature and scope of the work.

In line with best practices for engineers and to avoid potential conflicts of interest, the individuals involved in conducting the DSRs certified in writing that they followed the established guidelines and protocols. This certification is included in the Dam Safety Report, providing a documented assurance of their commitment to upholding best practices and maintaining the highest ethical standards throughout the review process.

It is important to note that the Engineer of Record role at Gold Fields is appointed to a firm rather than an individual. This approach checks collective responsibility, accountability, and a broader pool of expertise and experience brought to bear on our dam safety practices.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ Meets this Requirement



Requirement 10.6 – Self-Assessment Rating Justification

For tailings facilities with ‘Very High’ or ‘Extreme’ Consequence Classifications, the ITRB, reporting to the Accountable Executive shall provide ongoing senior independent review of the planning, siting, design, construction, operation, water and mass balance, maintenance, monitoring, performance and risk management at appropriate intervals across all phases of the tailings facility lifecycle. For tailings facilities with other Consequence Classifications, this review can be done by a senior independent technical reviewer.

✔ Requirement 10.6.A

Criteria

For tailings facilities with ‘Very High’ or ‘Extreme’ Consequence Classifications, the ITRB, reporting to the Accountable Executive provides ongoing senior independent technical review of the planning, siting, design, construction, operation, water and mass balance, maintenance, monitoring, performance and risk management at appropriate intervals across all phases of the tailings facility lifecycle.

Discussion

Gold Fields is deeply committed to promoting the highest safety and environmental stewardship in our TSFs at the Tarkwa mine. As part of our dedication to transparency and independent oversight, we have established an Independent Technical Review Board (ITRB) to provide ongoing senior independent technical reviews across all phases of the TSF lifecycle.

The ITRB, reporting directly to the Accountable Executive, is crucial in ensuring the robustness and effectiveness of the TSFs at the Tarkwa mine.

To facilitate comprehensive reviews, the ITRB has been actively engaged in on-site activities at the Tarkwa mine. The inaugural ITRB session occurred in June 2022, followed by a second session in June 2023. During their visits, the ITRB members spent a week on-site, engaging with our Engineer of Record (EoR) firms and the dedicated Tarkwa Tailings Stewardship team. These interactions enable in-depth discussions, knowledge sharing, and the exchange of best practices in tailings management.

In addition to their responsibilities at the mine, the ITRB members supported the Tarkwa community relations team by dedicating time to interacting with students at the Tarkwa School of Mines. Through a series of lectures, they emphasized the significance of responsible tailings management and the associated risks. These efforts reflect our holistic approach, ensuring that the wider community is informed and educated about the importance of sustainable mining practices.

At Gold Fields, we view the ITRB as a critical component of our commitment to the highest industry standards and best practices. The independent expertise and insights provided by the ITRB play a vital role in guiding our decision-making processes and ensuring the continual improvement of our TSFs' safety and performance.

We are grateful for the expertise and dedication of the ITRB members who diligently review and assess the planning, siting, design, construction, operation, water and mass balance, maintenance, monitoring, performance, and risk management of our TSFs. Their independent oversight enhances transparency, reinforces accountability, and underscores our unwavering commitment to the safety of our employees, communities, and the environment.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ **Meets this Requirement**



— Requirement 10.6.B

Criteria

For tailings facilities with other Consequence Classifications, a senior independent technical reviewer can perform this review alternatively.

Discussion

As TSF 1, 2, and 3 at our site have been classified as 'Very High' Consequence dams and an Independent Technical Review Board (ITRB) appointed to oversee their management, the team has rated this requirement as 'not applicable.' This is because the ITRB already provides ongoing senior independent reviews of the planning, siting, design, construction, operation, water and mass balance, maintenance, monitoring, performance, and risk management for these tailings facilities. We have implemented these measures to check the highest level of safety and compliance.

Therefore, Gold Fields has ranked this Requirement as “Not Applicable”.

Assessment Outcome

- — Not Applicable



✔ Requirement 10.6.C

Criteria

The ongoing reviews are conducted at appropriate intervals across all phases of the tailings facility lifecycle.

Discussion

Our appointed Independent Technical Review Board (ITRB) conducts comprehensive reviews of the planning, siting, design, construction, operation, water and mass balance, maintenance, monitoring, performance, and risk management of our tailings facilities. These ongoing reviews are conducted on an annual basis and consider all lifecycle stages of the TSF.

The ITRB members visit our site annually to undertake their review and check that the necessary assessments and evaluations are performed on time. This review timeframe aligns with the requirements outlined in our Gold Fields Tailings Standard, demonstrating our commitment to maintaining a robust and proactive approach to tailings management.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ Meets this Requirement



Requirement 10.7 – Self-Assessment Rating Justification

The amount of estimated costs for planned closure, early closure, reclamation, and post-closure of the tailings facility and its appurtenant structures shall be reviewed periodically to confirm that adequate financial capacity (including insurance, to the extent commercially reasonable) is available for such purposes throughout the tailings facility lifecycle, and the conclusions of the review shall be publicly disclosed annually. Disclosure may be made in audited financial statements or in public regulatory filings. Subject to the provisions of local or national regulations on this matter, Operators shall use their best efforts to assess and take into account the capability of an acquirer of any of its assets involving a tailings facility (through merger, acquisition, or other change in ownership) to maintain this Standard for the tailings facility lifecycle.

✔ Requirement 10.7.A

Criteria

Process and governance mechanisms have been established for closure planning and cost estimating.

Discussion

At Gold Fields, we prioritize establishing robust processes and governance mechanisms for closure planning and cost estimating. These important aspects are overseen at a corporate level by our Sustainable Development Group. The Tarkwa Sustainable Development team, a key stakeholder in the Tarkwa Tailings Stewardship team, receives guidance and support from this group.

Regarding closure planning and closure cost estimating, the Tarkwa Sustainable Development team follows a diligent approach:

They regularly review and update their closure plans in line with our Group's closure guidance aligned with the International Council on Mining and Metals (ICMM) standards.

They develop rigorous closure cost estimates, which undergo internal and external reviews on an annual basis.

They set annual performance targets for progressive rehabilitation plans, ensuring a proactive approach to closure's environmental and social aspects.

Our commitment to responsible closure practices is evident through our Gold Fields Group Policy Statements for Sustainable Development and Environment. These policies, accompanied by our Mine Closure Management Guideline and Closure Cost Estimate Guideline, require us to engage in thorough planning and design processes in consultation with relevant authorities and stakeholders. We also implement measures to address closure-related environmental and social aspects. Additionally, we check that adequate financial provision is made to fulfil our closure and post-closure commitments, as mandated by the guidelines.

We demonstrate our commitment to responsible and sustainable closure practices across our operations by adhering to these comprehensive processes and governance mechanisms.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ **Meets this Requirement**



🟡 Requirement 10.7.B

Criteria

A closure plan for the tailings facility has been established, and associated closure cost estimates have been prepared.

Discussion

At the Tarkwa mine, we have established a comprehensive mine-wide Closure Plan encompassing on-site TSFs. This plan addresses the necessary provisions and considerations for closure, including aspects of the TSFs. As part of our commitment to responsible closure practices, associated closure cost estimates have been prepared and underwent external reviews to check accuracy and transparency.

It is important to note that TSF 3, currently in an active closure phase, has a more detailed closure plan aligned with the site's overall closure plan. Recently, the closure plan for TSF 3 underwent a thorough review by our Engineer of Record partner, who identified minor gaps and opportunities for improvement. As a result, we acknowledge that while the closure plan is in place, there are ongoing efforts to address and incorporate the findings.

The team has rated our compliance with this requirement as 'Partially meets' due to the ongoing work required to address the identified gaps. However, we are committed to resolving these technical design considerations in line with best practices and regulatory requirements.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets”.

Assessment Outcome

- 🟡 [Partially Meets this Requirement](#)



✔ Requirement 10.7.C

Criteria

Closure cost estimates are reviewed periodically, and public disclosure is made annually to confirm that adequate financial capacity (including insurance, to the extent commercially reasonable) is in place to meet the closure requirements and the expected timing for the tailings facility in its current state.

Discussion

At Gold Fields, we prioritize the periodic review and assessment of closure cost estimates to check that we have adequate financial capacity to meet the closure requirements and the expected timing for our tailings facilities in their current state. These estimates encompass the costs associated with planned closure, early closure, reclamation, and post-closure activities.

On an annual basis, our assets diligently review and update their closure cost estimates, adhering to the specific requirements and guidelines set forth by local regulations, financial reporting obligations, and Gold Fields' Group guidance. This process involves internal and external review and assurance to uphold transparency and accuracy.

The internal review of closure cost estimates involves a comprehensive assessment by our dedicated team at the Tarkwa mine. The team evaluates various factors, including the current condition of the tailings facility, the anticipated closure requirements, and the projected timing of closure activities. This internal review checks that our closure cost estimates align with our commitment to responsible closure practices and meet the highest standards of financial prudence.

Additionally, we engage external or independent parties to review our closure cost estimates thoroughly. This external review process provides an objective and unbiased assessment of our estimates, enhancing their credibility and reliability. These external reviews are crucial in validating the adequacy of our financial capacity for closure-related activities throughout the lifecycle of our tailings facilities.

In line with our commitment to transparency, we publicly disclose the conclusions of these periodic reviews on an annual basis. This disclosure may be made through audited financial statements or public regulatory filings, ensuring that relevant stakeholders, including investors, regulatory bodies, and the public, have access to this information.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ Meets this Requirement



— Requirement 10.7.D

Criteria

If any of an Operator's assets involving a tailings facility changed Ownership since the last review, the Operator must provide documentation that they assessed and took into account the capability of an acquirer to maintain this Standard (subject to provisions of local/national regulations)

Discussion

There have been no changes in ownership of assets at the Tarkwa mine involving our tailings facility. Therefore, the team has rated this Requirement as 'Not applicable.'

We remain committed to upholding our operations' highest environmental stewardship and sustainability standards. Should any ownership changes occur, we will fulfil our obligations to assess the acquirer's ability to meet these standards, as mandated by local and national regulations.

Therefore, Gold Fields has ranked this Requirement as "Not Applicable".

Assessment Outcome

- — Not Applicable



GISTM Principle 11

Develop an Organisational Culture That Promotes Learning, Communication and Early Problem Recognition.

Principle 11 Self-Assessment Outcome

The Tarkwa mine has three TSFs with a Very High Consequence Classification. A summary of the self-assessment outcome for Principle 11 of the GISTM is presented in Table 16 below. Further information specific to each requirement part is provided in subsequent sections of this report.

Table 16: Principle 11 – Self-Assessment Outcome Summary

Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
11.1	A	The Operator has developed an educational programme inclusive of job procedures and responsibilities for preventing failure.	🟡	🟡	🟡
	B	Those with roles for preventing a failure in any phase of the tailing facility lifecycle are included in the education programme.	🟢	🟢	🟢
11.2	A	Mechanisms incorporating workers’ experience-based knowledge into planning, design and operations for all stages of the tailings facility lifecycle have been established.	🟢	🟢	🟢
11.3	A	The Operator has established mechanisms that promote cross-functional collaboration to support public safety and the integrity of the tailings facility through: <ul style="list-style-type: none"> • effective data and knowledge sharing, • effective communication, and • implementation of management measures. 	🟢	🟢	🟢
11.4	A	The Operator has identified and implemented lessons from internal incident investigations.	🟢	🟢	🟢
	B	The Operator has identified and implemented lessons from relevant external incident reports.	🟢	🟢	🟢
	C	Internal and external incident lessons learned pay particular attention to human and organisational factors.	🟢	🟢	🟢
11.5	A	The Operator has established a documented mechanism that recognises, rewards and protects employees and contractors who report problems or identify opportunities for improving tailings facility management.	🟢	🟢	🟢
	B	The Operator has responded promptly and communicated the actions taken in response to concerns and opportunities raised to employees and contractors.	🟢	🟢	🟢



Requirement 11.1 – Self-Assessment Rating Justification

Educate personnel who have a role in any phase of the tailings facility lifecycle about how their job procedures and responsibilities related to preventing a failure.

Requirement 11.1.A

Criteria

The Operator has developed an educational programme inclusive of job procedures and responsibilities for preventing a failure.

Discussion

At Gold Fields, we understand the critical role of education and training in preventing tailings facility failures.

In the past, our training approach primarily focused on dedicated sessions led by our Engineer of Record partner and industry specialists such as the International Tailings Review Board (ITRB). While these sessions provided valuable insights, we recognized the need for a more tailored and role-specific training approach. To address this, the Tarkwa Tailings Stewardship team made a significant change by converting the Tarkwa Tailings Operating Manual into a series of Safe Work Instructions (SWI).

The SWIs are essential tools to identify and address risks and hazards associated with each specific task operators may be involved in. This approach allows us to provide training that corresponds directly to the critical control bowties developed for each potential failure mode category. By utilizing the SWIs, we can train every individual involved with the TSF, ensuring that they clearly understand their responsibilities and how their actions contribute to preventing failures. The Safe Work Instructions (SWI) are in the process of being rolled out to operators at the Tarkwa mine.

We have implemented a Training and Competency Matrix to enhance our training efforts further. This matrix provides a detailed overview of personnel who require additional training and tracks the status of training they have undertaken. It serves as a comprehensive training record, ensuring that all individuals are appropriately trained and competent in their respective roles.

In addition to the SWIs and the Training and Competency Matrix, we are proud to announce the launch of the Gold Fields Tailings Training Academy. This academy offers a series of bite-sized modules specifically designed to raise awareness and provide a comprehensive understanding of tailings risk and tailings management. Through this academy, we aim to further empower our personnel with the knowledge and skills necessary to mitigate risks and contribute to the prevention of failures.

At the time of this disclosure, the SWI's and Tailings Training Academy was being rolled out. As such, the team have rated this requirement as "Partially meets".

Therefore, Gold Fields has ranked this Requirement as "Partially Meets".

Assessment Outcome

-  **Partially Meets this Requirement**



✔ Requirement 11.1.B

Criteria

Those with roles for preventing a failure in any phase of the tailing facility lifecycle are included in the education programme.

Discussion

At Gold Fields, we prioritize the education and training of personnel involved in any phase of the tailings facility lifecycle to check that they understand the importance of their job procedures and responsibilities in preventing failures. As outlined in Requirement 11.1A, our engineer of record partner has delivered tailings risk awareness training to personnel on site.

To enhance the training process, we have taken a two-fold approach. Firstly, we have converted operating manuals and tasks related to the TSFs into a series of Safe Work Instructions (SWIs). These SWIs provide clear guidelines and instructions for personnel involved in the TSFs. Secondly, we have developed a comprehensive tailings training academy accessible to all employees across the company. This academy is supplemented by in-person training sessions conducted by our engineer of record partners as needed.

To check competency and accountability, we have established the Tarkwa Competency Matrix, which defines the training requirements and identifies key roles within the tailings facility. The matrix tracks the training status, identifies training needs, and sets completion dates for each individual.

We have checked that those who prevent failures in any phase of the tailings facility are included in the SWI-based training and the company-wide tailings training academy. This comprehensive approach ensures that our personnel have the necessary knowledge and skills to fulfil their responsibilities effectively.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ Meets this Requirement



Requirement 11.2 – Self-Assessment Rating Justification

Establish mechanisms that incorporate workers' experience-based knowledge into planning, design and operations for all phases of the tailings facility lifecycle.

✔ Requirement 11.2.A

Criteria

Mechanisms incorporating workers' experience-based knowledge into planning, design and operations for all stages of the tailings facility lifecycle have been established.

Discussion

Gold Fields has established effective mechanisms to incorporate workers' experience-based knowledge into our tailings facilities' planning, design, and operations throughout their lifecycle. These mechanisms check that valuable insights and lessons learned from our experienced workforce are integrated into our processes.

Firstly, we have established a quarterly working group within the Tailings Group. This group brings together interdisciplinary stakeholders across our organization, including each site's responsible tailings facility engineer. The purpose of this forum is to facilitate knowledge sharing and the exchange of lessons learned. It provides a platform for nominated individuals to contribute their expertise, share valuable insights, and discuss best practices related to tailings management.

In addition, the Tarkwa Tailings Stewardship team organizes an Annual General Meeting (AGM) for Tailings. This meeting gathers interdisciplinary stakeholders from our Tarkwa mine and our engineer of record partner. The AGM offers an opportunity to review lessons learned throughout the year and consider important considerations moving forward. This collaborative approach checks that worker experience and perspectives are considered when making tailings facility planning, design, and operations decisions.

The Corporate Tailings Group capture and disseminate lessons learned across all our operations. They maintain an annual lessons learned register that consolidates findings from various sites. This register serves as a valuable resource for identifying common challenges, best practices, and innovative solutions related to tailings management. Regularly updating this register checks that our operations' collective experience and knowledge are shared, enabling continuous improvement and informed decision-making in our tailings facilities' planning, design, and operations.

To further encourage engagement and feedback, we have established an online platform called the "Tailings Hub." While the process is still in the early stages and hasn't been fully rolled out to operations at the time of this disclosure, the Tailings Hub provides a space for users to submit innovation ideas and comments. This platform will create a comprehensive feedback loop, allowing workers to contribute their knowledge and suggestions for continuous improvement in tailings management.

Therefore, Gold Fields has ranked this Requirement as "Meets".

Assessment Outcome

- ✔ **Meets this Requirement**



Requirement 11.3 – Self-Assessment Rating Justification

Establish mechanisms that promote cross-functional collaboration to check effective data and knowledge sharing, communication and implementation of management measures to support public safety and the integrity of the tailings facility.

✔ Requirement 11.3.A

Criteria

The Operator has established mechanisms that promote cross-functional collaboration to support public safety and the integrity of the tailings facility through:

- effective data and knowledge sharing,
- effective communication,
- and implementation of management measures.

Discussion

Gold Fields recognizes the importance of cross-functional collaboration in supporting public safety and ensuring the integrity of our tailings facilities. The Corporate Gold Fields Tailings Group has established an international quarterly working group to facilitate effective collaboration. This platform brings together interdisciplinary stakeholders from all our operations across the globe. The primary focus of this working group is to promote effective data and knowledge sharing, enhance communication channels, and drive the implementation of management measures. Each quarter, a Tailings Champion Award is issued, most recently awarded to the Community Relations Manager at the Tarkwa mine for their commitment to evaluating the human rights risks associated with the TSFs

Participants share their experiences, lessons learned, and best practices in tailings management through this collaborative forum. The knowledge shared during these sessions is a valuable resource, fostering innovation and continuous improvement across our operations. By leveraging the expertise and insights of peers from different regions and operations, we enhance our ability to identify and implement effective measures to support public safety and maintain the integrity of our tailings facilities.

The cross-functional collaboration facilitated by the Corporate Gold Fields Tailings Group contributes to a culture of shared responsibility and proactive risk management. It allows us to leverage our workforce's collective knowledge and expertise to address challenges, exchange ideas, and check the highest safety and environmental stewardship standards in all phases of the tailings facility lifecycle.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ Meets this Requirement



Requirement 11.4 – Self-Assessment Rating Justification

Identify and implement lessons from internal incident investigations and relevant external incident reports, paying particular attention to human and organisational factors.

✔ Requirement 11.4.A

Criteria

The Operator has identified and implemented lessons from internal incident investigations.

Discussion

Gold Fields is committed to proactive risk management and continuous improvement. In alignment with our stringent safety practices, all tailings incidents are promptly reported to the Group Head of Tailings, mine management, and Tarkwa Tailings Stewardship team, following the guidelines outlined in our Tailings Incident Guideline. At the Tarkwa mine, the Responsible Tailings Facility (RTFE) oversees the reporting process, but incident reporting is open to anyone who identifies an issue or concern related to tailings.

Once an incident occurs, our Corporate Tailings Group collaborates closely with the site team to conduct a comprehensive review. This review process aims to identify key lessons that can be learned from the incident. These lessons are documented in the Gold Fields Tailings Incident Lessons Learned Register, which is reviewed on an annual basis. The insights gained from incident investigations are then implemented into group and company-wide operating practices, guidance, and standards.

For instance, one significant lesson learned from the industry is eliminating using pipes through embankments in future design. This lesson, which eliminates the risks associated with piping, has been integrated into our Tailings Management Standard as a critical measure to mitigate piping risk.

By systematically identifying and implementing lessons from internal incident investigations, we strive to continuously enhance the safety and effectiveness of our tailings operations, ensuring the well-being of our employees and surrounding communities

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 11.4.B

Criteria

The Operator has identified and implemented lessons from relevant external incident reports.

Discussion

As part of our commitment to continuous improvement and best practices, Gold Fields actively reviews relevant external incident reports in addition to internal incident investigations. These reviews are conducted annually as part of our comprehensive assessment of lessons learned and incident registers.

The findings from these external incident reports are carefully analysed and incorporated into our tailings management framework. The insights and recommendations are communicated to our Tailings Working Group, which comprises international personnel from our global operations. This collaborative platform integrates the lessons learned into our operating practices, procedures, guidance, and standards.

By leveraging internal incident investigations and external incident reports, we check that a broad range informs our approach to tailings management of experiences and industry knowledge. This proactive approach allows us to continually enhance the safety, sustainability, and effectiveness of our tailings operations across the organization.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 11.4.C

Criteria

Internal and external incident lessons learned pay particular attention to human and organisational factors.

Discussion

At Gold Fields, we recognize the critical importance of understanding and addressing human and organizational factors in our incident investigations and lessons-learned processes. When conducting internal incident investigations and reviewing external incident reports, we pay specific attention to these factors to gain valuable insights into the root causes and contributing factors of incidents.

Our comprehensive approach involves thoroughly analysing incidents, identifying any human and organizational factors involved, and extracting key lessons to inform our practices and procedures. By emphasising these factors, we aim to enhance our understanding of human behaviour, decision-making processes, communication, and organizational systems.

Integrating these lessons into our operations allows us to mitigate risks and improve our safety culture proactively. We believe addressing human and organizational factors can create a safer and more resilient working environment for our employees and stakeholders.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ Meets this Requirement



Requirement 11.5 – Self-Assessment Rating Justification

Establish mechanisms that recognise, reward and protect from retaliation employees and contractors who report problems or identify opportunities for improving tailings facility management. Respond in a timely manner and communicate actions taken and their outcomes.

✔ Requirement 11.5.A

Criteria

The Operator has established a documented mechanism that recognises, rewards and protects employees and contractors who report problems or identify opportunities for improving tailings facility management.

Discussion

Gold Fields is committed to establishing mechanisms that recognize, reward, and protect employees and contractors who report problems or identify opportunities for improving tailings facility management. Our approach aligns with our Human Rights Policy Statement, which includes providing on-site grievance mechanisms for our workforce and communities.

In line with international standards such as the UN Guiding Principles on Business and Human Rights, the conventions of the International Labour Organization, and the UN Universal Declaration of Human Rights, we have internal grievance mechanisms that allow employees and contractors to raise concerns. These mechanisms are not limited to tailings-related issues. Grievances are handled by Gold Fields' HR function in consultation with legal teams, ensuring a fair and confidential process.

We have implemented a confidential third-party whistleblowing hotline for stakeholders to promote transparency and accountability further. This hotline provides an additional avenue for reporting concerns related to tailings facility management or other matters.

We updated the Grievance Register for Tarkwa in 2023 to allow for the future reporting of tailings-related grievances. This enhancement checks that individuals have a dedicated platform to raise concerns about tailings facility management. By adding a tailings identifier to Grievance Register, we aim to facilitate the reporting process and further strengthen our commitment to addressing and resolving tailings-related issues promptly and effectively.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ Meets this Requirement



✔ Requirement 11.5.B

Criteria

The Operator has responded promptly and communicated the actions taken in response to concerns and opportunities raised to employees and contractors.

Discussion

As part of our commitment to creating a transparent and accountable work environment, Gold Fields promptly responds to concerns raised by employees and contractors and checks effective communication regarding the actions taken. We have established internal grievance mechanisms that allow individuals to raise concerns, not limited to tailings-related issues. Our dedicated HR function handles these grievances in collaboration with our legal teams. All grievances are logged, time-bound and monitored.

While we strive to address grievances promptly, we acknowledge that certain cases involving contractors and suppliers may require additional time for resolution. However, we remain dedicated to resolving all concerns fairly and on time, ensuring that our employees and contractors are informed about their raised issues' progress and outcomes.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ Meets this Requirement



GISTM Principle 12

Establish a Process for Reporting and Addressing Concerns and Implement Whistle-blower Protections.

Principle 12 Self-Assessment Outcome

The Tarkwa mine has three TSFs with a Very High Consequence Classification. A summary of the self-assessment outcome for Principle 12 of the GISTM is presented in Table 17 below. Further information specific to each requirement part is provided in subsequent sections of this report.

Table 17: Principle 12 – Self-Assessment Outcome Summary

Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
12.1	A	The Accountable Executive has established a formal, confidential and written process to receive, investigate and promptly address concerns from employees and contractors related to the tailings facility, including possible permit violations or other matters related to regulatory compliance, public safety, tailings facility integrity or the environment.	✓	✓	✓
12.2	A	The Operator maintains whistle-blower protection practices that do not discharge, discriminate or retaliate against a whistle-blower who, in good faith, reports possible violations relating to regulatory compliance, public safety, tailings facility integrity or the environment.	✓	✓	✓



Requirement 12.1 – Self-Assessment Rating Justification

The Accountable Executive shall establish a formal, confidential and written process to receive, investigate and promptly address concerns from employees and contractors about possible permit violations or other matters relating to regulatory compliance, public safety, tailings facility integrity or the environment.

✔ Requirement 12.1.A

Criteria

The Accountable Executive has established a formal, confidential and written process to receive, investigate and promptly address concerns from employees and contractors related to the tailings facility, including possible permit violations or other matters related to regulatory compliance, public safety, tailings facility integrity or the environment.

Discussion

At Gold Fields, we prioritize establishing robust processes that allow us to address the concerns of our valued employees and contractors.

Gold Fields has implemented two key mechanisms to facilitate reporting such concerns: the Whistleblowing hotline and the internal grievance mechanism. These channels enable our employees and contractors to express their concerns regarding possible permit violations, regulatory compliance, public safety, tailings facility integrity, or environmental matters.

To emphasize commitment to these processes, the appointed Accountable Executive, who also holds the position of Executive for the Ghana region, has personally reviewed and approved the policies and procedures for use in Ghana. This reinforces our commitment to upholding the highest standards of accountability and transparency across our operations.

It is important to note that our reporting mechanisms are not limited solely to tailings concerns. We encourage our employees and contractors to utilize these channels to raise concerns about compliance, safety, tailings, or the environment. We are fully dedicated to addressing all concerns promptly and with the utmost seriousness they deserve.

The internal grievance mechanism operates under the oversight of Gold Fields' HR function in consultation with our legal teams. This checks that all reported concerns are appropriately handled and thoroughly investigated. Furthermore, our confidential third-party whistleblowing hotline serves as an additional avenue for stakeholders to report their concerns with complete confidentiality.

We are committed to addressing community issues and concerns about our operations timeously and effectively, where possible. We rely on an external grievance reporting system to maintain confidence and transparent communication with our stakeholders. This mechanism encourages community members to voice their complaints freely while obligating our mines to address the grievances within an agreed period. Where our team cannot resolve grievances, they are escalated to independent mediation.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ **Meets this Requirement**



Requirement 12.2 – Self-Assessment Rating Justification

In accordance with international best practices for whistle-blower protection, the Operator shall not discharge, discriminate against, or otherwise retaliate in any way against a whistle-blower who, in good faith, has reported possible permit violations or other matters relating to regulatory compliance, public safety, tailings facility integrity or the environment.

✔ Requirement 12.2.A

Criteria

The Operator maintains whistle-blower protection practices that do not discharge, discriminate or retaliate against a whistle-blower who, in good faith, reports possible violations relating to regulatory compliance, public safety, tailings facility integrity or the environment.

Discussion

At Gold Fields, we hold ourselves to the highest corporate governance and business ethics standards, ensuring that our operations align with our Vision of being the global leader in sustainable gold mining. We firmly believe that operational excellence and integrity must go hand in hand. To maintain this commitment, we have established whistleblower protection practices that safeguard individuals who, in good faith, report possible violations pertaining to regulatory compliance, public safety, tailings facility integrity, or the environment.

Our core Values are the unwavering foundation of our organizational culture, guiding our actions and behaviours. We embrace these Values in all aspects of our operations, both through our conduct and by holding others accountable for theirs. Through this collective dedication, we create an environment where integrity thrives.

Gold Fields actively encourages and requires the reporting of any actual or suspected unethical, illegal, fraudulent, or undesirable conduct within our business. We believe that transparency and accountability are paramount, and we are committed to ensuring that individuals who make reports can do so without fear of retaliation, victimization, disadvantage, or reprisal.

Our Whistleblowing Policy applies to all directors, officers, and employees of the Gold Fields Group, as well as to other individuals such as applicants for employment, contractors, suppliers, and any other third parties who have dealings with our organization, visit our premises, or attend our events. This policy is designed to facilitate the detection, reporting, prevention, and eradication of instances of reportable conduct.

In accordance with our policy, we conduct thorough investigations and promote a culture that encourages responsible disclosure of information regarding reportable conduct. We are committed to protecting whistleblowers from retaliation, victimization, or disadvantage resulting from their protected disclosure. We recognize the importance of providing remedies to whistleblowers who have suffered such negative consequences due to their courageous actions.

At Gold Fields, we firmly believe that everyone has a role to play in upholding our Values and maintaining the highest standards of integrity. By fostering a culture that values and protects whistleblowers, we create an environment where individuals can come forward with confidence, knowing that their concerns will be addressed, and they will be shielded from adverse repercussions.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ **Meets this Requirement**



GISTM Principle 13

Prepare for Emergency Response to Tailings Facility Failures.

Principle 13 Self-Assessment Outcome

The Tarkwa mine has three TSFs with a Very High Consequence Classification. A summary of the self-assessment outcome for Principle 13 of the GISTM is presented in Table 18 below. Further information specific to each requirement part is provided in subsequent sections of this report.

Table 18: Principle 13 – Self-Assessment Outcome Summary

Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
13.1	A	The Tailings Management System (TMS) includes a site-specific tailings facility Emergency Preparedness and Response Plan (EPRP). The EPRP includes specific actions to prepare, manage an escalating event, and respond after an event has occurred.	✓	✓	✓
	B	The tailings facility EPRP is responsive to credible flow failure scenarios, assesses potential consequences, and identifies potentially affected areas and the approximate degree of expected consequences.	✓	✓	✓
	C	The EPRP was developed with input from appropriate expertise in emergency response, site operation and project-affected people using best practices.	✓	✓	✓
	D	The tailings facility EPRP for operating facilities is tested and reviewed based on the process and frequency specified in the plan every 3 years or more frequently if triggered by a material change to the tailings facility or the social, environmental or economic context. Reference R. 13.2 and R. 13.3.	✓	✓	✓
	E	EPRP development and updates involve meaningful engagement of employees, contractors, community emergency response providers, and project-affected people engaged to co-develop community-focused emergency preparedness and communication of the plan to project-affected people.	✓	✓	✓
13.2	A	The operator has identified public sector agencies, first responders, local authorities and institutions that would participate in any emergency response to tailings facility failures.	✓	✓	✓
	B	The operator has engaged with identified organisations.	✓	✓	✓
	C	The operator has taken reasonable steps to assess the capability of identified organisations to address the hazards identified in the tailings facility EPRP, to identify gaps in capability, and to use this information to support the	✓	✓	✓



Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
		development of a collaborative plan to improve preparedness if gaps are identified.			
13.3	A	The Operator incorporates knowledge of community-focused measures and public sector capacity when establishing a state of readiness in the EPRP	✓	✓	✓
	B	The Operator has taken all reasonable steps to maintain a shared state of readiness by engaging with public sector agencies, first responders, local authorities, and institutions which would participate in emergency response (as identified in 13.2).	✓	✓	✓
	C	The Operator has secured and maintains resources in a state of readiness to respond to tailings facility credible flow failure scenarios if such apply to their facility.	✓	✓	✓
	D	Annual internal and community-focused training and exercises on the EPRP are conducted.	✓	✓	✓
	E	The Operator has a programme to conduct emergency response simulations with emergency service providers and project-affected people at a frequency defined in the EPRP.	✓	✓	✓
	F	For facilities with credible flow failure scenarios, the Operator conducted emergency response simulations at least every 3 years for those tailings facility credible flow failure scenarios, which may result in loss of life. Simulations can range from tabletop exercises to field exercises of an emergency and include testing multiple credible flow failure scenarios.	✓	✓	✓
13.4	A	The EPRP includes specific actions to immediately respond if a catastrophic tailings facility failure has occurred (refer to Requirements in 13.1).	✓	✓	✓
	B	The immediate response from a catastrophic tailings facility failure prioritises saving lives, providing humanitarian aid, and minimising environmental harm.	✓	✓	✓



Requirement 13.1 – Self-Assessment Rating Justification

As part of the TMS, use best practices and emergency response expertise to prepare and implement a site-specific tailings facility Emergency Preparedness and Response Plan (EPRP) based on credible flow failure scenarios and assessing potential consequences. Test and update the EPRP at all phases of the tailings facility lifecycle at a frequency established in the plan, or more frequently if triggered by a material change either to the tailings facility or to the social, environmental and local economic context. Meaningfully engage with employees and contractors to inform the EPRP, and co-develop community focused emergency preparedness measures with project-affected people.

Requirement 13.1.A

Criteria

The Tailings Management System (TMS) includes a site-specific tailings facility Emergency Preparedness and Response Plan (EPRP). The EPRP includes specific actions to prepare, manage an escalating event, and respond after an event has occurred.

Discussion

At Gold Fields, we prioritize proactive crisis management, emergency preparedness and response planning. These systems form a fundamental component of our Tailings Management System (TMS) and involve all organisational levels, from corporate to regional to site-specific operations.

At the Tarkwa mine, we utilize the catastrophic risk management system, a mine-wide Emergency Management and Response Plan, and a specific Tailings Emergency Management and Response Plan (EPRP).

The comprehensive Catastrophic Risk Management System is being upgraded to allow rapid digitized reporting and escalation processes, enabling us to respond swiftly and efficiently to critical risks. As part of our continuous improvement efforts in the space of catastrophic risk management, we conducted a comprehensive desktop-based tailings emergency response scenario to test the catastrophic risk management system in May of this year, allowing us to identify areas for further enhancement.

Our current EPRP for Tailings is managed by our dedicated site risk and safety team and the RTFE. The EPRP incorporates preparedness measures and response strategies, ensuring we are well-equipped to manage and mitigate risks promptly and effectively. In our ongoing commitment to enhance our emergency preparedness, we are updating our EPRP to reflect the new status of the TSF knowledge base.

The outcomes of rigorous analysis and studies, in alignment with the Global Industry Standard on Tailings Management (GISTM), are currently being integrated into the existing TSF EPRP. These include a comprehensive failure mode evaluation assessment which carefully assessed the credibility of potential hypothetical failure modes, inundation studies, updated trigger action response plans (TARPs), new instrumentation and software monitoring packages, and new specialized roles dedicated to tailings management and post-incident recovery.

As we have not formally launched our updated EPRP, we are well-positioned to manage emergencies and have robust Trigger Action Response Plans (TARPs) in place. We have rated this requirement as partial and will close this out when the updated EPRP is issued later in the year.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets”.

Assessment Outcome

-  **Partially Meets this Requirement**



🟡 Requirement 13.1.B

Criteria

The tailings facility EPRP is responsive to credible flow failure scenarios, assessing potential consequences and identifying potentially affected areas and the approximate degree of expected consequences.

Discussion

At Gold Fields, we place significant importance on the responsiveness of our tailings facility Emergency Preparedness and Response Plan (EPRP) to credible flow failure scenarios and assessing potential consequences.

At the time of this disclosure, the outcomes of rigorous analysis and studies, in alignment with the Global Industry Standard on Tailings Management (GISTM), are currently being integrated into the existing TSF EPRP.

These include a comprehensive failure mode evaluation assessment which carefully assessed the credibility of potential hypothetical failure modes, inundation studies, updated trigger action response plans (TARPs), new instrumentation and software monitoring packages, and new specialized roles dedicated to tailings management and post-incident recovery.

Our updated EPRP outlines the potentially affected areas and accurately assesses the expected consequences. We understand the importance of transparent and comprehensive communication in emergency preparedness, and our EPRP is designed to provide accurate and reliable information in such situations.

As we have not formally launched our updated EPRP, we are well-positioned to manage emergencies and have robust Trigger Action Response Plans (TARPs) in place. We have rated this requirement as partial and will close this out when the updated EPRP is issued later in the year.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets”.

Assessment Outcome

- 🟡 Partially Meets this Requirement



🟡 Requirement 13.1.C

Criteria

The EPRP was developed with input from appropriate expertise in emergency response, site operation and project-affected people using best practices.

Discussion

Throughout the development of our updated EPRP, the team actively engaged with our corporate and operational teams, including site personnel on the ground and our engineer of record partner. Their valuable input has allowed us to tailor our EPRP to the unique requirements of our operations at the Tarkwa mine. We have fostered a collaborative environment that promotes effective emergency management and response by involving various stakeholders with relevant expertise.

Furthermore, as part of our commitment to continuous improvement, we have appointed a consultant to support the digitising our Catastrophic Risk Management Software on-site. This initiative will allow us to streamline our emergency management processes, enabling more efficient response and effectively managing critical risks.

The next stage for Gold Fields is to roll out the updated EPRP and host a series of workshops with stakeholders. As we have not formally launched our updated EPRP, we are well-positioned to manage emergencies and have robust Trigger Action Response Plans (TARPs) in place. We have rated this requirement as partial and will close this out when the updated EPRP is issued later in the year.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets”.

Assessment Outcome

- 🟡 Partially Meets this Requirement



🟡 Requirement 13.1.D

Criteria

The tailings facility EPRP for operating facilities is tested and reviewed based on the process and frequency specified in the plan every 3 years or more frequently if triggered by a material change to the tailings facility or the social, environmental or economic context occurs. Reference R. 13.2 and R. 13.3.

Discussion

At Gold Fields, we prioritize the rigorous testing and review of our tailings facility Emergency Preparedness and Response Plan (EPRP) to check its effectiveness and adherence to best practices. Our commitment aligns with the specified process and frequency outlined in the plan, which mandates testing and reviews every three years. However, we acknowledge the need for more frequent assessments if there are significant changes to the tailings facility or the social, environmental, and economic context.

At the Tarkwa mine, we have implemented several positive changes to our tailings storage facilities, including transitioning to downstream management, representing a fundamental shift in our tailings management philosophy and integrating a live instrumentation monitoring system.

We rolled out new catastrophic risk management software in May this year and conducted a desktop simulation of an unwanted tailings failure scenario. This simulation was intended to test our ability to respond to a catastrophic level of failure.

As we have not formally launched our updated EPRP, we are well-positioned to manage emergencies and have robust Trigger Action Response Plans (TARPs) in place. We have rated this requirement as partial and will close this out when the updated EPRP is issued later in the year. The team are scheduled to facilitate tests and reviews of the updated EPRP in 2024.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets”.

Assessment Outcome

- 🟡 Partially Meets this Requirement



🟡 Requirement 13.1.E

Criteria

EPRP development and updates involve meaningful engagement of employees, contractors, community emergency response providers, and project-affected people engaged to co-develop community-focused emergency preparedness and communication of the plan to project-affected people.

Discussion

At Gold Fields, we understand the importance of meaningful engagement in developing and updating our Emergency Preparedness and Response Plan (EPRP). We have taken a comprehensive approach that involves active participation from various stakeholders, including risk and emergency management consultants, the Tarkwa Tailings Stewardship team and our Engineer of Record partner.

Throughout the process, we have collaborated closely with; representatives from the community relations and sustainable development team, the responsible tailing facility engineer, the engineer of record, and the site safety team. Their expertise and input have been instrumental in shaping the updated EPRP, ensuring that it addresses the specific needs and concerns of our operations and the communities we work with.

While we have made significant progress in developing the EPRP, we have not yet launched the updated plan. We recognize that engaging with the vast communities in Ghana requires careful consideration and a commitment to meaningful dialogue. Our focus has been on meaningful engagement and a robust EPRP supported by comprehensive technical studies. This is ongoing work and will continue progressively over time.

We believe in fostering collaborative relationships with the community and are dedicated to conducting the necessary engagements thoroughly and inclusively. We have plans to roll out the updated EPRP to the community and check that their perspectives and feedback are incorporated into our emergency preparedness measures.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets”.

Assessment Outcome

- 🟡 Partially Meets this Requirement



Requirement 13.2 – Self-Assessment Rating Justification

Engage with public sector agencies, first responders, local authorities and institutions and take reasonable steps to assess the capability of emergency response services to address the hazards identified in the tailings facility EPRP, identify gaps in capability and use this information to support the development of a collaborative plan to improve preparedness.

✔ Requirement 13.2.A

Criteria

Based on the nature of the emergency preparedness and response requirements for a given facility, following conformance with Requirement 13.1, the operator has identified public sector agencies, first responders, local authorities and institutions that would participate in any emergency response to tailings facility failures.

Discussion

At Gold Fields, we recognize the importance of collaboration and coordination with public sector agencies, first responders, local authorities, and institutions in ensuring effective emergency preparedness and response for any scenario.

The Tarkwa Sustainable Development and Community Relations teams are vital in managing stakeholder relationships at the Tarkwa mine. They are the custodians of our comprehensive stakeholder register, which includes a diverse range of stakeholders, including public sector agencies, first responders, local authorities, and institutions. This register is valuable for identifying and maintaining connections with these stakeholders in emergency response scenarios and other aspects of our operations.

Our dedicated Safety team actively monitors the emergency-related stakeholders listed in the register to check that their information is current and up-to-date. The team has updated this stakeholder register and identified stakeholders who could support an unwanted tailings event. This list will be referenced in the updated EPRP, which serves as a valuable reference point, enabling us to identify the relevant parties who could support us in emergency response scenarios, including but not limited to tailings-related incidents.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ Meets this Requirement



Requirement 13.2.B

Criteria

The operator has engaged with identified organisations

Discussion

At Gold Fields, we prioritize engaging with relevant organizations to check effective collaboration and preparedness in addressing the hazards identified in our tailings facility Emergency Preparedness and Response Plan (EPRP). We have made significant efforts to engage with various stakeholders and foster strong relationships within the Tarkwa community and beyond.

Our Tarkwa Sustainable Development and Community Relations teams play a pivotal role in maintaining these relationships. They actively manage the Tarkwa Mine Stakeholder Register, which includes a comprehensive list of stakeholders, including community members, regulatory agencies, and other organizations. We work diligently to keep these connections strong and check open lines of communication.

Furthermore, our Safety team engages with local public sector agencies and governmental departments on a regular basis. We conduct annual drills involving community and public sector agencies to address various risk-related matters. These activities help us assess the capabilities of emergency response services and identify any areas for improvement.

While we have taken significant steps to engage with organizations, such as the Minerals Commission, to discuss the effective implementation of our Global Industry Standard on Tailings Management (GISTM) at our operations, we acknowledge that further dedicated sessions focused specifically on tailings-related risks will be necessary with broader organisations to satisfy this requirement fully.

Considering the progress made so far, our team has rated this requirement as partially meets. We are committed to continuous improvement and will continue to engage with identified organizations to enhance further our collaborative efforts and preparedness for emergency response concerning our tailings facilities.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets”.

Assessment Outcome

-  **Partially Meets this Requirement**



🟡 Requirement 13.2.C

Criteria

The Operator has taken reasonable steps to assess the capability of identified organisations to address the hazards identified in the tailings facility EPRP, to identify gaps in capability, and to use this information to support the development of a collaborative plan to improve preparedness if gaps are identified.

Discussion

At Gold Fields, we are committed to ensuring the capability of identified organizations to address the hazards identified in our tailings facility Emergency Preparedness and Response Plan (EPRP).

The Tarkwa Tailings Stewardship team has conducted a thorough review of the capability of identified organizations to support us in the event of a tailings facility failure and is in the process of integrating this information into our updated EPRP. This plan will undergo further review and validation by our engineer of record partner.

It is important to note that at Gold Fields, we prioritize fully eliminating credible failure modes within our tailings facilities. To address this, we have made significant progress by transitioning some of our facilities to downstream management, which aligns with best practices. Through the completion of various technical studies, we have already screened out the majority of credible failure modes, and the remaining ones are currently undergoing detailed evaluation.

As we have not formally launched our updated EPRP, we are well-positioned to manage emergency situations and have robust Trigger Action Response Plans (TARPs) in place. We have rated this requirement as partial and will close this out when the updated EPRP is issued later in the year.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets”.

Assessment Outcome

- 🟡 Partially Meets this Requirement



Requirement 13.3 – Self-Assessment Rating Justification

Considering community-focused measures and public sector capacity, the Operator shall take all reasonable steps to maintain a shared state of readiness for tailings facility credible flow failure scenarios by securing resources and carrying out annual training and exercises. The Operator shall conduct emergency response simulations at a frequency established in the EPRP but at least every 3 years for tailings facilities with potential loss of life.

Requirement 13.3.A

Criteria

The Operator incorporates knowledge of community-focused measures and public sector capacity when establishing a state of readiness in the EPRP.

Discussion

Gold Fields greatly emphasises its relationship with the community and public sector agencies. We recognize the need to incorporate community-focused measures and consider the capacity of the public sector when establishing a state of readiness in Emergency Preparedness and Response Plans (EPRP).

Our risk and safety team conducts annual training and exercises in collaboration with the community to promote preparedness on an annual basis. These exercises have historically focused on addressing general catastrophic risks such as cyanide spills or fire incidents, but we have engaged the community about tailings risks in general.

Developing our updated EPRP has followed an interdisciplinary approach, benefiting from input from the Tarkwa Tailings Stewardship team. While our team possesses a solid understanding of the community and the capacity of the public sector, it is important to note that, as of the time of this disclosure, we have not launched the updated EPRP.

In the spirit of transparency, we rate our current progress as partially meeting this requirement, as we have not formally launched our updated EPRP. We are well-positioned to manage emergency situations and have robust Trigger Action Response Plans (TARPs) in place.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets”.

Assessment Outcome

-  **Partially Meets this Requirement**



🟡 Requirement 13.3.B

Criteria

The Operator has taken all reasonable steps to maintain a shared state of readiness by engaging with public sector agencies, first responders, local authorities, and institutions which would participate in emergency response (as identified in 13.2).

Discussion

Gold Fields is committed to maintaining a shared state of readiness and fostering strong collaboration with public sector agencies, first responders, local authorities, and institutions involved in emergency response efforts. Our safety and community team has established a solid relationship with these stakeholders and actively engages with them through annual training and emergency exercises. These initiatives provide valuable insights into the local capacity and readiness to respond effectively to tailings facility credible flow failure scenarios.

We acknowledge that evaluating and communicating catastrophic risks is a complex task, and it is important to convey accurate and relevant information about the risks to public sector agencies, first responders, local authorities, and other stakeholders. Our commitment to accurate technical studies and risk assessments is the foundation for effective emergency response planning and collaboration.

While we have not conducted an unwanted tailings-related event as part of our annual community engagement, we have plans to facilitate similar exercises in 2024. As of the time of this disclosure, we rate our progress in meeting this requirement as 'partially meets'. Nevertheless, we remain dedicated to actively engaging with public sector agencies, first responders, local authorities, and institutions to strengthen our shared readiness.

Therefore, Gold Fields has ranked this Requirement as "Partially Meets".

Assessment Outcome

- 🟡 Partially Meets this Requirement



🟡 Requirement 13.3.C

Criteria

The Operator has secured and maintains resources in a state of readiness to respond to tailings facility credible flow failure scenarios if such apply to their facility.

Discussion

Gold Fields is fully committed to maintaining a state of readiness and ensuring that adequate resources are secured to respond effectively to tailings facility credible flow failure scenarios. We understand the importance of preparedness and have taken all reasonable steps to ensure we have the necessary resources. However, it is important to note that the majority of credible failure modes which could apply to our TSF complex have been eliminated.

As part of our commitment to readiness, we regularly secure and maintain the resources required for any crisis or emergency response. This includes equipment, personnel, and other critical assets essential for effective and timely action in the event of a tailings facility failure. We continuously assess and update our resource needs to align with best practices and evolving industry standards.

In addition to securing resources, we conduct annual training and exercises to enhance our emergency response capabilities. These training sessions allow our personnel to familiarize themselves with emergency procedures, practice response protocols, and refine their skills. Regularly engaging in these exercises ensures our team is well-prepared and equipped to handle any potential flow failure scenarios.

As we have not formally launched our updated EPRP, we are well-positioned to manage emergency situations and have robust Trigger Action Response Plans (TARPs) in place. We have rated this requirement as partial and will close this out when the updated EPRP is issued later in the year.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets”.

Assessment Outcome

- 🟡 Partially Meets this Requirement



🟡 Requirement 13.3.D

Criteria

Annual internal and community-focused training and exercises on the EPRP are conducted.

Discussion

Gold Fields places great importance on maintaining a state of readiness and ensuring effective emergency response for tailings facility credible flow failure scenarios. As part of our commitment to preparedness, we conduct annual internal and community-focused training and exercises on our Emergency Preparedness and Response Plan (EPRP).

The Tarkwa mine strongly emphasises comprehensive risk management and emergency preparedness. Our approach includes maintaining a robust catastrophic risk management system, a mine-wide Emergency Management and Response Plan, and a dedicated Tailings Emergency Management and Response Plan (EPRP).

Recently, we have taken steps to further enhance our emergency preparedness by updating our EPRP to incorporate the findings and recommendations from GISTM technical studies, including updated trigger action response plans, new instrumentation and software monitoring instrumentation, and specialized roles specific to tailings management. By integrating these measures into our EPRP, we are better equipped to detect, respond to, and mitigate potential risks associated with tailings facility incidents.

Our community relations and safety team actively engages with the community through annual training and emergency exercises. These initiatives aim to enhance community awareness, preparedness, and collaboration in emergency response efforts on all catastrophic risks, including fire, cyanide, general risk and tailings. However, it is important to note that, as of this disclosure, the updated EPRP has not been launched, and as such, it has not been simulated with the community.

As the updated EPRP has not been launched, we have rated this requirement as partially meets. Although substantial progress has been made, the work package remains incomplete until the community simulation exercise is conducted. We recognize the significance of engaging the community in emergency preparedness and response, and we are committed to completing this aspect of our training and exercises.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets”.

Assessment Outcome

- 🟡 Partially Meets this Requirement



🟡 Requirement 13.3.E

Criteria

The Operator has a programme to conduct emergency response simulations with emergency service providers and project-affected people at a frequency defined in the EPRP.

Discussion

Gold Fields recognizes the importance of conducting emergency response simulations with emergency service providers and project-affected people to maintain a state of readiness for tailings facility credible flow failure scenarios. We are committed to engaging in regular simulations as part of our comprehensive emergency preparedness program.

The Tarkwa mine strongly emphasises comprehensive risk management and emergency preparedness. Our approach includes maintaining a robust catastrophic risk management system, a mine-wide Emergency Management and Response Plan, and a dedicated Tailings Emergency Management and Response Plan (EPRP).

Our safety and community relations team maintains strong relationships with emergency service providers in Ghana and actively collaborates with them. We conduct annual training sessions and emergency response simulations involving the community and other external stakeholders.

However, it is important to note that, as of this disclosure, the updated EPRP has not been specifically tested with the community. We have plans to include this simulation in our next annual community engagement event. We have rated this requirement as partially meeting our objectives in the spirit of transparency.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets”.

Assessment Outcome

- 🟡 Partially Meets this Requirement



🟡 Requirement 13.3.F

Criteria

The Operator conducted emergency response simulations for facilities with credible flow failure scenarios at least every 3 years for those tailings facilities with credible flow failure scenarios, which may result in loss of life. Simulations can range from tabletop exercises to field exercises of an emergency and include testing multiple credible flow failure scenarios.

Discussion

At the Tarkwa mine, we prioritize implementing a robust catastrophic risk management system, a mine-wide Emergency Management and Response Plan, and a dedicated Tailings Emergency Management and Response Plan (EPRP).

Recently, we have taken steps to further enhance our emergency preparedness by updating our EPRP to incorporate the findings and recommendations from GISTM technical studies, including updated trigger action response plans, new instrumentation and software monitoring instrumentation, and specialized roles specific to tailings management. By integrating these measures into our EPRP, we are better equipped to detect, respond to, and mitigate potential risks associated with tailings facility incidents.

To check preparedness, our safety and risk team conducts annual training sessions and emergency exercises, fostering engagement and collaboration with the community. We recently completed a desktop simulation of an unwanted tailings scenario using our newly digitized catastrophic risk management system. This exercise allowed us to assess and enhance our response capabilities.

While we have conducted exercises and simulations to test our catastrophic risk management systems and processes, including a desktop exercise, at the time of this disclosure, the updated EPRP has not been specifically simulated with the community. However, we have plans to conduct such simulations soon, recognizing the importance of community involvement. As a result, our team has rated this requirement as “Partially meets”, acknowledging the ongoing work to engage the community in emergency response simulations.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets”.

Assessment Outcome

- 🟡 Partially Meets this Requirement



Requirement 13.4 – Self-Assessment Rating Justification

In the case of a catastrophic tailings facility failure, provide immediate response to save lives, supply humanitarian aid and minimise environmental harm.

✔ Requirement 13.4.A

Criteria

The EPRP includes specific actions to immediately respond if a catastrophic tailings facility failure has occurred (refer to Requirements in 13.1).

Discussion

At the Tarkwa mine, we have developed a comprehensive Catastrophic Risk Management and Mine Wide Emergency Management and Response plan that addresses the risks associated with tailings facility failure. This plan includes specific actions to be taken immediately during a catastrophic failure.

Our plan checks a swift and effective response to save lives, provide humanitarian aid, and minimize environmental harm. It is supported by trigger action response plans that outline the steps to be taken based on the severity and nature of the failure.

To facilitate a rapid response, we have implemented advanced instrumentation and monitoring systems that continuously track and assess the conditions of our TSF. These systems enable us to detect any signs of potential failure, trigger the necessary actions to mitigate the risk and respond promptly.

We are currently incorporating the new knowledge base into our EPRP, which will be released later this year. The updated EPRP integrates with the mine-wide catastrophic risk management system and TSF-specific Trigger Action Response Plans. (TARPs)

In the event of a catastrophic tailings facility failure, we are prepared to take immediate action in accordance with our plan, mobilizing resources and coordinating efforts to save lives, provide necessary aid, and minimize any potential harm to the environment. Our goal is to respond swiftly and effectively to mitigate the impacts of such an event.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ Meets this Requirement



🟡 Requirement 13.4.B

Criteria

An immediate response from a catastrophic tailings facility failure prioritises saving lives, providing humanitarian aid, and minimising environmental harm.

Discussion

At the Tarkwa mine, we have implemented a robust Catastrophic Risk Management, Mine Wide Emergency Management and Response Plan, and dedicated Emergency Preparedness and Response Plan (EPRP) for Tailings. Prioritizing immediate response actions after a catastrophic tailings facility failure, focusing on saving lives, providing humanitarian aid, and minimizing environmental harm, is key to our emergency management approach.

The safety and well-being of our employees, the surrounding communities, and the environment are paramount to us. In the event of a catastrophic tailings facility failure, our immediate response actions are carefully designed to address these priorities.

Our emergency management processes are supported by TSF-specific trigger action response plans (TARPs) that provide clear guidance on the actions to be taken based on the severity and nature of the failure. These plans check a coordinated and effective response to the situation, allowing us to mobilize resources and expertise to save lives and provide humanitarian aid to those affected.

Furthermore, we have implemented advanced instrumentation and monitoring systems to continuously assess the conditions of our tailings storage facilities (TSF). These systems actively monitor the TSF, allowing us to detect any signs of potential failure and enabling us to take immediate action to minimize environmental harm.

We are currently integrating the learnings from technical studies, aligned with the GISTM, into an updated EPRP. We have existing risk management systems and processes in place to respond to and manage emergency situations on-site. However, as the updated EPRP has not been launched, the team has rated this requirement as Partially Meets.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets”.

Assessment Outcome

- 🟡 Partially Meets this Requirement



GISTM Principle 14

Prepare for Long-Term Recovery in the Event of Catastrophic Failure.

Principle 14 Self-Assessment Outcome

The Tarkwa mine has three TSFs with a Very High Consequence Classification. A summary of the self-assessment outcome for Principle 14 of the GISTM is presented in Table 19 below. Further information specific to each requirement part is provided in subsequent sections of this report.

Table 19: Principle 14 – Self-Assessment Outcome Summary

Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
14.1	A	Based on those scenarios and assessing potential consequences for facilities with credible flow failure scenarios, the operator has identified public sector agencies and other organisations that would participate in medium and long-term social and environmental post-failure response strategies.	✓	✓	✓
	B	The Operator has taken reasonable steps to engage with such organisations meaningfully.	⚠	⚠	⚠
14.2	A	The following are demonstrated in the event of a catastrophic tailings facility failure: The Operator has undertaken a post-incident impact assessment that addresses social, environmental and local economic impacts.	–	–	–
	B	The following are demonstrated in the event of a catastrophic tailings facility failure: The post-incident impact assessment has been undertaken as soon as possible after people are safe and short-term survival needs have been met.	–	–	–
14.3	A	The following are demonstrated in the event of a catastrophic tailings facility failure. The Operator has developed plans to address the failure's medium- and long-term social, environmental, and local economic impacts in conjunction with public sector agencies and other stakeholders.	–	–	–
	B	The following are demonstrated in the event of a catastrophic tailings facility failure. The Operator has provided for disclosure of the reconstruction, restoration, reclamation and recovery plans if permitted by public authorities.	–	–	–
	C	The following are demonstrated in the event of a catastrophic tailings facility failure. The Operator has implemented the plans with public sector agencies and other stakeholders.	–	–	–
14.4	A	The following are demonstrated in the event of a catastrophic tailings facility failure. The Operator has enabled the participation of affected people in	–	–	–



Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
		reconstruction, restoration, and recovery works and ongoing monitoring activities.			
14.5	A	In the event of a catastrophic tailings facility failure, the following are demonstrated: The Operator facilitates monitoring and public reporting of post-failure outcomes.	–	–	–
	B	In the event of a catastrophic tailings facility failure, the following are demonstrated: Monitoring and public reporting of post-failure outcomes are aligned with the thresholds and indicators outlined in the reconstruction, restoration and recovery plans.	–	–	–
	C	In the event of a catastrophic tailings facility failure, the following are demonstrated: Monitoring and public reporting of post-failure outcomes activities are adapted in response to findings and feedback.	–	–	–



Requirement 14.1 – Self-Assessment Rating Justification

Based on tailings facility credible flow failure scenarios and assessing potential consequences, take reasonable steps to meaningfully engage with public sector agencies and other organisations that would participate in medium- and long-term social and environmental post-failure response strategies.

✔ Requirement 14.1.A

Criteria

Based on those scenarios and assessing potential consequences for facilities with credible flow failure scenarios, the operator has identified public sector agencies and other organisations that would participate in medium and long-term social and environmental post-failure response strategies.

Discussion

Gold Fields emphasises proactive risk management and acknowledges the significance of engaging with public sector agencies and other organizations in response to credible flow failure scenarios. To check effective stakeholder engagement, our Tarkwa Sustainable Development and Community Relations team maintains a robust stakeholder register encompassing various stakeholders, including local communities, government agencies, emergency response providers, and interdisciplinary partners.

This stakeholder register is regularly reviewed and updated on an annual basis, with the most recent update taking place in 2023. The input from our Tarkwa Safety team plays a crucial role in identifying the relevant public sector agencies and other organizations that would participate in medium and long-term social and environmental post-failure response strategies. This collaborative approach ensures we are well-prepared to address potential risks or challenges.

Furthermore, we have recently enhanced our Emergency Management and Response Plan for Tarkwa, specifically incorporating an annex dedicated to tailings management. During the update process, a thorough review was conducted to identify and outline the stakeholders who should be engaged in emergencies. This comprehensive evaluation helps us establish effective lines of communication and coordination to facilitate timely and efficient responses to any unforeseen incidents.

Gold Fields remains committed to prioritizing the safety and well-being of our employees, communities, and the environment. By proactively engaging with public sector agencies and other relevant organizations, we strive to foster a collaborative and integrated approach to address potential flow failure scenarios and their potential consequences.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

- ✔ Meets this Requirement



🔍 Requirement 14.1.B

Criteria

The Operator has taken reasonable steps to engage with such organisations meaningfully.

Discussion

Gold Fields is fully committed to proactive catastrophic risk management and continuously strives to enhance our emergency response capabilities. The Tarkwa Risk and Safety team maintains positive relationships with internal stakeholders and external organizations, fostering collaboration and knowledge sharing on catastrophic risks. As part of our comprehensive risk management approach, we address various risks, including fire, cyanide, and tailings.

We have carefully evaluated this requirement and have rated our progress as "Partially meets." While we are proud of our substantial strides, such as upgrading our mine-wide emergency response plan and digitizing our catastrophic risk management system, we acknowledge that considerable work remains to be done.

To further strengthen our preparedness, we recently conducted a tailings-related desktop simulation to test and refine our catastrophic risk response strategies. Additionally, we have digitized our tailings monitoring technology and integrated it with trigger action response plans based on the latest stability models. These advancements have enhanced our ability to manage and respond to potential issues proactively.

In line with our commitment to collaboration, we have had preliminary discussions with the Minerals Commission, laying the foundation for effective partnerships in addressing catastrophic tailings risk. Furthermore, we have scheduled further meetings with external organisations in the fourth quarter. These meetings will provide valuable opportunities to exchange knowledge and expertise, ensuring that we remain at the forefront of best practices in social and environmental post-failure response strategies.

Gold Fields embraces this requirement as an opportunity for continuous improvement. Working closely with stakeholders and external partners will enhance our catastrophic risk management and emergency response capabilities.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets”.

Assessment Outcome

- 🔍 [Partially Meets this Requirement](#)



Requirement 14.2 – Self-Assessment Rating Justification

In the event of a catastrophic tailings facility failure, assess social, environmental and local economic impacts as soon as possible after people are safe and short-term survival needs have been met.

– Requirement 14.2.A

Criteria

In the event of a catastrophic tailings facility failure, the Operator has undertaken a post-incident impact assessment that addresses social, environmental and local economic impacts.

Discussion

Gold Fields has not experienced a catastrophic tailings facility failure. As such, the team has rated this requirement as ‘Not applicable.’

However, Gold Fields recognizes the importance of assessing the social, environmental, and local economic impacts of a catastrophic tailings facility failure. While we are grateful to report that we have not experienced such an incident, we understand the significance of preparedness.

Given the potential risks associated with tailings management, we have taken proactive measures to integrate a post-incident impact assessment procedure into our updated Emergency Preparedness and Response Plan. (EPRP) This comprehensive approach checks that we are well-prepared to address any unforeseen circumstances and conduct an assessment as soon as possible after ensuring the safety of individuals and meeting their immediate survival needs.

Although the need for a post-incident impact assessment has not been triggered, we prioritize proactive measures and comprehensive planning to safeguard the well-being of our employees, communities, and the environment. Incorporating this procedure into our emergency management plan demonstrates our commitment to responsible and sustainable practices.

While we have not encountered a catastrophic tailings facility failure, we remain vigilant to prevent and mitigate risks. Gold Fields will continue to prioritize the safety and well-being of all stakeholders, implementing proactive measures and ensuring that we are well-prepared to address any potential impacts that may arise.

Therefore, Gold Fields has ranked this Requirement as “Not applicable”.

Assessment Outcome

- – Not Applicable



— Requirement 14.2.B

Criteria

The post-incident impact assessment has been undertaken as soon as possible after people are safe and short-term survival needs have been met.

Discussion

Gold Fields has not experienced a catastrophic tailings facility failure, so the team has rated this requirement as not applicable. However, we remain committed to proactive risk management and comprehensive planning. In line with our dedication to preparedness, our team has developed a post-incident impact assessment procedure that aligns with the Gold Fields risk management framework.

While we have not experienced the need to conduct a post-incident impact assessment, we understand the critical importance of promptly assessing the social, environmental, and local economic impacts following such an unfortunate event. Our proactive approach ensures we are as prepared as possible to respond swiftly and comprehensively should a catastrophic tailings facility failure occur.

The post-incident impact assessment procedure has been designed to be initiated as soon as people are confirmed safe, and their short-term survival needs have been met.

Although this requirement is currently rated as not applicable, we will remain vigilant in our efforts to prevent and mitigate risks associated with tailings facility management. Our commitment to transparency and responsible practices drives us to improve our emergency response capabilities continually. Should the unfortunate event of a catastrophic tailings facility failure occur, we will swiftly implement our post-incident impact assessment procedure to assess and mitigate the social, environmental, and local economic impacts.

Therefore, Gold Fields has ranked this Requirement as “Not Applicable”.

Assessment Outcome

- — Not Applicable



Requirement 14.3 – Self-Assessment Rating Justification

In the event of a catastrophic tailings facility failure, work with public sector agencies and other stakeholders to develop and implement reconstruction, restoration and recovery plans that address the medium- and long-term social, environmental and local economic impacts of the failure. The plans shall be disclosed if permitted by public authorities.

– Requirement 14.3.A

Criteria

The following are demonstrated in the event of a catastrophic tailings facility failure: the Operator has developed plans to address the failure's medium- and long-term social, environmental, and local economic impacts in conjunction with public sector agencies and other stakeholders.

Discussion

Gold Fields recognizes the significance of addressing the medium- and long-term social, environmental, and local economic impacts in the event of a catastrophic tailings facility failure.

To effectively address the potential impacts, our team is in the process of updating the Emergency Preparedness and Response (EPRP) plan with the learnings from recently completed technical studies. This EPRP has been designed to include post-incident assessment and recovery procedures, encompassing the social, environmental, and local economic aspects.

Collaboration with public sector agencies and stakeholders is essential in formulating effective reconstruction, restoration, and recovery plans. While we have not encountered a catastrophic tailings facility failure, we have rated this requirement as not applicable, but we are committed to working closely with relevant authorities and stakeholders to develop and implement these plans should the need arise.

Therefore, Gold Fields has ranked this Requirement as “Not Applicable”.

Assessment Outcome

- – Not Applicable



— Requirement 14.3.B

Criteria

The following are demonstrated in the event of a catastrophic tailings facility failure: the Operator has provided for disclosure of the reconstruction, restoration, reclamation and recovery plans if permitted by public authorities.

Discussion

Gold Fields has not suffered a catastrophic tailings facility failure, so the team has rated this requirement as 'Not applicable.' However, Gold Fields recognizes the importance of providing for disclosure of the reconstruction, restoration, reclamation and recovery plans in the event of a catastrophic tailings facility failure.

Transparency and accountability are fundamental principles for us. Disclosing these plans can increase public awareness, understanding, and confidence in our efforts. However, it is crucial to adhere to the regulations and permissions set forth by public authorities regarding the disclosure of sensitive information related to emergency response and recovery plans.

By actively engaging with stakeholders and authorities, we aim to foster a collaborative approach incorporating diverse perspectives and expertise into our planning and decision-making processes. This inclusive approach helps to check the effectiveness, sustainability, and resilience of our reconstruction, restoration, reclamation, and recovery plans.

Therefore, Gold Fields has ranked this Requirement as “Not Applicable”.

Assessment Outcome

- — Not Applicable



— Requirement 14.3.C

Criteria

The following are demonstrated in the event of a catastrophic tailings facility failure: the Operator has implemented the plans in collaboration with public sector agencies and other stakeholders.

Discussion

Gold Fields is committed to implementing comprehensive plans in collaboration with public sector agencies and stakeholders to address the risks associated with tailings management effectively. We recognize the importance of engaging independent consultants to provide valuable industry insights and check the relevance and status of our plans.

Gold Fields has not suffered a catastrophic tailings facility failure, so the team has rated this requirement as 'Not applicable.' However, Gold Fields acknowledges that the robust implementation of these plans with public sector agencies requires time and continuous improvement. The complexity and scale of our operations necessitate careful coordination and cooperation. While we have made significant progress, we recognize the need for ongoing collaboration and refinement to check the utmost effectiveness of our emergency response efforts.

Therefore, Gold Fields has ranked this Requirement as “Not Applicable”.

Assessment Outcome

- — Not Applicable



Requirement 14.4 – Self-Assessment Rating Justification

In the event of a catastrophic tailings facility failure, enable the participation of affected people in reconstruction, restoration and recovery works and ongoing monitoring activities.

– Requirement 14.4.A

Criteria

The Operator has enabled the participation of affected people in reconstruction, restoration, and recovery works and ongoing monitoring activities.

Discussion

Gold Fields acknowledges that, fortunately, we have not experienced a catastrophic tailings facility failure. As a result, the team has evaluated this requirement as ‘Not applicable.’ However, despite the absence of such an event, we maintain a strong commitment to proactive risk management and continuously strive to enhance our emergency response capabilities.

While we have not encountered a catastrophic tailings facility failure, we are in the process of updating our Tailings Emergency Preparedness and Response Plan. (EPRP) This plan encompasses various reconstruction, restoration, and recovery procedures. Although these plans have not been implemented due to the absence of a catastrophic event, our commitment to their development confirms that we are prepared in the event of such an incident.

We have established a procedure for engaging project-affected communities that prioritizes inclusive decision-making processes, community consultations, and participatory workshops. By actively engaging with the affected communities, we will check that their voices are heard, their needs are considered, and their involvement is sought in all stages of the recovery process.

Furthermore, our commitment extends beyond the immediate recovery phase. We understand the significance of ongoing monitoring activities to assess the long-term impacts of any incident. If a catastrophic tailings failure were to occur, we would actively involve the affected people in these monitoring activities, empowering them to contribute their insights and perspectives.

Therefore, Gold Fields has ranked this Requirement as “Not Applicable”.

Assessment Outcome

- – Not Applicable



Requirement 14.5 – Self-Assessment Rating Justification

Facilitate the monitoring and public reporting of post-failure outcomes that are aligned with the thresholds and indicators outlined in the reconstruction, restoration and recovery plans and adapt activities in response to findings and feedback.

– Requirement 14.5.A

Criteria

The Operator facilitates monitoring and public reporting of post-failure outcomes.

Discussion

Gold Fields acknowledges that we have not experienced a catastrophic tailings facility failure. As such, the team has rated this requirement as ‘Not applicable.’

However, we understand the importance of being prepared and taking proactive measures to check the safety and well-being of our operations and surrounding communities. To this end, the Tarkwa Tailings Stewardship Team are updating the Tailings Emergency Preparedness and Response Plan, specifically addressing tailings risk and plans for reconstruction, restoration, and recovery in the event of a failure.

Although these plans are based on hypothetical scenarios, they serve as valuable tools to guide our preparedness and response efforts. One crucial aspect outlined in these plans is the establishment of meaningful thresholds and indicators that allow for ongoing monitoring and public reporting of post-failure outcomes. We recognize the significance of transparency and accountability in providing stakeholders with accurate and up-to-date information.

Should a catastrophic tailings facility failure occur, our monitoring activities will align with the thresholds and indicators defined in our reconstruction, restoration, and recovery plans. We will adapt our monitoring activities based on the findings and feedback received, ensuring we address any identified issues and continuously improve our response measures.

While we have not encountered a catastrophic tailings failure to date, our proactive approach and the development of robust plans enable us to effectively facilitate monitoring and public reporting of post-failure outcomes. We remain committed to upholding the highest transparency, accountability, and stakeholder engagement standards throughout our operations.

Therefore, Gold Fields has ranked this Requirement as “Not Applicable”.

Assessment Outcome

- – Not Applicable



— Requirement 14.5.B

Criteria

Monitoring and public reporting of post-failure outcomes are aligned with the thresholds and indicators outlined in the reconstruction, restoration and recovery plans.

Discussion

Gold Fields acknowledges the importance of monitoring and public reporting of post-failure outcomes, as outlined in the criteria. While we have not experienced a catastrophic tailings facility failure, we have taken proactive measures to address this requirement.

We are updating our Emergency Preparedness and Response Plan (EPRP) to include a post-incident recovery plan with established thresholds and indicators that serve as benchmarks for monitoring the impacts and progress in the aftermath of a hypothetical failure. It is crucial to emphasize that our focus is on prevention and preparedness, and it is important to note that these plans and associated monitoring activities are based on hypothetical scenarios and have not been tested by an actual failure event.

Our ultimate goal is to prevent catastrophic failures, as we know such incidents have immense human, environmental, and economic consequences. We are fully committed to ongoing improvement, learning from best practices in the industry, and continuously enhancing our risk management strategies.

Therefore, Gold Fields has ranked this Requirement as “Not Applicable”.

Assessment Outcome

- — Not Applicable



— Requirement 14.5.C

Criteria

Monitoring and public reporting of post-failure outcomes activities are adapted in response to findings and feedback.

Discussion

Gold Fields acknowledges the importance of monitoring and public reporting of post-failure outcomes and the need to adapt activities based on findings and feedback. While we have not experienced a catastrophic tailings facility failure, we recognize the significance of this requirement and have taken proactive measures to address it.

Although a catastrophic tailings facility failure has not occurred, we are in the process of updating our Emergency Preparedness and Response Plans (EPRPs) to include provisions for monitoring and public reporting of post-failure outcomes. These provisions are aligned with the thresholds and indicators outlined in our reconstruction, restoration, and recovery plans. This approach enables us to gather valuable data and insights in a hypothetical scenario, which can be used to adapt our activities and response strategies based on the findings and feedback received.

While the current application of this requirement may not be relevant due to the absence of a real-world incident, we are prepared to implement our plans and adapt our monitoring and reporting activities should such an event occur. We aim to check the safety of our operations, protect the well-being of our employees and surrounding communities, and minimize the potential social, environmental, and economic impacts of future incidents.

Therefore, Gold Fields has ranked this Requirement as “Not Applicable”.

Assessment Outcome

- — Not Applicable



GISTM Principle 15

Publicly Disclose and Provide Access to Information About the Tailings Facility To Support Public Accountability.

Principle 15 Self-Assessment Outcome

The Tarkwa mine has three TSFs with a Very High Consequence Classification. A summary of the self-assessment outcome for Principle 15 of the GISTM is presented in Table 20 below. Further information specific to each requirement part is provided in subsequent sections of this report.

Table 20: Principle 15 – Self-Assessment Outcome Summary

Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
15.1	A	<p>a. For new tailings facilities for which the regulatory authorisation process has commenced or that are otherwise approved by the Operator, the Operator shall publish and update, in accordance with Principle 21 of the UNGP, the following information:</p> <ol style="list-style-type: none"> 1. A plain language summary of the rationale for the basis of the design and site selected as per the multi-criteria alternatives analysis, impact assessments, and mitigation plans (Information may be obtained from the output of multiple Requirements including, but not limited to, Requirements 3.2, 3.3, 5.1, 5.3, 6.4, 6.6, 7.1 and 10.1); and 2. The Consequence Classification. (Requirement 4.1). 			
		<p>b. For each existing tailings facility and in accordance with Principle 21 of the UNGP, the Operator shall publish and update, at least on an annual basis, the following information:</p> <ol style="list-style-type: none"> 1. A description of the tailings facility (information may be obtained from the output of Requirements 5.5 and 6.4); 2. The Consequence Classification (Requirement 4.1); 3. A summary of risk assessment findings relevant to the tailings facility (Information may be obtained from the output of Requirement 10.1); 4. A summary of impact assessments and human exposure and vulnerability to tailings facility credible flow failure scenarios (Information may be obtained from the output of Requirements 2.4 and 3.3); 5. A description of the design for all phases of the tailings facility lifecycle, including the current and final height (Information may be obtained from the output of Requirement 5.5); 6. A summary of material findings of annual performance reviews and dam safety reviews (DSR), including implementation of 	✓	✓	✓



Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
		<p>mitigation measures to reduce risk to ALARP (Information may be obtained from the output of Requirements 10.4 and 10.5);</p> <p>7. A summary of material findings of the environmental and social monitoring programme, including implementation of mitigation measures (Requirement 7.5);</p> <p>8. A summary version of the tailings facility EPRP for facilities that have a credible failure mode(s) that could lead to a flow failure event that: (i) informed by credible flow failure scenarios from the tailings facility breach analysis; (ii) includes emergency response measures that apply to project affected people as identified through the tailings facility breach analysis and involve cooperation with public sector agencies; and (iii) excludes details of emergency preparedness measures that apply to the Operator’s assets, or confidential information (Requirements 13.1 and 13.2);</p> <p>9. Dates of most recent and next independent reviews (Requirement 10.5); and</p> <p>10. Annual confirmation that the Operator has adequate financial capacity (including insurance to the extent commercially reasonable) to cover estimated costs of planned closure, early closure, reclamation, and post-closure of the tailings facility and its appurtenant structures (Requirement 10.7).</p> <p>All of the disclosures specified in 15.1(A) and (B) above are addressed*</p>			
	B	<p>Provide local authorities and emergency services with sufficient information derived from the breach analysis to enable effective disaster management planning (Information may be obtained from the output of Requirement 2.3).</p> <p>The disclosures specified in 15.1(item C) above are addressed.</p>	✓	✓	✓
15.2	A	The Operator maintains a systematic and timely approach to responding to requests from project-affected people for information material to the public safety and integrity of a tailings facility.	✓	✓	✓
	B	When the Operator denies such requests, an explanation shall be provided to the requesting project-affected people in a	–	–	–



Req.	Part	Criteria	TSF 1	TSF 2	TSF 3
		reasonable timeframe, and records shall be kept of relevant explanations provided to the requesting project-affected people.			
15.3	A	Contribute information to credible global transparency initiatives relating to the safety and integrity of tailings facilities.	✓	✓	✓
	B	Update disclosed information relating to the safety and integrity of tailings facilities periodically, as a minimum, in line with requirements in 15.1.	✓	✓	✓



Requirement 15.1 – Self-Assessment Rating Justification

Publish and regularly update information on the Operator’s commitment to safe tailings facility management, implementation of its tailings governance framework, its organisation-wide policies, standards or approaches to the design, construction, monitoring and closure of tailings facilities. Such disclosures shall be made directly, unless subject to limitations imposed by regulatory authorities.

✔ Requirement 15.1.A

Criteria

a. For new tailings facilities for which the regulatory authorisation process has commenced or that are otherwise approved by the Operator, the Operator shall publish and update, in accordance with Principle 21 of the UNGP, the following information:

1. A plain language summary of the rationale for the basis of the design and site selected as per the multi-criteria alternatives analysis, impact assessments, and mitigation plans (Information may be obtained from the output of multiple Requirements including, but not limited to, Requirements 3.2, 3.3, 5.1, 5.3, 6.4, 6.6, 7.1 and 10.1); and
2. The Consequence Classification. (Requirement 4.1).

b. For each existing tailings facility and in accordance with Principle 21 of the UNGP, the Operator shall publish and update, at least on an annual basis, the following information:

1. A description of the tailings facility (information may be obtained from the output of Requirements 5.5 and 6.4);
2. The Consequence Classification (Requirement 4.1);
3. A summary of risk assessment findings relevant to the tailings facility (Information may be obtained from the output of Requirement 10.1);
4. A summary of impact assessments and human exposure and vulnerability to tailings facility credible flow failure scenarios (Information may be obtained from the output of Requirements 2.4 and 3.3);
5. A description of the design for all phases of the tailings facility lifecycle, including the current and final height (Information may be obtained from the output of Requirement 5.5);
6. A summary of material findings of annual performance reviews and dam safety review (DSR), including implementation of mitigation measures to reduce risk to ALARP (Information may be obtained from the output of Requirements 10.4 and 10.5);
7. A summary of material findings of the environmental and social monitoring programme, including implementation of mitigation measures (Requirement 7.5);
8. A summary version of the tailings facility EPRP for facilities that have a credible failure mode(s) that could lead to a flow failure event that: (i) informed by credible flow failure scenarios from the tailings facility breach analysis; (ii) includes emergency response measures that apply to project affected people as identified through the tailings facility breach analysis and involve cooperation with public sector agencies; and (iii) excludes details of emergency preparedness measures that apply to the Operator’s assets, or confidential information (Requirements 13.1 and 13.2);
9. Dates of most recent and next independent reviews (Requirement 10.5); and



10. Annual confirmation that the Operator has adequate financial capacity (including insurance to the extent commercially reasonable) to cover estimated costs of planned closure, early closure, reclamation, and post-closure of the tailings facility and its appurtenant structures (Requirement 10.7).

c. Provide local authorities and emergency services with sufficient information derived from the breach analysis to enable effective disaster management planning (Information may be obtained from the output of Requirement 2.3).

All of the disclosures specified in 15.1(A) and (B) above are addressed*

Discussion

At Gold Fields, the safety and integrity of our TSFs are paramount, and we strongly emphasise transparently sharing information about our tailings management practices. In alignment with Principle 21 of the United Nations Guiding Principles (UNGPs), we have made a firm commitment to publishing and regularly updating crucial information concerning our TSFs on an annual basis.

To fulfil this commitment, we have prepared our inaugural Annual Tailings Disclosure report, which comprises two sections: Section 1 features a concise and accessible plain language summary, while Section 2 provides a comprehensive self-assessment report. This report is a testament to our adherence to all the disclosure requirements outlined in Requirement 15.1.A.

By presenting this comprehensive report, we uphold transparency and accountability in our pursuit of safe tailings management. We are deeply dedicated to upholding the highest standards and continually enhancing our practices. The Annual Disclosure Report is an invaluable resource for our stakeholders, enabling them to stay well-informed about the safety and integrity of our TSFs.

Therefore, Gold Fields has ranked this Requirement as “Meets”.

Assessment Outcome

-  Meets this requirement



🔍 Requirement 15.1.B

Criteria

Provide local authorities and emergency services with sufficient information derived from the breach analysis to enable effective disaster management planning (Information may be obtained from the output of Requirement 2.3).

The disclosures specified in 15.1(item C) above are addressed.

Discussion

At Gold Fields, we recognize the significance of proactive engagement with the community and local emergency service providers in ensuring effective disaster management planning. At the Tarkwa mine, we actively collaborate with these stakeholders through annual workshops to enhance emergency preparedness and response measures. Our Tarkwa Sustainable Development, Community Relations, and Management team maintain regular and ongoing communication with local authorities and emergency service providers, fostering strong relationships and facilitating the exchange of critical information.

In an emergency, our established protocol involves promptly contacting local chiefs, who initiate a community-wide siren to alert residents, ensuring the timely dissemination of vital information.

As part of our ongoing commitment to continuous improvement, we are upgrading our catastrophic risk management system to a digital platform, enabling instant notifications and enhancing our overall emergency response capabilities. In addition, we have recently updated our Mine Wide Emergency Response Plans to incorporate an Annex specifically dedicated to Tailings Emergency Management Responses. These updates have been based on valuable insights from the recently completed inundation studies.

To check effective implementation and alignment with local authorities and emergency service providers, we will conduct workshops later this year, during which copies of the revised Mine Wide Emergency Response Plan will be shared and discussed in detail.

We acknowledge that the journey of catastrophic risk management is continuous, and while we have made substantial progress, we are not yet at the endpoint. We firmly believe that managing catastrophic risks necessitates careful consideration and diligent implementation, prioritizing the development of a robust and high-quality plan rather than merely meeting a specific deadline or ticking a box.

At Gold Fields, our focus remains steadfast on ensuring the safety and well-being of our stakeholders. We are committed to maintaining transparency and actively engaging with local authorities and emergency services as we strive to enhance our disaster management capabilities. Through these collaborative efforts, we are confident that we will continue to make meaningful progress in pursuing effective and comprehensive catastrophic risk management at the Tarkwa mine.

Therefore, Gold Fields has ranked this Requirement as “Partially Meets”.

Assessment Outcome

- 🔍 Partially Meets this Requirement



Requirement 15.2 – Self-Assessment Rating Justification

Respond in a systematic and timely manner to requests from interested and affected stakeholders for additional information material to the public safety and integrity of a tailings facility. When the request for information is denied, provide an explanation to the requesting stakeholder.

✔ Requirement 15.2.A

Criteria

The Operator maintains a systematic and timely approach to responding to requests from project-affected people for information material for the public safety and integrity of a tailings facility.

Discussion

At Gold Fields, we maintain a systematic and timely approach to responding to requests from project-affected people for information material to the public safety and integrity of our tailings facilities. We recognize the importance of providing transparent and accessible information to interested and affected stakeholders, and we are committed to upholding this principle.

Our Human Rights Policy Statement is embedded in our Code of Conduct, which applies to everyone associated with Gold Fields, including directors, contractors, and suppliers. This policy commits us to provide on-site grievance mechanisms for our workforce and communities, ensuring that concerns and requests for information are addressed appropriately.

At an operational level, we have established grievance mechanisms that allow employees and contractors to raise human rights concerns. Our HR function oversees these mechanisms in consultation with our legal teams, ensuring a comprehensive and fair resolution process. Additionally, we have implemented a confidential third-party whistleblowing hotline that provides stakeholders with a secure platform to voice their concerns.

Project-affected people seeking further information about our tailings facilities' public safety and integrity can contact our dedicated Tarkwa Community Relations team. This team will diligently document the request on the grievance register in accordance with our site grievance procedure, ensuring that the relevant personnel within our organization appropriately manages the request.

Furthermore, for general inquiries concerning the public safety and integrity of our TSFs, any requests submitted to Gold Fields will be directed to the Group Head of Tailings. The Group Head of Tailings will respond to these inquiries promptly and systematically, ensuring the requested information is provided and any necessary explanations are given to the requesting stakeholders.

We are committed to maintaining open lines of communication with project-affected people and interested stakeholders, recognizing their right to access relevant information pertaining to the safety and integrity of our tailings facilities. Through our established grievance mechanisms and dedicated teams, we strive to address requests promptly, transparently, and in a manner that upholds the principles of accountability and stakeholder engagement.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ **Meets this Requirement**



— Requirement 15.2.B

Criteria

When the Operator denies such requests, an explanation shall be provided to the requesting project-affected people in a reasonable timeframe, and records shall be kept of relevant explanations provided to the requesting project-affected people.

Discussion

At Gold Fields, we prioritize open and transparent communication with interested and affected stakeholders regarding our tailings storage facilities' public safety and integrity. We understand the importance of addressing requests for additional information systematically and on time.

As of this disclosure, we have not encountered any instances where we have denied information requests that are material to public safety related to our tailings storage facilities. However, we recognize that circumstances may arise where we must carefully consider and potentially deny such requests.

If a request for information is denied, we are committed to providing a clear and comprehensive explanation to the requesting stakeholder within a reasonable timeframe. We understand the importance of ensuring stakeholders are informed and properly understand the reasons behind the denial.

Furthermore, we recognize the significance of keeping records of these relevant explanations provided to requesting project-affected people. This practice allows us to maintain transparency and accountability, ensuring a documented record of our responses and decisions.

Our commitment to open dialogue and transparency remains unwavering. We are dedicated to fostering positive relationships with our stakeholders and addressing their information needs to the best of our ability. If an information request is denied, we will explain clearly, upholding our commitment to effective communication and responsible tailings facility management.

Therefore, Gold Fields has ranked this Requirement as “Not Applicable.”

Assessment Outcome

- — Not Applicable



Requirement 15.3 – Self-Assessment Rating Justification

Commit to cooperate in credible global transparency initiatives to create standardized, independent, industry-wide and publicly accessible databases, inventories or other information repositories about the safety and integrity of tailings facilities.

✔ Requirement 15.3.A

Criteria

Contribute information to credible global transparency initiatives relating to the safety and integrity of tailings facilities.

Discussion

Gold Fields is committed to actively participating in credible global transparency initiatives that focus on the safety and integrity of TSFs. We firmly believe in fostering transparency in the mining sector by creating standardized, independent, industry-wide, and publicly accessible databases, inventories, or other information repositories.

Gold Fields has implemented robust measures to check transparency and disclosure regarding our tailings facilities and our approach to tailings management to fulfil this commitment. We have made this information readily available to the public on our official website, providing comprehensive and accessible details. We aim to empower stakeholders from diverse technical backgrounds to develop a comprehensive understanding of our tailings management practices.

Gold Fields actively responds to requests for disclosures from esteemed organizations such as the Church of England and the Global Tailing Review (GTR) to support our dedication to transparency and contribution to global initiatives. By cooperating with these entities and providing the requested information, we contribute to developing a global database that enriches the knowledge base surrounding the safety and integrity of TSFs worldwide.

In addition to our engagement in global transparency initiatives, Gold Fields actively collaborates with academic institutions, industry conferences, and the insurance sector to share invaluable case studies, lessons learned, and best practices related to our TSF projects. Participating in these avenues contributes to the academic discourse, provides insights for future research and industry practices, and fosters meaningful dialogue among industry experts, researchers, and students.

Furthermore, our involvement in local and international conferences allows us to present detailed case studies concerning our TSFs. By sharing our project experiences, discussing challenges encountered, and showcasing successful strategies implemented, we actively contribute to the collective knowledge base of the industry.

Moreover, we recognize the significance of engaging with the insurance sector. By presenting pertinent information about our assets and tailings management practices, we collaborate with insurance industry professionals to enhance risk assessment and mitigation strategies, thereby contributing to the overall improvement of tailings management practices.

At Gold Fields, we firmly believe that disseminating knowledge and promoting transparency are instrumental in driving continuous improvement in tailings management practices within our organization and across the industry. By actively participating in credible global transparency initiatives and collaborating with various stakeholders, we are committed to fostering a culture of transparency, sharing best practices, and shaping a safer and more sustainable future for TSFs.



Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

-  Meets this Requirement



✔ Requirement 15.3.B

Criteria

Update disclosed information relating to the safety and integrity of tailings facilities periodically, as a minimum, in line with the requirements in Requirement 15.1.

Discussion

Gold Fields is fully committed to maintaining transparency and disclosure regarding the safety and integrity of our tailings facilities. We actively engage in credible global transparency initiatives to foster the creation of standardized, independent, industry-wide, and publicly accessible databases, inventories, and information repositories that promote responsible tailings management practices.

In line with this commitment, we understand the importance of periodic updates to check the accuracy and relevance of the disclosed information. We regularly update the information on our public website to meet this requirement and provide stakeholders with up-to-date information. Through this platform, we offer details about our tailings facilities and approach to tailings management, ensuring the information is easily accessible to all interested parties.

In addition, we have prepared this inaugural version of our annual tailings disclosure report. This report is a crucial resource for stakeholders and includes a plain language summary to facilitate comprehension for readers with varying technical backgrounds. Furthermore, the report incorporates a detailed self-assessment that delves into the specifics of our tailings management practices, showcasing our commitment to operational excellence and continuous improvement.

Moving forward, we are committed to regularly issuing the annual tailings disclosure report in adherence to the Global Industry Standard on Tailings Management (GISTM) requirements. Doing so checks that the information provided to the public remains accurate, reliable, and in line with the industry's evolving standards and best practices.

Gold Fields recognizes the significance of periodic updates in maintaining transparency and enhancing stakeholder confidence. We are dedicated to sharing accurate and timely information through standardized channels, contributing to developing a comprehensive knowledge base that promotes the safety and integrity of tailings facilities industry-wide.

Therefore, Gold Fields has ranked this Requirement as “Meets.”

Assessment Outcome

- ✔ Meets this Requirement