

# MORENCI MINE TAILINGS DISCLOSURE REPORT

DECEMBER 2023

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## Introduction

Freeport-McMoRan Inc. (FCX) is committed to transparency by ensuring relevant information regarding Tailings Storage Facilities (TSFs) at our operations is readily available through public disclosures and active engagement with stakeholders.

This report supports our efforts to publish and regularly update information on TSF management, implementation of our tailings governance framework, our policies, standards and approaches to the planning, design, construction, operation, monitoring, maintenance, closure and post-closure of tailings facilities in alignment with the Global Industry Standard on Tailings Management (Tailings Standard)<sup>1</sup> Requirement 15.1. It also supports our commitment to publish and update, at least on an annual basis, information on the TSFs at our Morenci Mine in Arizona in alignment with Tailings Standard Requirement 15.1B.

## Summary of FCX's Approach to Tailings Management

Effective and responsible tailings management is critical to mining safely, protecting people and the environment and to maintaining social license to operate. We strive to continuously manage, enhance and innovate our tailings system in a manner that minimizes impacts to stakeholders and the environment. We recognize the potential failure of a TSF at any of our mining operations could cause severe or catastrophic damage that could result in loss of life, property damage, or environmental harm. Using appropriate management approaches and technologies, we operate with a bias for action by quickly identifying and addressing issues to prevent and mitigate potential impacts at our TSFs.

The health and safety of our workforce, host communities, and the protection of the environment are fundamental to our extensive tailings management system and approach. Our objective is to have zero fatalities, zero catastrophic failures, and zero unplanned discharges from any of our TSFs.

Our **Tailings Management Policy** outlines our continued commitment to managing our tailings responsibly and effectively across our sites globally and includes our commitment to implement the Tailings Standard at applicable TSFs. This policy is intended to be implemented in conjunction with our **Environmental**, **Human Rights**, and **Social Performance** policies and associated management systems.

## Evolution of FCX's Tailings Management System and Implementation of the Tailings Standard

FCX established a Tailings Stewardship Program, which, over the last 20 years, has evolved into our comprehensive Tailings Management System (TMS) and applies to all TSFs by our operating subsidiaries. Our TMS, led by our expert team of tailings professionals, includes specific programs to address the various aspects of TSFs - over all phases of the TSF lifecycle - while promoting continuous improvement. Through our TMS, we systematically seek to identify and analyze, then eliminate or mitigate failure modes, to minimize the risk of failure scenarios associated with our TSFs. The TMS incorporates applicable regulations and international best practices.

Since the Tailings Standard was established in 2020, we worked to integrate the Tailings Standard within our existing systems. For example, we enhanced our multi-disciplinary collaboration and integration of our management systems. We also refined our risk assessment process and conducted gap-filling studies across our TSFs to enhance the knowledge base used for our risk assessments.

FCX's TSFs are designed and managed throughout their lifecycles using Risk Informed Decision Making (RIDM) with precautionary or performance-based design approaches identified by each

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<sup>1</sup> The Tailings Standard was established by the International Council on Mining and Metals (ICMM), the United Nations Environment Program, and Principles for Responsible Investment.

site's Engineer of Record (EoR) along with detailed inspections by the FCX Tailings Stewardship Team (TST) third-party reviewer and reviews by the Independent Tailings Review Board (ITRB). Our sites' EoRs design new TSFs and analyze existing TSFs using the stringent criteria for earthquakes and floods, applicable to Extreme TSFs, regardless of actual consequence.

In accordance with the Tailings Standard, FCX's updated consequence classification approach now incorporates each TSF's detailed information and analyses that have been enhanced over the past few years to reduce uncertainties as well as incorporate expert opinions on thresholds for Credible Failure Modes (CFM). Our approach is derived from the Tailings Standard, and we take a conservative approach to consequences where there is a potential Population at Risk (see Appendix). See Section 1.3 for more information. FCX's subsidiaries have been evaluating consequence classifications based on this updated approach, beginning with TSFs that were previously classified as Extreme or Very High based on hypothetical failure.

In line with RIDM, we continue to conduct additional investigations, analyses, and, when necessary, enhancements of our controls or take additional actions to reduce residual risks to as low as reasonably possible. In doing this work, we have reduced our uncertainties and increased our confidence in understanding our TSFs.

Monitoring our TSFs and striving to minimize potential risks is an ongoing process, and our disclosures will be updated as required by the Tailings Standard.

## 1.0 Our TMS

FCX has comprehensive measures in place to help ensure our TSFs are designed, built, operated, closed, and monitored to minimize risk.

The TMS comprises specific programs to address aspects of tailings planning, design, operation, maintenance, surveillance, and risk management over the TSF lifecycle. Although there is some overlap among the categories, our safeguards generally fall within four categories as illustrated by the examples for each provided below:

### 1. Engineering practices and safe designs

- We have robust stage-gate processes for engineering and design; our technical experts either manage or are embedded in projects to enhance shared knowledge and consistency in rigor and quality. In collaboration with the EoR, we conduct extensive site investigations and detailed site characterization to inform state-of-practice (or leading practice) engineering analyses and build a comprehensive knowledge base. Our EoRs design new TSFs and analyze existing TSFs using the stringent criteria for earthquakes and floods, applicable to Extreme TSFs, regardless of actual consequence.

### 2. Adherence to construction and operational parameters through monitoring and use of technology

- Our programs for operations, maintenance, inspections, and monitoring incorporate on-the-ground, automatically collected, and remote sensing data to enable regular analysis and internal reporting. Monitoring results are compared to established performance criteria. Action plans are developed and tracked to completion to help verify the TSF is operated in accordance with the design intent. Our Early Indicator Dashboard provides a mechanism to communicate performance in a timely manner to appropriate stakeholders at our sites and with our corporate leadership.

### 3. Multi-tiered oversight

- Our TMS includes mechanisms for internal and external reviews, such as internal subject matter experts and the Responsible Tailings Facility Engineer (RTFE), the EoR, the TST, and the ITRB. See sections 1.2 and 1.4 for more information. Reporting on monitoring program results and findings from these reviews are distributed to site and corporate leadership, including the Accountable Executive (AE) to inform and drive our bias for action.

### 4. Adherence to practices grounded in continuous improvement and learning from past experiences, including industry failures and best practices

- We actively participate in industry technical conferences and research initiatives, apply lessons from case histories, and conduct regular operator and engineer education and training.

Our RIDM process is an example that spans all four categories of safeguards and is discussed further in Section 1.3.

Figure 1 shows the evolution of the FCX TMS and key programs that exemplify the categories discussed above.

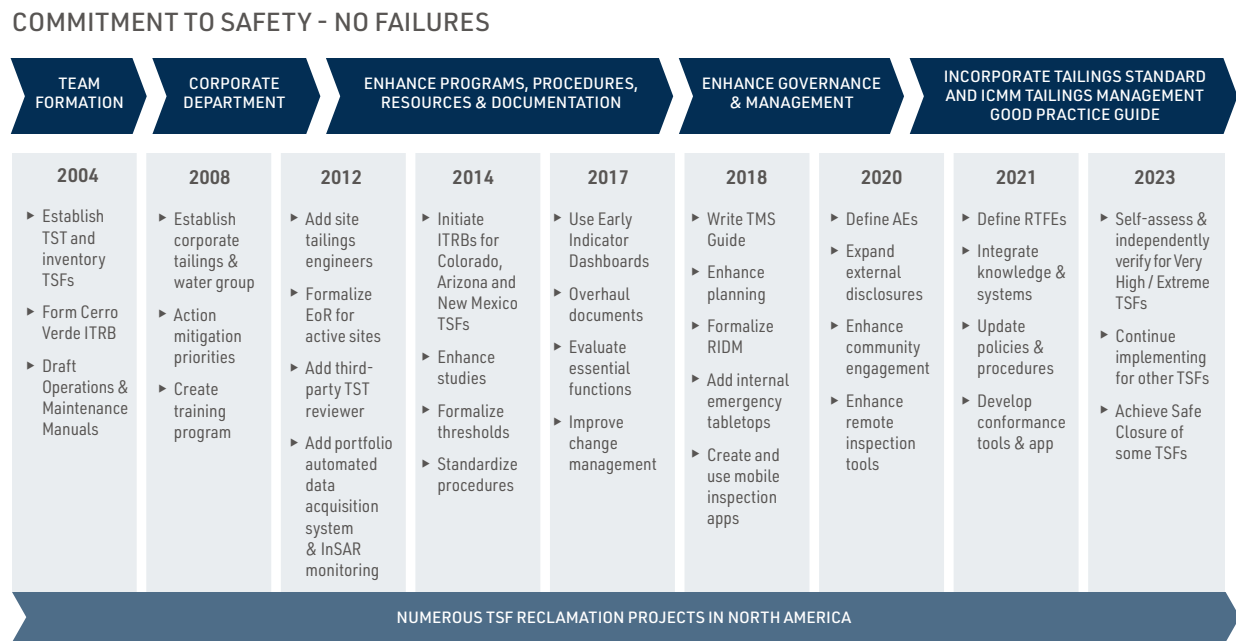


Figure 1. Tailings Stewardship & Management: A 20-Year Evolution.

## 1.1 TSF Lifecycle

A TSF lifecycle includes the design, construction, operation, closure, and post-closure phases. A TSF undergoes continual changes over its lifecycle, and these changes must be considered and managed to maintain safety and structural integrity. FCX works closely with internal and external experts, including the EoR, TST and ITRB for the full lifecycle management of the TSF.

FCX provides the “Status” of our TSFs in our public disclosures as follows:

- **Active** - TSFs with tailings distribution infrastructure in place for the intent of raising dam crest.

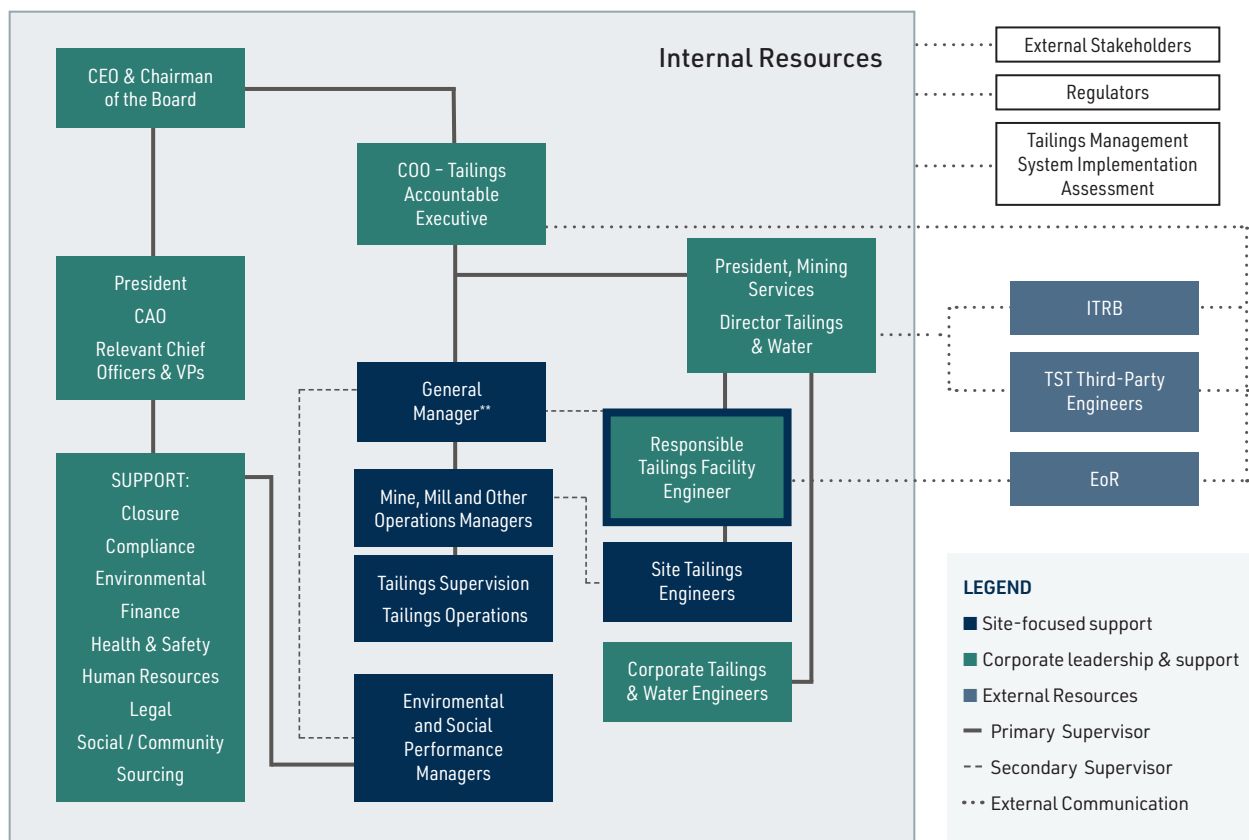
- **Inactive** - TSFs that are not intended to receive tailings deposition in the current operating plan but have not yet implemented final closure activities.
- **Closed** - TSFs having a closure plan approved and implemented, consistent with applicable government agency requirements and in consultation with relevant stakeholders.
  - **Safely Closed** - A subset of Closed TSFs that, upon collection and evaluation of additional data, have reached Safe Closure status as defined by the Tailings Standard. To receive this designation, TSFs require confirmation by an ITRB and approval by an AE. A Safely Closed TSF does not pose ongoing material risk to people or the environment.

## 1.2 Governance Framework

We believe our programs and safeguards are effectively implemented through the promotion of open and ongoing communication throughout our organization and a bias for action at all levels.

We remain focused on the safe execution of our TMS by maintaining robust, multi-tiered governance of our tailings programs, which involves appropriately qualified personnel with clearly defined roles, responsibilities, and accountabilities. There are multiple layers of assurance we apply to all TSFs: site-level implementation, functional accountability, third-party review, and board and executive leadership oversight as shown on Figure 2 and described as follows.

## Active Operations\*



\* Sites with only Inactive and / or Closed TSFs utilize a parallel structure reporting through the Chief Sustainability Officer.

\*\* In some cases, the General Manager may report to a Division Vice President or President who in turn reports to the COO-President Americas.

**Figure 2. Organizational Structure for Tailings Management System for Operating Sites that Facilitates Collaboration, Engagement, and Review.**

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Brief description of key roles in FCX's governance structure

### 1. Site-Level Implementation

- **Site Tailings Management, Engineers, and Operators:** Internal team that implements the management program and regularly monitors, identifies, and addresses potential risks.
- **Responsible Tailings Facility Engineer (RTFE):** Internal engineer appointed by AEs responsible for the integrity of assigned TSFs. RTFE provides technical expertise, manages risk, and liaises with the EoR. Corporate discipline experts provide regular support to RTFEs.
- **Engineer of Record (EoR):** External engineer who provides expert design and engineering analysis, technical support, inspection, review, and guidance to support an RTFE in achieving design intent of their assigned TSF.

### 2. Functional Accountability and Responsibilities

- **Accountable Executive (AE):** Chief Operating Officer who reports directly to the FCX Chief Executive Officer (CEO) and is accountable for the safe management of TSFs and for minimizing the social and environmental consequences of any TSF failure.
- **Tailings and Water Director:** Oversees RTFE activities and has delegated responsibilities from the AE for engaging with and reviewing the site-implementation of TMS activities.

### 3. Third-Party Review

- **Independent Tailings Review Board (ITRB):** Third-party, internationally known expert panels who provide independent opinions and guidance on the physical integrity, safety, and performance of TSFs and have access to corporate senior leadership. Members have decades of experience in applicable disciplines.
- **Tailings Stewardship Team (TST):** Third-party professional engineers who have not been directly involved with the design or operation of the TSFs and internal experts who inspect all TSFs, review documents and monitoring data, identify potential deficiencies, and recommend corrective actions.
- **Tailings Management System (TMS) Implementation Assessment:** An external consultant with sufficient knowledge and understanding of the TMS to assess the efficacy of the TMS applied at a site-specific level, including key tasks, roles and responsibilities, and associated governance structure to support proper management and operation of the TSFs, and structural integrity.

### 4. Board and Executive Leadership Oversight

- **Corporate Senior Leadership:** Executive leadership that participates in major decisions related to the tailings management program, including allocation of resources for TSF-related operations, initiatives and projects.
- **Board:** Corporate governing body firmly committed to providing the necessary financial and technical resources to maintain the safety and integrity of our TMS globally, with a focus on risk management and continuous improvement. The AE regularly reports to the Corporate Responsibility Committee of the Board of Directors on matters related to the Tailings Management Policy including implementation of the Tailings Standard.

## 1.3 Risk Informed Decision Making

Risk is a combination of the potential consequences of an event and the probability, or likelihood, of that event occurring.

FCX applies RIDM throughout the full lifecycle of each TSF from design to post-closure. RIDM allows us to make informed decisions while linking the stability performance and risk level that is acceptable for a TSF; the process includes periodic updates, so that changes in the operation and/or performance, which may alter the risk profile of a TSF, can be considered.

As part of FCX's TMS, RIDM consists of three primary elements:

1. Risk Assessment
2. Risk Management
3. Surveillance and Review

### 1.3.1 TSF Risk Assessment and Consequence Classification

TSF risk assessments include risk identification, analysis (including consequence classification), and evaluation used to determine which measures are, or should be, in place to eliminate or minimize risk.

The risk assessment focuses on potential physical failures of each of the TSFs, which may include instability, slope failures, excessive slope erosion, overtopping of the impoundment, and internal erosion. For the purposes of the assessment, FCX defines a TSF failure as the unintended loss of the structural containment where the tailings and water released could be impactful.

Other risks related to TSFs include, but are not limited to, occupational health and safety, environmental (including climate change), social (including human rights), economic, value chain, and other potential long-term sustainability and business risks. These risks are documented in the site's sustainability risk register process; see the 2022 Sustainability Report for more information.

The TSF risk assessment is updated with our full stakeholder group and workshop process every three years for applicable TSFs, and between five and seven years for Safely Closed TSFs. In the interim, the risk assessment is reviewed annually by the RTFE, site engineering staff, and the EoR.

During the risk identification and analysis workshops, multidisciplinary teams including the EoR, RTFE and internal team members, use available information such as TSF-specific detailed data and engineering analysis, experience from team members, case histories, and regulatory data to identify a specific chain of events that could lead to a TSF failure. The group analyzes how a failure may occur, what factors exist that make the potentially credible failure mode more or less likely (considering the site-specific knowledge base, existing robust controls and uncertainties), and ultimately determine which are credible failure scenarios.

Risk analysis leads to an understanding of each credible failure scenario for a TSF; a scenario comprises a CFM and an associated consequence that is technically feasible considering analysis and expert opinion on a minimum threshold of possibility of occurrence during a structured analysis process. To determine whether a failure mode and an associated scenario are credible, workshop participants use tools such as semi-quantitative risk analysis to estimate the likelihood of occurrence of each potentially credible failure mode, the likelihood of an adverse structural response, and the magnitude of potential adverse consequences. The group's best-estimate conservative ranking is used for the likelihood categorization of each CFM guided by information described in the Appendix.

CFMs reflect the residual uncertainty that exists around physical conditions and controls in the TSF considering all site-specific information and analyses. The resulting consequence



classification is not an indication that a credible failure scenario will occur and having CFMs is not a reflection of TSF safety.

The credible failure scenarios are then used to create a TSF “consequence classification,” as defined by the Tailings Standard. The TSF consequence classification is based on downstream conditions and potential impacts of CFMs, including incremental losses to Population at Risk, potential loss of life, environmental impacts, health/social/cultural impacts, and infrastructure and economic impacts.

FCX integrates our value of safety into our tailings programs by taking a conservative approach to consequence classification (see Appendix for additional detail). Our definitions for consequence classification align with the Tailings Standard except as outlined below.

- If there is one or more permanent Population at Risk (see Appendix)- including the public, employees, or contractors - the CFM is classified as “Extreme.” The Tailings Standard considers Population at Risk greater than 1,000 people to be classified as Extreme.
- If there is no permanent Population at Risk, but there is a transient Population at Risk (see Appendix), the minimum consequence classification is Significant.
- Other metrics (as defined in the Tailings Standard for environmental and health; social and culture; and infrastructure and economics) help further determine the consequence classification (see Appendix).

Appropriate modeling of credible failure breach flow or slump runout scenarios is used to inform our understanding of potential consequences. In accordance with the Tailings Standard, we assign a TSF a consequence classification based on the highest consequences of CFMs for that TSF. The consequence classification is primarily used for communications and disclosure purposes. The TSF consequence classification is formally revisited when the Risk Assessment is updated.

Regardless of the TSF consequence classification, all of FCX’s operating TSFs and new TSFs are designed, analyzed, and operated using Extreme loading criteria. Design criteria for Inactive, Closed, and Safely Closed TSFs are informed by the Extreme loading criteria and assigned using the as low as reasonably practicable (ALARP) principle.

A risk assessment compares the outcomes of the risk analysis for existing conditions to determine if risks are within acceptable limits, whether existing risk reduction measures and controls are adequate, and what additional risk reduction measures should be considered (pursuant to the ICMM Tailings Management Good Practice Guide 2021). The risk of each CFM is reviewed following the ALARP principle. In some cases, the ALARP principle may not be satisfied, and further risk reduction measures to reduce the likelihood of occurrence or the potential adverse consequences may be required.

### 1.3.2 Risk Management

Based on learnings from the TSF risk assessment, our expert teams use engineering and operational controls to prevent, minimize, and / or mitigate risks to meet the ALARP principle. These controls include an ongoing focus on quality engineering design, construction, and operating discipline. Controls could include a buttress or other mitigating construction activity (e.g., foundation improvements, stormwater management enhancements). Additionally, part of managing risk is engaging with our host communities and external authorities to maintain a shared state of readiness through robust emergency preparedness and response planning for credible failure scenarios.

The risk assessment steps are repeated until the risk conforms to the ALARP principle and is followed by annual reviews and periodic TSF risk assessment updates.

### 1.3.3 Surveillance and Review

Surveillance and review in our RIDM program include activities as outlined in our Operations Maintenance and Surveillance Manual (OMS). Surveillance involves inspection and monitoring of the operation, structural integrity, and safety of the TSF. It consists of both qualitative and quantitative comparison of actual to expected behavior and its activities are performed by appropriately trained personnel. Review of surveillance information occurs throughout the year for each TSF and is facilitated via internal reporting.

### 1.4 Approach to TSF Safety Performance Reviews

The TMS programs and their results are reviewed and evaluated for effectiveness regularly as part of routine operations and in focused performance reviews.

Internal and external reviews enhance confidence in safe tailings management, helping to confirm each TSF is performing in accordance with the design intent and to support informed decision making.

The following multifaceted review mechanisms are in accordance with the ICMM Tailings Management Good Practice Guide and satisfy the requirements of the Tailings Standard.

- **Annual Performance Review:** Each year, all TMS activities are reviewed to evaluate overall TSF performance and are documented and serve as a record of tailings analyses, design, construction, inspections, and monitoring results from the preceding year with references to supporting documentation. The review summarizes key findings and assesses the cumulative impact of activities and changes to the TSF. The EoR provides an overall conclusion about the performance of each TSF and provides recommendations if deviances from the design intent or good practice are found. Opportunities are identified to improve or optimize TSF performance or other TMS activities. Where material changes have occurred, recommendations are made to update the design basis, performance objectives and monitoring criteria, or other OMS activities as relevant. Actions taken to address recommendations and open recommendations are summarized in the following year's annual performance review.
- **TST Inspection:** This inspection is a review of TSFs and supporting infrastructure with a focus on TSF safety. The TST inspects all TSFs, identifies potentially significant deficiencies, recommends corrective actions, and verifies that recommended actions were completed through acceptable measures. The TST performs annual inspections of all Active and select Inactive or Closed TSFs. Inspections of other Inactive/Closed TSFs occur every one to three years, depending on risk profile, status of ongoing care and maintenance programs, progress towards safe closure, and whether TSFs are in a drained condition.
- **ITRB Review:** The ITRB comprises a group of third-party experts that independently review and assess design, construction, and tailings management practices for the applicable North and South America TSFs. The ITRB holds periodic meetings that are at least every four years and reviews information from significant field investigations and geotechnical and hydrotechnical analyses, progress on recommendations, and otherwise provides input on technical or operational issues. The RTFE and site team work collaboratively with the EoR to develop an action plan to address each recommendation.
- **TMS Implementation Assessment:** This periodic review occurs approximately every four years and is conducted to assess the efficacy of the TMS applied at a site-specific level, including key tasks, roles and responsibilities, and associated governance structure to support proper management and operation for maintaining TSF structural integrity. The RTFE and site team develop actions plans and schedules to incorporate the recommendations.

For disclosure purposes, a material finding for TSF Safety Performance Review means that the finding would result in:

- A significant update to the TSF design and/or design criteria, operations, or monitoring system; and/or
- Activation of the Emergency Preparedness and Response Plan (EPRP).

In addition to review processes with the EoR and independent reviewers, regulatory or permit-driven reviews are defined based on site- and TSF- specific factors.

## 2.0 Morenci Mine TSFs

This report presents a summary of the 2022 Annual Performance Review and other pertinent information for the 2 West, 3 West, 4 West, Silver Basin 1, Silver Basin 1X, Southwest 1, Southwest 2, and West / East TSFs at the Morenci mine. The reporting period is January 1, 2022, to December 31, 2022, unless otherwise noted. This summary provides information per Tailings Standard Requirement 15.1.

### 2.1 Description of the Morenci Mine and TSFs

This section provides a description of the Morenci mine and TSFs, including general background on the Morenci mine, history of the milling operations, and details on each TSF.

Located in Greenlee County, Arizona, the Morenci mine is an open pit copper mining complex owned by Freeport-McMoRan Morenci Inc. (FMMI), an affiliate of FCX. The Morenci mine is an unincorporated joint venture in which FCX owns a 72% undivided interest, with the remaining 28% owned by Sumitomo Metal Mining Arizona, Inc. (15%) and SMM Morenci, Inc. (13%). FCX is the operator of the Morenci mine. The mine currently has eight TSFs as listed in Table 1. Corporate employees of FCX provide technical services and support to each affiliate that owns and operates a TSF.

The TSFs lie west of the company-owned town of Morenci, Arizona, U.S. at the locations listed in Table 1. Figure 3 shows the general layout of the TSFs as well as the town of Morenci.

This site is situated in a rugged mountain terrain adjacent to the Gila River, San Francisco River, and Eagle Creek. In terms of seismicity, the Morenci mine is located along the southeastern edge of the Transition Zone between the Colorado Plateau and the Southern Basin and Range Province in southeast Arizona near the New Mexico border. Although the historical seismicity in the region has been relatively low to moderate, there have been large earthquakes in the area caused by active regional faults.

The habitats surrounding Morenci include desert scrub, chaparral, and generally riparian and mixed woodlands in the low-lying areas. The climate is characterized as semi-arid, between a high-altitude desert and cool plateau highlands with warm to hot summers and rainfall averaging 13 inches per year. The majority of the rainfall occurs in June through September during the monsoon season.

Ore mineralization was discovered in the Morenci district as early as 1863. The Morenci porphyry copper orebody is currently mined via open pit methods. Processing facilities in use today began operating in 1942, with additional TSF expansions and incremental capacity increases over time. Production rates have varied over the decades. The total mill throughput in 2022 was 38.1 million metric tons.

Table 1. Morenci TSFs\*

Name	Location	Status**	Description
2 West	33° 1'51.90"N 109°20'27.07"W	Inactive	2 West initial deposition started in the early 1940's. The 2 West TSF has not received continuous deposition since the 1990's, only receiving occasional nominal launder by-pass during mill outages. Outside of the nominal by-pass flows, this TSF does not contain any depositional infrastructure nor does FMML have intent to raise the crest in the future. This TSF is planned to be encapsulated by the West / East TSF as the latter is raised.
3 West	33° 2'12.36"N 109°20'25.68"W	Active	3 West initial deposition started in the early 1940's. The 3 West TSF last received limited deposition in August of 2020 and is generally targeted for use during upset conditions, to facilitate maintenance at other facilities, or during high milling throughputs periods. This TSF did not receive tailings in 2022.
4 West	33° 2'38.11"N 109°20'22.83"W	Active	4 West initial deposition started in the early 1940's. The 4 West TSF last received limited deposition in December of 2019 and is not targeted for deposition until 3 West impoundment elevation reaches the current 4 West impoundment elevation. These two TSFs currently are planned to merge into 1 TSF in about 2026. This TSF did not receive tailings in 2022.
Silver Basin 1	33° 1'28.68"N 109°21'43.09"W	Active	Silver Basin 1 initial deposition started in 1965. This TSF did not receive tailings in 2022.
Silver Basin 1X	33° 0'56.06"N 109°21'18.22"W	Inactive	Silver Basin 1X initial deposition started in 1981. The Silver Basin 1X TSF has not received deposition since 2016. This TSF does not contain any depositional infrastructure nor does FMML have intent to raise the crest in the future.
Southwest 1	33° 0'43.01"N 109°22'4.98"W	Active	Southwest 1 initial deposition started in 1979. The TSF received 12.5 million metric tons of tailings in 2022.
Southwest 2	32°59'49.80"N 109°22'9.08"W	Closed	Southwest 2 initial deposition started in 1981 and only operated for a few years. The TSF is Closed and was reclaimed in 1998.
West / East	33° 1'12.14"N 109°20'9.19"W	Active	The West / East Dam was commissioned in 2015 and is the primary Active TSF at the Morenci mine. The TSF received 25.6 million metric tons of tailings in 2022.

\* The 1 West TSF was managed as an Inactive TSF during the first nine months of 2022.; as planned, the West / East reclaim pond reached the same elevation and now fully encapsulates the 1 West. In October 2022, 1 West was removed from the registry of TSFs managed by FMML.

\*\* See Section 1.1 for description of "Status".





Figure 3. General Morenci TSF Layout (January 8, 2023).

## 2.2 Tailings Facility Design

This section presents a summary of the design for the upstream and centerline TSFs, including construction means and methods through the lifecycle of each TSF. The Morenci TSF designs are based on assessment of TSF potential risk, site conditions, water management, mine plan operations, social and environmental impact studies, economic feasibility, and geotechnical evaluations. The design and operation of the Morenci TSFs are regularly reassessed and updated to reduce risk and increase robustness. The updates are based on informed decisions accomplished through the regularly scheduled enhancements to instrumentation and geotechnical investigation data, regular inspections, instrumentation and operational monitoring, and geotechnical performance evaluations.

TSF designs and analyses are conducted by the site's EoR. Based on available documents, the EoR's company and its predecessors have been involved with supporting Morenci TSFs since 1971.

### 2.2.1 Upstream TSFs: 2 West, 3 West, 4 West, Silver Basin 1, Silver Basin 1X, Southwest 1, and Southwest 2

Seven of the eight Morenci TSFs were constructed using the upstream method. These include 2 West, 3 West, 4 West, Silver Basin 1, Silver Basin 1X, Southwest 1, and Southwest 2.

These TSFs were designed as cross-valley fill impoundments. The starter dams for each TSF generally were composed of compacted Gila Conglomerate and tailings sands. The initial construction method for the upstream dams was traditional header and spigot whole tailings deposition. Since the mid to late 1980s, these facilities have been constructed using the upstream method with crane mounted cyclone clusters for tailings deposition that forms an embankment downstream slope of 5H:1V. The crane mounted cyclone deposition method results in a coarse free-draining sand shell with fine grained tailings located upstream of the shell and deposited into the impoundment.

The upstream TSFs did not have a formal design when originally constructed, which is not unusual for the time of initial construction. However, as the state of practice in geotechnical engineering has advanced over the years, increasingly detailed investigations and analyses have been completed by the EoR, along with adoption of appropriate design criteria. Key design features include:

- The limited raise rates (rate at which tailings are deposited on embankment crest) support stable performance of the TSFs. Further, the relatively flat downstream slopes of 5H:1V enhance stability.
- The stability of the upstream TSFs is dependent on the conservative material (behavior of the structural zone and foundation materials) and pore pressure characterization of the tailings materials in the structural zone.
- The Morenci upstream TSFs are constructed on relatively pervious foundation materials that promote downward drainage from the stored tailings.
- Semi-arid low annual rainfall and high evaporation conditions and relatively low seismic conditions are favorable for upstream TSF stability and safe operations.
- Seepage from the upstream TSFs is captured in seepage interceptor wells downstream of the TSFs.
- Additionally, stormwater retention ponds capture impacted water and enable it to be pumped back into the process water system.
- FMML's Aquifer Protection Permit (APP), administered by Arizona Department of Environmental Quality (ADEQ) requires that TSF design and operation, including

seepage collection systems, are protective of groundwater quality. Groundwater monitor wells located downstream of seepage collection systems are used to monitor and ensure protection of groundwater quality at the Points of Compliance identified by the APP.

Select design information for the seven upstream TSFs is included in Table 2.

As described in Section 1, the TSFs are actively monitored for performance and periodically are re-evaluated for stability.

FMMI, in conjunction with the EoR, submitted an update of the closure strategy submittal to ADEQ in 2019. The closure strategy included all TSFs except Southwest 2 as this TSF has already been reclaimed. The closure strategy includes the following concepts:

- FCX's general closure concept for Morenci TSFs includes reclaimed landforms with a cover system that limits infiltration and a soil matrix supporting vegetation to integrate into the natural local ecological and wildlife context. Embankment slopes and impoundment will include cover material and revegetation.
- Upstream constructed TSFs will remain at an overall 5H:1V inclusive of downstream slope stormwater management.
- Probable Maximum Precipitation events, or extreme hydrological events, will be stored on the impoundments with intent to promote evaporation and minimize infiltration with spillways to convey stormwater onto armored down chutes, side slope channels, and energy dissipation structure at the base of the TSFs.
- Subsequent designs intend to facilitate a slow release of a portion of the design storm event within the run-on area into natural drainages.
- Point of compliance wells from the operational period will be used to monitor closure/post-closure performance of the TSFs.

### 2.2.2 Centerline TSF: West / East

The West / East TSF was designed with a centerline raise embankment that consists of a compacted Gila Conglomerate starter dam, a centerline raised cyclone underflow (coarse tailings) embankment, and fine-grained overflow tailings impounded upstream of the embankment. Tailings are deposited from cyclones mounted on a tailings delivery line jacking tower system located along the centerline crest, raising the TSF while maintaining the crest alignment above the starter dam. The downstream embankment is constructed at a target 3H:1V slope. Underflow construction water and seepage from the impoundment are collected by a system of underdrains and seepage collection ponds. In the long-term, FMMI plans to adjust portions of the embankment to a 3.5H:1V slope to support closure.

Select portions of the West / East TSF are underlain by historic upstream TSFs.

- The east portion of the TSF (left abutment) is constructed across a historic TSF. FMMI performed extensive investigations and analyses to inform additional design features to ensure safe performance of the TSF in this area. The embankment is constructed at 4H:1V slopes in this area. The ITRB (Section 2.5) has reviewed and concurred with the design features and observed performance of this area.
- Originally, the west portion of the TSF (right abutment) was designed to cross the Silver Basin 1X impoundment. Recognizing associated challenges, the site's EoR developed re-alignment options and conducted a multiple accounts analysis structured decision-making process with the project team (considering technical, economic and sustainability risks and opportunities) to select the most effective design option for the

right abutment. The design changes include realignment to avoid crossing the Silver Basin 1X impoundment and incorporate mechanically placed embankment materials. Extensive investigations and analyses were conducted to inform the design changes. The ITRB reviewed (section 2.5) and concurred with these design changes.

Closure measures for the West / East TSF are also described in the 2019 closure strategy submittal plan approved by ADEQ as part of Morenci's APP and generally align with the description above for the upstream TSFs, except that the final grade for the West / East TSF embankment slopes, inclusive of stormwater conveyance, is targeting an overall slope of 3H:1V to 3.5H:1V.

Select design information for the West / East TSF is included in Table 2.



Table 2. Select Design Information for Morenci TSFs as of December 31, 2022

	2 West	3 West	4 West	Silver Basin 1	Silver Basin 1X <sup>1</sup>	Southwest 1	Southwest 2	West / East
Primary Construction Material	Tailings							Tailings / Gila Conglomerate
Construction Method	Upstream							Centerline
Tailings Embankment Downstream Slope (H:V)	5:1	5:1	5:1	5:1	5:1	5:1	5:1	Varies 3:1 to 4:1
December 2022 Max. Embankment Height / Elevation (meters)	23/ 1,246	77/ 1,293	74/ 1,297	96/ 1,300	166/ 1,245	205/ 1,318	78/ 1,273 <sup>2</sup>	150/ 1,230
Permitted Max. Embankment Elevation (meters)	1,305 <sup>3</sup>	1,305	1,305	1,355	1,355	1,366	1,173	1,265 <sup>4</sup>
Stored Tailings (million metric tons)	60	35	31	117	105	411	16	179
Permitted Capacity (million metric tons)	N/A	46	52	171	290	601	16	489
Inflow Design Flood <sup>5</sup>	PMP							
Safety Evaluation Earthquake	1/10,000-year annual exceedance probability							

<sup>1</sup> Silver Basin 1X is an Inactive TSF. Even though there is remaining capacity, FMCI does not plan to operate this TSF.

<sup>2</sup> The final SW2 deposited upstream raise crest elevation is 1,173 meters. A maintenance road was constructed of local borrow above the crest of SW2 to about elevation 1,175 meters as part of closure activities.

<sup>3</sup> 2 West is an Inactive TSF; its embankment height is expected to decrease as the West / East TSF is raised and ultimately encapsulates 2 West.

<sup>4</sup> West / East is permitted for dam crest elevation of 1,305 meters, but the current design elevation is 1,265 meters.

<sup>5</sup> The term "Probable Maximum Precipitation" (PMP) or "Probable Maximum Flood" (PMF) are terms often used to denote extreme hydrological events. Analyses show that Morenci TSFs meet or exceed the Extreme external flood design criteria referenced in the Tailings Standard and applicable regulations. The potential impacts of climate change are considered when evaluating robustness of designs. For example, a diversion structure is currently being reconstructed at Southwest 2 to divert excess stormwater runoff during a PMP event.

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## 2.3 Risk Assessment, Impact Assessment, and Consequence Classification

This section provides a summary of risk assessment findings for the Morenci TSFs, consequence classifications, as well as a summary of impact assessments and human exposure and vulnerability to credible flow failure scenarios.

In accordance with ICMM and the Tailings Standard, a comprehensive risk assessment for the Morenci TSFs was completed in late 2022, which was transmitted to the ITRB. Our risk assessment process is described in Section 1.3.1.

Using information collected over many years and enhanced with recent updates in Morenci's knowledge base, a multi-disciplinary stakeholder group – including the RTFE, EoR, and other internal stakeholders – led by an expert risk assessment facilitator, initially identified 79 potentially credible failure modes among Morenci's eight TSFs through a series of semi-quantitative risk analyses workshops.

Extensive engineering, monitoring and instrumentation, operational practices, analyses (geotechnical and hydrotechnical), and field and laboratory testing data were reviewed and utilized to analyze each potentially credible failure mode, understand how the failure may occur, what factors exist that make the potential failure mode more or less likely, and determine which are CFMs. Ultimately, the group determined that there were eight CFMs among the eight TSFs.

These CFMs were further analyzed to determine which CFMs could result in flow of material, also known as a credible flow failure scenario, to determine the consequence classification of each TSF. As summarized in Table 3, two TSFs had CFMs that could result in a breach flow failure, four TSFs had CFMs that could lead to a slump runout, and two TSFs had no CFMs. See the Appendix for the consequence classification flowchart and matrix as well as the likelihood categorization matrix.

**Table 3. Credible Failure Scenarios (Modes and Consequences) and Associated TSF Consequence Classifications as of March 2023**

<b>TSF</b>	<b>Credible Failure Scenario</b>	<b>Likelihood</b>	<b>Consequence Classification</b>	<b>Potential Impact</b>
2 West	None	N/A	N/A	No credible failure scenarios
3 West	Foundation failure or slope instability causes slump runoff	Low	Extreme	Site Personnel at risk Population infrequently (transient) at risk
4 West	Foundation failure or slope instability causes slump runoff	Low	Extreme	Population and Site Personnel at risk
Silver Basin 1	Slope instability causes slump runoff	Low	Extreme	Site Personnel at risk
Silver Basin 1X	None	N/A	N/A	No credible failure scenarios
Southwest 1	Slope instability causes slump runoff	Low	Significant	Site Personnel infrequently (transient) at risk
Southwest 2	Overtopping causes breach flow	Remote-Low	High	Environmental impacts
West / East	Foundation failure causes breach flow	Low-Moderate	High	Environmental impacts Population and Site Personnel infrequently (transient) at risk

The risk assessment considered whether there are any measures needed to minimize risk to ALARP. The risk of each CFM was evaluated following the ALARP principle. Resulting actions are summarized in Section 2.6.

Potential consequences in the event of a CFM were informed by appropriate breach or slump models; the assessment of potential human exposure and vulnerability was most recently updated in March 2023. We aim to update this assessment when there is a material change to any of the TSFs or an update to the knowledge base, including the social and economic context characterized by the social baseline study. Possible impacts may include transient and permanent Populations at Risk in the immediately adjacent town of Morenci and Site Personnel within the mine processing areas, damage to homes and buildings, road closures, temporary loss of utilities such as power and sewer, and / or reduced water quality in the San Francisco River.

## 2.4 EPRP

The EPRP was updated in 2023. The update was developed using the CFMs in Table 3 and associated breach or slump analysis where applicable; local emergency management agencies provided input during the updates of the EPRP.

A summary version of the Morenci EPRP, also referred to as the **Morenci Public Guide** to Tailings Storage Facilities, is available on [fcx.com](http://fcx.com). The Morenci Public Guide was developed through engagement with community members and local emergency management agencies.

A tabletop exercise to test the response procedures to a credible failure scenario was completed in May 2023, during which Morenci employees, local emergency management agencies, and community members participated.

## 2.5 Dates of Most Recent and Next Independent Reviews

Per Morenci's OMS, its internal site engineers perform routine inspections. The RTFE and multiple levels of internal leadership, as well as the EoR, received monthly early indicator reporting for review. The AE reviewed summaries of the quarterly early indicator reporting.

The EoR conducted quarterly inspections and data reviews and provided a detailed 2022 annual performance review with input from the RTFE, site engineers, and operators.

In addition, FCX's TST, led by the third-party reviewer, completed an annual inspection and data review of the Morenci TSFs in November 2022. For context, the TST began its regular inspections at Morenci in 2004. The next annual inspection is planned for November 2023.

The ITRB for Morenci TSFs is engaged in periodic reviews over the lifecycle. The most recent ITRB quadrennial review was conducted in 2019. The ITRB for Morenci TSFs initially was engaged in 2015 and has had multiple quadrennial and update review meetings with FMMI. Specifically, the ITRB for Morenci TSFs received three update reviews in 2022 and two updates in 2023 (February and June). The next ITRB update review is planned for November 2023 and the next quadrennial review is planned for January 2024.

The most recent Tailings Management System Implementation Assessment was completed in 2019, with the next review planned by the end of August 2023.

A summary of material findings from these inspections and reviews is presented in the following section. Open material recommendations from the previous reporting period were brought forward and are shown in Table 4.

## 2.6 Material Findings from TSF Safety Performance Reviews at FMMI and Mitigations to Reach ALARP

As described in Section 1.4, FCX and its subsidiaries conduct multifaceted reviews of TSF safety. Reviews consider annual performance data, observations, and documentation and provide conclusions on the overall performance of the TSFs. Reviews may result in TSF Safety Performance material findings<sup>2</sup> as defined in Section 1.4.

Although FMMI is in the process of implementing all recommended actions from these reviews, Table 4 summarizes the material recommendations resulting from the review process.

<sup>2</sup> The term "material findings" as used in this report, is based on a different definition of materiality than used in U.S. securities laws and other legal regimes. Please refer to Cautionary Statement on Page 23 of this report.

**Table 4. Summary of Material Findings, Recommendations, and Associated FMMI Action Plans as of December 31, 2022**

TSF	Recommendations to Address Material Findings	Action Plan	Status
West / East	As described in Section 2.2, the West / East's right abutment overlies a portion of the Silver Basin 1X embankment. Downward drainage from ongoing construction of the West / East is expected to infiltrate the area and could lead to saturation of currently dry sand. The ITRB recommended FMMI undertake additional site characterization, along with efforts to reduce seepage water associated with infiltration from the West / East realignment deposition into the Silver Basin 1X.	Under the direction of the EoR, additional site characterization was implemented, and seepage mitigation measures evaluated. The studies resulted in a wick drain network designed to manage pore pressures in various zones of the TSF materials. The wick drains were installed in 2022, and increased instrumentation and monitoring was developed and implemented.	Complete
Southwest 2	Southwest 2 currently was not capable of safely storing or passing the PMF when reviewed by the ITRB. The ITRB recommended FMMI evaluate and construct measures to upgrade stormwater handling capacity up to the PMP event at Southwest 2.	In 2022, the EoR designed a concrete diversion berm structure and associated spillway channel to allow Southwest 2 to safely store and pass the PMP storm event. Construction of the diversion berm and modifications to the spillway channel started in January 2023 and are anticipated to be completed by the end of August 2023.	In Progress

There were no activations of the EPRP for any Morenci TSF in 2022.

Based on the multifaceted safety reviews, Morenci TSFs generally performed within expectations in 2022. Several operational and sustaining projects were ongoing or completed in 2022. Based on the annual performance review, the EoR concluded that all TSFs met the design intent and standards of good practice and are performing as expected.

The risk of each CFM was reviewed following the ALARP principle. Risk reduction measures were identified and implemented including:

- FMMI enhanced monitoring activities through updates to specific work instruction documents, additional aerial surveys, and updates to instrumentation plans and deposition plans.
- FMMI is constructing a new concrete diversion berm and spillway upgrades on Southwest 2 (anticipated completion by the end of August 2023). The project is expected to enable the TSF to safely manage the PMP storm event; completion of the structure is expected to mitigate the only CFM for Southwest 2.

- Research into continual improvement opportunities to further reduce risk will continue. For example, FMMI plans to conduct a long-term evaluation of the efficacy of modifying upstream construction methods at Silver Basin 1. A multi-year trial deposition and associated study has been initiated and will be used to determine if the modifications are practicable.

The successful completion of these risk reduction measures will demonstrate the eight Morenci TSFs meet the ALARP principle and additional planned risk reduction measures are not expected to be required. Although the ALARP principle will be met, there will be periodic TSF risk assessment updates and annual reviews (as summarized in Section 1.3).

## 2.7 Material Findings of Annual Performance Review of Environmental and Social Monitoring

Social and environmental monitoring programs were completed and reported per the company requirements as well as regulatory requirements including the APP program administered by ADEQ.

The Social Performance Management System (SPMS) is an internal system designed to drive increased communication and coordination across operations and various other functions of the business to ensure that the actual or potential social impacts of any of our activities are eliminated, managed, or mitigated and performance is continuously improved.

The SPMS monitoring program included community related grievances, a human rights impact assessment (HRIA) (conducted for the five active Arizona operations in 2022), ongoing engagement / dialogue / feedback with the Population at Risk and the broader population of project-affected people, and a social baseline study to characterize the social and economic conditions of the areas proximate to the TSFs to determine vulnerabilities and human rights issues, particularly those associated with identified CFMs, as well as provide the necessary contextual information to inform future decisions about the TSFs for the continued protection of public safety. Further, the SPMS monitoring included identification of social risks associated with the TSFs via the site risk register process.

FMMI manages dust from tailings impoundments in accordance with regulatory requirements including opacity limits under its air permit. The Arizona HRIA identified dust emissions, often linked to high winds generating dust in the region, which constitutes a material finding<sup>3</sup> resulting from the SPMP monitoring program. Morenci strives to continually improve effectiveness of its dust control measures and is evaluating additional measures for its operations.

The Environmental Management System (EMS) includes monitoring of water, air, soil quality, vegetation, and wildlife, as well as waste generated by Morenci. There were no material findings<sup>4</sup> resulting from the EMS monitoring program, no material environmental changes associated with Morenci's TSFs, and no material environmental impacts due to events during the year.

## 2.8 Confirmation of adequate financial capacity

As stated in our 2022 [Annual Report on Form 10-K for the year-ended December 31, 2022](#), we have the financial capacity to meet current estimated lifecycle costs, including estimated closure, post-closure and reclamation obligations associated with our TSFs.

<sup>3</sup> As used in this report, a material social performance finding is identified from social performance monitoring and reviews of aspects related to or impacted by TSFs. Material findings may be caused by a material change in the local social, economic or environmental context (including climate) that would reasonably be expected to have a significant effect on the quality of life or stability of the local community or any change in the business / operation (or its assets, liabilities or capital) that would reasonably be expected to have a significant effect on the nature of the operation and / or its positive or negative effect / impact on the local community and / or other project-affected people.

<sup>4</sup> As used in this report, a material environmental finding or material findings resulting from a review of environmental monitoring is information that is identified from environmental monitoring and audits of TSFs that may result in a significant consequence to human health or the environment, have a significant legal component or have a significant operational impact.

## CAUTIONARY STATEMENT

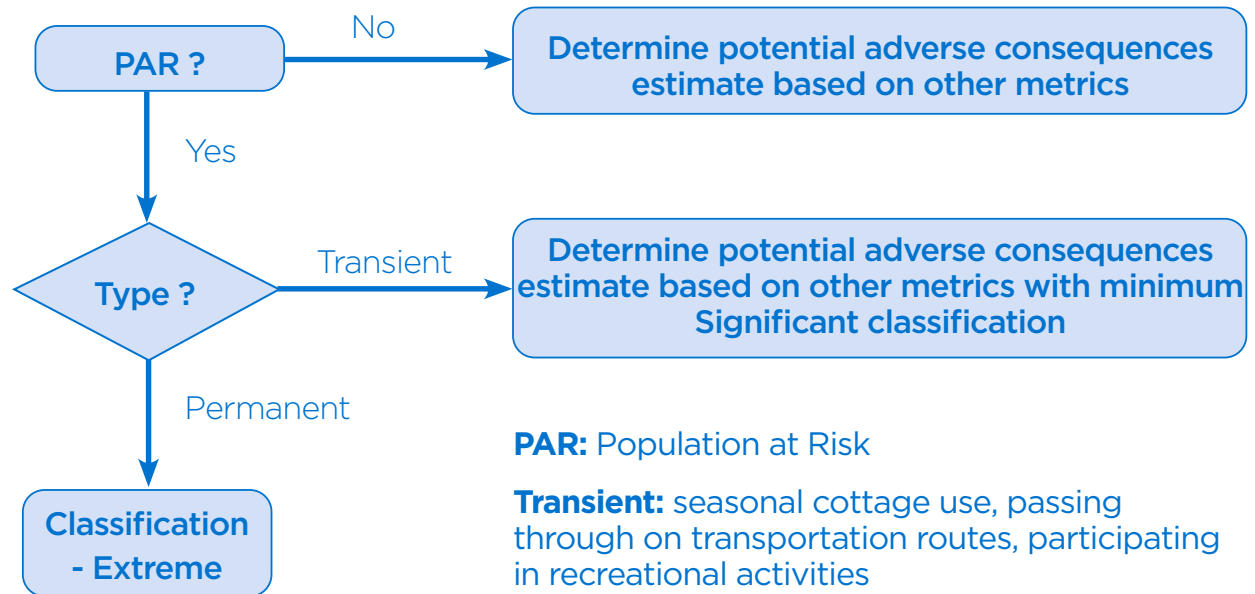
This report contains forward-looking statements in which we discuss potential future TSF-related performance, operations, and projects. Forward-looking statements are all statements other than statements of historical facts, such as plans, projections, expectations, targets, objectives, strategies, or goals relating to TSF-related performance, operations, risks, and projects, and the underlying assumptions and estimated impacts on our business and stakeholders related thereto; future risk mitigation; our continuing commitment to safe and reliable operations; our commitment to operating our TSFs in conformance with the Tailings Standard; the anticipated benefits of the Tailings Standard, including improved tailings management practices across the industry and reduced risks to people and the environment due to TSF failures; our commitment to ensuring our TSFs meet global best practice standards for safety; our tailings management programs, standards and practices, including with respect to engineering, inspection, and surety; closure or divestment of certain operations or TSFs, including associated costs; improvements in operating procedures and technology innovations relating to tailings management; anticipated tailings production; anticipated productive lives of TSFs; post-closure liabilities; regulatory developments; and our commitment to deliver responsibly produced copper and molybdenum, including plans to implement, validate, and maintain validation of our operating sites under specific frameworks. The words “anticipates,” “may,” “can,” “plans,” “believes,” “efforts,” “estimates,” “expects,” “seeks,” “goals,” “strategy,” “objective,” “projects,” “targets,” “intends,” “likely,” “will,” “should,” “could,” “to be,” “potential,” “assumptions,” “guidance,” “forecasts,” “future,” “commitments,” “initiatives,” “opportunities,” and any similar expressions are intended to identify those assertions as forward-looking statements. We caution readers that forward-looking statements are not guarantees of future performance and actual results may differ materially from those anticipated, expected, projected or assumed in the forward-looking statements. Important factors that can cause our actual results to differ materially from those anticipated in the forward-looking statements include, but are not limited to, the factors described under the heading “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2022, filed with the U.S. Securities and Exchange Commission (SEC), as updated by our subsequent filings with the SEC, and available on our website at [fcx.com](https://www.fcx.com).

Many of the assumptions upon which our forward-looking statements are based are likely to change after the forward-looking statements are made. Further, we may make changes to our business plans that could affect our results. We undertake no obligation to update any forward-looking statements, which speak only as of the date made, notwithstanding any changes in our assumptions, changes in business plans, actual experience, or other changes.

This report contains statements based on hypothetical scenarios and assumptions, and these statements should not be viewed as representative of current risks or forecasts of expected risks. Any third-party scenarios discussed in this report reflect the modeling assumptions and outputs of their respective authors, and their use or inclusion herein is not an endorsement of their underlying assumptions, likelihood, or probability. While certain matters discussed in this report may be significant and relevant to our investors, any significance should not be read as rising to the level of materiality for purposes of complying with the U.S. federal securities laws and regulations or the disclosure requirements of the SEC. The goals and projects described in this report are aspirational; as such, no guarantees or promises are made that these goals and projects will be met or successfully executed.

## Appendix: Consequence of Failure Classification

### Flowchart for Population at Risk (PAR)



**PAR:** Population at Risk

**Transient:** seasonal cottage use, passing through on transportation routes, participating in recreational activities

**Permanent:** household, commercial and/or mine site work offices or facilities



## Other Metrics

Consequence Classification	Incremental Losses		
	Environmental	Health, Social and Cultural	Infrastructure and Economics
Low	Minimal short-term loss or deterioration of habitat or rare and endangered species.	Minimal effects and disruption of business and livelihoods. No measurable effect on human health. No disruption of heritage, recreation, community or cultural assets.	Low economic losses: area contains limited infrastructure or services. <US\$1M.
Significant	No significant loss or deterioration of habitat. Potential contamination of livestock / fauna water supply with no health effects. Process water low potential toxicity. Tailings not potentially acid generating and have low neutral leaching potential. Restoration possible within 1 to 5 years.	Significant disruption of business, service or social dislocation. Low likelihood of loss of regional heritage, recreation, community, or cultural assets. Low likelihood of health effects.	Losses to recreational facilities, seasonal workplaces, and infrequently used transportation routes. <US\$10M.
High	Significant loss or deterioration of critical habitat or rare and endangered species. Potential contamination of livestock / fauna water supply with no health effects. Process water moderately toxic. Low potential for acid rock drainage or metal leaching effects of released tailings. Potential area of impact 10-20km <sup>2</sup> . Restoration possible but difficult and could take > 5 years.	500-1000 people affected by disruption of business, services or social dislocation. Disruption of regional heritage, recreation, community or cultural assets. Potential for short term human health effects.	High economic losses affecting infrastructure, public transportation, commercial facilities or employment. Moderate relocation / compensation to communities. <US\$100M.
Very High	Major loss or deterioration of critical habitat or rare and endangered species. Process water highly toxic. High potential for acid rock drainage or metal leaching effects from released tailings. Potential area of impact >20km <sup>2</sup> . Restoration or compensation possible but difficult and requires a long time (5-20 years).	1000 people affected by disruption of business, services, or social dislocation for more than one year. Significant loss of national heritage, community, or cultural assets. Potential for significant long-term human health effects.	Very high economic losses affecting important infrastructure or services (e.g. highway, industrial facility, storage facilities for dangerous substances) or employment. High relocation / compensation to communities. <US\$1B.
Extreme	Catastrophic loss of critical habitat or rare and endangered species. Process water highly toxic. Very high potential for acid rock drainage or metal leaching effects from released tailings. Potential area of impact >20km <sup>2</sup> . Restoration or compensation in kind impossible or requires a long time (>20 years).	5000 people affected by disruption of business, services or social dislocation for years. Significant national heritage or community facilities or cultural assets destroyed. Potential for severe and/or long-term human health effects.	Extreme economic losses affecting critical infrastructure or services (e.g. hospital, major industrial complex, major storage facilities for dangerous substances) or employment. Very high relocation / compensation to communities and very high social readjustment costs >US\$1B.

## Likelihood Categorization

Failure Likelihood Categories	
Likelihood	Description
Very High	There is <b>direct evidence or substantial indirect evidence</b> to suggest it has initiated or is <b>likely to occur</b> in the near future. The annual failure likelihood is <b>more frequent than 1/1,000</b> .
High	The <b>fundamental condition or defect is known to exist</b> ; indirect evidence suggests it is plausible; and <b>key evidence</b> is weighted more heavily toward <b>more likely than less likely</b> . The annual failure likelihood is <b>between 1/1,000 and 1/10,000</b> .
Moderate	The <b>fundamental condition of defect is known to exist</b> ; indirect evidence suggests it is plausible; and <b>key evidence</b> is weighted more heavily toward <b>less likely than more likely</b> . The annual failure likelihood is <b>between 1/10,000 and 1/100,000</b> .
Low	The <b>possibility cannot be ruled out</b> , but there is <b>no compelling evidence</b> to suggest it has occurred or that a <b>condition or flaw exists</b> that could lead to initiation. The annual failure likelihood is <b>between 1/100,000 and 1/1,000,000</b> .
Remote	<b>Several events must occur concurrently or in series</b> to cause failure, and most, if not all, have negligible likelihood such that failure <b>likelihood is negligible</b> . The annual failure likelihood is <b>more remote than 1/1,000,000</b> .

US Army Corps of Engineers and US Bureau of Reclamation (USACE/USBR). 2019. Best Practices in Dam and Levee Safety Risk Analysis. Version 4.0, July

## ANNEX 1: Acronym Definitions

<b>AE</b>	<b>Accountable Executive</b>
<b>ALARP</b>	<b>As Low As Reasonably Practicable</b>
<b>CDA</b>	<b>Canadian Dam Association</b>
<b>CFM</b>	<b>Credible Failure Mode</b>
<b>EOR</b>	<b>Engineer of Record</b>
<b>EMS</b>	<b>Environmental Management System</b>
<b>EPRP</b>	<b>Emergency Preparedness and Response Plan</b>
<b>FCX</b>	<b>Freeport-McMoRan Inc.</b>
<b>FMMI</b>	<b>Freeport-McMoRan Morenci Inc.</b>
<b>GISTM</b>	<b>Global Industry Standard on Tailings Management</b>
<b>ICMM</b>	<b>International Council on Mining and Metals</b>
<b>ITRB</b>	<b>Independent Tailings Review Board</b>
<b>OMS</b>	<b>Operations, Maintenance and Surveillance</b>
<b>RIDM</b>	<b>Risk Informed Decision Making</b>
<b>RTFE</b>	<b>Responsible Tailings Facility Engineer</b>
<b>SPMS</b>	<b>Social Performance Management System</b>
<b>TMS</b>	<b>Tailings Management System</b>
<b>TMSIA</b>	<b>Tailings Management System Implementation Assessment</b>
<b>TSF</b>	<b>Tailings Storage Facility</b>
<b>TST</b>	<b>Tailings Stewardship Team</b>

END OF THE DOCUMENT