# BAGDAD MINE TAILINGS DISCLOSURE REPORT

SEPTEMBER 2024

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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 TSF at the Bagdad 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 managed 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.

<sup>&</sup>lt;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.

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 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 (CFMs). 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 practicable. 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.

#### INCORPORATE TAILINGS STANDARD CORPORATE TEAM ENHANCE PROGRAMS, PROCEDURES, **ENHANCE GOVERNANCE** AND ICMM TAILINGS MANAGEMENT FORMATION **DEPARTMENT** RESOURCES & DOCUMENTATION & MANAGEMENT **GOOD PRACTICE GUIDE** 2004 2008 2012 2014 2017 2018 2020 2021 2023 ► Establish ► Establish ► Add site ► Initiate ► Use Early ► Write TMS ► Define AEs ► Define RTFEs ► Self-assess & tailings Indicator TST and ITRBs for independently corporate Guide ► Expand ► Integrate inventory Colorado, Dashboards verify for Very tailings & engineers ► Enhance external knowledge & **TSFs** Arizona and High / Extreme water group ► Formalize ▶ Overhaul planning disclosures systems New Mexico ► Form Cerro ► Action EoR for documents **TSFs** ► Formalize ► Enhance ► Undate Verde ITRB mitigation active sites ► Continue ► Evaluate RIDM policies & community priorities ► Enhance implementing ▶ Draft ► Add thirdessential procedures engagement studies for other TSFs ► Add internal Operations & ► Create party TST functions emergency ► Enhance ► Develop Maintenance ► Achieve Safe training reviewer ► Formalize ► Improve tabletops remote conformance Manuals program thresholds Closure of ► Add portfolio change inspection tools & app some TSFs Create and automated ▶ Standardize management tools use mobile data procedures ► Establish inspection acquisition dedicated apps system Tailings & InSAR Innovation monitoring Group NUMEROUS TSF RECLAMATION PROJECTS IN NORTH AMERICA

#### COMMITMENT TO SAFETY - NO FAILURES

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:

• **Development** - TSFs that have completed permitting and are in stages of design and/ or construction through commissioning, prior to start of tailings deposition.

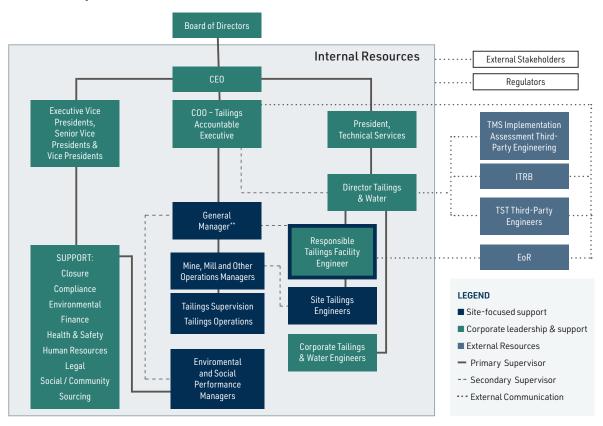
- Active TSFs with tailings distribution infrastructure in place for the intent of raising dam crest.
- Inactive TSFs that are not intended to receive tailings deposition in the current operating plan but have not yet implemented final closure activities.
- Closed TSFs that are no longer in operation and have been closed to meet applicable design criteria, but for which safe closure under the Tailings Standard is not yet complete or confirmed.
- Safely 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 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



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

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

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

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 TSF, 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 annual 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 and additional external experts as appropriate, 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 CFM 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 Development 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 reviews and assesses design, construction, and tailings management practices for the applicable North and South America TSFs. The ITRB holds periodic meetings that are as often as bi-annually, but typically these meetings will be held no less frequent than quadrennially for Development, Active, and Inactive TSFs, and slightly less frequent for Safely Closed TSFs, to review 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 typically occurs approximately every four years, depending on several factors, 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 **Bagdad TSFs**

This report presents a summary of the 2023 Annual Performance Review and other pertinent information for the Mulholland, Mammoth, and Upper Mammoth TSFs at the Bagdad mine. In addition to these three existing TSFs, a new TSF at the Bagdad mine, the Sycamore TSF, was permitted in 2023 with plans to initiate starter dam construction in 2025. The reporting period is January 1, 2023, to December 31, 2023, unless otherwise noted. This summary provides information per Tailings Standard Requirement 15.1.

#### 2.1 **Description of the Bagdad Mine, Mill and TSF Areas**

This section provides a description of the Bagdad operations, including general background on the site, history of the mining and milling operations, and details on the TSFs.

Located in Yavapai County, Arizona, the Bagdad mine is an open-pit copper mining complex. The Bagdad mining complex is owned and operated by Freeport-McMoRan Bagdad Inc. (FMBI). a wholly owned subsidiary of FCX. Technical services support to the Bagdad mine, including the TSFs, is provided by corporate employees of FCX. Details on the Bagdad mine's three current TSFs and new Sycamore TSF are provided in Table 1.

The site is located in mountainous terrain with elevation ranging from 595 to 1,265 meters above sea level, with the Upper Mammoth TSF foundation located at an elevation of approximately 1,108 meters. In terms of seismicity, the Bagdad mine is in the transition zone between the Colorado Plateau and the Southern Basin and Range Province in west-central Arizona, also known as the Central Highlands. Historically, this region has been characterized by a relatively low to moderate level of seismicity.

The habitats surrounding Bagdad include a mix of woodlands, shrubs, and grasses representing Upland Sonoran Desert scrub, Apacherian-Chihuahuan Desert species, Madrean savanna, and woodlands. The climate is characterized as an arid to semi-arid environment with warm to hot summers and rainfall averaging 38 centimeters per year. The majority of the rainfall occurs from July through September and from December through April, and the wettest month is typically August.

Ore mineralization was discovered in the Bagdad district as early as 1882. The Bagdad porphyry copper-molybdenum orebody is currently mined via open-pit methods. Processing facilities in use today began operating in 1977, with additional TSF expansion and incremental capacity increases over time.

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

Table 1. Bagdad TSFs\*

Name	Location	Status*	Description
Mulholland	34° 35′ 30.00″ N 113° 14′ 53.43″ W	Inactive	This is a centerline facility. Tailings deposition started in 1977 and ended in 1985. The TSF receives occasional nominal thickener by-pass and water flows during mill outages. This TSF does not have depositional infrastructure nor does FMBI intend to raise the crest in the future.
Mammoth	34° 35′ 0.79″ N 113° 16′ 13.28″ W	Active	This is a centerline facility with the last 15 meters being constructed using the upstream raised method. Tailings deposition started in 1985 and substantially ended in 2013. This TSF continues to receive limited deposition each year and is used during operational disruptions at the mill and to facilitate maintenance at other facilities.
Upper Mammoth	34° 34′ 14.27″ N 113° 14′ 43.79″ W	Active	This is a centerline facility that was commissioned in 2013. The Upper Mammoth is the primary active TSF at the Bagdad mine.
Sycamore	34° 35′ 16.3644″ N 113° 5′ 18.1104″ W	Development	The Sycamore TSF was permitted in 2023 as a centerline facility with plans to initiate starter dam construction in 2025.

<sup>\*</sup> See Section 1.1 for description of "Status."

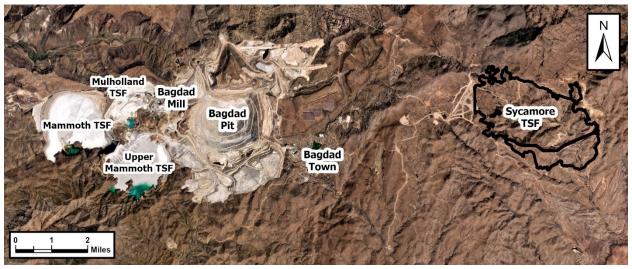


Figure 3. General Bagdad Layout (March 2024).

#### 2.2 **Tailings Facility Design**

This section presents a summary of the design for the Bagdad TSFs, including construction means and methods through the TSF lifecycle. The Bagdad TSFs' 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 Bagdad TSFs are regularly reassessed and updated to reduce risk and increase robustness. The updates are based on informed decisions accomplished through 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 the Bagdad TSFs since the early 2000s.

The current Bagdad TSFs are designed to be constructed using the centerline raise method. The starter dams for the TSFs generally were composed of compacted, locally available borrow materials for Mulholland and Mammoth TSFs and compacted underflow sand for the Upper Mammoth TSF. The TSFs were raised using a centerline raised cyclone underflow (coarse tailings) embankment and fine-grained overflow tailings impoundment 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 last 15 meters of the Mammoth TSF are being constructed using the upstream raise method. The downstream embankment for Upper Mammoth TSF is currently being constructed at a target 3 horizontal (H) to 1 vertical (V) slope. Underflow construction water and seepage from the impoundment are collected by a system of underdrains and seepage collection ponds.

FMBI conducted siting and multiple account analysis (MAA) studies between 2012-2017 to identify a new TSF site. The studies involved identifying a suitable site within a 16-kilometer radius of the Bagdad mine. The evaluation included review of precedent at existing facilities, alternative tailings disposal technologies and Bagdad's specific site conditions. A total of 43 combinations of sites and technologies were identified and reviewed and eight sites were advanced to MAA after screening and fatal flaw analysis. The MAA involved comparing sites based on site-specific criteria including consideration of technical, operational, environmental and cost factors. FMBI conducted comprehensive biodiversity baseline studies and applied the mitigation hierarchy framework seeking to minimize the new TSF's project-related impacts to the ecosystem and identified offsets to compensate for residual impacts from the project. The results of the MAA study were presented to the ITRB and the new Sycamore TSF site was selected as the preferred site for the next TSF at the Bagdad mine.

The basis of design adopted for the new TSF is informed by the Extreme design loading criteria provided in the Tailings Standard. The starter dam for the Sycamore TSF is expected to be generally composed of compacted, locally available borrow materials. The Sycamore TSF is designed at a 3.5H:1V slope. Like the existing Bagdad TSFs, the Sycamore TSF is planned to be raised using a centerline raised cyclone underflow (coarse tailings) embankment and fine-grained overflow tailings impoundment upstream of the embankment. Underflow construction water and seepage from the impoundment is expected to be collected by a system of underdrains and seepage collection ponds. A water balance model, water management plan, and Operations, Maintenance and Surveillance (OMS) manual and monitoring program were developed; they will be refined in subsequent design stages, finalized prior to commissioning of the facility, and integrated with the tailings management system developed for the existing Bagdad TSFs.

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

FBMI previously submitted a closure strategy to the Arizona Department of Environmental Quality (ADEQ). In 2022 and in conjunction with the EoR, FBMI updated its strategy. The ADEQ approved the update in 2023. The closure strategy includes all TSFs, including the Sycamore TSF under development, and implements the following concepts:

- FCX's general closure concept for Bagdad TSFs includes reclaimed landforms with a cover system that limits net infiltration and creates a self-sustaining ecosystem capable of supporting vegetation to mimic the natural local ecological and wildlife context.
- For Mulholland and Sycamore TSFs, the Probable Maximum Flood (PMF) will be stored on lined areas with the intent to minimize infiltration on the reclaimed surface. Runoff more than the PMF will be routed off the TSFs.

- For Mammoth and Upper Mammoth TSFs, the PMF will be routed off the TSFs via spillways with the intent to minimize infiltration on the reclaimed surface.
- For all TSFs, the perimeter and bench diversion channels will convey runoff off the embankments or to armored down chutes and energy dissipation structures at the base of the TSFs.
- Point of compliance wells from the operational period will be used to monitor closure and post-closure performance of the TSFs.

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

Table 2. Select Design Information for Bagdad TSFs as of December 31, 2023

	Mulholland	Mammoth	Upper Mammoth	Sycamore
Primary Construction Material	Cycloned under from whole taili dam is construc borrow material	ngs. Starter ted of local	Cycloned underflow sand from whole tailings. Starter dam is constructed of compacted underflow sand and there is a rockfill dam constructed with local borrow material.	Cycloned underflow sand from whole tailings. Starter dam expected to be constructed of local borrow material.
Construction Method	Centerline	Centerline with 15 meter upstream raise	Centerline	Centerline
Tailings Embankment Downstream Slope (H:V)	2.5H:1V	2.8H:1V	3H:1V	3.5H:1V (Design)
December 2023 Embankment Height (meters)	122	256	96	N/A
Stored Tailings (million metric tons)	109	596	286	N/A
Permitted Capacity (million metric tons)	110	617	519	1179
Inflow Design Flood <sup>2</sup>	PMF			
Safety Evaluation Earthquake	1/10,000-year annual exceedance probability			

<sup>&</sup>lt;sup>2</sup> "Probable Maximum Precipitation" (PMP) or PMF are terms often used to denote extreme hydrological events. Analyses show that the Bagdad TSFs' available capacity exceeds the "Extreme" external flood design criteria for required capacity as referenced in the Tailings Standard and applicable regulations. The potential impacts of climate change are considered when evaluating robustness of designs.

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

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

In accordance with ICMM and the Tailings Standard, a comprehensive risk assessment for the Bagdad TSFs was completed in March 2024, which was presented to the ITRB in June 2024. Our risk assessment process is described in Section 1.3.1.

Using information collected over the life of the existing three Bagdad TSFs (Mulholland, Mammoth and Upper Mammoth TSFs) and during the design of the new Sycamore TSF, a multi-disciplinary stakeholder group – including the RTFE, EoR, and other internal stakeholders – led by an expert risk assessment facilitator, initially identified 64 and 93 potentially CFMs related to the existing Bagdad TSFs and new Sycamore TSF, respectively, through a series of semi-quantitative risk analysis workshops.

Extensive engineering, monitoring and instrumentation, operational practices, analyses (geotechnical and hydrotechnical), field investigation and laboratory test data were reviewed and utilized to analyze each potentially CFM, describe how the potential failure may occur, what factors exist that make the potential failure mode more or less likely, and analyze which are CFMs. Ultimately, the group determined that there were six CFMs for the existing Bagdad TSFs and eight CFMs for the new Sycamore TSF during the initial risk assessment process.

These CFMs were further analyzed to determine the potential impacts of the credible failure scenarios and the consequence classification of the TSF. The existing Bagdad TSFs had no credible flow failure scenarios. The new Sycamore TSF has CFMs that have potential to affect downstream property beyond the boundaries of the mine. As summarized in Table 3, the existing Bagdad TSFs had consequence classifications of "Significant" for Upper Mammoth TSF based on slump runout CFMs, "Low" for Mammoth TSF due to limited environmental impacts and "N/A" for the Mulholland TSF as it had no CFMs. The new Sycamore TSF had a consequence classification of "High" based on breach models and slump runout for the CFMs. Through the next stages of design evolution, careful construction and rigorous quality assurance and quality control, we aim to further reduce risk for the Sycamore TSF. 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) for Existing Bagdad TSFs as of March 2024

TSF	Credible Failure Scenario	Likelihood	Consequence	Potential Impact
Upper Mammoth	Unidentified weak zone causes slope instability and slump runout	Low	Significant	Personnel infrequently at risk
Upper Mammoth	Underdrain failure increases phreatic surface causing slope instability and slump runout	Low	Significant	Personnel infrequently at risk
Upper Mammoth	Unidentified weak zone in rockfill dam causes slope instability and slump runout	Low	Significant	Personnel infrequently at risk
Upper Mammoth	Construction activity in narrow valley increases phreatic surface causing slope instability and slump runout	Moderate	Significant	Personnel infrequently at risk

TSF	Credible Failure Scenario	Likelihood	Consequence	Potential Impact
Mammoth	Water backing up in pipe causing enlargement of the existing sinkhole	Low	Low	Environmental
Mammoth	Water backing in pipe causes internal erosion	Low-Remote	Low	Environmental
Sycamore	Saturation of the underflow sand causes slope instability and slump runout	Moderate- High	Significant to High	Environmental Personnel infrequently at risk
Sycamore	Underdrain failure increases phreatic surface causing slope instability and slump runout	Low	Significant to High	Environmental Personnel infrequently at risk
Sycamore	Tailings delivery line ruptures on the dam causing erosion	Low	Significant	Environmental Personnel infrequently at risk
Sycamore	Overtopping causes embankment breach resulting in tailings flow	Low	High	Environmental Personnel infrequently at risk
Sycamore	Surface erosion leads to tailings flow beyond the toe of the rockfill dam	Very High	Low to Significant	Environmental
Sycamore	Saturation of the underflow sand during seismic event causes slope instability and slump runout	Moderate	Significant to High	Environmental Personnel infrequently at risk
Sycamore	East By-Pass Channel erodes leading to overtopping at the crest	Low	High	Environmental Personnel infrequently at risk
Sycamore	Wave induced by land bridge failure causes overtopping at the crest	Low	High	Environmental Personnel infrequently 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 slump runout models; the assessment of potential human exposure and vulnerability was most recently updated in March 2024. The term "Personnel" used in the table above refers to infrequently present Bagdad employees and contractors working on the Bagdad TSFs.

We aim to update this assessment when there is. a material change to the Bagdad TSFs or an update to the knowledge base, including the social and economic context characterized by the social baseline study.

#### 2.4 **ERP**

The ERP is updated annually and is informed by the Bagdad TSFs risk assessment, which is updated triennially. The Emergency Response Plan (ERP) for the existing TSFs was updated in 2023. The update was developed using the CFMs in Table 3 and associated slump runout

analyses where applicable. Based on the risk assessment, the Bagdad TSFs have no CFMs that could have off-site impacts and therefore Bagdad does not require an EPRP co-developed with local emergency management agencies and the broader community.

A tabletop exercise to test the response procedures to a credible failure scenario was completed in April 2022. Appropriate personnel were trained on the ERP after the 2023 update.

The Sycamore TSF is in development. Emergency response procedures and applicable documentation will be implemented when the TSF is constructed.

#### 2.5 Dates of Most Recent and Next Independent Reviews

Per Bagdad's OMS manual, its internal site engineers performed routine inspections. The RTFE and multiple levels of internal leadership, as well as the EoR, receive monthly early indicator reporting for review. The AE reviews summaries of the quarterly early indicator reporting.

The EoR conducted four field inspections and data reviews and provided a detailed 2023 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 Bagdad TSFs in April 2024. For context, the TST began its regular inspections at Bagdad in 2005. The next annual inspection is planned for April 2025.

The ITRB for the Bagdad TSFs is engaged in periodic reviews over the TSF lifecycle. The ITRB for the Bagdad TSFs initially was engaged in 2016 and has had multiple quadrennial and update review meetings with the site. Specifically, the ITRB for the Bagdad TSFs completed a quadrennial review in 2020 and three updates in 2023 – two updates (February and November) for the existing TSFs and one update (December) for the new Sycamore TSF. An additional update was completed in June 2024 for the existing Bagdad TSFs and the new Sycamore TSF. The next ITRB quadrennial review is planned for early 2025.

The most recent Tailings Management System Implementation Assessment was completed in 2023, with the next assessment planned for 2027.

A summary of material findings from these inspections and reviews is presented in the following section.

# 2.6 Material Findings from TSF Safety Performance Reviews of the Bagdad TSFs and Mitigations to Reach ALARP

As described in Section 1.4, FCX and its subsidiaries conduct multifaceted reviews of TSF safety for existing TSFs. Reviews consider annual performance data, observations, and documentation and provide conclusions on the overall performance of the TSF. Reviews may result in TSF Safety Performance material<sup>3</sup> findings as defined in Section 1.4.

There were no activations of the ERP for the Bagdad TSFs in 2023. The existing Bagdad TSFs had two material findings or recommendations during the 2023 review process.

<sup>&</sup>lt;sup>3</sup> As used in this report, the term "material" is based on a different definition of materiality than used in U.S. federal securities laws and regulations and other legal regimes. Please refer to Cautionary Statement on Page 20 of this report.

Table 4. Summary of Material Findings, Recommendations, and Associated FMBI Action Plans as of December 31, 2023

TSF	Recommendations to address Material Findings	Action Plan	Status
Mammoth	A 2022 stability analysis by EoR indicated that the Northeast (NE) dike of the Mammoth TSF did not meet the recommended minimum factor of safety for a sensitivity loading condition. To mitigate, a buttress was recommended on the NE dike of the Mammoth TSF to raise the factor of safety to the target and reduce risk to ALARP.	The Buttress was designed by EoR and constructed by FMBI during the 2023 reporting period.	Complete
Upper Mammoth	Interim threshold alarms based on residual strength criteria for three piezometers were triggered due to elevated phreatic surface in the north portion of the Upper Mammoth TSF during the reporting period. The ITRB recommended that FMBI evaluate and modify tailings deposition in the area.	Deposition was adjusted in the north portion of the Upper Mammoth TSF which led to a decreasing piezometer level trend. Two piezometers remain slightly above the assigned threshold such that factor of safety is at one-hundredth below the sensitivity target. Additional piezometers were installed and are part of ongoing monitoring of the phreatic surface in the area.	In Progress

The existing Bagdad TSFs met design intent and performed within expectations in 2023 based on the multifaceted dam safety reviews and the annual performance review completed by FCX and the EoR. Several operational and sustaining projects were ongoing or completed in 2023 to support continued safe operation.

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

- A buttress was constructed at the NE dike portion of the Mammoth TSF.
- Bagdad is following a cautious approach by controlling the deposition and flattening the slope of the embankment and evaluating constructing a buttress or compacting a lower zone of the embankment for the Upper Mammoth TSF.

The successful completion of these risk reduction measures is expected to demonstrate that the existing Bagdad TSFs meet the ALARP principle and that additional planned risk reduction measures are not expected to be required. The design and construction specifications of the Sycamore TSF will be refined during a detailed design stage and construction to further reduce risk for the Sycamore TSF. Although projects to meet the ALARP principle have been identified and are in progress, periodic Bagdad TSFs risk assessment updates and annual reviews will be performed for existing and new TSFs, as summarized in Section 1.3.

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

Social and environmental monitoring programs were completed and reported per FCX requirements as well as regulatory requirements. The Bagdad TSFs fall under the jurisdiction of the ADEQ.

The Social Performance Management System (SPMS) is an internal system designed to drive increased communications and coordination across operations and various other functions of the business to help 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 2021-2022); ongoing engagement, dialogue, and feedback with the community; and a social impact assessment study to characterize the social and economic conditions of the areas proximate to the Bagdad TSFs. This monitoring program aimed to determine vulnerabilities and potential 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 program included identification of social risks associated with the Bagdad TSFs via TSF-specific and site risk register processes. There were no material findings<sup>4</sup> from the SPMS monitoring program in 2023.

The Environmental Management System (EMS) includes monitoring and management of water, air quality, soil quality, vegetation, and wildlife, as well as waste generated by Bagdad. There were no material findings<sup>5</sup> resulting from the EMS monitoring program, no material environmental changes associated with the Bagdad TSFs, and no material environmental impacts due to events during the year.

#### 2.8 Confirmation of Adequate Financial Capacity

As stated in our 2023 Annual Report on Form 10-K for the year ended December 31, 2023, we have the financial capacity to meet current estimated lifecycle costs, including estimated closure, post-closure, and reclamation obligations associated with our TSFs.

<sup>&</sup>lt;sup>4</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 or 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 effects and impacts on the local community and/or others affected by the project.

<sup>&</sup>lt;sup>5</sup> As used in this report, a material environmental finding or material finding resulting from a review of environmental monitoring is information that is identified from environmental monitoring and audits of TSFs that may have a significant consequence to human health or the environment, a significant legal component, or a significant operational impact.

#### **CAUTIONARY STATEMENT**

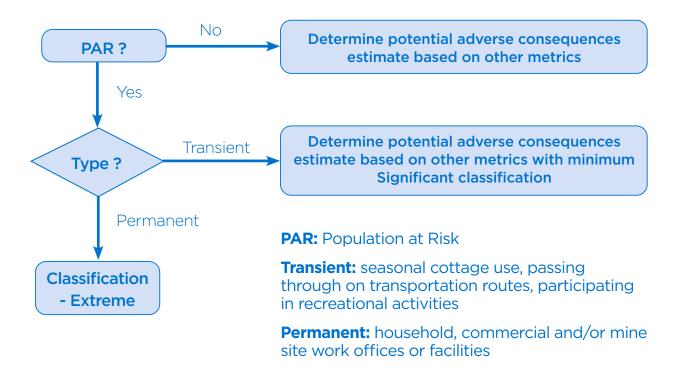
This report contains forward-looking statements. Forward-looking statements are all statements other than statements of historical facts, such as plans, projections, expectations, targets, objectives, strategies, or goals relating to TSF-related performance, operations, risks, and projects, and the underlying 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, 2023, 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.

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)



## **Other Metrics**

Consequence	Incremental Losses			
Classification	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\$1,000,000.< th=""></us\$1,000,000.<>	
Significant	No significant loss or deterioration of habitat. Potential contamination of livestock / fauna water supply with no health effects. Process water has 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.	
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 10-20 square kilometers. Restoration possible but difficult and could take > 5 years.	500-1,000 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\$100,000,000.< th=""></us\$100,000,000.<>	
Very High	Major loss or deterioration of critical habitat or rare and endangered species. Process water is highly toxic. High potential for acid rock drainage or metal leaching effects from released tailings. Potential area of impact is >20 square kilometers. Restoration or compensation possible but difficult and requires a long time (5-20 years).	1,000 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.	
Extreme	Catastrophic loss of critical habitat or rare and endangered species. Process water is highly toxic. Very high potential for acid rock drainage or metal leaching effects from released tailings. Potential area of impact >20 square kilometers. Restoration or compensation in kind impossible or requires a long time (>20 years).	5,000 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\$1,000,000,000.	

## **Likelihood Categorization**

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

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

## **ANNEX 1: Acronym Definitions**

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

## **END OF THE DOCUMENT**