Tailing & Heap Leach Facility Management Standard

1 PURPOSE AND OBJECTIVES

This Tailing & Heap Leach Facility Management Standard (the "Standard") sets the minimum Newmont requirements for the design and management of tailing storage facilities (TSF) and heap leach facilities (HLF) to protect human health, wildlife and flora, protect groundwater and/or surface water, prevent uncontrolled releases to the environment, manage process fluids and set requirements for closure and reclamation.

Use of this Standard shall be in conjunction with other applicable standards and guidance within the Geology, Process, Mine Engineering and S&ER Functions, and incorporates the elements of the ICMM position statement on *Preventing Catastrophic Failure of Tailings Storage Facilities.* Sites shall identify, assess, and comply with applicable laws, regulations, permits, licenses, external standards and other applicable or relevant and appropriate requirements.

A TSF includes the collective structures, components and equipment pertaining to management of any tailings and associated waters, including dams and reservoirs, other related facilities and appurtenances. A HLF includes heap leach pads, process solution ponds, solution transport pipes, solution application devices, leach pad process plants, and process solution channels.

2 SCOPE

The scope of this Standard is global. It applies to all directors, officers and employees of Newmont Corporation ("NC") or any entity that is controlled or managed by NC (together with NC, "Newmont" or the "Company"). In addition, where explicitly stated in an applicable contract, it may apply to Newmont's contingent workers, vendors, contractors, and other types of business partners. It is applicable to all sites and in all phases of the mine life cycle including exploration, design, construction, operation and closure.

3 CONTENT

3.1 Planning & Design

3.1.1 Area baseline conditions shall be evaluated prior to siting and design of the TSF and HLF through qualified technical studies that address geographic and temporal variation, in accordance with the Investment System Requirements by stage. These studies will include, at a minimum:

a) Land use
b) Surface and ground water hydrology
c) Geochemistry
d) Climate
e) Flora/Fauna
f) Cultural Resources
g) Geology
h) Seismicity
i) Soils
j) Visual aesthetics

3.1.2 During the investment process, the project team must demonstrate compliance with the investment system study/project requirements by stage. This includes identifying all costs associated with the design, construction, operations and closure of the TSF or HLF to ensure that, at all stages of development and operation for the life of the facility, sufficient resources are available to maintain the necessary operational controls, monitor, and review of the facility.

3.1.3 Sites shall develop a TSF and/or HLF Management Plan or equivalent to restrict the release of potential contaminants to the environment. The plan(s) shall include:

a) TSF or HLF management framework with design and operating criteria
b) Schedule for internal and external audits and inspections
c) Applicable regulatory, legal, and other obligations and requirements
d) Inventory, description, characterization and management methods for TSF/HLF
e) Risk assessments inclusive of risk-based designs and infrastructure/communities located downstream of embankments shall be summarized in the management plan

f) Instrumentation, inspection, and site specific monitoring plans with key performance indicators (KPIs) for critical controls based on results of risk assessment
g) Organizational structure with clearly defined roles, responsibilities, qualifications and training requirements for all personnel who will operate, maintain, supervise or manage TSF and HLF
h) Emergency response plan (ERP)
i) Inundation analysis and mapping
j) Concurrent reclamation

3.1.4 A Fluid Management Plan (FMP) or equivalent shall be developed that addresses the management of solution based on the site-wide probabilistic water balance including the TSF and HLF. The FMP will identify trigger alert levels and contingency plans, during the operation and closure and reclamation phases.

3.1.5 TSF and HLF emergency response and key contact information shall be documented in the site ERP and developed in conjunction with the Social Responsibility team to ensure that all potentially affected persons are included in the emergency notification system. The TSF and HLF emergency procedures shall be reviewed annually and tested periodically.

3.1.6 All sites shall conduct a risk-based assessment of the TSF and HLF designs to ensure adequate levels of protection for human health, water resources, and fauna in accordance with legal and regulatory requirements and other obligations and voluntary commitments.

3.1.7 Risk-based designs shall be reviewed cross-functionally including the Global Practice leads for Geotech & Hydrology, Environment, Process, Mine Engineering and Projects.

3.1.8 Where cyanide solutions are present, the TSF and HLF shall meet the requirements of the International Cyanide Management Code.

3.1.9 Excess TSF and HLF solutions, that require discharge to the environment, shall comply with applicable quality and quantity discharge limits in accordance the downstream designated beneficial use.

3.1.10 Geochemical testing and characterization shall be completed on ore before placement on a TSF or HLF. Additionally, geochemical testing and characterization shall be completed on soil and rock materials used to construct the TSF or HLF. Geochemical characterization shall be undertaken utilizing a recognized Acid Base Accounting (ABA) methodology.

3.1.11 TSF and HLF shall be designed to be geotechnically stable, including erosion potential and its potential impact to material containment.

3.1.12 Tailings solutions shall achieve ≤ 50-ppm weak acid dissociable (WAD) cyanide (CN); or lower concentration as determined by legal compliance criteria and/or other risk-based approach at point of discharge into the TSF.

3.1.13 TSFs shall have a composite liner system consisting of a minimum 300 mm (12-inch) thick soil liner with a permeability of $1x10^{-6}$ cm/sec or lower, overlain by a geosynthetic liner with a permeability of $1x10^{-11}$ cm/sec or lower. The TSF composite liner system must extend to the maximum expected elevation of the Life-of-Mine operating supernatant pond. Above this elevation, only a soil liner is required.

3.1.14 HLFs shall have a composite liner system consisting of a minimum 300 mm (12-inch) thick soil liner with a permeability of $1x10^{-6}$ cm/sec or lower, overlain by a geosynthetic liner with a permeability of $1x10^{-11}$ cm/sec or lower and be equipped with a leak collection and recovery system (LCRS) and/or underdrain system, as required from risk-based assessment.

3.1.15 HLF solution channels external to the pad shall have a single geosynthetic liner with a permeability of $1x10^{-11}$ cm/sec or lower over the subgrade with a permeability of $1x10^{-6}$ cm/sec or lower.

3.1.16 Process ponds and under-drainage ponds and sumps that will normally contain process solution during operations (i.e. excludes stormwater ponds) shall have a double liner system consisting of two geosynthetic liners with a permeability of $1x10^{-11}$ cm/sec or lower equipped with a LCRS between the double liners.

3.1.17 Ponds built for contingency overflow of process solutions (i.e. event ponds associated with HLF) shall have a composite liner system consisting of a minimum 300 mm (12-inch) thick soil liner with a permeability of $1x10^{-6}$ cm/sec or lower, overlain by a geosynthetic liner with a permeability of $1x10^{-11}$ cm/sec or lower. Overflow solutions into these ponds shall be removed per the FMP and operating permits.

3.1.18 TSF, HLF and associated solution storage and conveyance systems shall be designed and constructed to prevent overtopping and provide containment of a design storm event. The design storm event shall be determined using a risk-based approach with site-specific data, or as otherwise specified by local regulatory requirements, whichever is more stringent.

3.1.19 Runoff generated outside of a TSF and HLF shall be diverted away from the facility unless approved for collection as make-up water. Temporary and permanent stormwater structures shall be designed and constructed to convey the design storm event determined and documented by the risk-based design approach with site-specific data, or as otherwise specified by local regulatory requirements, whichever is more stringent.

3.1.20 Groundwater monitoring wells shall be installed upgradient to establish baseline conditions, and downgradient to monitor potential seepage from the TSF and HLF based on area hydrology and hydraulic conditions.

3.1.21 TSF shall include piezometers designed to measure the solution head build up in the embankment and in the tailing (if applicable). Trigger levels and response plans for the piezometers are to be listed in the TSF Management Plan.

3.1.22 Quality assurance/quality control (QA/QC) monitoring and documentation is required for the construction of TSFs and HLFs. Final as-built documentation with associated QA/QC reports shall be completed by a registered engineer or equivalent and maintained at the site over the life of the operation.

3.2 Implementation & Management

3.2.1 All TSFs and HLFs shall have critical controls implemented to mitigate significant risks. Risk assessments of facilities shall be conducted annually and at major milestones.

3.2.2 All TSFs and HLFs shall be managed with defined accountabilities, responsibilities, and associated competencies to support identification and management of risks.

3.2.3 Prior to and throughout construction and operation a site-specific change management process shall be developed and reviewed at least annually.

3.2.4 Operating and human resource requirements to implement the TSF and/or HLF Management Plan shall be included in the Site Business Plan. Sites shall provide training, as required, to maintain the prerequisite skills and knowledge base of industry best management practices and new technologies.

3.2.5 The TSF and HLF FMP or equivalent, shall be implemented, reviewed, and updated annually or whenever significant changes to the system are made.

3.2.6 TSF and HLF water balances are to be updated throughout operation to reflect changes in mine plans, ore geochemistry, processing, and operations at least annually. TSFs and HLFs shall be included in the site-wide probabilistic water balance.

3.2.7 All ponds shall be managed consistent with the design and operational criteria.

3.2.8 The TSF shall be operated to maintain the piezometric head in the embankment and tailing below the trigger levels as specified in the TSF Management Plan and design report. Exeedances of these limits shall be recorded and addressed against a continuous improvement process.

3.2.9 If discharge is required, process solution including residual drainage shall meet applicable limits at a designated compliance point, and in accordance with downstream beneficial use.

3.2.10 TSF shall implement dust control measures as required to ensure compliance with air quality criteria.

3.2.11 Disposal of materials other than tailings in the TSF or HLF must be compatible with operation and management of the facility, comply with laws and permits, and not compromise closure and reclamation designs.

3.2.12 Sites shall implement the Closure and Reclamation Plan inclusive of the FMP or equivalent, in order to minimize erosion and infiltration while maintaining containment of placed materials and working to achieve post-mining designated land uses.

3.2.13 TSF and HLF shall be managed to be protective of the environment and fauna, be geotechnically stable and adhere to requirements of the International Cyanide Management Code, permit/license/regulatory requirements, and any other legal obligations and voluntary commitments.

3.3 Performance Monitoring

3.3.1 Sites shall follow the detailed monitoring plan for TSF and HLF (including groundwater wells, underdrains, LCRS, and discharges to the environment) and shall continue monitoring through the post-closure period until closure and reclamation is approved by the governing authority.

3.3.2 Sites shall monitor TSF and HLF material characterization (e.g. geochemistry and ARD potential) throughout the operational life to verify design assumptions.

3.3.3 TSFs and HLFs shall have an Independent Tailings Review Board (ITRB) where needed. The need for an ITRB will be based on technical, social, and/or political risks as determined by Newmont Regional and Corporate leadership.

3.3.4 The ITRB shall have a defined charter, with members selected by a steering committee chaired by the Regional SVP, and shall conduct an assessment of the TSF on an annual basis, reporting results to Executive Leadership.

3.3.5 Sites shall conduct inspection of freeboard, embankments and exposed lined areas to verify adherence to design parameters and conduct maintenance and/or repair as outlined by the monitoring plan.

3.3.6 Embankment and tailings piezometers shall be measured and reviewed by a suitably qualified and experienced geotechnical engineer on a routine basis but no less than quarterly in accordance with the TSF Management Plan.

3.3.7 At a minimum, Performance Monitoring and inspections shall be conducted as follows:

a) Performance Monitoring and Inspections - Daily
b) Geotechnical Reviews – Annual by a qualified Independent Senior Geotechnical Engineer

The results of these reviews shall include a record of the list of observations/findings and a record of when these are closed out. These reports, along with documented actual performance measured against the KPIs shall be reviewed by Executive Leadership on a routine basis, but no less frequently than quarterly. The developed records shall be managed in Cintellate.

4 TERMS

Refer to the S&ER Policies & Standards glossary for definitions.

- Conveyance
- Characterization
- Closure
- Critical Controls
- Fluid Management Plan
- Independent
- Leak Collection and Recovery System (LCRS)
- Site-wide probabilistic water balance
- Process Pond
- Reclamation
- Site
- Waste

5 REFERENCES

- Technical Services - Mine Ore, Waste and Stockpiles Characterization and Testing Standard
- Surface Ground Control Standard – NEM-TES-STA-003
- GARD Guide (Global Acid Rock Drainage Guide, International Network for Acid Prevention)
- Heap Leach Pad Geotechnical Guideline – NEM-MIN-GDL-351
- Tailing Facilities Geotechnical Guideline – NEM-MIN-GDL-362
- Seismic Criteria Guideline – NEM-MIN-GDL-363
- Water Impounding Structures Geotechnical Guideline – NEM-MIN-GDL-361
- Mine Risk-Based Design Guideline – NEM-MIN-GDL-301
- Investment Standard – NEM-INV-STA-001
- Closure and Reclamation Standard - NEM-SER-STA-002
- Water Management Standard NEM-SER-STA-001
- Integrated Management Standards (all if applicable)
- Cintellate Tool (Risk, Event, Action, Inspection modules)
- ICMM position statement on preventing catastrophic failure of tailings storage facilities, December 2016

6 DOCUMENT CONTROL

VERSION	AUTHOR	APPROVER	APPROVAL DATE
1.0	Jim Dodd	Policies & Standards Committee	03/21/2014
1.1	Cynthia Parnow	Policies & Standards Committee	03/06/2015
2.0	John Lupo	Global Governance Committee	09/22/2017
3.0	Briana Gunn	Global Governance Committee	01/14/2020