

Waste Rock & Ore Stockpile Facility Management Standard

1 PURPOSE AND OBJECTIVES

This Global Standard sets the minimum requirements for the management of waste rock and ore stockpiles to minimize adverse environmental and human health impacts, to promote beneficial post-mining land uses, and to reduce post mining closure and reclamation liability.

This Standard addresses characterization of ore and waste rock, design, construction, operation, closure and reclamation of rock stockpiles and other unsuitable material that has the potential to degrade the environment. Use of this Standard should be done in conjunction with other applicable Standards, Guidelines and guidance within the Geology, Process, and Mine Engineering Functions.

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

Sites shall determine baseline conditions prior to siting and design of Waste Rock and Ore Stockpiles. Baseline conditions shall be determined through qualified technical studies that address geographic and temporal variations. These studies will include, at a minimum:

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| a) Land use | h) Cultural, archeological and ethnographical sites |
| b) Surface and ground water hydrology | i) Geology |
| c) Water Quality | j) Seismicity/Stability |
| d) Geochemistry | k) Soils |
| e) Climate | l) Community impacts |
| f) Flora/Fauna | |
| g) Visual/aesthetics | |

3.1.1 During the investment process, the project team must demonstrate conformance with the investment system study/project requirements by stage. This includes identifying all costs associated with the design, construction, operations and closure of the Waste Rock and Ore Stockpiles 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 facility performance against post-mining land uses.

3.1.2 Sites shall develop a Waste Rock and Ore Stockpile Management Plan (WROSMP) or equivalent to ensure adequate levels of protection for human health, safety and the environment. This Plan shall include:

- Reference to applicable regulatory and legal requirements
- Geotechnical requirements (NEM-MIN-GDL-352 – Waste Rock Facility Geotechnical Guideline)
- Design parameters to minimize the generation and/or release of pollutants which could adversely impact the environment
- Inventory, description, characterization, and management methods for waste rock and ore stockpiles including geochemistry and summary of test work completed on the material (NEM-TES-GDL-402 Mine Ore Waste Stockpile Characterization and NEM-TES-GDL-403 – Process Products and Wastes Characterization and Testing Guideline).
- Inspection and site-specific monitoring requirements and schedule

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- Governance structure with clearly defined roles, responsibilities, qualifications and training requirements for all personnel who will operate, maintain, supervise or manage Waste Rock and Ore Stockpiles
 - Closure design criteria, plans for concurrent reclamation and compliance with post-closure landuse and strategy
 - Water management including hydrologic modeling as required in the Water Management Standard - NEM-SER-STA-001 Water Management Standard and in support of the site wide water strategy
 - Materials management of waste rock and overburden considering potential for leaching of contaminants
 - Risk assessments
- 3.1.3 All sites shall conduct a risk-based assessment of the Waste Rock and Ore Stockpile designs to ensure adequate levels of protection for human health, safety and the environment in accordance with legal and regulatory requirements, other obligations and voluntary commitments, and compatibility with the Closure & Reclamation plan.
- 3.1.4 Waste rock and ore shall be physically and geochemically sampled (NEM-TES-GDL-408 – Geometallurgical Sample Determination and Collection) and characterized (NEM-TES-GDL-403 Process Products and Wastes Characterization and Testing Guideline) prior to design and continue through operations. Characterization shall represent, to the extent practical, discrete lithologic units, geochemical variability and, spatial distribution of the ore and waste using the metallurgical testing ‘Bingo Chart’ approach. Acid generating potential will be determined using acid-base accounting methodology that is consistent with Newmont standards and is acceptable to regulatory requirements.
- 3.1.5 Waste rock disposal and ore stockpiles with the potential to generate acid rock drainage or water quality that does not meet compliance for discharge (surface water or groundwater) should design retention basins with sufficient capacity to store runoff. The volume of capacity should be developed using a risk based design approach (Mine Risk Based Design Guideline - NEM-MIN-GDL-301) and consider climate modeling.
- 3.1.6 Runoff generated outside of the waste rock and ore stockpile facilities 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.
- 3.1.7 Potentially Acid Generating (PAG)/contaminant leaching material used for construction purposes outside of the waste rock disposal facilities shall be geotechnically and geochemically suitable for the planned application and managed such that adequate protection of the environment and compliance with relevant regulatory, legal and social requirements is achieved.
- 3.1.8 Waste rock disposal and related drainage facilities will be designed and constructed to comply with permit/license, regulatory, legal, and social requirements.
- 3.1.9 Waste rock and ore stockpile facilities, and their foundations, will be designed to be geotechnically stable, under static and seismic loading conditions, including erosion potential and its potential impact to material containment. Minimum Factors of Safety shall be developed using a risk based approach.
- 3.1.10 Incorporation of solid and liquid waste disposal and/ or contaminated soil management facilities within waste rock facility footprints will be based on a risk assessment and in accordance with regulatory, legal, and social requirements. Specific facility design criteria shall be prescribed within the Waste Management plan (or equivalent).
- 3.1.11 Risk-based designs must be reviewed cross-functionally and approved by the Global Practice leads for Geotech & Hydrology, Environment, Processing and Metallurgy, Mine Engineering and Projects.
- 3.2 Implementation & Management**
- 3.2.1 Sites shall implement and maintain the WROSMP or equivalent which shall be reviewed and updated as required by changes in mine plans, changes in mineralogy of waste rock/stockpiled ore that could result in acid rock drainage or impacted water quality, or at least every three (3) years. All facilities shall be managed

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with defined accountabilities, responsibilities, and associated competencies to support identification and management of risks.

- 3.2.2 The WROSMP or equivalent Site practices shall include appropriate methods to track waste and ore to its destinations. The Site shall implement methods that identify rock in a manner appropriate to ensure routing to the destination which achieves consistent results aligned to regulatory, legal, and social or other requirements. These practices must include adequate record keeping to determine the location, volume, and geochemical profile of the waste rock storage facilities and ore stockpiles.

Operating and human resource requirements to implement the WROSMP shall be included in the Site Business Plan. Sites shall provide training, as required, to maintain the prerequisite skills and knowledge base of industry good management practices and new technologies.

- 3.2.3 Waste rock and ore stockpile facilities will be managed throughout operations and closure to mitigate the release of pollutants to the environment via surface runoff, toe seepage and groundwater infiltration.
- 3.2.4 Waste rock disposal facilities and ore stockpiles will be operated and closed to be geotechnically stable considering physical and geochemical characteristics of the waste rock in accordance with the WROSMP or equivalent (permit/license, regulatory and social requirements) to meet the objectives as detailed in the Closure and Reclamation plan for the Site. The Closure and Reclamation Plan should minimize erosion while maintaining containment of placed materials and working to achieve post-mining designated land uses
- 3.2.5 Prior to and throughout construction and operation for the life of the Waste Rock and Ore Stockpiles, a site specific change management process (NEM-IMS-STA-013 Management of Change Standard) and risk assessment shall be utilized as key changes in underlying design and management criteria occur.

3.3 Performance Monitoring

- 3.3.1 Sites shall evaluate waste rock and ore stockpile facility operation with the WROSMP or equivalent no less than annually throughout the operational life and shall monitor through the post-closure period until closure and reclamation is approved by the governing authority.
- 3.3.2 Geotechnical monitoring of waste rock and ore stockpiles facilities shall be completed as per the monitoring plan to verify the facility is being constructed and operated in accordance with design.
- 3.3.3 Waste rock disposal facilities will be inspected for erosion and general integrity following periods of significant rainfall, as determined by the Site and documented in the WRAOSMP or equivalent. In addition, the diversion structures and sediment control structures shall be inspected to verify they are functioning as designed. Facilities will be inspected following any significant seismic event.
- 3.3.4 Monitoring of surface runoff, toe seepage and groundwater wells around waste rock disposal facilities will be conducted routinely in accordance with the monitoring scheduled identified in the WROSMP or equivalent. 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 compliance criteria (as identified in Newmont Water Management Standard- NEM-SER-STA-001 Water Management Standard) shall be reviewed by site and regional leadership on a routine basis, but no less frequently than annually. Records shall be managed in accordance with IMS Standard.

4 TERMS

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

- Acid rock drainage (ARD)
- Adverse Effects
- Bingo Chart
- Convey
- Characterization
- Closure
- Concurrent reclamation
- Ore Stockpile
- Pollutant
- Potentially Acid Generating (PAG)
- Reclamation
- Site
- Waste Rock
- Waste rock disposal facility

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5 REFERENCES

1. Waste Rock Characterization for Nevada Projects NNA-SOP-0062
2. INAP GARD Guide
3. Rock Characterization and Water Resources Analysis Guidance for Mining Activities, BLM 2010
4. NEM-SER-STA-001 Water Management Standard
5. NEM-SER-STA-002 Tailing & Heap Leach Facility Management Standard
6. NEM-MIN-GDL-352 Waste Rock Facility Geotechnical Guideline
7. NEM-TES-GDL-402 Mine Ore Waste Stockpile Characterization
8. NEM-TES-GDL-403 Process Products and Wastes Characterization and Testing Guideline
9. NEM-TES-GDL-408 – Geometallurgical Sample Determination and Collection
10. NEM-SER-STA-001 Water Management Standard
11. NEM - Technical Services - Geology Standards and Guidelines
12. NEM-IMS-STA-013 Management of Change Standard
13. NEM-MIN-GDL-301 Mine Risk Based Design
14. NEM-SER-STA-003 Closure & Reclamation Standard

6 DOCUMENT CONTROL

VERSION	AUTHOR	APPROVER	APPROVAL DATE
1.0	Mark Wood	Policies & Standards Committee	21 March 2014
1.1	Cynthia Parnow	Policy & Standards Committee	6 March 2015
2.0	Scott Miller	Global Governance Committee	9/21/18
3.0	Mike Aire	Global Governance Committee	2/12/2020