

Waste Management Standard

PURPOSE AND OBJECTIVES

This Global Standard sets the minimum requirements for the management of hazardous and non-hazardous wastes, sewage and sludges generated at Newmont sites, such that human health and the environment are protected. This standard does not include the requirements for the management of waste rock or tailings.

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.

It is also applicable relative to the generation, segregation, collection, handling, storage, transportation, minimization, reuse/recycle, and disposal of hazardous wastes, non-hazardous wastes, sewage, and sludges.

Tailing, heap leach and waste rock are addressed in the respective Tailing & Heap Leach Facilities Management and Waste Rock and Ore Stockpile Management Standards.

CONTENT

1 PLANNING & DESIGN

- 1.1 Sites shall identify, assess, and comply with applicable laws, regulations, permits, and other obligations or requirements relating to waste management for both NC, and their vendors, suppliers, contractors, and other types of business partners.
- 1.2 Sites shall identify and classify all expected waste streams as hazardous or non-hazardous wastes during project design.
- 1.3 Sites shall develop a Waste Management Plan or equivalent to manage all expected Hazardous and Non-Hazardous waste types, sewage and sludges that include the following:
 - a) Reference to applicable laws, regulations, permits, and other obligations or requirements, accumulation time limits, labeling, and storage requirements.
 - b) Waste stream descriptions, quantities/volumes generated, source, characterization, classification, inspection procedures, tracking/monitoring requirements, storage and disposal methods, and locations of associated facilities.
 - c) Process for the segregation of non-hazardous wastes that supports the 3R (reduction, reuse, recycle) process (reduce, reuse, recycle) particularly for used rubber (tires), metal, cardboard, wood, plastics, glass, clean empty storage containers (i.e. buckets, drums, totes), and aerosols.
 - d) Disposal or treatment method.
 - e) Risk assessment of potential impacts associated with waste streams.
 - f) Clear allocation of responsibilities, including contractor responsibilities, emergency response contacts and procedures, and training and implementation programs.
- 1.4 Hazardous waste may be temporarily stored onsite in legally compliant facilities that are designed with the following:
 - a) Fencing, signage, roofing, lighting, a means of communication in case of emergency and inclement weather protection (e.g. lightning, wind, rain, etc.).

Waste Management Standard

- b) Secondary containment shall be constructed of concrete or other inert material with a similar permeability of concrete and shall be designed to provide containment of 110% of the capacity of the largest tank in the facility plus the volume of water contained from the risk-based storm event.
 - c) Diversion channels or berms to prevent storm runoff from entering the facility.
- 1.5 Plans for on-site industrial incineration of wastes and/or plans for on-site open burning of waste such as oily rags and putrescible waste shall be communicated to the public during the stakeholder engagement process and permitted as required.
- 1.6 Sites shall assess new facilities for mercury waste streams using mineralogy data and metallurgical process chemistry and include all mercury waste streams in the Waste Management Plan.
- 1.7 Sewage treatment plants shall be designed, constructed, operated and maintained to manufacturer's recommendations, Sewage sludge handling and disposal methodology shall be specified in the Waste Management Plan.
- 1.8 Septic systems (i.e. holding tanks, transfer stations, leach field beds, etc.) shall be designed and constructed using an applicable industry code or engineering standard. Percolation tests shall be conducted prior to siting and installing septic leach fields to demonstrate the receiving environment has adequate capacity to accommodate the design discharge flow.
- 1.9 Onsite landfills shall be designed and constructed to the engineering design specifications and regulatory requirements, taking into consideration current and projected future generation rates, site expansions, local characteristics, and applicable water quality standards to protect human health and the environment.

2 IMPLEMENTATION & MANAGEMENT

2.1 General Waste Management

- 2.1.1 Sites shall implement the Waste Management Plan or equivalent. The Plan shall be approved at the start of operations by the General Manager or representative, reviewed annually thereafter by mining, processing and S&ER, and updated as required.
- 2.1.2 Sites shall identify, classify and characterize (see Table 1 for required tests) all new waste streams and re-evaluate existing waste streams as changes occur. A waste shall be considered hazardous if it possesses any of the characteristics contained in Annex III of the Basel Convention, is considered to be hazardous by jurisdictional regulatory regime, or fails any of the tests in Table 1.
- 2.1.3 Sites shall develop, implement and maintain a 3R (reduce, reuse, recycle) program for wastes where applicable and beneficial.
- 2.1.4 Sites shall depressurize all aerosol cans prior to disposal or recycling.
- 2.1.5 Records related to waste generation, segregation, collection, storage, transportation, 3R, on-site and off-site disposal and inspections including chain-of-custody and audits shall be maintained as per regulatory requirements and site record retention schedules.

2.2 Hazardous Waste

- 2.2.1 Hazardous wastes shall be managed according to their hazardous characteristics and compatibility with other wastes.
- 2.2.2 Hazardous wastes shall not be comingled with ore, input into metal extraction processing streams, or placed on active heap leach pads when it reduces recovery of metals, impacts the environment, or results in legal non-compliance.

Waste Management Standard

- 2.2.3 Medical wastes shall be treated and/or disposed in a manner that is protective of human health and the environment and meets regulatory requirements.
- 2.2.4 Site may treat and dispose of hazardous wastes on-site if it complies with all legal requirements, site permits, and is disposed of in a designated facility that is approved by a cross-functional group including the Global Practice leads for Geotech & Hydrology, Environment, Process, and Mine Engineering.
- 2.2.5 Decommissioning of on-site hazardous waste accumulation facilities, and management of hazardous wastes generated during decommissioning, shall be incorporated into closure and reclamation plans.

2.3 Non-Hazardous Waste

- 2.3.1 Sites may dispose of non-hazardous waste (e.g., solid non-hazardous domestic or industrial wastes) on-site if legally permissible and if such disposal is protective of human health and the environment.
- 2.3.2 Decommissioning of non-hazardous waste facilities, and non-hazardous wastes generated during decommissioning, shall be incorporated into closure and reclamation plans.
- 2.3.3 Site landfills shall be operated and maintained to be geotechnically stable and to prevent impacts to ground water, surface water, wildlife and air quality (dust generation). The potential for leachate generation and the estimated leachate impact from landfills will be risk assessed and managed as required.
- 2.3.4 Putrescible wastes and plastics disposed of on-site shall be covered routinely in a manner to limit windblown waste and animal scavenging. Frequency will be defined based on site-specific conditions with consideration given to regulatory requirements.
- 2.3.5 The following wastes are prohibited from disposal in non-hazardous site landfills unless otherwise approved by regulatory authorities:
 - a) hazardous wastes including elemental mercury, mercury containing devices (including switches, florescent tubes, weights), mercury compounds produced as by-products of mercury air emission control, batteries, asbestos, and polychlorinated biphenyls (PCBs)
 - b) liquid or semi-solid wastes including sewage slurry, black water, sewage treatment sludge
 - c) medical waste
 - d) hydrocarbon products
 - e) untreated hydrocarbon or chemical contaminated soils
 - f) pressurized tanks or gas cylinders
 - g) animal carcasses or remains

2.4 Sewage

- 2.4.1 Raw sewage shall be treated using sewage treatment plants or septic systems that are capable of producing effluents that meet discharge standards. Treated effluent may be used for legally permissible on-site activities (e.g., dust control, irrigation). Treated effluent used for Site activities must be assessed for health and the environment considerations and meet beneficial use criteria if it has potential to leave the Site and/or enter receiving streams.
- 2.4.2 Sites shall verify that no waste streams other than sewage are connected to on-site sewage systems.

Waste Management Standard

- 2.4.3 Sediment and sludges from sewage treatment plants shall be managed using risk assessed practices appropriate to site conditions and which have been approved by the relevant regulatory authority. Sewage sludge shall be treated (e.g., digested, composted) prior to disposal.
- 2.4.4 Septic systems and sewage treatment plants shall be operated and maintained according to applicable regulatory requirements and manufacturers recommendations.

3 PERFORMANCE MONITORING

- 3.1 Sites shall monitor and measure the effectiveness of the Waste Management Plan and conduct workplace inspections of hazardous waste storage facilities and sewage treatment plants in conformance with the Integrated Management System Monitoring and Measurement and Interactions, Inspections and Audits standards.
- 3.2 Sites shall monitor surface water and groundwater down gradient of on-site septic system leach fields, non-hazardous waste disposal facilities, and hazardous waste disposal facilities.

4 TERMS

Refer to the Integrated Management Standard glossary for definitions:

<http://myprospector.newmont.com/programs/ims/Pages/Glossary.aspx>

- Characterization
- Classification
- Closure
- Contaminated
- Disposal
- Decommissioning
- Elemental Mercury
- Hazardous waste
- Incineration
- Leachate
- Medical waste
- Minimization
- Non-hazardous waste
- Reclamation
- Recycling
- Reduce/Reduction
- Reuse
- Segregation
- Semi-solid waste
- Septic System
- Sewage
- Waste
- Waste stream

REFERENCES

- Integrated Management System (IMS), Interactions, Inspections and Audits Standard, NEM-IMS-STA-008
- Integrated Management System (IMS), Monitoring and Measurement, NEM-IMS-STA-007
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal – Annex III, 1673 UNTS 126; 28 ILM 657 (1989).
- Newmont Water Management Standard – NEM-SER-STA-001
- Technical Services - Processing, May 13, 2014. Process Products and Wastes Characterization and Testing Guideline, NEM-TES-GDL-403.

Waste Management Standard

DOCUMENT CONTROL

VERSION	AUTHOR	APPROVER	APPROVAL DATE
1.0	Mike Aire	Policies & Standards Committee	21 March 2014
2.0	Mike Aire	Global Governance Committee	10/11/19
2.1	Mike Aire	Global Governance Committee	2/19/2020

TABLES AND FIGURES

Table 1 – Hazardous Waste Classification Testing

This table describes analytical tests for process wastes including tailings, sludges, leach residues, carbon fines, refinery slags to identify potential environmental impacts for the purpose of identifying appropriate waste management practices that are protective of human health and the environment. For more details on waste characterization, see [Process Products and Wastes Characterization and Testing Guideline, NEM-TES-GDL-403](#)

Test	Description	Results
Solid Waste Disposal Characterization	The test is an 18-hour weak acid leach that is used to determine if a solid should be designated as a hazardous waste or is suitable for disposal in a municipal landfill (U.S. only). The concentrations of metals dissolved into the leach solution are compared to dissolved concentration limits for arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver.	If any dissolved metal (e.g., As, Ba, Ca, Cr, Pb, Hg, Se, Ag) concentrations are greater than the jurisdictional, beneficial use limits, waste shall be designated as a hazardous waste and disposed of in a designated facility.
Synthetic Precipitation Leaching Procedure	The SPLP test is to determine the mobility of inorganic analytes of solid wastes. It is applicable for single batch extractions only, as a screening test. It does not apply to organic substances, volatile matter or biologically active samples. Samples are reacted with an extraction fluid of deionized water for 18 hours in a bottle rolled end over end. The final leachate is filtered and submitted for analysis.	If any dissolved metal concentrations are greater than the jurisdictional, beneficial use limits, waste shall be designated as a hazardous waste and disposed of in a designated facility.
Humidity Cell Tests	The sample is finely crushed, if necessary, and placed in a cylindrical cell and flushed with humid air and deionized water every week to accelerate weathering and the effluent is analyzed. Results are used to identify potentially problematic materials requiring special handling.	If any dissolved metals concentrations are greater than the jurisdictional, beneficial use limits, waste shall be designated as a hazardous waste and disposed of in a designated facility.