

KMC 矿山废物管理政策

KMC Mine Waste Management Policy

KMC 为履行环境责任与社会责任，保障人类健康、安全及生态系统稳定，特制定本政策，作为矿山废物全生命周期管理的核心依据。本政策以“风险优先消除、影响最小化”为核心目标，覆盖废物产生、分类、储存、回收、处置等全流程，同时明确地下环境（含地下水资源、土壤层）保护要求，确保管理行为合规、科学、可持续。

To fulfill its environmental and social responsibilities and safeguard human health, safety, and ecosystem stability, KMC has formulated this policy as the core basis for the full life-cycle management of mine waste. This policy prioritizes risk elimination and minimizes impact, covering the entire process of waste generation, classification, storage, recycling, and disposal. It also clearly defines the requirements for underground environment protection (including groundwater resources and soil layers) to ensure that management practices are compliant, scientific, and sustainable.

一、政策核心原则 **Core Policy Principles**

1、安全优先原则：将人类健康与作业安全置于首位，所有废物管理行为需符合国家及行业安全标准，杜绝因废物泄漏、不当处置引发的人身伤害、健康损害事件。

2、环境友好原则：以保护自然环境为基础，严格控制废物对地表植被、土壤、水体（含地下水）、大气的影响，避免污染物跨区域迁移，维护生态系统平衡。

3、资源循环原则：最大化挖掘废物回收价值，通过技术升级与流程优化，推动可利用废物资源化、减量化，降低原生资源消耗与

废物最终处置量。

4、责任明确原则：明确各部门、岗位在废物管理中的职责，建立“谁产生、谁负责，谁管理、谁监督”的责任机制，确保政策落地执行。

1. Safety First Principle: Prioritizing human health and operational safety, all waste management practices must comply with national and industry safety standards to prevent personal injury and health damage caused by waste leaks or improper disposal.

2. Environmentally Friendly Principle: Based on protecting the natural environment, strictly control the impact of waste on surface vegetation, soil, water bodies (including groundwater), and the atmosphere, preventing cross-regional migration of pollutants and maintaining ecosystem balance.

3. Resource Recycling Principle: Maximize the recycling value of waste by promoting the resource recovery and reduction of usable waste through technological upgrades and process optimization, thereby reducing the consumption of primary resources and the amount of waste ultimately disposed of.

4. Clear Responsibility Principle: Clearly define the responsibilities of each department and position in waste management, establishing a responsibility mechanism of "whoever generates it is responsible; whoever manages it supervises it," ensuring policy implementation.

二、废物分类与管理要求 **Requirements for Waste**

Classification and Management

(一) 废物分类标准

1、一般矿山废物：包括采矿废石、选矿尾矿（非有毒有害类）、施工建筑垃圾等，需按产生来源、物理特性分类堆放，建立分类台账，记录产生量、堆放位置、处置去向。

2、危险矿山废物：包括含重金属尾矿、化学药剂残渣、油污废物、放射性废物等，需参照《国家危险废物名录》及行业标准单独标识、分类储存，台账需详细记录有害成分、浓度、处理方式及合规性证明。

(I) Waste Classification Standards

1. General Mining Waste: Includes mining waste rock, mineral processing tailings (non-toxic and hazardous), construction waste, etc. It must be classified and stacked according to its source and physical characteristics, and a classification ledger must be established to record the amount generated, the stacking location, and the disposal destination.

2. Hazardous Mining Waste: Includes tailings containing heavy metals, chemical residues, oily waste, radioactive waste, etc. It must be separately labeled and classified for storage in accordance with the "National Hazardous Waste List" and industry standards. The ledger must record in detail the hazardous components, concentration, treatment methods, and compliance certificates.

(二) 具体管理措施

1、储存管理

(1) 一般废物储存区需选址于地势较高、远离水源（含地下水补给区）及居民区的区域，设置防渗层、排水系统及围挡，防止雨水冲刷导致废物扩散；临时储存区需明确堆放时限（最长不超过 3 个月），逾期未处置需报备并制定延期方案。

(2) 危险废物储存区需采用全封闭或半封闭结构，配备防渗漏、防腐蚀、防扬散设施，设置有毒有害标识及应急防护用品（如防毒面

具、防护服、吸附材料），储存时限严格遵守国家规定（最长不超过1年），超期需委托有资质单位处置。

2、回收与资源化

成立废物回收专项小组，联合技术部门评估废物回收价值，对可再利用的废石（用于道路铺设、场地平整）、尾矿（提取有价元素）制定回收方案，明确回收流程、技术标准及责任部门，确保年度回收利用效率不低于行业平均水平。

3、最终处置

(1) 一般废物最终处置需选择合规的尾矿库、废石堆场，处置前需进行环境影响评估，处置过程中定期压实、覆盖，减少扬尘与水土流失；处置完成后需开展生态恢复（种植本土植被、修复土壤），确保区域生态功能逐步恢复。

(2) 危险废物需委托具备相应资质的第三方机构处置，签订规范的处置合同，留存处置记录（运输单据、处置报告），定期核查处置机构合规性，杜绝非法转移、处置行为。

(II) Specific Management Measures

1. Storage Management

(1) General waste storage areas must be located in areas with higher elevations, far from water sources (including groundwater recharge areas) and residential areas. They must be equipped with impermeable layers, drainage systems, and fencing to prevent rainwater runoff and waste diffusion. Temporary storage areas must have clearly defined storage periods (maximum 3 months). Failure to dispose of waste within the specified period requires reporting and the development of an extension plan.

(2) Hazardous waste storage areas must adopt fully enclosed or semi-enclosed structures, equipped with anti-leakage, anti-corrosion, and

anti-scattering facilities. They must be marked with toxic and hazardous materials and equipped with emergency protective equipment (such as gas masks, protective clothing, and absorbent materials). Storage periods must strictly comply with national regulations (maximum 1 year). Overdue waste must be disposed of by a qualified unit.

2. Recycling and Resource Utilization

A special waste recycling team will be established to jointly assess the recycling value of waste with technical departments. Recycling plans will be developed for reusable waste rock (for road paving and site leveling) and tailings (for extracting valuable elements), clearly defining recycling processes, technical standards, and responsible departments to ensure that the annual recycling rate is not lower than the industry average.

3. Final Disposal

(1) For general waste, compliant tailings ponds and waste rock dumps must be selected for final disposal. An environmental impact assessment must be conducted before disposal. During disposal, regular compaction and covering are required to reduce dust and soil erosion. After disposal, ecological restoration (planting native vegetation and soil remediation) must be carried out to ensure the gradual recovery of regional ecological functions.

(2) Hazardous waste must be disposed of by qualified third-party organizations. A standardized disposal contract must be signed, and disposal records (transport documents, disposal reports) must be retained. The compliance of the disposal organization must be checked regularly to prevent illegal transfer and disposal.

三、地下环境专项保护 **Special Protection of Underground**

Environment

1、源头防控：废物储存区、处置区选址前需开展地下水资源勘察，避开地下水饮用水源地、补给区及敏感含水层；储存设施需采用双层防渗结构（如高密度聚乙烯膜 + 黏土防渗层），定期检测防渗性能，防止废物渗漏污染地下水。

2、监测机制：在废物储存区、处置区及周边设置地下水监测井，每月采集水样检测 pH 值、重金属含量、化学需氧量等指标，建立监测台账；若发现指标异常，立即启动预警机制，排查渗漏点并采取应急处理措施（如设置截渗墙、抽取受污染水体处理）。

3、修复措施：若发生地下水污染，需立即制定污染修复方案（如渗透反应墙、生物修复），明确修复目标、技术路线及完成时限，定期评估修复效果，直至地下水水质恢复至标准水平。

1. Source Control: Groundwater resource surveys must be conducted before selecting sites for waste storage and disposal areas to avoid groundwater drinking water sources, recharge areas, and sensitive aquifers. Storage facilities must employ a double-layer impermeable structure (such as a high-density polyethylene membrane + clay impermeable layer), and their impermeability must be tested regularly to prevent waste leakage and groundwater contamination.

2. Monitoring Mechanism: Groundwater monitoring wells should be installed in and around waste storage and disposal areas. Water samples should be collected monthly to test indicators such as pH value, heavy metal content, and chemical oxygen demand (COD), and a monitoring log should be established. If any abnormal indicators are detected, an early warning mechanism should be activated immediately, leakage

points should be investigated, and emergency treatment measures should be taken (such as installing cutoff walls and extracting and treating contaminated water).

3. Remediation Measures: If groundwater pollution occurs, a remediation plan (such as a permeable reactive barrier or bioremediation) must be developed immediately, clearly defining remediation objectives, technical routes, and completion deadlines. The remediation effect should be evaluated regularly until the groundwater quality returns to standard levels.

四、监测、监督与应急管理 Monitoring, Supervision and Emergency Management

1、监测体系：建立“日常巡查 + 定期监测”机制，每日对废物储存区、处置区进行巡查（检查设施完整性、有无泄漏迹象），每月开展环境监测（大气、土壤、水体），每季度委托第三方机构进行合规性检测，确保管理行为符合政策及标准要求。

2、监督考核：将废物管理纳入部门及员工绩效考核，明确考核指标（如废物分类准确率、回收利用率、无泄漏天数）；对违反政策的行为（如混放危险废物、未按规定处置）予以通报批评，情节严重的追究相关人员责任。

3、应急处理：制定《矿山废物突发环境事件应急预案》，明确废物泄漏、火灾、爆炸等突发事件的应急处置流程、责任分工及物资保障（如应急泵、吸附材料、防护装备）；每年组织1-2次应急演练，提升员工应急处置能力；若发生突发事件，立即启动预案，控制事态发展，减少环境与健康影响，并按规定向当地环保部门报告。

1. Monitoring System: Establish a "daily inspection + periodic monitoring" mechanism. Daily inspections of waste storage and disposal



areas (checking facility integrity and for any signs of leakage) will be conducted. Monthly environmental monitoring (air, soil, and water) will be carried out. Quarterly compliance testing will be commissioned to a third-party organization to ensure management practices comply with policies and standards.

2. Supervision and Assessment: Waste management will be incorporated into departmental and employee performance evaluations, with clearly defined performance indicators (such as waste classification accuracy, recycling rate, and number of leak-free days). Violations of policies (such as mixing hazardous waste or failing to dispose of waste according to regulations) will be publicly criticized, and those with serious violations will be held accountable.

3. Emergency Response: Develop an "Emergency Response Plan for Sudden Environmental Incidents Involving Mine Waste," clearly defining the emergency response procedures, division of responsibilities, and material support (such as emergency pumps, adsorption materials, and protective equipment) for sudden incidents such as waste leaks, fires, and explosions. 1-2 emergency drills will be organized annually to improve employees' emergency response capabilities. In the event of an emergency, the plan will be activated immediately to control the situation, minimize environmental and health impacts, and report to the local environmental protection department as required.

五、社区沟通与信息公开 Community Communication and Information Disclosure

1、社区参与：定期（每半年）向周边社区通报矿山废物管理情况（如废物产生量、处置方式、环境监测结果），邀请社区代表、

环保组织参与废物管理监督（如巡查、监测），听取社区意见与建议，及时调整管理措施，保障社区居民知情权与参与权。

2、信息公开：每年在公司官网、厂区公告栏公开《矿山废物管理年度报告》，内容包括废物产生与处置情况、环境监测数据、生态恢复进展等，接受社会监督。

1. Community Participation: Regularly (every six months) report to surrounding communities on mine waste management (such as waste generation, disposal methods, and environmental monitoring results), invite community representatives and environmental organizations to participate in waste management supervision (such as inspections and monitoring), solicit community opinions and suggestions, adjust management measures in a timely manner, and ensure community residents' right to know and participate.

2. Information Disclosure: Publish the "Annual Report on Mine Waste Management" annually on the company's official website and factory bulletin boards, including information on waste generation and disposal, environmental monitoring data, and ecological restoration progress, to accept public supervision.

六、政策实施与更新 **Policy Implementation and Updates**

1、本政策自发布之日起实施，各部门制定相应的实施细则（明确岗位职责、操作流程、技术标准），确保政策落地执行。

2、本政策由公司SHE管理委员会批准。SHE管理委员会负责对本政策所载各项承诺进行治理监督，审查政策实施情况，监督目标和指标完成进展，并推动废弃物管理工作的持续改进。环境管理、可持续发展及相关职能部门负责本政策的具体实施、监督和报告。废弃物管理相关重大风险、绩效结果及目标达成进展应定期向KMC SHE

管理委员会汇报并接受审查。

3、公司每 2 年对本政策进行评估，根据国家法律法规更新、行业标准变化、环境风险评估结果及管理需求，对政策内容进行修订完善，确保政策的科学性与适用性。

1. This policy shall be implemented from the date of its issuance. Each department shall formulate corresponding implementation rules (clearly defining job responsibilities, operating procedures, and technical standards) to ensure the policy is effectively implemented.

2.This Policy is approved by the KMC SHE Management Committee. The SHE Management Committee is responsible for providing governance oversight of the commitments contained in this Policy, reviewing its implementation, monitoring progress against objectives and targets, and promoting the continual improvement of waste management practices.The Environmental Management, Sustainability, and other relevant functional departments are responsible for the implementation, monitoring, and reporting of this Policy.

Significant

waste management-related risks, performance results, and progress toward achieving objectives and targets shall be reported regularly to the KMC SHE Management Committee for review and oversight.

3. The company shall evaluate this policy every two years, revising and improving its content based on updates to national laws and regulations, changes in industry standards, environmental risk assessment results, and management needs to ensure its scientific validity and applicability.

叶建国

签发人：总经理 / SHE委员会主任

Issued by: General Manager / Chair of the SHE Committee

2026年1月1日

1 Jan 2026

