Anglo<mark>Gold</mark>Ashanti

MANAGEMENT STANDARD			
WASTE			
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BRIEF DESCRIPTION OF CHANGES			

Revision 02:

- Condensing the requirements of Revision 1
- Removal of performance assessment framework
- Title change (replacement of "Guideline" with "Standard")
- Modification of document identification nomenclature
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- Revision 03:
- Cyanide Management is no longer excluded from the requirements of the Management Standard
- Minor clarifications and text edits
- Removal of 'guidance'-type footnotes
- Revision and clarification of section 2. OBJECTIVES to include "waste management is guided by the 'waste management hierarchy', with the primary objective being waste prevention and minimisation"
- Inclusion of Hazardous Waste and Non Hazardous Waste in 6. GLOSSARY
- Deletion of clause 4.2 "This standard applies to valueless waste streams which may be generated during the mining and processing of the ore or the treatment of water, for example; chemical precipitates of arsenic or sulphur"
- Adjustment to clause 5.4.2.3 to include 'offsite recycling or treatment' of hazardous waste
- Update of template



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1. INTRODUCTION

Waste is any substance or object which its producer or the person in possession of it discards or intends to discard. A wide spectrum of wastes is generated throughout the mining lifecycle. These range from inert to reactive, benign to highly toxic, organic to inorganic, and arise from the commercial, industrial and domestic activities of the company. Hazardous wastes typically require compliance with regulatory controls. The management of low hazard and non-hazardous waste tends to be based on economic considerations.

This document provides a framework for the management of non-mineral waste in AngloGold Ashanti (AGA) managed sites.

2. OBJECTIVES

The objective of this document is to ensure that waste management is guided by the 'waste management hierarchy', with the primary objective being waste prevention and minimisation. The standard also aims to ensure that actual and potential impacts arising from waste generation, handling, transportation, reuse, recycling, treatment and disposal are managed in accordance with host country requirements and the Values and Business Principles of AGA.

3. ACCOUNTABILITY AND RESPONSIBILITY

Overall accountability for implementing this standard lies with the Manager of the site. Responsibility for its implementation can be delegated to a designated person(s) who must clearly understand their role(s) and responsibilities.

4. SCOPE

- 4.1 This waste management standard defines the approach to the management of waste products at AGA managed sites, including activities of waste generation, collection, segregation, transport, reuse, recycling, treatment and disposal.
- 4.2 Where AGA has no operational responsibility but a significant equity stake, and an equivalent standard is not in place, this standard must be made available to the operator for application.
- 4.3 Onsite contractors and subcontractors must adopt this standard unless they have an alternative waste management standard, approved in writing by AGA.
- 4.4 This waste management standard does not apply to radioactive substances and mineral wastes such as tailings and waste rock

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5. REQUIREMENTS

5.1. LEGAL AND OTHER REQUIREMENTS

AGA managed sites must manage all wastes and on-site waste disposal facilities in compliance with applicable international treaties, national laws and regulations, environmental licence conditions and any other binding obligations.

5.2. CLASSIFICATION OF WASTE STREAMS

- 5.2.1 A register of the different waste streams generated under normal and abnormal conditions by the site must be developed and maintained.
- 5.2.2 The identified waste streams must be characterised, for example as domestic waste, hydrocarbon waste, etc and include a classification of either hazardous or non-hazardous. Those subject to regulatory controls must be clearly distinguished.

5.3. DEVELOPMENT OF WASTE MANAGEMENT PROGRAMMES

- 5.3.1 Sites must develop waste management programmes¹ in the context of the legal and other obligations applicable to the different types of waste identified. Documented waste management programmes must be maintained.
- 5.3.2 The waste management programmes must be guided by the following hierarchy of waste management strategies:
 - Waste avoidance practices which prevent the generation of waste through e.g. purchasing practices aimed at reducing volumes of packaging; ensuring waste materials are recyclable, etc.
 - Waste reduction practices which reduce waste production at source through e.g. more efficient use of physical resources or maintaining optimum levels of substances which are prone to expiring.
 - iii. **Waste reuse** where objects or materials can be reused directly or after refurbishment, such as electric motors, pump components or printer cartridges.
 - iv. **Waste recycling** using waste materials, such as waste heat, metal, plastic, wood and paper, as raw material inputs into other processes or industries.
 - v. **Waste treatment** transforming a nuisance or hazardous waste into a form that is easier to manage, e.g. through chemical stabilisation, or the chemical extraction of toxic constituents through, for example, precipitation.
 - vi. **Waste disposal** the disposal of hazardous & sub-economic waste to appropriately licensed, constructed and managed waste disposal facilities.

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¹ These programmes should be integrated into the site Environmental Management System through, for example, site specific procedures.

5.4. COMPONENTS OF WASTE MANAGEMENT PROGRAMMES

5.4.1 Segregation, handling and storage

- Segregation² measures for waste streams according to their chemical and physical 5.4.1.1 characteristics must be specified in the waste management programme, while considering the available waste management strategies.
- 5.4.1.2 The location and design specifications³ of waste transfer and disposal facilities must be suited to the waste stream being managed and ensure protection of the environment and the health and safety of people.

5.4.2 Transport, recycling, treatment or disposal

- 5.4.2.1 The regulatory requirements relating to the transportation of hazardous & non-hazardous waste materials in host countries must be specified in the waste management programmes.
- 5.4.2.2 Waste disposal on AGA property, including in landfill sites, pits and via co-disposal in rock dumps, may take place only if approved by the host country government.
- 5.4.2.3 Proof of safe offsite recycling, treatment or disposal of hazardous waste materials must be maintained.
- 5.4.2.4 Where off-site recycling, treatment or disposal is done by contractors, the contractor must provide proof of registration to conduct such business and the proof of safe recycling, treatment or disposal.

5.5. MONITORING

Where waste transfer, sorting, recycling, treatment or disposal activities present a risk of land and water becoming contaminated, suitable monitoring programmes to enable corrective and preventative actions must developed and implemented.

5.6. EMERGENCY PREPAREDNESS AND RESPONSE

Sites must include appropriate responses to waste incidents, with specific responses for those related to hazardous wastes, in their emergency preparedness and response planning.

5.7. REPORTING

5.7.1. Information⁴ on hazardous and non-hazardous waste materials must be collated and reported in accordance with regulatory and other reporting requirements.

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² Where feasible, segregation should be performed at source since this lowers the potential for waste mixing and contamination and usually as a consequence, the overall cost of waste handling.

Including engineered protection measures such as a firm, waterproof base; liners, protection from the ingress and egress of storm water from surrounding areas; and drainage into a containment area to prevent contaminated water from entering the environment.

⁴ Information such as that required for GRI reporting,

5.7.2. The results of monitoring conducted to verify the integrity of environmental protection measures must be maintained.

5.8. CLOSURE

AGA operations must adapt and incorporate their waste management programmes into the site Closure Plan, as part of the decommissioning plan, taking into account the reduced level of resources on site.

6. GLOSSARY

- 6.1 **Hazardous waste** is waste that has the potential, even in low concentrations, to have a significant adverse effect on public health and the environment because of its toxicological, chemical and physical properties, or is waste classified as such by host country law. Hazardous wastes streams can be classified into waste streams such as recyclable or non-recyclable, with further logical subcategories, such as asbestos, fluorescent tubes, electronic, hydrocarbons, PCB-contaminated transformer oils, cyanide-contaminated waste, solvents, sewage, etc.
- 6.2 **Manager** refers to the manager in direct control of the whole site
- 6.3 **Non Hazardous waste** streams can be classified as recyclable/non-recyclable, ferrous & nonferrous metals, wood, paper, cardboard, plastic, etc.
- 6.4 **Operation** refers to a producing mine.
- 6.5 **Project** refers to an exploration project or a new mine expansion.
- 6.6 **Site** is used when referring collectively to gold producing operations and to Greenfields and Brownfields exploration and expansion projects.
- 6.7 **Mining lifecycle** encapsulates all stages of a mine project, from exploration to operation and closure.