



# GROUP ENVIRONMENT STANDARD 7 GENERAL WASTE MANAGEMENT

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## 1. INTENT

IGO is committed to the proactive and sustainable management of waste generated at our work places. We will:

- ensure that all reasonable and practicable measures are undertaken to avoid, reduce, reuse, recycle or treat waste before disposal, with a focus on best practice waste management
- minimise any potential environmental and human health impacts from the generation, storage and management of waste, and reduce long-term post-closure environmental liabilities
- encourage a 'cradle to grave' approach to waste management that incorporates mine closure planning at all IGO exploration projects and operations.

## 2. APPLICATION

This standard shall apply to all IGO exploration and mining activities, projects and operations (collectively referred to as 'sites'). All IGO operations and projects shall comply with the provisions of this standard, and all legislative requirements relevant to each jurisdiction.

For the purpose of this standard, waste refers to all non-mineral waste generated and stored on IGO sites. This includes but is not limited to putrescible waste, industrial waste, hazardous waste, controlled waste (sewage, tyres, etc) and waste generated during site demolition and closure (section 12). For information on Mineral Waste Management (ie tailings and waste rock), refer to IGO Group Environmental Standard 3.

## 3. WASTE MANAGEMENT PLAN

All operating mine sites, mines in construction or 'care and maintenance', and long-term exploration camps or similar, must have a Waste Management Plan.

The Waste Management Plan (WMP) must include:

- a description of the key waste streams generated by the site
- a description of how the hierarchy of waste management (section 4) is applied to each waste stream
- a description of how individual waste streams are handled and or transported as relevant. Particular note must be made where waste streams are transported off site.
- references to legislation, codes and or regulatory requirements related to specific waste streams
- for on-site waste facilities, or for any waste management facility owned by IGO:
  - a description of the engineering design criteria, drawings, figures and maps;
  - licences and reference to the relevant conditions in the IGO Obligations Register
- identify the environmental aspects and impacts associated with each waste stream
- an assessment of the risks associated with the key waste streams. The following risk types must be considered: OH&S, environmental, Community and reputation, financial loss or exposure, and statutory compliance

- a description of the relevant controls and management measures required to achieve the intent of this standard
- an overview of the site's operating procedures relating to waste management;
- the site's waste inspection and monitoring program (inclusive of a schedule)
- a description of, as pertains to waste management, the site's roles & responsibilities, emergency response procedures, training and contractor management.

As relevant, the WMP shall be integrated with, an appropriately cross reference mine and closure planning.

The WMP shall be reviewed triennially or upon significant changes to the design, risk or management measures associated with waste management. The WMP shall be incorporated into the Environmental Management System.

#### 4. HIERARCHY OF WASTE MANAGEMENT

In managing waste, IGO will apply the hierarchy of waste management. The Table 1 – Hierarchy for Waste Management Methodology lists in order of preference, the methodology to be applied to each waste stream:

**Table 1 – Hierarchy for Waste Management Methodology**

Methodology	Description
<b>Avoidance</b>	The avoidance or elimination of a waste stream through substitution of inputs, increasing efficiencies in the use of raw materials, redesigning processes and improving maintenance and operation of equipment
<b>Reduction</b>	Reducing the mass of waste produced at the source through efficiencies in design, operation, processes and purchasing
<b>Reuse</b>	
<b>Recycling</b>	Maximising the reuse of objects and materials
<b>Treatment</b>	Use waste materials for input into other processes or industries, including waste products such as water, metal, plastic, timber, tyres, paper and heat.
<b>Disposal</b>	Transform a waste into a form that is easier to manage

#### 5. WASTE MANAGEMENT FACILITIES

Waste management facilities (specifically including landfills and waste segregation facilities) shall be designed, located, licenced, constructed and operated to ensure protection of the environment, human health and the safety of people. Waste management facilities shall be designed by a competent person. The design shall reflect recognised good practice and shall include facility closure.

#### 6. PROCUREMENT CONTRACTS

Where products, containers and/or packaging can be returned to a supplier, procurement contracts shall require suppliers to take responsibility for the removal from site for suitable off-site management.

#### 7. WASTE TRANSPORT

Waste shall be transported both on and off site in accordance with regulatory requirements relevant to each project site. Records of waste transported on and off site shall be maintained. Where waste is sent off site for disposal, the site shall verify that the receiving third-party disposal facility is appropriately licenced to receive IGO's waste.



## 8. INSPECTIONS AND MONITORING

Subject to the outcomes of a risk assessment as document in the site's Waste Management Plan, and or as required by licence and regulatory requirements, a periodic inspection and monitoring program shall be established for all waste facilities and waste streams. The program shall ensure that wastes are being appropriately segregated, stored and treated in accordance with regulatory requirements and the intent of this standard.

Non-conformances and corrective actions shall be recorded in INX.

## 9. RESPONSIBILITIES

Clear responsibilities are to be assigned for the management of waste at each site. A cradle-to-grave approach to waste management and ownership should be applied as far as reasonably practicable. It is the responsibility of the:

- General/Registered Manager to ensure their site has a WMP and that this WMP is updated at least triennially
- The senior environmental officer on site, or Registered Manager's delegate, to oversee the completion of an internal audit process to validate or otherwise the site's compliance to this standard and the site's WMP
- Employees and all contractors to safely and correctly dispose (or remove from site) waste material at our exploration projects and operations

## 10. DATA MANAGEMENT

IGO collectively, and each site shall maintain a database of waste types, volumes and management practices. The data collected must include spatial datasets and databases, design and construction information, operation and monitoring information or other information that meets a specific purpose (e.g. maps, area statistics or modelled environmental impacts). All technical reports should be referenced and included in the database.

## 11. RELATED DOCUMENTS

This standard shall be viewed with reference to the following IGO documentation where relevant:

- IGO Environmental Management System Manual
- Mining Proposals
- Waste Management Plans
- Mine Closure Plans
- Procedures

## 12. DEFINITIONS

**Table 2 - Definitions**

<b>Term</b>	<b>Definition</b>
<b>Controlled waste</b>	Refers to waste materials that are subject to regulations specifying their management. This includes tyres, sewage and other forms of waste generated by industrial, medical or commercial activities.
<b>Industrial waste</b>	Refers to waste materials generated by construction and maintenance activities including machinery, equipment, containers, packaging and by-products considered non-hazardous.
<b>Hazardous waste</b>	Refers to any solid, liquid or gaseous waste that has the potential to impact human health and/or the environment which may include substances that are toxic, infectious, carcinogenic, explosive, flammable, corrosive oxidising or radioactive. These waste substances require special management to reduce risk.
<b>Non-hazardous waste</b>	Refers to wastes that do not pose a risk to human health/and or the environment. These wastes are usually inert and do not require special management.
<b>Non-mineral waste</b>	Refers to waste materials generated by construction and maintenance activities including machinery, equipment, containers, packaging and by-products considered non-hazardous.
<b>Putrescible waste</b>	Refers to waste generated by human consumption activities that are likely to become putrid, including wastes that contain organic materials such as food wastes, animal wastes and biodegradables including paper and cardboard.