EXPRO
هيئة كفاءة الإنفاق والمشروعات الحكومية
Expenditure Efficiency & Projects Authority

National Manual of Assets and Facilities Management
Volume 5, Chapter 17

Waste Management Procedure for Healthcare

Document No. EOM-ZO0-PR-000077 Rev 001

Document Submittal History:

Revision:	Date:	Reason For Issue
000	28/03/2020	For Use
001	18/08/2021	For Use

THIS NOTICE MUST ACCOMPANY EVERY COPY OF THIS DOCUMENT

IMPORTANT NOTICE

This document, ("Document") is the exclusive property of Government Expenditure & Projects Efficiency Authority.

This Document should be read in its entirety including the terms of this Important Notice. The government entities may disclose this Document or extracts of this Document to their respective consultants and/or contractors, provided that such disclosure includes this Important Notice.

Any use or reliance on this Document, or extracts thereof, by any party, including government entities and their respective consultants and/or contractors, is at that third party's sole risk and responsibility. Government Expenditure and Projects Efficiency Authority, to the maximum extent permitted by law, disclaim all liability (including for losses or damages of whatsoever nature claimed on whatsoever basis including negligence or otherwise) to any third party howsoever arising with respect to or in connection with the use of this Document including any liability caused by negligent acts or omissions.

This Document and its contents are valid only for the conditions reported in it and as of the date of this Document.

Table of Contents

1.0 PURPOSE

Waste is a substance or object that is no longer part of the normal commercial cycle or chain of utility. Most waste goes to landfill, incineration or is disposed of using alternative technologies. Waste, irrespective of its processing method, has the potential to pollute land, air, and water. It is therefore essential to have robust measures in place, such as Waste Management Plans and Procedures, to govern the processing of waste.

The purpose of this Waste Management Procedure for Healthcare Facilities is to guide the Entity in preparing its own Waste Management Procedures. It is specifically targeted at Facility Management personnel, but should also be read and understood by all Waste Management personnel such that it can be suitably applied at all levels of the organization.

Facility Management is responsible for the safe storage and security of hazardous/special waste and the safe disposal of non-hazardous waste generated on-site in accordance with current statutory legislation. This document details the operational considerations which Facility Management should make throughout the Waste Management Process of: Waste Segregation, Collection, Transportation, Storage, Sorting, and Recycling.

2.0 SCOPE

The objective of having a robust Waste Management Procedure and associated Waste Management Plan in place is to contribute to the Entity's sustainability strategy and to promote cultural change. In addition, the Procedure will support each Entity in:

- Raising awareness of the importance of waste management in line with best practice
- Satisfying both statutory legislation and local requirements
- Implementing the Hierarchy of Waste (Reduce – Reuse – Recycle – Recover – Dispose).

3.0 DEFINITIONS

The table below contains definitions of common terms related to waste management extracted from applicable laws, as well as additional terms which relate to the guidance contained within this Procedure.

Term	Definition
Bulky Waste	All waste of large size that is difficult to collect with components of other Municipal Solid Waste (MSW). These include vehicle parts, tree trunks, furniture, and household electrical appliances.
Chemical Waste	Chemicals which are considered dangerous and have any of the following characteristics: • Toxic • Flammable • They cause the corrosion of other material • Active or explosive • Have an ability to create congenital defects in fetuses or change in genetic substances, cause cancer or lead to stopping the growth of cells
Classification	Evaluation of the financial, technical, administrative, and executional capacities of the waste management contractor or waste management investor to be accorded a suitable field and level in accordance with the provisions of the Contractor Classification Law and the Implementing Regulations thereof.
Collection	Collection of municipal solid waste from collection points using trucks and machinery dedicated for such purpose.
Commercial and Administrative Waste	Waste produced by shops, markets, commercial centers, restaurants, shopping centers, entertainment centers, hotels, and all administrative offices and institutions such as schools, universities, and ministries.

Compressed Gas Containers Waste	Empty or damaged compressed gas containers used in filling inert gases or gases that can cause damage or might explode when they are exposed puncturing or high temperature.
Confidential	Printed paper-based information not intended to become generally available to all
Construction and Demolition Waste	Construction and demolition waste resulting from construction, maintenance, demolition, and leveling work, as well as waste resulting from road construction and others.
Container	Any vessel used for the collection or transportation of materials or for the sorting of waste.
Contractor	An individual, party, or company contracted by the Ministry, or by competent entities, in Municipal Solid Waste management.
Duty of Care	The Duty of Care applies to anyone who is the holder of controlled waste. Anyone subject to the Duty of Care who has some 'controlled waste' must identify and describe the kind of waste it is
Environmental Evaluation	A study performed for the project to determine the potential effects or results of the project as well as the procedures and suitable methods to prevent harmful environmental effects in accordance with environmental standards and criteria existing in the Kingdom of Saudi Arabia (in accordance with the Saudi Environmental Law).
Facilities Management (FM) Provider	Facility-appointed Contractor
Facility	Any hospital, clinic, medical center, veterinary center, drug company, medical research center, pharmacy or public or private convalescent home
Final disposal of Municipal Solid Waste	Placement of unusable Municipal Solid Waste or the recycling of usable Municipal Solid Waste at landfills.
Genotoxic and Cytotoxic Waste	Waste that can affect genes and cells as they lead to health problems, such as congenital defects in fetus or are able to cause cancer and have the ability to stop the growth of cells. These materials are used in nuclear medicine sections and units of oncology and radio diagnosis, including sewage water produced from the water closets of patients treated with those materials
Green Waste	Waste generated from gardens and private and public parks, the source of which is green landscapes, grass, trees, and waste resulting from landscaping and maintenance works.
Hazardous Industrial Waste	Waste resulting from industrial activities that may contain solvents, degreasers, oils, radioactive materials, coloring materials (inks), sludge, acids and alkalis, or any industrial waste other than Municipal Solid Waste.
Hazardous Medical Waste	All waste produced by sources contaminated or possibly contaminated with infectious, chemical, or radioactive agents. They constitute the smallest portion of total medical waste and also pose risk to individuals, the community and the environment during their production, collection, handling, storage, transportation or disposal
Incineration	Ignition of Municipal Solid Waste to discharge it by means of open burning or by using sealed furnaces (incineration) regardless of energy recovery.
Infectious Waste	Waste containing pathogens (bacteria, viruses, parasites or molds) in quantities or concentrations enough to cause disease to people exposed to infection. It includes remains of bacterial culture, residues of surgical operations, residues of isolation wards for patients having infectious diseases and residues of dialysis section
Landfill	Facility where Municipal Solid Waste is buried underground in accordance with adopted technical standards for the purpose of eliminating its impacts that harm public health and the environment.
Law	Municipal Solid Waste Management Law

Litter	Waste disbursed and distributed randomly on streets, roads, and locations as a result of the random dumping of waste or the movement of wind.
Municipal Solid Waste (MSW)	All materials dumped or disposed of that are of no benefit for their producer and are not deemed as hazardous healthcare waste or hazardous industrial waste. Such materials include household waste, construction and demolition waste, commercial waste, administrative waste, industrial waste, green waste, healthcare waste, and litter.
Municipal Solid Waste Management	Procedures undertaken for the separation, collection, transportation, storage, sorting, recycling, treatment, and final disposal of waste, including the supervision of such procedures, due care at final disposal sites, and studies and researches performed for any of such procedures.
Parts and remains of Body Organ Waste	Tissues, organs or their parts, fetal and placental tissues, carcasses with the exception of implanted teeth, blood and its products, and other bodily fluids and
Pharmaceutical Waste (Medicines)	Waste produced from the manufacturing and preparation of medicines, pharmaceutical products, damaged or expired medical products, contaminated medical products, sera and vaccines and includes vessels and instruments used in their production, filling and distribution
Producer	Any individual, party, or organization whose activity leads to the production of medical waste
Radioactive Materials Waste	Includes all radioactive (solid and liquid) material used in examination, diagnosis and treatment and all materials contaminated with them (whether they are solid or liquid)
Recycling	Preparation of Municipal Solid Waste materials for recovery or reuse as raw materials in manufacturing processes.
Risk Assessment	Formally approved assessment and record of associated hazards and risks stating suitable and sufficient controls
Sanitary landfilling	A method of disposing of Municipal Solid Waste by burying it in an environmentally safe manner in sanitary, engineered landfills designed for environmental improvements.
Segregation	Segregating the group of Hazardous Medical Waste in the bags and containers allocated for them, starting from the point of producing them in the facility and through the stages of their on-site collection, packing, storage, and transportation
Sharp Instrument Waste	Instruments that can cause cut or prick injuries in the body, such as syringes, lancets, blades, broken glass, other sharp instruments and fragile glass containers
SIC Code	The Standard Industrial Classification (SIC) are four-digit codes that categorize the industries that companies belong to, based on their business activities. An alternative to SIC codes are six-digit NAICS (North American Industry Classification System) codes. A further alternative to SIC codes are EWC/LOW (European Waste Catalogue/List of Wastes) codes, which are also identified six digits
Sorting	The manual or automatic separation of Municipal Solid Waste components from one another such as paper, glass, metals, and others at transfer stations or sorting and treatment plants for purposes of recycling or treatment
Sorting and Treatment Plants	Facilities or plants to which Municipal Solid Waste is delivered for sorting, treatment, and preparation of its components for reuse or as raw materials in manufacturing processes.
Source Separation	Separation and segregation of the various types of Municipal Solid Waste that can be reused or recycled at production sites.

Storage	Reservation of all or some of the Municipal Solid Waste components for future use.
Transfer Stations	Plants or facilities used partially or utilized during one of the stages of transportation of Municipal Solid Waste to treatment or sorting plants or to final disposal sites for the purpose of reducing transportation costs.
Transportation	Transportation of Municipal Solid Waste from its sources and collection points to transfer stations, sorting and treatment plants, or landfills using adopted transportation methods.
Transportation Document	The application that includes all data taken and signed by the Producer, the Transporter, and the Disposer. It is often comprised of several copies accompanying the load of Hazardous Medical Waste carried from the facility producing waste to the treatment unit as per Form No. (1) – Application for Off-site Transportation of Waste Permit
Transporter	The individual, company, or public or private establishment who works in the field of transporting Hazardous Medical Waste to the treatment and disposal unit
Treatment	Changing the characteristics of Municipal Solid Waste after sorting for the purpose of reducing its size or facilitating usage upon reuse or recycling.
Urban Areas	Cities, villages, and urban centers that have growth potential. These could be classified into small cities, medium cities, and large cities.
Waste	Any substance or object which the producer or the person in possession discards or intends or is required to discard
Waste Producer	An individual, party, or company that produces Municipal Solid Waste
Waste Treatment Unit	The facility where the process of Hazardous Medical Waste treatment will be conducted
Abbreviations	
A&E	Accident & Emergency
COSHH	Control of Substances Hazardous to Health – assessment to be carried out by each Entity during preparation of Waste Management Plan and Procedures
CPD	Continuous Professional Development
GAMEP	General Authority of Meteorology and Environment Protection
H&S	Health and Safety
MOH	Ministry of Health
MOMRA	Ministry of Municipal and Rural Affairs
NMA&FM	National Manual of Assets and Facilities Management
PPE	Personal Protective Equipment
Sanpro	Sanitary products
SDS	Safety Data Sheet
SIRC	Saudi Investment Recycling Company
SLA	Service Level Agreement
WEEE	Waste Electrical and Electronic Equipment

4.0 REFERENCES

Given that Healthcare Facilities are the primary Waste Producer of Hazardous Medical Waste in KSA, guidance contained within this Procedure is primarily based upon:

- Gulf Cooperation Council (GCC) Uniform Law for Medical Waste Management (amended in Jumada Thani 1440H/February 2019) KSA, Ministry of Health (MOH) – Laws and Regulations.

Healthcare Facilities also produce other forms of waste such as Municipal Solid Waste (MSW). Therefore, guidance featured herein pertaining to forms of Waste other than Hazardous Medical Waste is based upon:

- GCC Uniform Law for Municipal Solid Waste Management (Rabi' al-Awwal 1437H) KSA, Ministry of Municipal and Rural Affairs (MOMRA) – Laws and Regulations

Other agencies cited and referenced within this document are as follows:

- International Standards Organization (ISO) 14001: 2015, Standard for Environmental Management Systems.
- United States Environmental Protection Agency (EPA) Report: Recycling Economic Information (REI) Study, 2016

References to other procedures contained within the National Manual of Assets and Facilities Management (NMA&FM) are as follows:

- NMA&FM – Volume 17, Sustainability Procedure (EOM-ZN0-PR-000002)

5.0 RESPONSIBILITIES

This section outlines responsibilities of all stakeholders involved in the Hierarchy of Waste (Reduce – Reuse – Recycle – Recover – Dispose).

5.1 The Entity

Healthcare Facilities shall ensure that:

- A Waste Management Policy is established and maintained
- All persons within the Entity (i.e. Senior Leadership Team, Facilities Management, Medical Staff, Waste Handlers, and Cleaning Staff) comply with the Policy, and associated waste regulations
- There are systems in place to monitor compliance and report progress.

Producers of waste should quantitatively and qualitatively reduce the rate of waste production through a variety of measures, including:

- Review of procurement practices
- Developing equipment specifications
- Implementing retro-fit measures to existing infrastructure
- Adopting clean technology
- Selecting alternative materials which cause less damage to the environment and public health.

Every facility should set up an integrated Waste Management Program comprising the above measures, as a minimum. See Volume 17, Sustainability Procedure (EOM-ZN0-PR-000002) for guidance in setting up a Waste Management Program.

In collaborating with stakeholders, entities shall:

- Make information available (including Policies, Procedures, and Plans) to demonstrate compliance with legislation

- Comply with recording and reporting practices outlined herein
- Provide assistance as required to MOH and MOMRA (as applicable) to allow them to execute their responsibilities.

5.2 Healthcare Director

The Healthcare Director is responsible for:

- Implementing the Entity's Waste Policy and associated procedures
- Ensuring that no conflict exists between any appointed Contractor's Waste Policy and procedures, and that of the Entity
- Ensuring Tenants or Service Providers within the Facility are managing their waste as per GCC Law.

5.3 Facility Managers and Contractor Managers

Facility Managers are those directly employed by the Entity and whom report to the Facility Director. In some entities, this entire role, or specific responsibilities under the role are outsourced to a Contractor. A Facility Manager employed by a Service Provider is referred to herein as a Contractor Manager.

The Facility Manager or Contractor Manager shall:

- Ensure that all waste storage, handling, and disposal practices comply with the requirements outlined by statutory legislation, and appointed facility and Contractor policies and procedures
- Train all staff in appropriate infection control and waste safety issues. This includes specific induction training
- Ensure formal, written risk assessments are carried out on tasks posing a significant risk to staff or others
- Ensure all staff involved in waste handling, as part of their normal duties, have received the appropriate information, instruction and training
- Monitor their staff to establish compliance with policies, procedures, and safe systems of work

5.4 Waste Management Officers

Waste Management Officers are responsible for ensuring that:

- Waste is managed according to legal and other requirements
- Standards are maintained
- Everyone is aware of these requirements
- Relevant personnel are appropriately trained to safely deal with waste in their areas
- All necessary data is recorded and transmitted to stakeholders

5.5 Waste Handlers

Waste Handlers are key Operators within the Facility and shall ensure that Waste in any intermediate storage areas is properly segregated, contained, and labeled. The role of Waste Handler is independent to that of Cleaning or Domestic staff.

Any problem noted must be immediately brought to the attention of the responsible person in that area.

5.6 Health & Safety Officer

The Health & Safety (H&S) Officer shall oversee activities at Waste Collection/Storage/Recycling Points alongside the Waste Management Officer, ensuring that:

- Access is possible by appropriate vehicles to collect and remove waste to the correct facility

- Points are accessible and resilient case of emergency and for purposes of inspection and monitoring
- All containers therein shall be checked regularly for leaks
- Staff and Contractors are operating in a safe manner in accordance with Operating Procedures.

5.7 All Employees

All employees are responsible for working safely and ensuring the safety of themselves and others through the application of safe system of work when handling, transporting and storing waste.

6.0 PROCESS

The process which enables effective waste management is described in this section.

6.1 Hierarchy of Waste Management

Each Entity shall identify waste generated by its activities and determine how to effectively and efficiently reduce, reuse, recycle, recover, and dispose of waste in compliance with local standards, and international best practice.

The figure below defines the priority which should be placed on the processing of all types of waste:

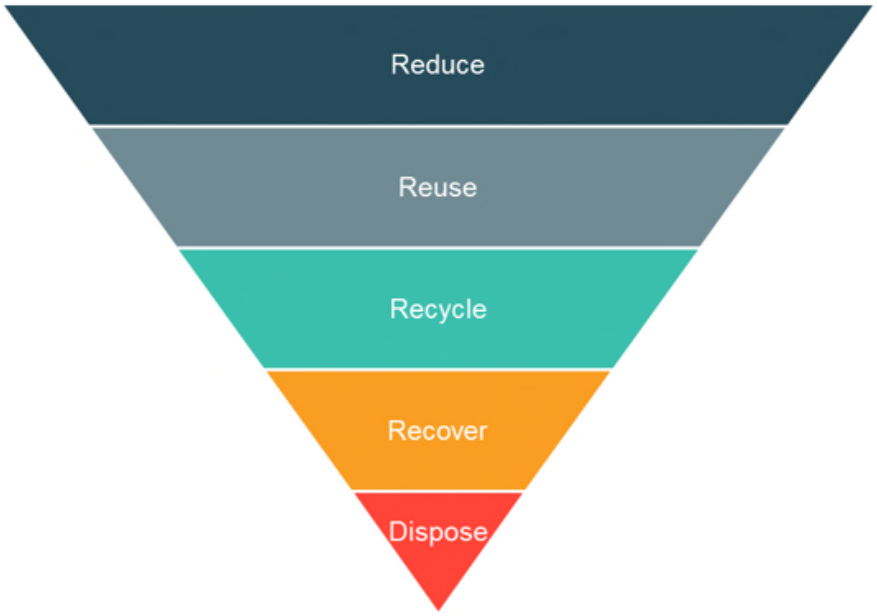


Figure 1: Hierarchy of Waste

6.1.1 Reduce

The top priority for all entities shall be the avoidance and reduction of waste generation. The upstream impact is a reduction in the use and extraction of raw materials (which represent a finite resource) in the Manufacturing Process.

Healthcare facilities should ensure that:

- Products purchased through the Procurement Process use minimum packaging or require the fewest resources to produce
- Disposable goods or single-use materials are avoided as much as possible
- Products which are purchased have some or all of the following features:

- Recycled
- Recyclable
- Repairable
- Refillable
- Re-usable
- Biodegradable

6.1.2 Reuse

Where waste reduction is not possible, the next priority for Healthcare Facilities is to reuse materials. Doing so eliminates the costs associated with recycling.

6.1.3 Recycle

Recycling is the process of converting waste materials into products. Selected benefits of recycling are as follows:

- Reduces the amount of waste sent to landfill
- Conserves finite raw materials
- Reduces embodied product cost
- Saves energy and reduces environmental impacts caused by mining and manufacturing

Following collection, recyclable materials are sent to a Recovery Facility to be sorted, cleaned and processed into materials which can be used for manufacturing.

Products used by Healthcare Facilities which commonly contain recycled materials are as follows:

- Printer paper
- Paper towels
- Plastic, and glass drink containers
- Trash bags
- Stationary
- Vomit bowls
- Stool and urine test sample containers

6.1.4 Recover

When products cannot be reduced, reused, or recycled; the Entity shall use recovery as a method by which to process waste. For the purposes of this Procedure, waste recovery entails that the Entity (or the environment in which the Entity is operating) ascertains potential benefits that can be incurred from the waste product which would otherwise have gone to landfill or to a recycling facility. Benefits may include whole or partial recovery of:

- **Convertible Energy:** through incineration or gasification (i.e. energy from waste)
- **Nutrients:** through organic processing
- **Cost:** by connecting with external parties willing to purchase the waste

6.1.5 Dispose

Some types of waste, such as Hazardous Waste, Medical Waste, or Offensive Waste, cannot be reused, recovered, or recycled and require treatment (to make them safe or easier to handle) and disposal. In such situations, the following guidance shall be followed as a minimum:

- Store all waste in a safe and secure manner ensuring appropriate segregation is in place to avoid cross-contamination. Hazardous Waste must also be segregated, as should other specific waste streams such as e-Waste (Waste Electrical and Electronic Equipment {WEEE}, including batteries and lamps)

- Ensure that all Contractors removing waste from site are qualified to do so and are disposing of waste at a licensed Waste Processing Facility, recording this in a Waste Transportation Record Form (Attachment 5 – EOM-ZO0-TP-000067 - Waste Transportation Record Form (1) Template)
- Arrange collection of waste, accurately describing the waste using appropriate waste codes (i.e. four-digit SIC code, six-digit NAICS code, or EWC/LOW code). Each removal of Hazardous (Industrial or Medical) Waste shall be accompanied by a Waste Transportation Record. Certificates obtained through successful completion and submission of Waste Transportation Record Forms to MOMRA or MOH demonstrate that the Entity is meeting its legal Duty of Care.
- Retain copies of Duty of Care documents for a minimum of 3 years as evidence the legal requirements have been satisfied
- Any uncontrolled release of waste or non-compliance with waste legislation must be treated as an environmental incident and reported to MOMRA (in the case of MSW) and MOH (in the case of Medical Waste non-compliance).

6.2 Waste Management Process

This Procedure will breakdown the components of the Waste Management Process shown in Figure 2 below and in Attachment 1 (Waste Management Process Flow):

- Waste Segregation
- Collection
- Transportation
- Storage
- Sorting
- Recycling

The following list provides guidance for Facility Management, Waste Management Officers, and Waste Handlers to be applied when establishing Waste Management Plans:

- Ensure all Contractors removing waste from site are appropriately licensed, and that the waste is also destined for an appropriately licensed site (use Attachment 2: EOM-ZO0-TP-000064 - Waste Compliance Matrix Template).
- Implement the Hierarchy of Waste for all waste streams (Attachment 3 – EOM-ZO0-TP-000065 – Waste Management Plan Template).
- Store waste streams in a safe and secure manner ensuring appropriate segregation is in place.
- Retain all Duty of Care documents.
  Monitor and track waste performance i.e. amount of waste disposed of and amount of waste recycled.

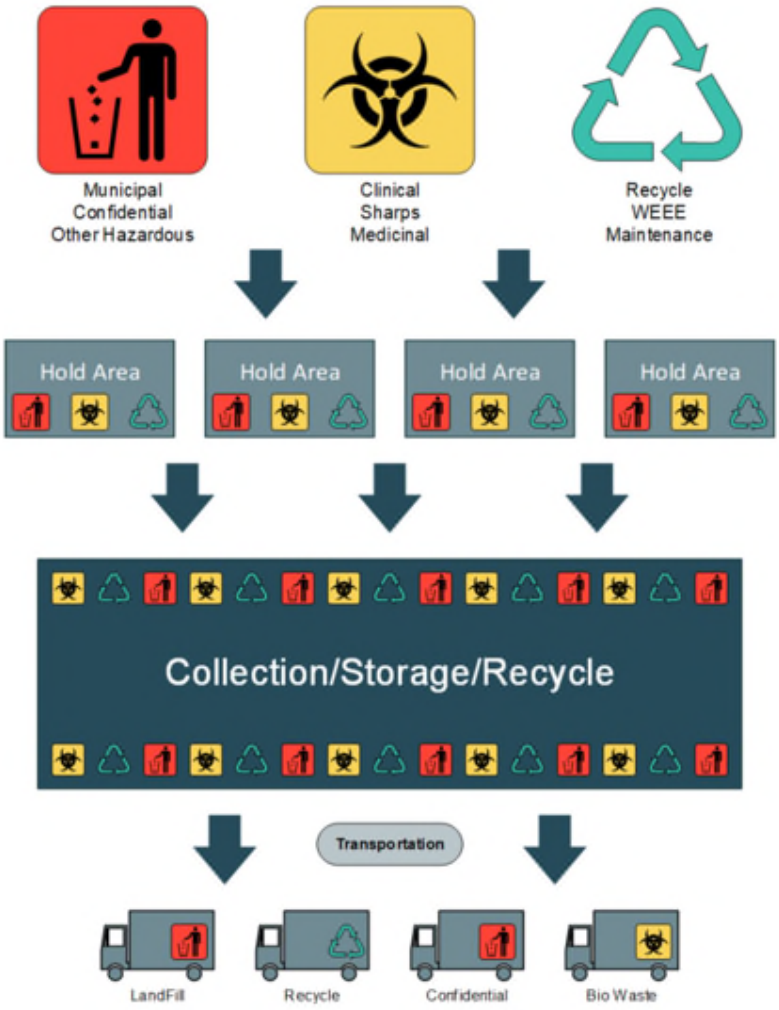


Figure 2: Waste Process

6.3 Municipal Waste Types

6.3.1 Solid Waste

Municipal Solid Waste (MSW) is not deemed as Hazardous (industrial or healthcare) Waste. MSW includes all materials which are earmarked for disposal and which are of no benefit to the Waste Producer. Such materials include Non-Hazardous:

- Household Waste
- Construction and demolition Waste
- Commercial Waste
- Administrative Waste
- Industrial Waste
- Green Waste (i.e. flora and other biota from the earth)
- Healthcare Waste

MSW usually goes to landfill. It is the responsibility of Healthcare Facilities to ensure that the quantum of MSW produced by each facility and which is sent to landfill from each facility is reduced as far as possible.

6.3.2 Green Waste

Waste which comes out of the earth, from land owned by the Entity, is called Green Waste. This waste usually arises as a result of landscaping and maintenance from gardens and parks but can also result from construction projects. Green Waste includes grass, trees, flowers, plants, soil, raw aggregate and clay.

6.3.3 Bulky Waste

All waste which is large in size (weight and dimensions) and which is difficult to handle is known as Bulky Waste. This waste can be difficult to break into its components, and poses a logistic challenge as it usually requires lifting equipment to handle and appropriate vehicles to transport. Bulky Waste can fall under any waste category (i.e. MSW, Green Waste, or e-Waste). Examples of Bulky Waste include: vehicle parts, tree trunks, furniture, and electrical appliances.

6.3.4 Hazardous Industrial Waste

Hazardous Industrial Waste is that which results from industrial activities. Such waste may contain solvents, degreasers, oils, radioactive materials, coloring materials (inks), sludge, acids and alkalis, or any industrial waste other than MSW.

6.3.5 Offensive Waste

Offensive Waste is also known as “human hygiene” and “sanpro” (sanitary products) waste. Any item that is stained or contaminated with any bodily fluid that is non-infectious and does not contain medications or chemicals is classed as offensive. Due to its nature, the waste is likely to be unpleasant for anyone who comes in contact with it.

Offensive Waste generated in the facility is normally sent to a waste plant or landfill.

6.3.6 Labelling

MSW shall be placed into black bags that are held within foot pedal operated flip lid bins as illustrated in the figure below. These should be available at suitable locations within all areas.

Figure 3: Labeling and Use of MSW

Toilets shall feature clear bags, contained within open top bins for the disposal of paper towels. Clear bags in open top metal bins should also be available in most office areas. When not more than 75% filled, the bag should be removed from the bin and tied to avoid the content spilling out. This task will normally be carried out by Cleaning Staff (not Waste Handlers). Whoever removes the bag (black or clear) should ensure that it is securely tied to enable safe transportation. Each bag must be kept separate and secured with the correct labeled tape allocated to that area.

6.3.7 Local Storage and Collection of MSW

MSW gathered from Waste receptacles should be stored in Hold Areas as close as practicable to the place of generation. Each Holds Area shall feature a large wheeled black MSW bin as shown in Figure 4.

Figure 4: MSW Bins Residing in Hold Areas

Large wheeled black MSW bins located in Hold Areas can have the lid left open to aid depositing waste, but this is only acceptable if the door to the Hold Area is kept locked at all times and Waste Handlers are the only key holders.

Under no circumstances should waste be left outside the Hold Area.

It is vital that no items of Hazardous Waste or Confidential Waste are placed into the MSW stream. Such instances represent a breach of legislation, and a potential beach of patient and staff confidentiality. Crossing waste streams also presents a high risk of the spread of infection which could threaten public health and the environment.

Procedures covering segregation, collection, transportation, storage, sorting, and recycling of waste should be established, maintained, and overseen by each Entity.

6.4 Healthcare Waste Types

6.4.1 Segregation

According to Article (5) of the GCC Uniform Law for Medical Waste Management, the Producer of Hazardous Medical Waste shall segregate such waste from Non-hazardous Medical Waste at the point of origin. The Waste Producer shall undertake direct responsibility for segregating waste as follows:

- Infectious Medical Waste shall be collected in plastic bags marked off in YELLOW color with the phrase “Hazardous Medical Waste" and the Biohazard Waste Symbol displayed on the bag (symbol specifications provided in Appendix (4) of the Law).
- Sharp instruments waste shall be collected in thick YELLOW puncture-proof leak-proof containers with the phrase "Sharp Waste" and the Biohazard Waste Symbol displayed on the bag. They should always be left open during periods of use and should be closed only when they are three-quarters full or when deemed necessary (e.g., when an unpleasant odor emanates from them, in which case they would be immediately replaced).
- Liquid Chemical Material Waste shall be collected in YELLOW thick, tightly closed leak-proof containers with the phrase "Chemical Waste" visible on them. Solid Chemical Material Waste shall be collected in YELLOW bags with the phrase "Chemical Waste - Medicines" and the Biohazard Waste Symbol shown on the bag.

6.4.1.1 Pharmaceutical Waste (Medicines)

- Expired medicines and materials, if they are found in large quantities, should be returned to the pharmacy section to dispose them in a proper manner
- Residues of possibly contaminated medicines and pharmaceutical material should be disposed of by putting them in leak-proof containers and after that in plastic bag marked off in YELLOW color bearing the symbol of biohazard medicines, drugs, and waste

6.4.1.2 Radioactive Material Waste

Radioactive material waste shall be collected in containers specially prepared for this purpose according to specifications set by the competent Entities. The containers are made of lead or wrapped in lead and are tightly closed with the international radiation symbol clearly displayed on them.

6.4.1.3 Human Remains

The parts and human organ remains shall be collected in red plastic bag with the biohazard waste symbol shown on them (They shall be preserved in the morgue refrigerator until they are processed as per KSA laws).

6.4.1.4 Highly Infectious Waste

Highly infectious waste produced from bacterial cultures shall be collected in plastic bags that can be subject to initial treatment using autoclave in the section producing them. After the initial treatment, those bags shall be placed in a YELLOW bag with the phrase “Hazardous Medical Waste" and the biohazard waste symbol shown on the bag.

6.4.1.5 Genotoxic and Cytotoxic Material Waste

Genotoxic and cytotoxic material waste shall be collected in leak-proof containers marked off in YELLOW color with the phrase "residues of cytotoxic materials" written on them. They should be returned to their source or burned at a very high temperature of 1200 ºC or higher. They should not be buried or dumped in the drainage system. In addition, they should not be mixed with other pharmaceutical material.

6.4.2 Medical Waste Categorization

Medical Waste shall be categorized into the following two types:

- Non-hazardous Medical Waste
- Hazardous Medical Waste

Categorization codes provided by MOH are shown in Table 1 below:

Medical Waste Categorization Codes	Waste Description
1	Non-hazardous Medical Waste
2.1	Infectious waste
2.2	Parts and body organs remains waste
2.3	Sharp instruments waste
2.4	Pharmaceutical waste
2.5	Genotoxic and cytotoxic waste
2.6	Chemical waste
2.7	Radioactive materials waste
2.8	Compressed gas containers waste

Table 1: Medical Waste Categorization

6.4.3 Waste Producers on-site Labeling, Collection and Transportation

According to Article (6) and Article (7) of the GCC Uniform Law for Medical Waste Management, the Producer of Hazardous Medical Waste shall apply adhesive labels or print directly onto waste containers and bags before their transportation to the storage site in the Healthcare Facility or the Treatment Unit, provided that those labels shall contain the following information:

- Name of the Waste Producer (Entity Name, and Facility Name)
- Name of site (Section or Ward)
- Type of Waste as per the categorization set forth in Article (4) of the Law
- Weight and quantity of waste stored in the container or bag
- Time and date of assembly
- Time and date of transportation

6.4.4 Requirements for On-site Collection and Transportation

- The collection and transportation of medical waste bags and containers requires the use of carts (trolleys) allocated for this purpose and trained staff to guarantee the maximum level of safety during the process of collection and transportation in the health facilities, so that the content of the bags or containers does not scatter or leak.
- Workers responsible for the transportation of waste shall be obligated to adhere to proper Personal Protective Equipment (PPE) ensuring personal safety (i.e. heavy duty gloves, gowns or overalls impermeable to fluids, surgical masks, protective footwear, and protective glasses).
- Prior to the collection and transportation of Hazardous Medical Waste bags and containers, they should be sealed firmly and bear the data label of the waste inside them with the biohazard waste symbol displayed on their exterior.
- The bags shall not be filled with waste by more than three quarters of their volume. They shall not be pressed, compacted, or held at the bottom when they are carried. Rather, they should be held from their top when they are carried.
- Hazardous Medical Waste shall be transported within the health facility by covered carts (trolleys) allocated for this purpose and designed in a way that ensures their efficiency upon loading and emptying. They shall be strong, leak-proof, easy to clean, and disinfected.
- Hazardous Medical Waste produced from sections and rooms of infectious diseases and isolation rooms shall be collected under the direct supervision of a Medical Waste Management Officer.

- Human, fetal, and placental tissues and organs shall be collected separately and preserved in the morgue refrigerator or in a special refrigerator so that they can be disposed of in accordance with applicable laws in every country in compliance with the principles of Sharia
- Dead bodies and tissues of animals shall be collected and preserved in a refrigerator so that they can be treated and disposed of
- Carts (trolleys) allocated for the transportation of Hazardous Medical Waste shall be cleaned, washed, and disinfected daily with disinfectants approved by the MOH by trained staff under the supervision of the medical waste officer in the health facility at a special location
- If Hazardous Medical Waste scatter or leak from the bags, containers or transportation carts, the scattered or leaked waste shall be considered as extremely hazardous waste, which requires immediate handling of them and taking disinfection and safety procedures in the place where they leaked
- Non-hazardous Medical Waste shall be collected in black bags, isolated, and handled separately from Hazardous Medical Waste at all stages (filling, collection, on-site transportation, and storage) until their transportation to the final disposal place in the landfill allocated by the municipality

6.4.5 Waste Bags and Containers

6.4.5.1 Red Bag

The term Red Bag refers to a red plastic bag of at least 150 micrometers in thickness and a maximum capacity of 100 liters with the phrase "Hazardous Medical Waste" and the biohazard waste symbol displayed on it.

6.4.5.2 Yellow Bag

The term Yellow Bag refers to a yellow plastic bag of at least 150 micrometers in thickness and a maximum capacity of 100 liters with the phrase "Hazardous Medical Waste" and the biohazard waste symbol written on it.

6.4.5.3 Sharp Instruments Waste Containers

Sharp Instruments Waste Containers refer to yellow plastic containers that are solid, puncture-proof, and leak-proof with the phrase "Hazardous Sharp Waste" and the Hazardous Medical Waste symbol displayed on them. These containers should have an opening for entering sharp instruments and should be equipped with a cover to allow them to be tightly secured and a handle to allow for easy carrying and transportation.

6.4.5.4 Bag Containers (Baskets)

Bag Containers refer to baskets made of steel that does not rust (stainless steel) or an easy-to-clean plastic material with a tight upper cover that can be opened by foot. Its cover and front side will have the phrase "Hazardous Medical Waste" and the biohazardous waste symbol written on them.

6.4.5.5 Radioactive Material Containers

Radioactive Material Containers refer to containers made of or wrapped in lead with the international radiation symbol inscribed on them.

6.4.5.6 Transportation Trolleys

Transportation Trolleys refer to yellow trolleys made of rustproof materials with wheels to allow for easy movement. They are not affected by acids or alkalis and are leak-proof with easy-to-clean surfaces and angles, a volume suitable for carrying ten bags at a time, a cover to close them tightly during transportation and a handle to move them easily. Their sides and cover will bear the phrase "Hazardous Medical Waste" along with the biohazardous waste symbol clearly displayed on them.

6.4.5.7 Liquid Waste Container

Liquid Waste Containers refer to yellow containers made of a material that does not react with the chemicals which will be placed in them. They are solid, fit-for-storage and tightly closed with a capacity of not more than 50 liters. Their sides shall bear the phrase "chemical waste" and display the Hazardous Medical Waste symbol.

6.5 Clinical Waste

The definition of clinical waste has historically been used to describe waste produced from healthcare and similar activities that pose a risk of infection or that may prove hazardous. Taken from the controlled waste regulations (issued under the Environmental Protection Act), clinical waste is defined as:

- Any waste which consists wholly or partly of human or animal tissue, blood or other bodily fluids, excretions, drugs or other pharmaceutical products, swabs or dressings, syringes, needles or other sharp instruments, which unless rendered safe may prove hazardous to any person coming into contact with it; and
- Any other waste arising from medical, nursing, dental, veterinary, pharmaceutical or similar practice, investigation, treatment, care, teaching or research or the collection of blood for transfusion, which may cause infection to any person coming into contact with it

Broadly, clinical waste can be divided into two categories of material:

- Waste which poses a risk of infection (Infectious waste)
- Medicinal waste

6.5.1 Waste Packaging

- Liquid chemical material waste shall be segregated in liquid waste containers.
- Solid chemical material waste shall be segregated first in their containers and then in yellow plastic bags with the phrase "chemical waste" and the biohazard waste symbol displayed on them as illustrated in Figure 5 below:

Figure 5: Biohazard Waste Symbol

6.5.2 Human Waste

The parts and human organ remains shall be collected in a red plastic bag with the biohazard waste symbol shown on them. They shall be preserved in the morgue refrigerator until they are processed as per KSA laws.

6.5.2.1 Placenta

Placenta must be packaged in a Yellow container with a red lid, dedicated only for the purpose. The container must have clear, indelible markings indicating its contents as “Clinical Waste – For Incineration Only”. Such a container must not be filled to more than 75% of its capacity or to above any warning line or such that it cannot be effectively sealed in accordance with its design. Once appropriately filled, the container must be permanently sealed in accordance with the manufacturer’s instructions. The containers must not be put into any bag after filling but placed directly into a wheeled yellow lidded bin.

6.5.2.2 Amputations

Amputations or other large pieces of human tissue must be deposited in a suitable 'limb bin' with clear indelible markings stating `Clinical Waste for Incineration only'. A container must not be filled to more than 75% of its capacity or to above any warning line or such that it cannot be effectively sealed in accordance with its design. Once appropriately filled, the container must be permanently sealed in accordance with the manufacturer's instructions. The containers must not be put into any bag after filling but placed directly into wheeled Yellow bin.

Remains of human organs and parts shall be segregated in red plastic bag, except for blood, and body fluids.

6.5.3 Condemned Mattresses or Large Items of Clinical Waste

Condemned mattresses and other large items of waste must be packaged in suitably sized YELLOW bag with clear indelible markings stating `Clinical Waste for Incineration only`.

6.5.4 Local Storage of Clinical Waste

Clinical waste should be stored as near as possible to the place of production. Each work area should have an allocated disposal hold for this purpose. Each hold should be able to accommodate suitably sized clinical waste bins dependent on the amount of waste produced by the department/ward and should be situated in a secure and lockable area.

The disposal hold door must be kept shut and locked at all times except during the loading or removal of waste.

Under no circumstances should Yellow bags be left outside the disposal hold. Collection plans must consider the frequency for collection to ensure the hold area is never full.

6.5.5 Handling Requirements

Once a bag containing clinical waste is sealed, it must immediately be placed in the appropriate local storage container. Decanting of clinical waste is not allowed.

The following procedures must be adopted by persons handling clinical waste:

- Care must be taken to minimize the potential for damage to bags or containers
- Manual handling and carrying of bags/containers of clinical waste must be minimized as far as practicable and meet the following criteria
- Bags must only be handled by the neck above closure point
- Bags must be carried/held away from the body
- Bags must not be thrown, dropped or similarly mistreated

The following protective clothing must be worn by persons handling bags of Clinical Waste (mainly nursing and cleaning staff):

Workers on the transportation of waste shall be obligated to wear attire that ensures personal safety (heavy-duty gloves, gowns or overalls impermeable to fluids, surgical masks, protective footwear, and protective glasses).

6.6 Sharps Waste

Sharps are items that could cause cuts or puncture wounds, including needles, syringes with needles attached, broken glass ampoules, scalpel and other blades, and infusion sets (the sharp part thereof).

Sharp Waste does not include:

- Syringe bodies (in the absence of a needle)

Medicinal Waste is waste in the form of:

- Bottles
- Swabs
- Tubes or tablets
- Vials
- Other soft infectious waste or anatomical waste

6.6.1 Packaging

Medicinal Waste should be packaged into a yellow container with a yellow lid dedicated only for Sharps Waste. The container will have the words “Danger Contaminated Sharps Only” and “Destroy by Incineration or To Be Incinerated” printed on the label.

Figure 6: Sharps Waste Containers

The containers are available in a variety of sizes and it is important to ensure that an appropriate size container is available for use depending on the activity undertaken.

6.6.2 Labelling and Use of Sharps Containers

Sharps containers must have the label completed appropriately by the person assembling the container and a suitable marker tape applied prior to use. This is the responsibility of the clinical staff.

The container must not be filled to more than 75% of its capacity or above any fill line. Sharps must not be put into any other type of bag or container and sharps containers must not be put into any type of bag when full.

Clinical staff who are using sharps have the responsibility for ensuring that they are placed in the correct container once they have been used. Wherever possible, the sharps container should be taken to the point of use, including the bedside and the sharp placed into the container immediately to minimize the risk of injury.

- Label details must be completed prior to disposal by the person sealing the container and should include:
    - Name of the producer of waste (facility name)
    - Name of the site (section or ward)
    - Type of produced waste as per the categorization
    - Weight and quantity of waste stored in the container or bag
    - Time and date of assembly
    - Time and date of transportation

- Labels put on the containers and bags should be waterproof and of proper size. Label markings should be made in permanent ink.
- The biohazard waste symbol should be put on the containers and bags as specified.

6.6.3 Local Storage of Sharps Containers when Filled

Sharps containers should be stored as near as practicable to the place of production in a manner that protect the sharps from accidental contact by hospital staff, patients, and the public.

Each work area should be given a designated collection point for local storage of the sharps container prior to collection by the designated waste handlers on the agreed schedule.

Each Yellow bin must be sealed closed when in transit.

6.6.4 Handling Requirements (Sharps)

Manual handling and carrying of sharps containers must be minimized as far as practicable and meet the following criteria:

- Only one container to be carried in each hand at any one time
- Containers should be held away from the body
- Containers must not be thrown, dropped, or similarly mistreated

In event of a needle stick or other sharps injury seek immediate medical attention.

6.7 Medicinal (Pharmaceutical) Waste

Medicinal Waste is classified into two categories:

- Cytotoxic and cytostatic medicines
- Medicines other than those classified as cytotoxic and cytostatic

6.7.1 Cytotoxic Waste

Cytotoxic Waste includes waste relating to chemotherapy treatments and patients undergoing treatment. The Healthcare Director will provide additional details for the collection and disposal of Cytotoxic Waste which includes:

- Excess reconstituted drugs
- Disposable protective clothing
- Disposable bed pans and bed pan liners
- Incontinence pads
- Urine containers
- Sharps
- Protective covers
- Paper towels

6.7.2 Packaging of Cytotoxic Waste

All Cytotoxic Waste must be handled, stored, and disposed of in compliance with the specific policy. Heavy duty Purple bags with the wording ‘Clinical Waste – For Incineration Only’ must be used for all Cytotoxic/Cytostatic Waste except for sharps.

Sharps go into Yellow sharps bins labelled Cytotoxic Sharps – For Incineration Only.

6.7.3 Labelling and Use

The producer of Hazardous Medical Waste shall place adhesive labels or print on the containers and bags of waste before their transportation to the storage site in the health facility or the treatment unit, provided that those labels shall contain the following information:

- The final label details must be completed prior to disposal by the person sealing the container and should include:
  - Name of the producer of waste (facility name)
  - Name of the site (section or ward)
  - Type of the produced waste as per the categorization
  - Weight and quantity of waste stored in the container or bag
  - Time and date of assembly
  - Time and date of transportation

- Labels put on the containers and bags should be of proper size and in permanent ink and should be waterproof
- The biohazard waste symbol should be put on the containers and bags as specified

Yellow bags must be placed in a pedal operated, flip lid bin labelled for Cytotoxic Waste Only.
The bag should be filled not more than 75% capacity before sealing using a swan neck technique and named tape and replacing with an empty bag.

Cytotoxic sharps containers must have the label completed appropriately by the person assembling the container and the correct named tape applied prior to use. This is the responsibility of the clinical staff.

The sharps container should be filled not more than 75% capacity or above the marked fill line before locking shut, the person who locks the container must complete the label details.

6.7.4 Local Storage of Cytotoxic Waste

Solid genotoxic and cytotoxic material waste and material contaminated with them and solid material contaminated with liquid genotoxic and cytotoxic materials shall be segregated in Yellow plastic bags with the phrase "cytotoxic waste" and the cytotoxic waste symbol displayed on them.

Cytotoxic waste should be placed in a Yellow bin that is designated for cytotoxic waste. This will display a label on the side of the container clearly stating Cytotoxic Waste Only.

Areas which generate more substantial amounts of Cytotoxic Waste will be provided with the appropriate wheeled bin marked for cytotoxic waste in their nearest waste hold. These areas will be informed about the presence of such bins, their usage, and other guidelines.

6.7.5 Medicines (other than those classified as cytotoxic and cytostatic)

Unwanted drugs should be returned to the pharmacy department as soon as possible.

6.7.6 Controlled Drugs

Solids (e.g. tablets): can be placed in clinical waste bags.

Liquids: should be emptied into a Medicinal bin (Yellow bin with a blue lid) as shown in the figure below:

Figure 7: Controlled Drugs Waste

Liquid and solid pharmaceutical materials waste shall be segregated in their containers and then placed in Yellow plastic bag with the phrase "medicines and drugs waste" and the biohazard waste symbol shown on them.

6.7.7 Radioactive Waste

The healthcare provider is the only employer on a site with the authorization to generate and dispose of radioactive waste. Only approved and competent healthcare personnel are authorized to handle such waste.

Radioactive Waste includes waste generated within:

- Cytogenetic laboratories
- Nuclear medicine departments
- Radionuclide treatment rooms on radiotherapy wards
- Radio pharmacy suite (Pharmacy)

All waste bags within these areas will be classified as radioactive waste unless identified otherwise by a competent person from that department.

Radioactive waste also includes:

- Waste from patients on wards who have recently been in contact with radioactive substance as part of diagnostic or therapeutic procedures
- Waste from people who have been accidentally contaminated by a radioactive incident (e.g., nuclear industry incident admitted through the Accident & Emergency Department)

The Healthcare Provider is the only employer on-site with the authorization to generate and dispose of radioactive waste. Only approved and competent healthcare personnel are authorized to handle such waste.

Radioactive material waste shall be segregated in radioactive material containers.

6.8 Recyclables

The aim for all facilities is to recycle as much MSW as possible and not to send it to landfill sites unnecessarily.

Recyclables include:

- Clean aluminum cans
- Clean cardboard
- Clean paper

- Clean plastic bottles
- Clean steel cans
- Junk mail (with any plastic wrapping removed)
- Magazines
- Newspapers

Cans, plastic bottles, and containers should be rinsed before being placed into a recycle bin.

Separate bins, identified by a recycling label, and color-coded as shown in Figure 8 below should be provided for recycling. The bins are usually identified by a recycling label.

Figure 8: Waste Segregation Points

Before the introduction of recycling, local Service Level Agreements (SLAs) shall be in place with off-takers to ensure correct disposal (see Section 6.15 for guidance regarding off-takers).

6.8.1 Uncontaminated Glass

Uncontaminated glass must be placed in a cardboard box in preparation for disposal and ready for collection. This glass is then taken to the loading bay where it is deposited into the glass bank by waste staff wearing suitable Personal Protective Equipment (PPE).

Contaminated glass bottles must not be placed in sharps bins unless they are broken phials. If glass bottles are potentially contaminated, the possibility of introducing a bespoke recycling system, such as large plastic buckets with purple labels showing “Cytotoxic Sharps for Incineration only”, should be considered.

6.8.2 Cardboard Boxes

If cardboard is placed into the bin directly and contaminated with residue from other waste, it can no longer be recycled and will go to landfill. Such instances shall be avoided by flattening cardboard boxes and storing separately for collection.

6.8.3 Aerosols

Aerosols should be emptied and placed in a clear bag. Collection and safe processing of aerosols should be built into the SLAs established with waste off-takers (see Section 6.15 for guidance regarding off-takers).

6.8.4 Confidential Waste

Confidential Waste includes:

- IT storage devices, hard drives, USB sticks
- Commercially sensitive documents

- Complaints/litigation information
- Patient information
- Photographs
- Staff personal details

6.8.4.1 Local Storage

Within the Waste Management Process, Waste Segregation Points for Confidential Waste feature a unit as shown in Figure 9 (below):

Figure 9: Confidential Waste Bin

Confidential Waste bins should be lidded, and lockable, and should display the words “Confidential Waste for Shredding”, or similar.

The bins should be placed as close to the areas that generate Confidential Waste (i.e. printers, shredders, adjacent Administrative Staff) as is reasonably practicable but need not be located in every room or office.

Anyone who identifies waste as Confidential should dispose of it into the Confidential Waste container. Disposal of Confidential Waste into the wrong waste stream could result in a breach of KSA Data Protection Law.

6.8.4.2 Collection of Confidential Waste

The Facility Manager or Contractor Manager shall provide a suitable crosscut shredding machine for the disintegration of Confidential Waste. Following disintegration, Confidential Waste can then be disposed of as other wastepaper for recycling.

Dependent on the nature of the Confidential Waste, the Entity may consider establishing an SLA with a Company, specifically for collection and disposal of Confidential Waste. The Service Provider will collect full Confidential Waste bins on an agreed schedule and replace them with empty containers. The bins are then taken to a facility where the content is securely shredded or incinerated.

If Confidential Waste is deposited into the Confidential Waste bin by mistake there should be a process for retrieval featured within the Entity’s Waste Management Procedure.

6.9 Hazardous Waste (Commercial and Municipal)

Included in this category are:

- Batteries (e.g. Lead-acid, magnesium, alkaline, zinc oxide, nickel–cadmium) and energy accumulators (e.g. hydraulic devices, and capacitors)
- Chemical Waste (e.g. used formalin, mercury)
- Fluorescent light tubes
- Oils (mineral and synthetic)
- Photographic chemicals (e.g. developers, activators, neutralizers, fixers)
- Any other waste identified as Hazardous under a Control of Substances Hazardous to Health (COSHH) assessment that is not classed as Hazardous Medical Waste or Industrial Waste.

6.9.1 Batteries

Used batteries should have the ends taped (i.e. scotch tape, cello tape, or similar) and then disposed of into a non-metal container. The Waste Management Officers should arrange provision of a suitable container and have it located at a suitable Waste Segregation Point. Collection and safe processing of batteries should be built into the SLAs established with waste off-takers (see Section 6.15 for guidance regarding off-takers).

6.9.2 Luminaires

Where a light tube needs replacement, the old tube will be removed by a member of the O&M Team and taken to the disposal dock. Collection and safe processing of luminaires should be built into the SLAs established with waste off-takers (see Section 6.15 for guidance regarding off-takers).

6.9.3 Waste Electrical and Electronic Equipment (WEEE)

Processing of electrical and electronic equipment shall be carried out by the O&M Team. All electrical and electronic equipment for disposal must be inspected and authorized as being 'Waste' by a competent person. Once such analysis is complete, it will be processed as recyclable waste. Collection and safe processing of WEEE should be built into the SLAs established with waste off-takers (see Section 6.15 for guidance regarding off-takers).

6.9.4 All Other Waste

Waste which is not covered by specific Procedures, may still require controlled disposal. Contact the Facility Manager for advice regarding such instances.

6.10 Internal Waste Collection and Storage

Waste shall be collected at Waste Segregation Points and transported by waste management personnel to hold areas. The division between Waste Segregation Points and Hold Areas shall depend on Facility layout. For example, hold areas may be situated at the basement or ground floor level of each building. Waste shall be transported from hold areas to centralized collection, storage, and Recycling points as described in Figure 10 below.

6.10.1 Waste from Hold Areas

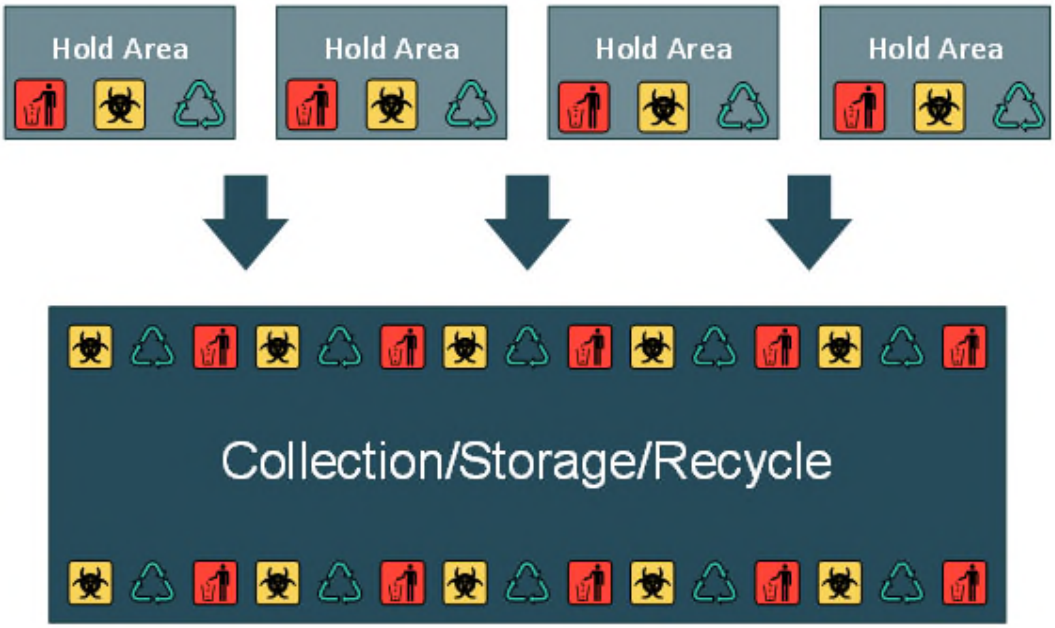


Figure 10: Hold Areas to Collection/Storage/Recycling Points

The Entity's Waste Management Plan shall provide details for recycle and domestic waste bins, to be collected from Hold Areas on a scheduled collection system and replaced with empty ones. In accordance with the schedule, designated Waste Management personnel shall transport wheeled waste containers to Waste Collection Points. From there, designated vehicles should transport the waste onward for processing.

If a waste bin is filled prior to scheduled collection, then provisions should be made for bespoke/special collections within Waste Management Plans.

Both the YELLOW and black bins must be locked prior to removal from the disposal hold and remain locked during transit to the central storage area. No items are to be transported on top of the bins and decanting is not allowed. Puncturing of clinical waste bags is also prohibited.

Manual Handling Procedures should be followed at all times when transporting Waste receptacles.

6.10.2 Central Storage and Disposal

Guidance regarding collection, storage, and recycling points is as follows:

- Shall be accessible by appropriate vehicles to collect and remove waste to the correct facility
- Shall be accessible in case of emergency and for purposes of inspection and monitoring
- Shall be enclosed but adequately ventilated
- All containers therein shall be checked regularly for leaks

Collection, storage, and recycling points should only be accessed by authorized personnel and will be overseen by the Waste Management Officer and any Safety personnel (as applicable). Local Health and Safety (H&S) restrictions to such areas may apply.

Any facility wishing to temporarily store Hazardous Medical Waste in the facility until transportation to the Treatment Unit shall comply with the 14 points contained within the GCC Uniform Law for Medical Waste Management. This includes appropriate air-conditioning devices and shall have good lighting, ventilation and a temperature of 15-18ºC. The period of storing Hazardous Medical Waste shall not exceed 24 hours.

Waste Management personnel handling waste, and those operating vehicles which transport waste shall wear appropriate Personal Protective Equipment (PPE) depending on the tasks and waste type being handled (i.e. heavy-duty gloves, gowns or overalls impermeable to fluids, face masks with filters, protective footwear, and protective glasses).

Within collection, storage, and recycling points, waste shall be further segregated into the categories, as required. All waste shall be collected from collection, storage, recycling points on an agreed schedule by the assigned Contractor detailed within Waste Management Plans.

It is normal for waste to be processed at an off-site facility and therefore be transported by road. The need for the proper labeling of waste is vital to comply with KSA regulations associated with transportation of dangerous goods.

6.10.3 Monitoring for Compliance

Waste Management Procedures shall be assured through inspections carried out by the Facility Manager or Contractor Manager in coordination with a Healthcare Representative. Non-conformances relating to unsafe working practices shall be addressed immediately.

Duty of Care visits should take place to ensure that third parties involved in the waste disposal process are adhering to the agreed contractual Service Level Agreement (SLA).

6.10.4 Hazardous Material Inventory Regulations

If the Entity is required to maintain a Hazardous Material Inventory, the Facility Director shall retain on file current Safety Data Sheet (SDS) information for all hazardous material present at the Facility.

6.11 Spillage, Incident or Accident

6.11.1 Clinical Waste, Cytotoxic, Cytostatic Substances/Sharps Bins

In the event of a spillage arising from waste disposal the following guidance should be followed in conjunction with the Entity's Infection Control Manual or, in the case of a cytotoxic substance spillage, the Entity's Cytotoxic Policy.

In the event of a spillage of clinical waste, the following procedure must be followed:

- The area must be kept under supervision by a member of staff and cordoned off using the appropriate signage
- The area will also need to be cleaned by approved cleaning staff
- Appropriate additional Personal Protective Equipment (PPE) may be required during the clean-up operation

For healthcare personnel who perform tasks that may involve exposure to blood or body fluids, vaccination against hepatitis-B should be considered.

Where any sharps are involved, they should not be picked up by unprotected hands under any circumstances. The use of the correct PPE and equipment is essential to avoid a needle stick injury.

Spillage must be reported to a cleaning supervisor or person in charge of the area as soon as practicable and preferably prior to clean up, so the extent of the hazard can be established and appropriate clean-up methods employed. The facility/contractor management and safety department should be advised as soon as possible to enable a suitable investigation to be carried out where appropriate.

Any damaged packaging should be retained for investigation into the cause of the spillage. Any spillage must be reported and included in management and training plans.

Various spill kits should be available for general response on-site. These will contain inert, absorbent material for mopping up liquids. Separate cytotoxic spill kits are available via trust pharmacy. Any items used from spill kit are to be listed and replaced by the responsible party.

The Entity will have a formal recording process for accident and incident. This should be used within 48 hours of an incident.

6.11.2 Sharps Injury and/or Exposure to Blood or Bodily Fluids

In the event of an injury resulting from contact with Hazardous Waste, the following procedures should be followed:

- The injured person(s) should carry out immediate first aid (bleed, wash, cover, report).
- It is advisable that the injured person contact the Accident & Emergency (A&E) Department directly after first aid has been administered. This will ensure that an appropriate risk assessment can be carried out to determine the potential risk of infection and advice can be given for appropriate treatment. This should be done immediately in the case of needle stick or blood exposure incident whenever possible.
- The Facility Manager and Safety Department should be advised as soon as possible so that an investigation can be undertaken, to reduce the risk of further occurrence.
- The Entity will have a formal recording process for accident and incident. This should be used within 48 hours of an incident.

In the event of a needle stick or other sharps injury, the injured individual shall seek immediate medical attention.

6.12 Waste Transfer Off-Site

Waste shall be collected at collection, storage, or recycle points and transported to trucks as described in Figure 11 below. The division of responsibilities between Entity staff and third party Contractors shall be determined through Service Level Agreements.

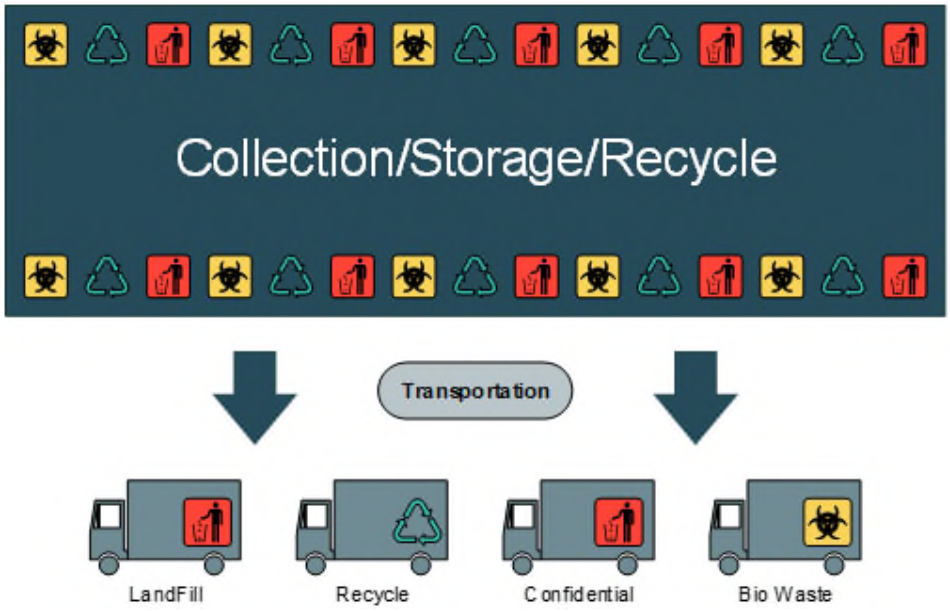


Figure 11: Collection/Storage/Recycling Points to Trucks

Each facility shall have a robust Process in place to record the transfer of Waste between the Entity and third party Contractor.

6.12.1 Hazardous/Special Waste

A Waste Transportation Record Form (Attachment 5 – EOM-ZO0-TP-000067 – Waste Transportation Record Form (1) Template) must be produced for the transfer of Hazardous Waste. Responsibility for applying the Waste Transportation Record Form shall feature as part of the SLA. However, it is most likely to fall under the responsibility of the third party Waste Contractor. If the application of the Waste Transportation Record Form does not fall under the responsibility of the Waste Contractor as described within the SLA, then it shall be produced by the Facility Manager. The Waste Sample Label Template (Attachment 4 – EOM-ZO0-TP-000066 – Waste Sample Label Template) shall describe the Waste and detail the Waste code (i.e. four-digit SIC code, six-digit NAICS code, or EWC/LOW code).

A Hazardous Waste System shall be used to record Hazardous Waste movement. Copies of documents produced under the system shall be kept by both parties for at least three years for Hazardous Waste, and four years for Waste Electrical and Electronic Equipment (WEEE) after transfer of waste. Each movement of Hazardous Waste requires a Consignment Note.

6.12.2 Non-hazardous Waste

A Waste Transportation Record Form shall be prepared for transfer of waste. The Waste Transportation Record Form should be produced by the waste carrier for the Waste Processing Facility. It should also include a declaration of pre-treatment to acknowledge that the Hierarchy of Waste is being implemented by the Facility producing the waste. The Waste Transportation Record Form can be completed for an individual collection or in the case of annual Waste Transportation Record Form for regular collection of similar quantities and types of waste for one year. Copies of the Waste Transportation Record Form must be kept by both parties for at least two years after transfer of the waste.

6.12.3 Transfer to Registered Carrier

Requirement for transportation of waste to an offsite facility requires an Off-site Transportation Permit which is obtained through completion of the Waste Transportation Record Form (Attachment 5 – EOM-ZO0-TP-000067 - Waste Transportation Record Form (1) Template). The applicant shall provide the following information in order to secure an Off-site Transportation Permit:

- A description of the means of transport and equipment to be used in the transportation process
- The Emergency Plan to be used in case of accidents or waste leakage at delivery facilities or during the transportation process
- A list of the name of workers, their work experience, and a certificate verifying their suitability for the job, on the condition that the certificate shall not be older than one year
- Evidence of that applicant(s) have undertaken a training program for workers in this field
- Any additional information which the competent Entity may deem necessary for the conservation of human health and the environment during transportation of waste.

The Contractor shall carry the Off-site Transportation Permit in the vehicle at all times.

6.12.4 Transportation of Medical Waste Form

This document demonstrate the facility is meeting their local, regional or country wide legal Duty of Care (This will be as per the waste management standards). All the waste generated in a facility shall be transported by approved transporters to an approved Waste Management Facility (WMF)/Waste Recycling Facility (WRF).

A copy of the application form is contained within the appendices.

6.13 Records and Reporting

According to Article (10) of the “Gulf Cooperation Council (GCC) Uniform Law for Medical Waste Management”, Hazard Medical Waste Producers (Entities) are required by Law to produce a report on all

aspects of Hazardous Medical Waste, such as the data of production, storage, transportation and treatment. Regularity of reporting shall be agreed between the Entity and MOH.

Furthermore, pertinent to (Article 10/1L) Waste Producers (Entities) shall present data on the types and quantities of Hazardous Medical Waste production in their facilities and the method of transportation and treatment. Such data shall be provided to MOH periodically, as agreed between each Entity and MOH.

Waste Processing Facilities are also required by Law to record and report on waste categories, and quantities. Therefore, the Operator of Waste Processing Facilities shall present a monthly report to MOH (for Hazardous Medical Waste) and MOMRA (for all other types of Waste) detailing:

- Daily quantity of waste received from each Waste Producer (Entity)
- Associated names of each Waste Producer (Entity) and Transporters

Further to (Article 18/1L) of the GCC Uniform Law for Medical Waste Management, the Operator of Waste Processing Facilities shall present reports to the General Authority of Meteorology and Environment Protection (GAMEP) on daily quantities of waste processed at the Waste Processing Facility, on a monthly basis, or upon GAMEP request.

Sustainability best-practice as outlined in Volume 17 of the NMA&FM, Sustainability Procedure (EOM-ZN0-PR-000002) also dictates that each Entity should adopt reporting using the Global Reporting Initiative (GRI) reporting framework.

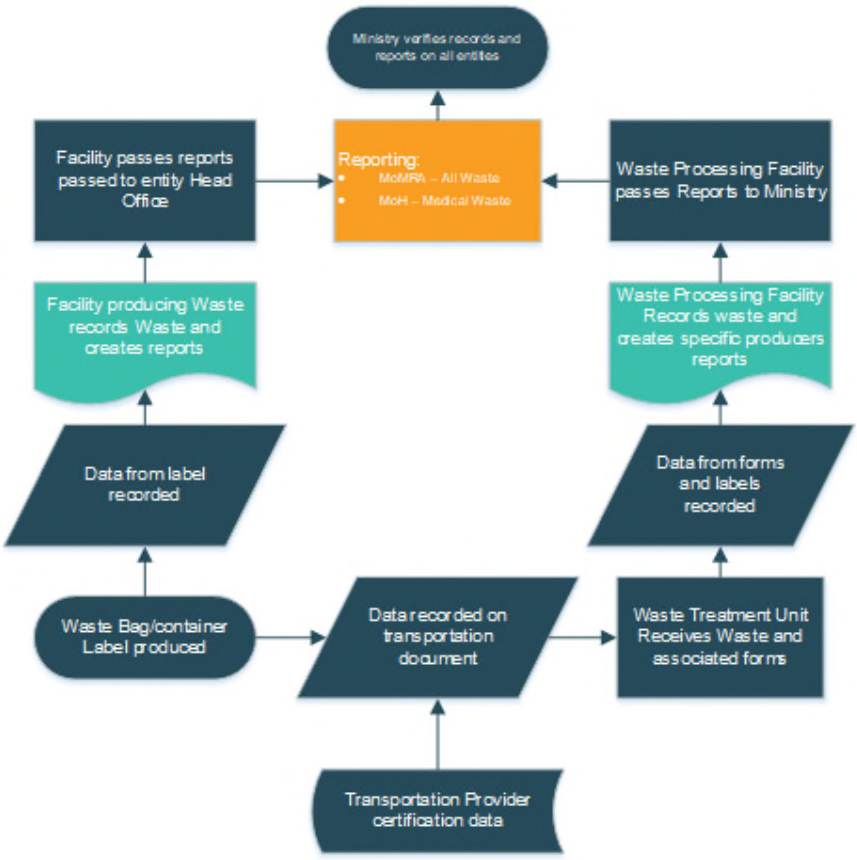


Figure 12: Process of Recording and Reporting Waste

6.14 Training

This Section details minimum required training which shall be undertaken by Waste Management personnel.

6.14.1 All Waste Management Personnel

All staff shall undergo the following training as part of Continuous Professional Development (CPD):

- Mandatory training as outlined in the Sustainability Awareness Training Program detailed within Volume 17, Sustainability Procedure (EOM-ZN0-PR-000002)
- Understanding and implementing waste policies, processes, and procedures
- Reporting unsafe practices and conditions
- Refresher training and toolbox talks at regular intervals
- Use and disposal of any PPE and the importance of personal hygiene
- How to carry out Point of Work Risk Assessments
- Facility Site Induction and Tour
- Annual training, including:
    - Definitions of the different waste types
    - Importance of segregation
    - Information on the final destination of the waste types
    - Introduction of the Waste Policy
    - Labelling requirements for each waste type
    - Packaging requirements for each waste type
    - Responsibilities of each staff group
    - Spillage procedures
- Specific work area training and local procedures including:
    - Location of waste receptacles, hold areas, and collection, storage, and recycling points
    - Reporting issues, non-compliances, and safety concerns
    - Obtaining replacement bins and consumables
- Training regarding Emergency Management Plans

Continuous messaging regarding correct waste segregation, the importance of recycling, and continuous improvement through staff feedback is critical to the success of the training program.

6.14.2 Waste Handlers

In addition to aforementioned mandatory training, waste handlers shall undergo the following training as a minimum with formal periodic reviews of competence and re-training as required:

- Waste handling (with a focus on waste that is incorrectly sealed, bagged or stored)
- How to address spillages
- The correct selection and use of PPE
- Manual Handling Procedures
- Emergency Procedures
- Incident reporting

Waste handlers are to be given additional training on spillage, the use of Personal Protective Equipment, manual handling procedures, emergency procedures, and incident reporting.

6.14.3 Cleaning/Domestic Staff

The nature of operations which take place within a healthcare facility dictate that Waste Management personnel are independent of leaning staff. Specifically, waste handlers within a healthcare facility have a function separate to that of cleaning staff.

As a minimum, Cleaning Staff shall receive ‘on-the-job’ training with a particular focus on:

- Locations of waste receptacles, hold areas, an collection, storage, or recycling Points
- Waste Collection Procedure for their work area.
- Manual Handling Procedure
- Spillage Procedures.
- Reporting problems, non-compliances, and safety concerns
- Obtaining replacement bins and consumables

6.15 Waste Off-takers

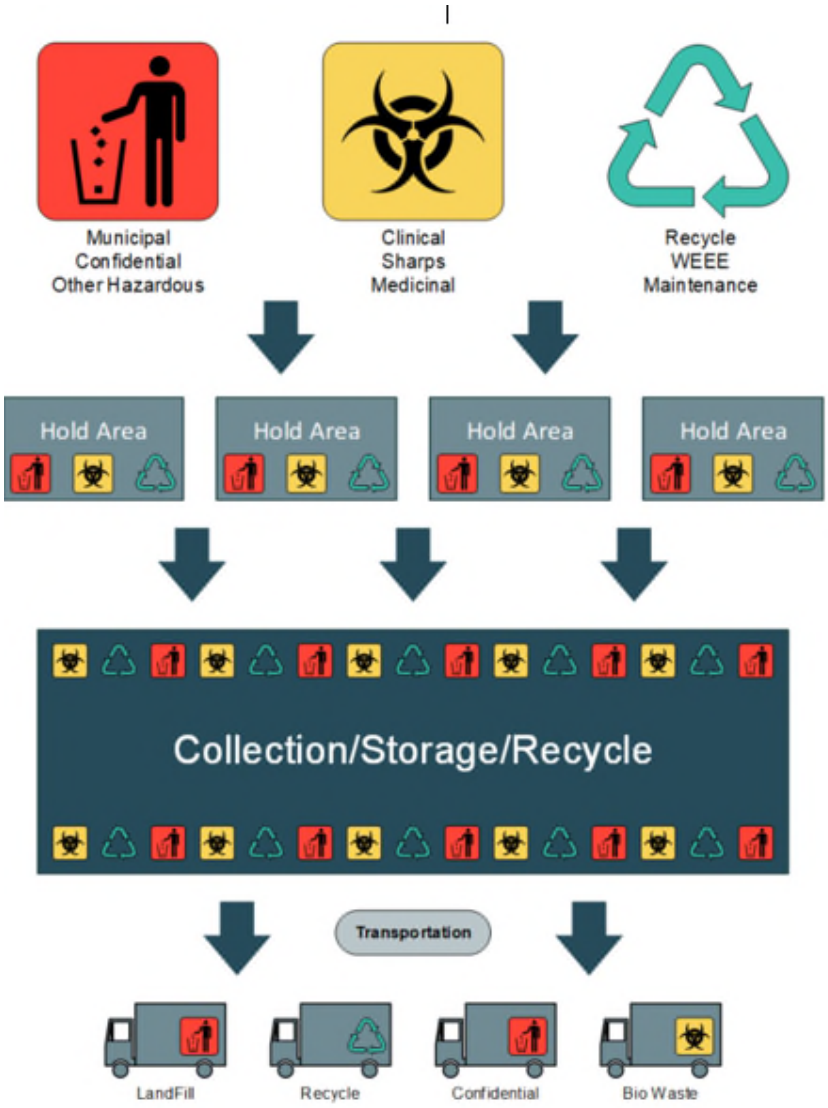
A critical part of implementing the Hierarchy of Waste (Reduce – Reuse – Recycle – Recover – Dispose) is to ensure that the Entity identifies where it can add value to the circular economy (i.e. the value chain). Identifying partners and 3rd party service providers which are willing to receive waste as part of an SLA or similar arrangement is key to the successful implementation of the Hierarchy of Waste. One example of a local organization which can support the Entity in identifying waste streams which can form part of the circular economy is the Saudi Investment Recycling Company (SIRC).

SIRC is at the forefront of driving the circular economy within KSA in line with strategic objectives set out within the KSA National Vision 2030. In 2019, for example, The National Waste Management Center, Riyadh Municipality and SIRC signed a tripartite memorandum of understanding (MoU) to begin integrated waste management and waste recycling activities in Riyadh. Key targets for SIRC include recycling of 81% MSW and 47% construction and demolition waste by 2035. Each Entity shall set its own targets for waste management, but shall collaborate with 3rd parties such as SIRC to align with national plans.

7.0 Attachments

1. Attachment 1 - Waste Management Process Flow
2. Attachment 2 - EOM-ZO0-TP-000064 - Waste Compliance Matrix Template
3. Attachment 3 - EOM-ZO0-TP-000065 - Waste Management Plan Template
4. Attachment 4 - EOM-ZO0-TP-000066 - Waste Sample Label Template
5. Attachment 5 - EOM-ZO0-TP-000067 - Waste Transportation Record Form Template

Attachment 1 - Waste Management Process Flow



Attachment 2 - EOM-ZO0-TP-000064 - Waste Compliance Matrix Template

Site / Location	Organisation responsible? i.e. Serco / Landlord / client	Waste stream	6 digit EWC code	Waste Carrier Name	Waste Carriers licence number (collection permit in ROI)	License / permit valid until?	Waste destination site address	Site permit / License / exemption number (facility permit in ROI)	Site accepts EWC code?	Waste hierarchy route? i.e. reuse / recycled / recovered (ie energy from waste / compost) / landfill	Date Annual Transfer note valid until? if applicable
Milton Keynes site	*Serco*	*Confidential paper*	*200101*	*PHS datashred*	*CB/MP 3493LL*	*3/31/2016*	*PHS, Rugby*	*Exempt EPR / WE5198KD / A001*	*Yes, waste type noted on exemption*	*Recycled*	*12/4/2019*

Attachment 3 - EOM-ZO0-TP-000065 - Waste Management Plan Template

Last revision date: XXXXXXXX

Type of waste	Waste Hierarchy					Other comments
	Reduce / Reuse		Recycle / Recover / Dispose			
	Action to reduce or reuse waste stream?	Responsibility	Action to recycle or recover waste stream?	Storage location	Responsibility	
Infectious Waste Yellow Stream	Place waste type poster adjacent to each bin to direct users to use the correct bin for each waste type. Toolbox talks	HelathCare managers	Dispose			
Cytotoxic/Cytostatic Waste. Yellow Stream	Place waste type poster adjacent to each bin to direct users to use the correct bin for each waste type. Toolbox talks	HelathCare managers	Dispose	Local Yellow bag holders with metal lids, sealed & tied bags within hold areas, storage caged in disposla hold	HealthCare employees and users	Local bags to be collected daily and moved to hold areas, Hold areas to be emptied every two days. Weekly collection from disposal area.
Non Infectious Waste	Place waste type poster adjacent to each bin to direct users to use the correct bin for each waste type. Bags opended to check contents in segregation area prior to disposal.	HelathCare managers	Recover: Segregate from non recyclable waste stream and introduce recycle bins	Local Black bag holders with metal lids, sealed & tied bags within hold areas, storage caged in disposal hold	HealthCare employees and users	Local bags to be collected daily and moved to hold areas, Hold areas to be emptied every two days. Weekly collection from disposal area.
Sharps Infectious	Place waste type poster adjacent to each bin to direct users to use the correct bin for each waste type.	HelathCare managers	Dispose	Treatment rooms, consultation cupboards, pharmacy		
Hazardous	Place waste type poster adjacent to each bin to direct users to use the correct bin for each waste type.	HelathCare managers	Dispose		HealthCare Employees and users	
Paper waste	Reduce: Set printers to default double sided printing	IT / Office manager	Recycle	Paper recycling bins adjacent to printers and large wheelie bins by back door	Office Manager	Confidential paper waste to be disposed of in confidential waste bins
As above	Reuse: Non confidential waste paper used as notes	Management policy / Staff	Recycle	Paper recycling bins adjacent to printers and large wheelie bins by back door	Office Manager	Non confidential paper to be disposed of in mixed recycling
As above	Reuse: Non confidential waste paper used as notes	Management policy / Staff	Recycle	Paper recycling bins adjacent to printers and large wheelie bins by back door	Office Manager	Non confidential paper to be disposed of in mixed recycling
Food waste	NA	NA	Recover: Segregate from non recyclable waste stream and introduce food waste bins	Local Bins Restaurant areas	Catering contractor	Remove daily to ensure no issues with smells
Lighting waste	Reduce: Introduce LED lights with longer life	Engineering manager	Waste lighting tube / box / coffin	Engineering room	Engineering	Phased introduction / assess wider organisational commitments / targets such as CRC, ESOS compliance and carbon reduction permitted

Attachment 4 - EOM-ZO0-TP-000066 - Waste Sample Label Template

Name of Establishment: ……
Name of Location (Section): ……
Type of Waste: ……
Name of the person in charge: ……
Signature: ……
Date: ……
Other information: …… …… …… ……

Attachment 5 - EOM-ZO0-TP-000067 - Waste Transportation Record Form Template

Form No. (1) – Application for Off-site Transportation of Waste Permit

Kingdom of Saudi Arabia – Ministry of Health
Identification No. issued by the General Authority of Meteorology and Environment Protection .....
Directorate/District .....
Health Facility .....
Serial No. .....
Reference No. .....

A

Waste Source Certificate:

A.1. The Waste hereunder have been assembled at ..... for evacuation to .....
Name: ..... Signature: .....
Position: ..... Facility Name: .....
Phone No.: ..... Address: .....
Waste Collection Date: .....

A.2. Waste Description (Quantity and Category):
.....

B

Waste Transporter Certificate:

I hereby witness that I have received the load of Waste and that the information provided in A-(1) and A-(2) are correct and subject to any amendments I shall give mention of as follows:
.....
This load has been received at .....
on .....
Name: ..... Signature: ..... Date: .....
Truck Number Plate: ..... Phone No. .....
Name of Transportation Company: .....
Address: .....

C

Waste Receiver Certificate

Name and Address of the Establishment (Final Facility): .....
.....
This load of Waste has been brought by truck having plate number ..... at ..... o'clock on ..... and the transporter said that their name is ..... on behalf of ..... and I hereby witness that the information provided in A-(2) and amended, if the need arises, in (B) are correct and subject to any amendments I shall give mention of as follows:
.....
Name: ..... Signature: ..... Position: .....
Date: ..... Name of Establishment: .....

D

Treatment Completion Certificate

The abovementioned Waste have been treated using the technique of ..... and have been disposed through .....
Name: ..... Signature: .....
Date: ..... Name of Establishment: .....