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PREFACE

The National Environment Management Authority, (NEMA) is the principal instrument of Government in the implementation of all policies relating to the environment. NEMA is established under the Environmental Management and Co-ordination Act, (EMCA) of 1999. The Act entitles every person to a clean and healthy environment, while requiring each person to safeguard and enhance the environment.

In order to implement EMCA, NEMA has developed a Strategic Plan with robust programmes and actions that focus on ways and means of improving our environment. The plan builds on the national priorities as spelt out in Vision 2030 and the MTP (2008 – 2012) among other international, national, sectoral and stakeholders considerations.

As envisaged in EMCA and the Strategic plan, NEMA in consultation with SERC has over the years developed several regulations to address various issues facing the environment. The EMCA (Waste Management) Regulations 2006 is one among the various regulations already developed. The purpose of the regulations is to provide for guidelines, procedures and standards for the environmental governance to ensure compliance. The regulations also provide for licensing, monitoring and enforcement.

Poor solid waste management has contributed to environmental pollution resulting in reduced

environmental quality, risks to human health, loss of natural aesthetic value as well as strained existing waste management infrastructure. Lack of proper waste management systems has led to littering and illegal dumping. In addition, lack of waste segregation at source has led to mixed waste including domestic, medical as well as hazardous waste. The waste Management regulations seek to stop and reverse environmental pollution resulting from solid waste by providing mechanisms for managing solid waste. Such mechanisms include promotion of cleaner production technologies, segregation at sources, recycling and reuse.

This Handbook provides a brief of the gazetted Environmental Management and Coordination (Waste Management) Regulations 2006 in simplified language that is easy to understand. It is aimed at promoting awareness and understanding of the regulations with a view to enhancing compliance at all levels of the society in order to achieve a clean and health environment for all.

ACKNOWLEDGEMENT

The National Environment management Authority (NEMA) gratefully acknowledges the financial contribution of Regional Programme on Sustainable Management of the coastal zones of the countries of the Indian Ocean (RECOMAP) for supporting the production of this Waste Management Regulations Information Handbook. The handbook will enhance the understanding of the regulations by the various sectors as well as the general public thus enhancing the level of compliance to set standards and betterment of the environment.

Further the Authority appreciates the efforts of the team that analyzed and simplified the regulations and developed this information handbook.

List of Acronyms

EIA	Environmental Impact Assessment
EA	Environmental Audit
EU	European Union
EMCA	Environmental Management and Coordination Act
NEMA	National Environment Management Authority
RECOMAP	Regional Program on Sustainable Management of the Coastal Zones of the Countries of the Indian Ocean

1.0 INTRODUCTION

Background

Poor solid waste management has remained a major challenge in Kenya for many years. This has contributed to environmental pollution resulting in reduced environmental quality, risks to human health, loss of natural aesthetic value as well as strained existing waste management infrastructure. The accumulation of solid waste has been occasioned by inefficient waste collection, transportation and disposal systems as well as changing consumption patterns. The situation has been compounded by lack of segregation of solid waste at source. The Environmental Management and Co-ordination (Waste Management) Regulations were gazetted in September 2006 by the Minister for Environment and Natural Resources to address the deplorable state of the environment.

Rationale of the Regulations

The high generation of solid waste in the country has not been matched by the provision of adequate infrastructure for the segregation, regular waste collection and adequate treatment and disposal of the waste. The situation has been made worse by the lack of modern waste management facilities such as

sanitary landfills leading to open dumping of waste across all towns and urban centres across the country. In addition, lack of waste segregation at source leads to mixed waste including domestic, medical as well as hazardous waste.

They pose a great danger to those physically handling the waste as well as contamination through exposure.

Furthermore, both individual and corporate negligence, irresponsible dumping and poor handling of waste has resulted to littering, illegal dumping and overall accumulation of solid waste in the environment. In addition, high population and increased poverty levels have resulted to predominant focus on livelihoods as opposed to solid waste management leading to high generation of waste that exert pressure on existing waste management infrastructure.

Scope

The Regulations apply to all categories of waste including solid waste, industrial waste, hazardous, pesticides and toxics, biomedical waste and radioactive substances. Some of the stakeholders that are regulated include: waste generators, transporters, recyclers, composters, incinerator operators and landfill/dumpsite operators. In addition, the

licensing procedure, fees, offences and penalties as well as operational guidelines are also provided.

.....The Regulations apply to all categories of waste including solid waste, industrial waste, hazardous, pesticides and toxics, biomedical waste and radioactive substances.....

2.1 Waste Generation

The regulations prohibits waste generators from disposing any waste on a public highway, street, road, recreational area or in any public place except in a designated waste receptacle and is required to collect, segregate and dispose or cause to be disposed off such waste in the manner provided for under these Regulations. Any person whose activities generates waste has an obligation to ensure that such waste is transferred to a person who is licensed to transport and dispose off such waste in a designated waste disposal facility.

These regulations support the application of cleaner production technologies in relevant facilities in order to minimize waste generation and maximize use of raw materials. These includes improvement of production processes; monitoring the product cycle from

beginning to end; and incorporating environmental concerns in the design, process and disposal of a product.

“Waste is only disposed at designated waste receptacles”

2.2 Waste Transportation

A license from the Authority is required for any person intending to transport, own and operate an incinerator or own and operate a waste disposal site. Transportation of waste should safeguard against scattering, escaping and/or flowing out of the waste from the vehicle. In addition the transporter must comply to the scheduled routes approved by the Authority from the point of collection to *the disposal site or plant.*

2.3 Waste Disposal

Under the regulations disposal sites are required to operate in environmentally sound manner to ensure proper and modern management of solid waste. Waste within the disposal sites shall be treated in accordance with all the relevant legislations to ensure that such waste does not present any imminent and substantial danger to public health, the environment and natural resources



Operator/owners of waste disposal sites or plants are required to carry out annual environmental audit while those intending to set up new disposal sites or plants shall carry out EIA.

The regulations recognize the important role of incineration as a mode for disposing of hazardous and other types of waste. As such, operator/owners of incinerators are required to carry out annual environmental audit while those intending to set up new ones shall carry out EIA. Standard incinerators should be able to incinerate at an average temperature of 1000 oC.

“The Waste Management Regulations seek to stop and reverse environmental pollution resulting from solid waste by providing mechanisms for managing solid waste. Such mechanisms include promotion of cleaner production technologies, segregation at sources, recycling and reuse”.



2.4 Waste Recycling

In Kenya most recycling technologies are either informal or rudimentary. Traditionally, the common practice has been on collection and disposal of waste rather than segregation at source leading to mixed waste. Some of the common recyclable waste include waste paper, cardboard, glass, scrap metal, rubber sludge/used oil and plastics. The regulations require that any operator/owner of plants or recycling sites established for re-use or re-cycling of wastes should apply for waste disposal license





2.0 OBLIGATIONS FOR DIFFERENT SECTORS

Waste generators

The major sources of solid waste include industrial processes, domestic, hospital facilities, markets, hotels and institutions. The wastes generated from these sources vary in form and need different handling procedures. The regulations provide specific procedures for handling the different types of wastes.

i) Domestic

Domestic waste constitutes a large proportion of solid waste generated in the country on a daily basis. Households generate waste based on consumption patterns. Residential areas in urban centers generate more waste compared to rural households due to changing consumption patterns.

The common types of domestic waste include kitchen waste, packaging materials and used items.



The sector is required by regulations to undertake waste segregation at source to enhance waste disposal mechanisms, for ease of handling and recycling. As such landlords are encouraged to install compartmentalized waste receptors for segregation of waste.

ii) Industrial wastes

The industrial sector is a major contributor of solid waste mainly in cities and other urban centers across the country. The sector is required by regulations to install pollution control technology for the pretreatment of the waste emanating from trade or industrial undertaking. The treatment of waste will be guided by other existing legislations.

iii) Hazardous wastes

Hazardous wastes include explosives, flammable solid and liquids, corrosives, radioactive and carcinogenic substances among others. These wastes require specialized handling, treatment and disposal due to high damaging effect to the environment and human health. The regulations prohibit activities likely to generate any hazardous waste without a valid EIA license issued by the Authority. It also directs that generator of hazardous waste should ensure that containers or packages for storing such waste are secure and labeled in easily legible characters, written in English and Kiswahili.

v) Biomedical wastes

The regulations require that any person who owns/operates an institution that generates biomedical waste should obtain EIA license from the Authority and should also comply with all other relevant legislations.

All biomedical waste generated should be segregated at all stages of generation as specified in annex 2 (Seventh Schedule of the regulations). Segregated waste should be securely packaged in biohazard containers which are clearly labeled with the symbols set out in the regulations.



Further these packaged waste should be treated as prescribed in annex 3 (Ninth Schedule of the regulations) before storage or disposal. The Authority in consultation with relevant lead agency issues permits for transportation of biomedical waste.

vi) Radio-active substances

The regulations are guided by the provisions of the Radiation Protection Act in relation to the classification, registrations, labeling, packaging, transportation, importation, exportations, waste disposal and health and safety requirements with regard to radioactive substances. Disposal of radioactive substances or waste is restricted to designated sites or plant approved by the Authority.





3.2 Waste Transporters

Transportation of solid waste from point of generation to disposal site is an important aspect of waste management. Waste transportation and its coordination remains a challenge to most cities and urban centres. This has resulted to instances of uncollected waste and accumulation at source as well as illegal dumping.

However, the waste management regulations have provided a mechanism for licensing and monitoring of waste transportation across the country.

Licensing and monitoring of waste transporters is intended to address environmental and health impacts of waste management activities through prevention of illegal dumping, prevention of land contamination, secure containment of wastes in

storage and transit, appropriate storage, handling and disposal of wastes, and data collection with regard to quantities of waste.



Obligations

- Waste transporters are required by these regulations to obtain transport license from the Authority in consultation with the relevant lead agency.

...It is an offence to transport waste without a valid licence from NEMA...

- Transporters are required to use designated geographical areas of operation and scheduled routes approved by the Authority.

- The collection and transportation of waste is conducted in such a manner that will not cause scattering, flowing out and emissions or noxious smell. The vehicles and equipment for the transportation of waste should conform to set standards.
- A waste transporter is required to possess at all times during transportation of the waste a duly filled tracking document to facilitate monitoring by law enforcement agents.
- Any person licensed to transport waste shall collect waste from the designated area of operation and shall deliver such waste to the designated disposal site or plant.

3.3 Recyclers/ Composters

Recycling provides an opportunity for material recovery for re-use. It leads to reduction of waste quantities and provides opportunities for employment and income generation. The principle of recycling allows for prior segregation of waste, proper disposal and reduced production cost due to material recovery.

Composting also presents an alternative measure for managing organic biodegradable waste. Key products of composting include manure and biogas which boosts agricultural productivity and alternative clean energy respectively.

The regulations require re-cyclers and composters to obtain the relevant licenses for their operations.

3.4 Landfill/Dumpsites and Incinerators

To date Kenya lacks a modern sanitary landfill for proper solid waste management. Open dumping therefore remains as the major mode of solid waste disposal in major cities, towns and urban centers. This poses health risks to both human and animals. In addition open dumping attracts scavengers posing risks to aviation industry.



The regulations provides for licensing of dumpsites even as the country endeavors to establish modern landfills for waste disposals. The regulations also recognize the important role of incineration as a mode for disposing of hazardous and other types of waste. Institutions that need to install incinerators for handling of waste include hospitals, schools, research centres, private companies and municipalities.



Obligations

- Waste within the disposal sites shall be treated in accordance with all the relevant legislations to ensure that such waste does not present any imminent and substantial danger to public health, the environment and natural resources.
- Operator/owners of waste dumpsites and incinerators are required to carry out annual environmental audit while those intending to set up new dumpsites and incinerators should carry out EIA.
- Operator/owners of incinerators should comply with temperature standards prescribed in annex 1 (Third Schedule of the regulations).

- Operator/owners of waste dumpsites should comply with provisions of other relevant legislations.

3.0 LICENSING PROCEDURES

Applicants shall obtain relevant application forms from the nearest NEMA office or download the same from the NEMA Website: www.nema.go.ke

- The applicant shall fill forms indicating EIA or EA Reference Number and attach supporting documents such as site location maps, sketch of facility/site. In addition the applicant must attach design plan of the waste disposal facilities, company PIN Certificate and Certificate of incorporation.
- The applicant shall pay the prescribed application fee equivalent to KShs 3,000 through NEMA's KCB Revenue Account . A NEMA official receipt will be issued to the applicant on evidence of payment such as bank deposit slips or copy of a banker's cheque.
- The duly filled forms and documents shall be returned to the District Environment Officer who will then forward the form to NEMA Headquarters for processing
- The application will then be reviewed within 21 working days and an approval

for licensing will be given with relevant conditions or a decline stating the reasons

- Upon approval, license fees are paid as per the specified activities namely transportation, operation of a disposal site/plant, export/transit as shown in annex 4 (Second Schedule) and a license issued.
- The license is liable for renewal every year based on evidence of adherence to set conditions.
- Every licensed owner or operator of a waste disposal site or plant shall carry out an annual environmental audit in accordance with the provisions of the Act.
- Any person granted a license should comply with all conditions of the licence to ensure that the disposal site/plant operates in an environmentally sound manner.
- Any operator of a disposal site should also comply with other relevant provisions on waste treatment under the Local Government Act and Regulations.

5.0 PENALTIES FOR NON-COMPLIANCE

EMCA 1999 identifies various environmental offences and states that any person who contravenes any part of the regulations commits an offence. Any person who contravenes the provisions of the waste management regulations is liable upon conviction to imprisonment or a fine

not exceeding five hundred thousand Kenya Shillings (KShs 500, 000) as per the Act. In addition, the court may give such other orders as provided for by the Act

Environmental Inspectors of the Authority will undertake regular monitoring of waste disposal facilities to ensure compliance with the regulations. In the event of violation of conditions in the license, the Authority shall revoke the license regardless of its validity. Following such revocation, the facilities shall cease to operate until the licensing conditions are fulfilled.

6.0 CONCLUSION

The implementation of waste management regulations offers an opportunity to redeem the environment from solid waste which has been an eyesore and major risk to human and animal health. Segregation and recycling of waste contribute to material recovery, waste reduction and provision of alternative livelihoods. This will contribute to the attainment of a clean and healthy environment in line with Vision 2030.

NEMA urges the various stakeholders to observe and adhere to their obligations as stipulated in the regulations. This will enhance the quality of the environment while making relevant operations

compliant to environmental standards. Stakeholders are encouraged to submit relevant feedback regarding the implementation of these regulations.

It is important to note that this Handbook provided a brief of the gazetted Environmental Management and Coordination (Waste Management) 2006 Regulations (Legal notice No. 121). The regulations can be obtained from Government printer or downloaded from NEMA website: www.nema.go.ke