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**CONTENTS • INHOUD**

No.

Page  
No.    Gazette  
          No.

**GOVERNMENT NOTICE**

**Environmental Affairs, Department of**

*Government Notice*

926	National Environmental Management: Waste Act (59/2008): National norms and standards for the storage of waste.....	3	37088
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## GOVERNMENT NOTICE

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### DEPARTMENT OF ENVIRONMENTAL AFFAIRS

No. 926

29 November 2013

#### NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (ACT NO. 59 OF 2008)

#### NATIONAL NORMS AND STANDARDS FOR THE STORAGE OF WASTE

I, Bomo Edith Edna Molewa, Minister of Water and Environmental Affairs, in terms of section 7(1)(c) of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), hereby set the national norms and standards for the storage of waste in the Schedule hereto for implementation.



BOMO EDITH EDNA MOLEWA

MINISTER OF WATER AND ENVIRONMENTAL AFFAIRS

**SCHEDULE**

**NATIONAL NORMS AND STANDARDS FOR THE STORAGE OF WASTE**

**TABLE OF CONTENTS**

**CHAPTER 1**

**INTERPRETATION, PURPOSE AND APPLICATION**

1. Definitions
2. Purpose
3. Legislative framework
4. Application

**CHAPTER 2**

**REQUIREMENTS FOR WASTE STORAGE FACILITIES**

**Part 1**

**Registration, Location and Construction**

5. Registration
6. Location
7. Construction and design

**Part 2**

**Management of Waste Storage Facilities**

8. Access control and notices
9. Operation

10. General requirements of waste storage containers
11. Minimum requirements for above ground waste storage facilities
12. Minimum requirements for underground waste storage containers

### **CHAPTER 3**

#### **General Provisions**

13. Training
14. Emergency preparedness plan
15. Monitoring and inspection
16. Auditing
17. Relevant authority audits and inspections
18. Reporting
19. Records
20. Minimum requirements during the decommissioning phase

### **CHAPTER 4**

#### **Miscellaneous**

21. Transitional provisions

## CHAPTER 1

### INTERPRETATION, PURPOSE AND APPLICATION

#### 1. Definitions

In this Schedule, unless the context indicates otherwise, any word or expression that is defined in the National Environmental Management: Waste Act, 2008 (Act No.59 of 2008) has the same meaning, and—

**“Applicable legislation”** includes, but is not limited to—

- (a) the National Environmental Management Act, 1998 (Act No. 107 of 1998);
- (b) the National Environmental Management: Waste Act, 2008 (Act No.59 of 2008);

**“Best environmental practice”** means to perform or exercise a particular activity or activities in the most suitable, appropriate, advantageous or best advised manner in order to achieve the highest standards while performing or exercising such activity or activities;

**“Colour coding”** means the use of colour on a container or bag or the label attached to such, that serves to identify the category of waste that it contains;

**“Constitution”** means the Constitution of the Republic of South Africa, 1996

**“General waste storage facility”** means a storage facility that has a capacity to store in excess of 100m<sup>3</sup> of general waste continuously;

**“Ground water”** means water that occupies pores in the soil and cavities and spaces found in the rocks which are situated in the saturated zone of the profile by rising from a deep magmatic source or by the infiltration of rainfall;

**“Handling”** means the functions associated with the movement of waste, including storage, treatment and ultimate disposal, by the use of manual systems and automated systems;

**“Hazard”** means the intrinsic potential property or the ability of any agent, equipment, material or process to cause harm;

“**Hazardous waste storage facility**” means a storage facility that has a capacity to store in excess of 80m<sup>3</sup> of hazardous waste continuously;

“**Impermeable surface**” means a physical barrier or a membrane that prevents leaching of waste;

“**Monitoring**” means continuous or non-continuous measurement of a concentration or other parameters for purpose of assessment or control of environmental quality or exposure and the interpretation of such measurements;

“**Tank**” means a container designed for the accumulation of waste.

### **LIST OF ACRONYMS**

**CBO:**Community Based Organization

**DEA:**Department of Environmental Affairs

**NEMA:** National Environmental Management Act, 1998(Act No. 107 of 1998)

**NEM: WA:** National Environmental Management: Waste Act, 2008(Act No.59 of 2008)

**NGOs:** Non Governmental Organizations

**SEMAs:** Specific Environmental Management Acts

## 2. Purpose

- (1) The purpose of these norms and standards is to—
- (a) provide a uniform national approach relating to the management of waste storage facilities;
  - (b) ensure best practice in the management of waste storage facilities; and
  - (c) provide minimum standards for the design and operation of new and existing waste storage facilities.

## 3. Legislative Framework

- (1) The Constitution provides the foundation for environmental regulation and policy. Section 24 of the Constitution makes provision for environmental protection for the benefit of present and future generations and the right to an environment that is not harmful to health and well-being. This can only be achieved through a reasonable legislative framework and other measures that prevent pollution and ecological degradation, promote conservation, and secure ecologically sustainable development and the sustainable use of natural resources. The responsibility of ensuring a safe and healthy environment rests upon the State; reference can be made to the provisions of section 7(2) of the Constitution that reads "*The State must respect, protect and fulfill the bill of rights*". The DEA fulfills these rights through the application of the NEMA and the SEMAs among other tools.
- (2) The NEMA introduced a number of guiding principles into the South African environmental legislation, including the life-cycle approach to waste management, producer responsibility, the precautionary principle and the polluter pays principle. NEMA also places a duty of care on any person who causes significant pollution or degradation to the environment, requiring them to institute measures to prevent pollution from occurring, or to minimise and rectify the pollution or degradation where it cannot reasonably be avoided. The development of the norms and standards is the foundation of the regulatory system established in terms of section 7(1)(c) of the NEMA: WA.



#### **4. Application**

- (1) These norms and standards apply to any person who stores general or hazardous waste in a waste storage facility.
- (2) These facilities are required to comply with the norms and standards without a need to conduct a basic assessment and obtain a waste management licence as required by the Government Notice No. 718 of 3 July 2009.
- (3) The norms and standards do not apply to the storage of general or hazardous waste in surface impoundments or lagoons.

### **CHAPTER 2**

#### **REQUIREMENTS FOR WASTE STORAGE FACILITIES**

##### **Part 1**

##### **Registration, Location and Construction**

#### **5. Registration**

- (1) A new waste storage facility must be registered with the competent authority within 90 (ninety) days prior to the construction taking place.
- (2) The applicant must provide at least the following information to be registered:
  - (a) Demarcation of the area where the storage facility will be located;
  - (b) Name of the waste storage facility;
  - (c) Name of the owner of the waste storage facility;
  - (d) Types of waste to be stored at the facility;
  - (e) Size of the storage facility;
  - (f) Sources of waste to be stored at the facility;

(g) Time frames for the storage of waste; and

(h) Geographical co-ordinates of the waste storage facility.

## **6. Location**

- (1) In locating the waste storage facility consideration must be given to the public health and environmental protection. The location of the waste storage facility must also take into consideration the requirements in respect of existing servitudes.
- (2) A new hazardous waste storage facility must be located within an industrial demarcated zone. A storage facility that is not located within the industrial demarcated zone must have a buffer zone of at least 100m unless there is a prescribed buffer zone by the relevant municipality.
- (3) A general waste storage facility may be located within a residential area and must be located such that the facility is easily accessible by the public.
- (4) A waste storage facility must be located in such a manner that it can provide optimum handling and transportation of waste material.
- (5) The location of the hazardous waste storage facility must also take into consideration the hazards including the flammability and toxicity of the waste stored and applicable codes and standards.
- (6) A waste storage facility must be located in areas accessible by emergency response personnel and equipments.

## **7. Construction and Design**

- (1) Construction and development of the waste storage facility must be carried out under the supervision of a registered professional engineer and must be in accordance with the approved civil engineering designs. The plan must only be amended and approved by a registered professional engineer.

- (2) The liquid waste storage area must have firm, impermeable, chemical resistant floors and a roof. Liquid waste containers that are not stored under a roofed area must be coated to prevent direct sunlight and rain water from getting in contact with the waste.
- (3) A hazardous waste storage facility must have impermeable and chemical resistant floors.
- (4) A liquid waste storage facility must be surrounded by an interception trench with a sump for intercepting and recovering potential spills and must be lined in compliance with the requirements set out in paragraph 7(2) of these standards.
- (5) A waste storage facility must be constructed to maintain on a continuous basis a drainage and containment system capable of collecting and storing all runoff water arising from the storage facility in the event of a flood. The system must under the said rainfall event, maintain a freeboard of half a meter.
- (6) A liquid waste storage area must have a secondary containment system (e.g. bund, drip tray) of a capacity which can contain at least 110% of the maximum contents of the waste storage facility. Where more than one container or tank is stored, the bund must be capable of storing at least 110% of the largest tank or 25% of the total storage capacity, whichever is greater (in the case of drums the tray or bund size must be at least 25% of total storage capacity).

## Part 2

### Management of Waste Storage Facilities

#### 8. Access Control and Notices

- (1) A waste storage facility must have effective access control to prevent unauthorised entry. Weatherproof, durable and legible signs in at least 3 (three) official languages applicable in the area must be displayed at each entrance to the facility. The signs must indicate the risks involved in entering the site, hours of operation, the name, address, telephone number and the person responsible for the operation of the facility as a minimum.

- (2) Access to a hazardous waste storage facility must be limited to employees who have been trained with respect to the operation of the hazardous waste storage facility and emergency response procedures and any other person authorised by the owner of the hazardous waste storage facility.

## **9. Operation**

- (1) A waste storage facility must be free from odour or emissions at levels likely to cause annoyance.
- (2) Waste must be sorted at source into various categories (recyclables and non-recyclables) and a documented procedure must be implemented to prevent any mixing of hazardous and general waste integrated waste management plan and/or Industry Waste Management Plan, if any.
- (4) A waste storage facility must be operated within its design capacity and the waste storage container must not be overfilled.
- (5) Liquid waste must be stored in leak resistant containers which must be inspected weekly for early detection of leaks.

## **10. General Requirements of Waste Storage Containers**

- (1) A liquid waste container must be of sufficient strength and structural integrity to ensure that it is unlikely to burst or leak in its ordinary use.
- (2) Waste that is spilled or blown by wind during opening, handling or storage must be contained.
- (3) Hazardous waste must be stored in covered containers and only open when waste is added or emptied.
- (4) Below-ground pipes connected to the container must be protected from physical damage (e.g. excessive surface loading, ground movement or disturbance). If mechanical joints have to be used, they must be readily accessible for inspection.

- (5) A hazardous waste storage container, associated piping and equipment must be of sufficient structural strength to withstand normal handling and installed on stable foundation.
- (6) The foundation of a hazardous waste storage container must be protected from, or resistant to all forms of internal and external wear, vibration, corrosion, fire, heat, vacuum and pressure which might cause the storage tank foundation to fail.
- (7) A leak monitoring device must be installed on an underground liquid waste storage container and piping to and from the container in order to keep operating personnel informed.
- (8) If a container is lined or internally coated, the coating must be compatible with the substance stored. Furthermore the coating specification must adhere to existing engineering practices and the applicable standards or requirements.
- (9) The waste storage tank must be a closed system and pressure resistant.
- (10) In a case where a tank or vent pipe is not visible during the filling process an automatic overflow prevention device must be fitted onto the tank.

#### **11. Minimum Requirements for above ground waste storage facilities**

- (1) A hazardous waste container resting on the ground must be underlain by barriers, which will not deteriorate with permeability rate of the waste stored.
- (2) Bottoms of the container in contact with soil and are subject to corrosion must be protected from external corrosion by either ensuring that the container is made of corrosion resistant materials or the container have a cathodic protection system.
- (3) A waste storage tank must not have mechanical joints, except if it can be accessed for inspection.
- (4) The screw fitting or other fixed coupling fitted to the tank must be maintained in good condition and must only be used when filling the tank.

**12. Minimum Requirements for underground waste storage containers**

- (1) Underground waste storage container must have double walled and synthetic liners and underground vaults must be installed.
- (2) A steel underground tank and piping in contact with soil must be protected from corrosion using corrosion resistant materials or cathodic protection.
- (3) Container components that are placed underground and backfilled must be provided with a backfill material that is a non-corrosive, porous, homogeneous substance and that is installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.
- (4) If external coating is used to protect the tank from external corrosion, the coating must be fiberglass, reinforced, plastic, epoxy, or any other suitable dielectric material.

**Chapter 3****General Provisions****13. Training**

- (1) Training must be provided continuously to all employees working with waste and to all contract workers that might be exposed to the waste.
- (2) The training programme must amongst others include the following:
  - (a) Precautionary measures that need to be taken;
  - (b) Procedures that the employees must apply to their particular type of work;
  - (c) Procedures for dealing with spillages and accidents;
  - (d) Appropriate use of protective clothing; and
  - (e) The risks of the hazardous substances to their health which they are likely to be exposed to.

- (3) A sufficient number of employees must receive training to cover for leave periods, absences due to illness, public holidays or any other reason.
- (4) An attendance register must be kept and signed by each employee at each training session and made available to the relevant authorities when required.
- (5) Only trained persons must be allowed to handle hazardous waste.

#### **14. Emergency Preparedness Plan**

- (1) Waste can be hazardous or dangerous to the environment if not handled properly or if stored inappropriately. To minimise environmental impacts, a waste storage facility must have an emergency preparedness plan including the following:
  - (a) Hazard identification;
  - (b) Prevention measures;
  - (c) Emergency planning;
  - (d) Emergency response;
  - (e) Remedial actions.
- (2) Immediate action must be taken to contain spillage and prevent it from entering storm water drains or environment.

#### **15. Monitoring and Inspection**

- (1) Containers, tanks, valves and piping containing hazardous waste must be inspected for leaks, structural integrity and any sign of deterioration (e.g. corrosion or wearing of protective coatings) on a weekly basis.
- (2) A registered engineer must inspect tanks containing hazardous waste at least once per annum to check tank integrity, corrosion, piping, valves, bunding, and impermeability of the bund wall and bund floor.

- (3) The secondary containment system must be examined at least weekly or after each significant precipitation event to ensure that the containment is free of debris, rainwater and other materials that would compromise the capacity and integrity of the system.
- (4) Ventilation systems, sump pumps, emergency alarms, impressed current corrosion protection systems, level alarms and other mechanical systems must be inspected on a weekly basis to ensure proper functioning based on manufacturer recommendations, regulatory requirements or best practice.
- (5) Inspection must include the review of the adequacy and accessibility of spill response equipment.
- (6) If environmental pollution is suspected or is occurring from the waste storage facility, an investigation must be initiated into the cause of the problem or suspected problem and remedial action taken.

## **16. Auditing**

### Internal Audits

- (1) Internal audits must be conducted bi-annually and on each audit occasion an official report must be compiled by the relevant auditor to report the findings of the audits, which must be made available to the external auditor.

### External Audits

- (2) An independent external auditor must be appointed to audit the waste storage facility biennially and the auditor must compile an audit report documenting the findings of the audit, which must be submitted to the relevant authority.
- (3) The external audit report must-
  - (a) specifically state whether conditions of these standards are adhered to;



- (b) include an interpretation of all available data and test results regarding the operation of the storage facility and all its impacts on the environment;
- (c) specify target dates for the implementation of the recommendations to achieve compliance;
- (d) contain recommendations regarding non-compliance or potential non-compliance and must specify target dates for the implementation of the recommendations and whether corrective action taken for the previous audit non conformities was adequate; and
- (e) show monitoring results graphically and conduct trend analysis.

#### **17. Relevant Authority Audits and Inspections**

- (1) The relevant authority responsible for waste management reserves the right to audit and/or inspect the waste storage facility without prior notification at any time.
- (2) Any records or documentation pertaining management of the waste storage facility must be available to the relevant authorities upon request, as well as any other information which may be required.

#### **18. Reporting**

- (1) An emergency incident must be reported in accordance with section 30 of NEMA.
- (2) An action plan which includes a detailed time schedule, and resource allocation to address any incident must be signed off by the senior management of the organisation.
- (3) Complaints register and incident report must be made available to the external auditor and relevant authority.
- (4) Each external audit report must be submitted to the relevant authority within 30 days from the date on which the external auditor finalized the audit.

**19. Records**

- (1) Each waste storage facility must be able to provide documentation verifying the following:
  - (a) number of waste storage containers or tanks within the facility;
  - (b) date of collection; and
  - (c) authorized collector or collectors and proposed final point of treatment, recycling or disposal.
- (2) Any deviations from the approved integrated or industry waste management plan must be recorded.
- (3) Records must be kept for a minimum of 5 (five) years and must also be available for inspection by the relevant authority.

**20. Minimum Requirements during the Decommissioning Phase**

- (1) A waste storage facility to be discontinued, the site must be rehabilitated to the satisfaction of the relevant authority.
- (2) A rehabilitation plan for the site, including the indication of end use of the area must be developed and submitted to the DEA for approval not more than 1 (one) year prior to the intended closure of the facility.
- (3) The rehabilitation plan must indicate the following:
  - (a) measures for rehabilitating contaminated areas within the facility; and
  - (b) manner in which the waste resulted from decommissioning activities will be managed.
- (4) The site must be rehabilitated according to such a plan.
- (5) The owner of the facility, including the subsequent owner of the facility will remain responsible for any adverse impacts on the environment, even after operations have

ceased.

## CHAPTER 4

### MISCELLANEOUS

#### **21. Transitional provisions**

A person who lawfully operated a waste storage facility for the storage of general and hazardous waste prior to and on the date of coming into operation of these standards may continue with the activity for the duration as stipulated in the permit or licence and after the expiry of the permit or licence comply with these standards.

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