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1. Introduction

This procedure will focus on addressing all waste related issues and will advocate the handling, storage, collection, recycling, and disposal of all waste streams that will be generated during Arnot Power Station's (APS) operations

The management, staff, partners at Arnot Power Station are committed to generate low-cost power without compromising its responsibility towards the natural environment. There are waste streams generated in the station during the power generation process and its activities, these waste streams must be classified, handled, stored, recycled, transported and disposed of in an environmentally acceptable manner.

2. Supporting Clauses

2.1 Scope

This procedure covers the EMS and waste management requirements of all employees including those employees doing work under APS's control and the visitors.

2.1.1 Purpose

The purpose of this procedure is to guide Arnot Power Station's employees, partners, contractors, and suppliers on how to handle, store, recycle, transport and dispose waste as well as to ensure that all waste related legislations and regulations are not contravened. Furthermore, the procedure assists in ensuring that reasonable measures are taken to prevent future pollution and harm to the employees and the environment emanating from Arnot Power Stations activities, Products and Services.

2.1.2 Applicability

The procedure will apply to all waste streams generated in the areas that are scoped in Arnot Power Station's Environmental management system. Apply to all waste generators, waste transporters and waste managers.

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2.1.3 Effective date

This document will be effective from date of signatures

2.2 Normative/Informative References

2.2.1 Normative

- [1] ISO 9001 Quality Management Systems
- [2] SANS codes for transportation of hazardous waste -10228 to 10234, 10206, 10265
- [3] National Environmental Management Waste Act 59 of 2008 - National Norms and Standards for the Storage of Waste (GN 926)
- [4] National Environmental Management Waste Amendment Act 2014, (Act 26 of 2014) National Environmental Management Waste Act 59 of 2008 - National Norms and Standards for Disposal of Waste to Landfill (GN R636)
- [5] National Environmental Management Waste Act, 59 of 2008 National Norms and Standards for the Sorting, Shredding, Grinding, Crushing, Screening or Bailing of General Waste
- [6] Basel Convention on the trans-boundary movement of hazardous waste
- [7] SANS ISO 14001 2015 Environmental Management System Requirements with guidance for use
- [8] Kyoto Protocol on the removal of greenhouse gases
- [9] Montreal Protocol on the removal of ozone depleting substances
- [10] National Environmental Management Act (NEMA), 1998 (Act 107 of 1998)
- [11] Stockholm Convention on the identification and removal of persistent organic pollutants
- [12] Rotterdam convention on the banning of hazardous substances

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- [13] Montreal Convention, the phase-out of ozone depleting substance National Environmental Management Act (Act No 107 of 1998 National Environmental Management Waste Act (Act No 59 of 2008)
- [14] National Environmental Management Waste Act, 59 of 2008 Waste Classification and Management Regulations, 2013
- [15] National Environmental Management. Waste Act, 59 of 2008 National Norms and Standards for the Assessment of Waste for Landfill Disposal Published under Government Notice R635 in Government Gazette 36784 of 23 August 2012
- [16] National Environmental Management Act, 107 of 1998 (NEMA
- [17] Environment Conservation Act, 73 of 1989
- [18] Occupational Health and Safety Act, 85 of 1993 (OHSA)
- [19] National Environmental Management Waste Act, 59 of 2008
- [20] STEVE TSHWETE LOCAL MUNICIPALITY (TRANSITIONAL LOCAL COUNCIL FOR MIDDELBURG)
- [21] Refuse (Solid Waste) and Sanitary By-laws
- [22] Published under LAN 23 in Mpumalanga Provincial Gazette 504 of 4 February 2000
- [23] National Health Act, 61 of 2003
- [24] Nkangala District Municipality Health Services By-law 139. Obligations of holders of waste

2.2.2 Informative

- [1] Eskom's Procurement and Supply Chain Management Procedure 32-1034
- [2] Safety, Health, Environment and Quality (SHEQ) Policy, 32-727
- [3] Spill Assessment Table 240-47176039
- [4] Spill Feedback Form 240-47176095
- [5] Eskom Waste Management Standard 32- 245
- [6] Polychlorinated Biphenyl Phase out standard, 32-1135

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- [7] Requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles, 32-303

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2.3 Definitions

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Definition	Explanation
“associated structures and infrastructure”	when referred to in Schedule 1, means any building or infrastructure that is necessary for the functioning of a facility or waste management activity or that is used for an ancillary service or use from the facility,
“best practicable environmental option”	means the option that provides the most benefit or causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term
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
Contaminant	Means any substance present in an environmental medium at concentrations in excess of natural background concentrations that has a potential to cause harm to human health or the environment
Disposal	means the burial, deposit, discharge, abandoning, dumping, placing or release of any waste into, or onto, any land,
Employer	Means a person that employs people, in this case it is Eskom
“emergency”	means an unexpected sudden occurrence, including a major emission, fire or explosion leading to serious danger to the public or potentially serious pollution of or detriment to the environment, whether immediate or delayed
General waste	Waste, excluding hazardous waste that emanates from premises that are used wholly or mainly for residential, educational, health care, sport or recreation purposes General waste means waste that does not pose an immediate hazard or threat to health or to the environment, and includes - <ul style="list-style-type: none"> a) Domestic waste, b) Building and demolition waste, c) Business waste, d) Inert waste or e) Any waste classified as non-hazardous waste in terms of the regulations made under section 69 of NEMWA
General waste storage facility	means a storage facility that has a capacity to store in excess of 100m ³ of general waste continuously,
Hazardous waste	means any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment and includes hazardous substances, materials or objects within business waste, residue deposits and residue stockpiles as outlined below
Hazardous waste storage facility	means a storage facility that has a capacity to store in excess of 80m ³ of hazardous waste continuously
Health care risk waste	Means the hazardous portion of the waste generated at the health care facility. This is any waste that poses a hazard to human health or the environment

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Definition	Explanation
"Incident"	means an unexpected, sudden and uncontrolled release of a hazardous substance, including from a major emission, fire or explosion, that causes, has caused or may cause significant harm to the environment, human life or property,
life cycle assessment	means a process where the potential environmental effects or impacts of a product or service throughout the life of that product or service is being evaluated,
"Leachable Concentration (LC)"	means the leachable concentration of a particular element or chemical substance in a waste, expressed as mg/l
"Leachable Concentration Threshold (LCT)"	means the leachable concentration threshold limit for particular elements and chemical substances in a waste, expressed as mg/l, prescribed in section 6 of these Norms and Standards
"putrescible waste"	means waste that contains organic matter capable of being decomposed by microorganisms, or that will readily decay under normal conditions, giving rise to offensive odours, or which is capable of providing food for birds and animals, thereby attracting vermin or disease-causing vectors such as flies and rodents
Recycling	A series of activities that includes the collection of recyclable materials that would otherwise be considered waste, the sorting and the processing of recyclables into raw material such as fibres, and the manufacture of these raw materials into new products
Remediation	The management of a contaminated site to prevent, minimise, or mitigate harm to human health or the environment
responsible person	<p>includes any person who -</p> <ul style="list-style-type: none"> (i) is responsible for the incident, (ii) owns any hazardous substance involved in the incident; or (iii) was in control of any hazardous substance involved in the incident at the time of the incident, <p>(c) "relevant authority" means -</p> <ul style="list-style-type: none"> (i) a municipality with jurisdiction over the area in which an incident occurs, (ii) a provincial head of department or any other provincial official designated for that purpose by the MEC in a province in which an incident occurs, (iii) the Director-General, (iv) Any other Director-General of a national department

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Definition	Explanation
Re-use	To utilise the whole, a portion of or a specific part of any substance, material or object from the waste stream for a similar or different purpose without changing the form or properties of such substance, material or object
"SANS 10234"	means the latest edition of the South African National Standard Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
Scrapyard	a place where old used steel and machines are stored, collected and either sold or prepared for being used again
"Total Concentration (TC)"	means the total concentration of a particular element or chemical substance in a waste, expressed as mg/kg,
"Total Concentration Threshold (TCT)")" means the total concentration threshold limit for particular elements or chemical substances in a waste, expressed as mg/kg, prescribed in section 6 of these Norms and Standards
Temporary storage	A once off storage of waste for a period not exceeding 90 days
	<p>The term waste in these Regulations has the meaning as assigned by the Act, and is deemed to include both general waste and hazardous waste</p> <p>(3) General waste and hazardous waste have the meanings as assigned by the Act, and are referred to as such in these Regulations, where specific provisions are only applicable to either general or hazardous waste</p> <p>(4) For any action contemplated in terms of these Regulations for which a timeframe is prescribed, the specified numbers of days are ordinary days</p>
"waste disposal facility"	means any site or premise used for the accumulation of waste with the purpose of disposing of that waste at that site or on that premise

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Definition	Explanation
“waste management activity”	<p>means any activity listed in Schedule 1 or published by notice in the <i>Gazette</i> under section 19, and includes-</p> <ul style="list-style-type: none">(a) the importation and exportation of waste;(b) the generation of waste, including the undertaking of any activity or process that is likely to result in the generation of waste,(c) the accumulation and storage of waste,(d) the collection and handling of waste,(e) the reduction, re-use, recycling and recovery of waste,(f) the trading in wastethe transportation of waste,(h) the transfer of waste,(i) the treatment of waste, and(j) the disposal of waste,

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Definition	Explanation
"waste management facility"	means a place, infrastructure, structure or containment of any kind, wherein, upon or at, a waste management activity takes place and includes a waste transfer station, container yard, landfill site, incinerator, a lagoon, recycling or a composting facility,
"waste manifest system"	means a system of control documentation, which accompanies a load of hazardous waste transported from the point of generation to the waste management facility,
Waste transfer facility	Means any site that is used to accumulate waste for the purpose of storage, recovery, treatment, reprocessing, recycling or sorting of that waste
"waste classification"	Means establishing, in terms of SANS 10234 (a) whether a waste is hazardous based on the nature of its physical, health and environmental hazardous properties (hazard classes), and (b) the degree or severity of hazard posed (hazard categories),
"waste generator"	means any person whose actions, production processes or activities, including waste management activities, results in the generation of waste,
"waste manager"	means any person who re-uses, recycles, recovers, treats or disposes of waste,
"waste transporter"	means any person who conveys or transfers waste- (a) between the waste generator and a waste management facility, or (b) Between waste management facilities

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2.4 Abbreviations

Abbreviations	Explanation
PPE	Personal Protective Equipment
IMD	Information Management Department
SDC	Safe Disposal Certificate
PCB	Polychlorinated biphenyl
SDS	Safety Data Sheet
OSSD	Operating Support Services Department
EMD	Electrical Maintenance Department
APS	Arnot Power Station

2.5 Roles and Responsibilities

General duty in respect of waste management

(1) A holder of waste must, within the holder's power, take all reasonable measures to-

(a) Avoid the generation of waste and where such generation cannot be avoided to minimise the toxicity and amounts of waste that are generated

(b) Reduce, re-use, recycle and recover waste

(c) Where waste must be disposed of, ensure that the waste is treated and disposed of in an environmentally sound manner

(d) Manage the waste in such a manner that it does not endanger health or the environment or cause a nuisance through noise, odour or visual impacts

(e) Prevent any employee or any person under his or her supervision from contravening this Act, and

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- (f) Prevent the waste from being used for an unauthorised purpose

For additional roles refer to Resources, Roles, Responsibilities and Authority Procedure ASEN 0004

2.6 Process for Monitoring

A waste register inclusive of waste types, quantities disposed of and recycled shall be kept. Records of disposal destination as well as SDC shall be kept. Waste shall only be disposed of and/or recycled at permitted or licenced facilities. The Environmental practitioner will ensure monitoring and compliance to this procedure.

2.7 Related/Supporting Documents

- Waste reporting template
- Waste Register
- Monthly Waste Report
- Biannual Waste Report
- Annual Waste report
- PCB Inventory
- Asbestos inventory
- SDC's

3. Classification of waste at Arnot Power Station

- The waste produced at Arnot Power Station is classified as either General waste or Hazardous waste
- The waste generated shall be classified according to SANS 10234 as well as the National Environmental Management Waste Act (59/2008) Waste Classification and Management Regulation 634, 635 and 636

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- Waste must be kept separate for the purposes of classification in terms of sub-regulation (2), and must not be mixed prior to classification
- Waste must be re-classified in terms of sub-regulation (2) every five (5) years, or within 30 days of modification to the process or activity that generated the waste, changes in raw materials or other inputs, or any other variation of relevant factors
- The types of waste produced at Arnot Power station are listed on Arnot Power Station Waste Suppliers ARNF 508 register

Safety Data Sheets

Subject to Regulation 4 (2) and sub-regulations (2) and (3), generators of hazardous waste must ensure that a safety data sheet for the hazardous waste is prepared in accordance with SANS 10234

Sub-regulation (1) does not apply to generators of waste listed in item (2)(b) of Annexure 1 to these Regulations provided that the safety data sheets for these wastes are prepared as follows-

(a) Safety data sheets for waste listed in item (2)(b)(i) of Annexure 1 to these Regulations must be prepared in accordance with SANS 10234 for the product the waste originates from, and

(b) Safety data sheets for waste listed in item (2)(b)(ii) of Annexure 1 to these Regulations must be prepared in accordance with SANS 10234 reflecting the details of the specific hazardous waste/s or hazardous chemical/s in the waste

(3) Generators of waste listed in item (2)(b)(iii) of Annexure 1 to these Regulations do not have to prepare a safety data sheet for the waste

(4) Every holder of hazardous waste, except waste listed in item (2)(b)(iii) of Annexure 1 to these Regulations, must be in possession of the safety data sheet/s for the waste referred to in subregulations (1) and (2)

Waste Treatment

(1) Waste must not be mixed or treated where this would-

(a) Reduce the potential for re-use, recycling or recovery, or

(b) Result in treatment that is not controlled and not permanent

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(2) Notwithstanding Regulation 6 (2) and Regulation 7 (1), waste may be blended or pre-treated to-

- (a) Enable potential for re-use, recycling, recovery or treatment; or
- (b) Reduce the risk associated with the management of the waste

Standard Assessment Methodology

Approach

(1) To assess waste for the purpose of disposal to landfill, the following are required-

- (a) Identification of chemical substances present in the waste, and
- (b) Sampling and analysis to determine the total concentrations (TC) and leachable concentrations (LC) of the elements and chemical substances that have been identified in the waste and that are specified in section 6 of these Norms and Standards

(2) Within three (3) years of the date of commencement of the Regulations, all analyses of the TC and LC of elements and chemical substances in waste must be conducted by laboratories accredited by the South African National Accreditation System (SANAS) to conduct the particular techniques and analysis methods required

(3) The TC and LC limits of the chemical substances in the waste must be compared to the threshold limits specified in section 6 of these Norms and Standards for total concentrations (TCT limits) and leachable concentrations (LCT limits) of specific elements and chemical substances

(4) Based on the TC and LC limits of the elements and chemical substances in the waste exceeding the corresponding TCT and LCT limits respectively, the specific type of waste for disposal to landfill must be determined in terms of section 7 of these Norms and Standards

4 Total Concentration (TC) Analysis

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The TC of all the elements and chemical substances specified in section 6 of these Norms and Standards that are known to occur, likely to occur or can reasonably be expected to occur in the waste must be determined

(2) The TC of elements and chemical substances in waste must be determined using techniques and analysis methods that will provide reliable, accurate and repeatable results of the TC of elements and chemical substances specified in section 6 of these Norms and Standards

Leachable Concentration (LC) Analysis

(1) The LC of elements and chemical substances must be determined using the Australian Standard Leaching Procedure (AS 4439 1, 4439 2 and 4439 3)

(2) The type of leaching fluid (section 5 2 and 5 3 of AS 4439 3) used in the leaching procedure must be selected as follows -

(a) Waste to be disposed of with, or waste that contains, putrescible wastes Use 0 1 M acetic acid solution with altered pH 5 0 or pH 2 9 determined as per section 7.5(a-e) of AS 4439 3,

(b) Waste to be disposed of with non-putrescible waste. Use a basic 0 1 M sodium tetraborate decahydrate solution of pH 9 2 \pm 0 1, as well as an acetic acid solution with pH 5 0 or pH 2 9) determined as per section 7 5(a-e) of AS 4439 3, or Non-putrescible waste to be disposed of without any other wastes Use reagent water

(3) Existing LC results for elements and chemical substances in wastes, which have been determined in terms of the Toxicity Characteristic Leaching Procedure (TCLP) leach test criteria of the Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste (2nd Edition, 1998, Department of Water Affairs and Forestry) prior to the Regulations taking effect, may be utilised for comparison with the LCT limits in section 6 of these Norms and Standards to assess waste for the purpose of disposal of the waste to landfill, for a period not exceeding three (3) years from the date of publication of this Notice

Determining Waste Types for Landfill Disposal

(1) The specific type of waste for disposal to landfill must be determined by comparing the TC and LC of the elements and chemical substances in the waste with the TCT and LCT limits specified in section 6 of these Norms and Standards

(2) Based on the assessment of the particular waste destined for disposal to landfill, the type of waste is determined as follows-

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(a) Wastes with any element or chemical substance concentration above the LCT3 or TCT2 limits ($LC > LCT3$ or $TC > TCT2$) are Type 0 Wastes,

(b) Wastes with any element or chemical substance concentration above the LCT2 but below or equal to the LCT3 limits, or above the TCT1 but below or equal to the TCT2 limits ($LCT2 < LC \leq LCT3$ or $TCT1 < TC \leq TCT2$), are Type 1 Wastes,

(c) Wastes with any element or chemical substance concentration above the LCT1 but below or equal to the LCT2 limits and all concentrations below or equal to the TCT1 limits ($LCT1 < LC \leq LCT2$ and $TC \leq TCT1$) are Type 2 Wastes,

(d) Wastes with any element or chemical substance concentration above the LCT0 but below or equal to the LCT1 limits and all TC concentrations below or equal to the TCT1 limits ($LCT0 < LC \leq LCT1$ and $TC \leq TCT1$) are Type 3 Wastes, or

(e) Wastes with all element and chemical substance concentration levels for metal ions and inorganic anions below or equal to the LCT0 and TCT0 limits ($LC \leq LCT0$ and $TC \leq TCT0$), and with all chemical substance concentration levels also below the following total concentration limits for organics and pesticides, are Type 4 Wastes-

3.1 General Waste

(1) Waste transporters and waste managers must not accept waste that has not been classified in terms of Regulation 4 unless such waste is listed in Annexure 1 of these Regulations

(2) Waste must not be diluted solely to reduce the concentration of its constituents for the purposes of classification in terms of Regulation 4 (2), or assessment of the waste in accordance with the Norms and Standards for Assessment of Waste for Landfill Disposal set in terms of section 7 (1) of the Act

(3) Any container or storage impoundment holding waste must be labelled, or where labelling is not possible, records must be kept, reflecting the following-

(a) The date on which waste was first placed in the container,

(b) The date on which waste was placed in the container for the last time when the container was filled, closed, sealed or covered,

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(c) The dates when, and quantities of, waste added and waste removed from containers or storage impoundments, if relevant,

(d) the specific category or categories of waste in the container or storage impoundment as identified in terms of the National Waste Information Regulations, 2012, and

(e) The classification of the waste in terms of Regulation 4 once it has been completed

(4) Waste generators must ensure that their waste is re-used, recycled, recovered, treated and/or disposed of within eighteen (18) months of generation

(5) Waste managers must not store waste for more than eighteen (18) months from the date of receipt from the waste generator

(6) The re-use, recycling, recovery, treatment or disposal of waste stored in an existing facility prior to promulgation of these Regulations must be commenced within five (5) years from the date of commencement of these Regulations

(7) Proof of disposal (SDC's) and the supporting documents to be submitted to Environmental Department at the end of each month after collection and disposal

Waste that is spilled or blown by wind during opening, handling or storage must be contained

3.1.1 Domestic waste

- Domestic waste shall be stored in white wheelie bins and white skips
- Responsible OSSD Contracts Manager will ensure that wheelie bins and skips are available at all times
- All employees, visitors and partners shall comply with the waste colour coding for storage
- Appointed waste collection contractor will collect and dispose domestic waste at an authorised landfill site
- The appointed Contractor has a fulltime site waste team that is responsible on a daily basis for separating waste from the skips and wheelie bins, ensuring that there is good housekeeping on site in terms of waste, emptying of wheelie bins that are around offices and any other waste related activities

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- SDC's must be provided to the Environmental Practitioner on a monthly basis

3.1.2 Paper

- Waste paper produced in the offices will be stored in the recycling containers provided at strategic points
- The appointed contractor will collect the paper on site for recycling and/or re-use or disposal
- Records for disposal or recycling will be submitted to the environmental department

throw, drop, deposit, spill or in any other way discard any litter into or onto any public place, land, vacant erf, stream, watercourse, street or road, or on any place to which the general public has access, except in a container or a place specifically provided for that purpose,

- The appointment contractor will have to provide the contract manager and environmental department a record of papers that have been collected

3.1.3 Scrap metal

- All scrap waste produced in the station will be stored at the scrapyards/salvage yard, which has different compartments for each type of scrap material. All scrap/salvage metals produced within the plant, will be temporarily discarded in blue wheelie bins which will then be emptied at the scrap yard
- The appointed contractor will collect the scrap on site for recycling and/or re-use or disposal
- Scrap metal quantity removed, re-used and recycled must be reported to the Environmental department and the records retained

3.1.4 Food waste

- Food waste is generated from the canteen
- Food waste is stored in white skips for disposal
- Food waste is collected by local farmer to feed their pigs
- Record of food collected will be provided to Environmental department

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3.1.5 Garden waste

- All garden waste produced will be disposed at Reitkuil dumping site

3.1.6 Building rubble

- All building rubble waste produced in the station shall be disposed at Middleburg or Witbank General Waste Disposal Site. For special projects where there is building rubble waste produced, the End User is to inform OSSD by loading a priority 04 defect, 8 weeks prior to the commencement of work so that more skips can be arranged

3.1.7 Non contaminated PPE

- Non contaminated PPE will be disposed in white wheelie bins and white skips provided at strategic points
- Non contaminated PPE should be disposed at Middleburg or Witbank General Waste Disposal Site

3.1.8 Lagging

- Lagging removed from the plant must be single bagged by the Employer (Oram Industrial Contract), taken to the Lagging Yard, and placed in the white containers provided by the Contractor. This will be collected by the appointed contractor for safe disposal at Rietfontein waste disposal site
- Collection is done after logging of a call for service

3.1.9 Electronic waste

- All electronic waste that do not forms part of scrap metal waste will be stored at the red skips or red 210L drums which is placed at Electrical Department cable yard
- When the skip is full the OSSD Contract Manager logs a call for service for the waste to be collected

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- The appointed contractor will collect the waste on site for recycling at Desco Electronic Recyclers

3.1.10 Waste Oil

- Waste oil is drained into the blue, green or red drums placed at strategic points around the station
- Depending on the type of oil that is checked and separated by the Site Waste Attendants, the designated contractor collects the full drums on a call for service
- A call for service must be logged for all oil collection by OSSD Contract Manager
- If it is fuel waste oil inside the drums, it is then disposed of at Holfontein hazardous waste disposal site
- If it is cooking oil waste inside the drums, it is then disposed of at Holfontein hazardous waste disposal site
- If it is lubrication waste oil inside the drums, it is then collected by oil recyclers to or disposed of at a hazardous waste disposal site
- Responsible Contracts Manager from OSSD will ensure that empty 210L blue or green drums are always available

3.1.11 Waste grease and oil sludge

- Waste grease is stored in blue and white drums placed at strategic points around the station
- A call for service must be logged by the OSSD Contract Manager
- Waste will then be disposed of at Holfontein hazardous waste disposal site

3.1.12 Fluorescent tubes and globes

- Electrical Maintenance Department is responsible to remove faulty and redundant fluorescent tubes in the station
- Broken fluorescent tubes and globes are placed inside the red open top 210L drums
- Fluorescent tubes are stored in 6ft and 8ft boxes depending on the tube length

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- OSSD supplies EMD with 8ft boxes and red open top drums as and when required
- Electrical maintenance supervisor must notify OSSD Contract Manager to log a call for service request when the drums or boxes are full
- Fluorescent tubes and globes must be taken for recycling to E-waste Africa

3.1.13 Chemical waste

- Bulk chemical waste is generated at water plant and laboratories
- Chemical waste is stored at water plant or the lab inside the blue and green 210L plastic drums
- Every department using chemicals should file MSDS's for all the chemicals they use
- OSSD Contracts Manager must be notified when there is a need to dispose of any chemical waste
- OSSD Contracts Manager is responsible for making arrangements for collection and safe disposal of any chemical waste.
- A call for service will be logged by the OSSD Contract Manager for the waste to be collected and disposed
- Chemical waste will be disposed of at Holfontein hazardous landfill site
- Large quantities of empty chemical waste containers from laboratories to be stored in 210L drums at chemical lab

3.1.14 Asbestos

The disposal of asbestos or asbestos containing material, must be done in accordance with section 20 of the Environment Conservation Act, 73 of 1989 ("ECA") and regulation 20 of the Asbestos Regulations, 2001

Disposal of Asbestos or Asbestos Containing Material

Any person who wishes to dispose of any asbestos or asbestos containing material in his or her possession must dispose of that asbestos or asbestos containing material in accordance with section 20 of the Act and regulation 20 of the Asbestos Regulations, 2001

Packaging and Transport of Asbestos

A person who transports or packages asbestos must comply with the standards set for transport and packaging in SANS 10228 and SANS 10229

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An employer or self-employed person shall as far as is reasonably practicable ensure that-

- (a) All asbestos waste is placed in containers that will prevent the likelihood of exposure during handling,
 - (b) all vehicles, re-usable containers or any other similar articles which have been in contact with asbestos waste are cleaned and decontaminated after use, in such a way that such vehicles, containers or similar articles do not cause a hazard inside or outside the workplace concerned,
 - (c) all asbestos waste which can cause exposure, is disposed of only on sites specifically designated for this purpose in terms of the Environment Conservation Act, 1989 (Act No 73 of 1989), and the National Environmental Management Act, 1998 (Act No 107 of 1998), and in such a manner that it does not cause a hazard inside or outside the site concerned,
 - (d) All persons occupied in the collection, transport and disposal of asbestos waste, who may be exposed to that waste, are provided with suitable personal protective equipment, and
 - (e) Where the services of a contractor for the disposal of asbestos waste are used, a provision is incorporated into the contract stating that the contractor shall also comply with the provisions of these Regulations
- Asbestos is stripped by the designated contractor in the presence of an Eskom occupational hygienist
 - After stripping, it must be immediately double bagged by the contractor that was stripping, collected and temporary stored in a closed yellow skip at the asbestos yard
 - A call for service will be logged by OSSD Contract Manager and will be transported inside the closed white skip by the contractor
 - All Asbestos containing materials must be handled in the same manner Asbestos yard must be locked at all times
 - Asbestos and asbestos containing material shall be disposed at Holfontein hazardous waste disposal site

3.1.15 Fabric filter bags

- Fabric filter bags are used in the fabric filter plant for removal of dirty gas combustion process and the bags are replaced regularly when leaking

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- Removed bags must be stored in a white waste skip provided behind induced draught fans
- Once the skip is full, OSSD Contract Manager logs a call for service for the Contractor to collect and dispose
- Filter bags are disposed at Holfontein hazardous waste disposal site

3.1.16 Sludge

- Uncontaminated sludge is generated from the cooling water system, effluent neutralisation sump, water treatment plant and all waste water recovery dams
- Sludge is disposed at the ash dams by the relevant department
- Contaminated sludge is removed by a competent service provider to Holfontein hazardous waste disposal site
- OSSD Contracts Manager must be notified when there is a need to dispose of any contaminated sludge
- A call for service will be logged by the OSSD Contract Manager for the waste to be collected and disposed

3.1.17 Ash

- Ash is generated after combustion process of which it is transported through a wet ashing system
- Ash is disposed at the ash dams

3.1.18 Medical waste / Health Care Risk Waste.

- Medical waste is generated at the medical centre
- Health care risk waste is generated at the Medical Centre and in lavatories
- Medical waste shall be stored in the medical waste bins provided at the centre
- All reusable containers must be effectively disinfected before reuse and meet the standards specified in SANS 10248 2004

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- A lid used for a pathological waste container or a disposable sharps container must provide an airtight seal to prevent the emission of odours and be secured in such a way that it cannot be reopened once closed
- Healthcare risk waste other than pathological waste, sharps and pharmaceutical waste shall not be stored for more than 90 days from the date of generation
- The date of the initial waste storage shall be logged onto the container for monitoring
- Prior to containers reaching their storage date, the medical centre is responsible to arrange the bins to be removed
- Arnot P S Medical Center Contract Manager to log a call for service for all medical waste except for sanitary waste where a call for service will be logged by OSSD Contract Manager to be disposed of accordingly
- The waste will be sent to A-thermal Retort Technology and or to ClinX Waste Management depending on the type of waste to be incinerated and all the ash or final product of waste after incineration to be sent to Holfonetin for disposal

3.1.19 Contaminated PPE and oily rags

- Contaminated PPE and oily rags must be stored in wheelie bins and red skips provided at strategic points
- Once the skips are full, OSSD Contract Manager to log a call for service for waste to be collected and disposed
- Contaminated PPE and oily rags are disposed at Holfonetin hazardous waste disposal site

3.1.20 Contaminated saw-dust and contaminated soil

- Sawdust is used to absorb spilled oil
- Used sawdust must be bagged and stored in red wheelie bins and skips provided at strategic points
- Soil contaminated from spilled oil shall be removed by the relevant people, bagged and stored in red bins and skips provided at strategic points

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- Once the skips are full, OSSD Contract Manager to log a call for service for waste to be collected and disposed
- The waste will further be disposed of at Holfontein hazardous waste disposal site

3.1.21 Waste water

- Effluents are generated throughout the station mainly from the water treatment plant, sewage works and station drains water
- Arnot power station is operating with the Zero Liquid Effluent Discharge (ZLED) Policy, all effluent are reused back into the system using cascading discharge

3.1.22 Herbicides

- Herbicides are used to control vegetation and invader plants around Arnot Power station property by the Horticulture department
- Herbicide waste and empty herbicide containers must be stored in red 210L drums at Horticulture storage area
- SDS's for herbicides must be made available at the Department using the herbicides
- OSSD Contracts Manager must be notified when there is a need for disposal
- Herbicides waste and their empty containers must be disposed at Holfontein hazardous waste disposal site

3.1.23 Paints and Solvents

- Old redundant paints, solvents and their empty containers must be stored in red skips provided at strategic points
- Once the skips are full, OSSD Contract Manager to send a call for service request for the waste to be collected and disposed

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3.1.24 Coal rejects, lashed coal and spilled coal

- Coal rejects are generated from milling plant, and coal rejects must be stored in yellow or black skips at both South and North coal rejects areas
- Coal rejects will be disposed at Ash dams
- Spilled and lashed coal must be removed and taken to the yellow or black skips at both South and North coal rejects areas

3.1.25 Sewage waste

- Solid sewage waste is removed from screens in the raw sewage sump and must be disposed of in the red skips provided
- Dried sludge must be removed from the sludge beds and waste reagents from microbial analysis
- Once the skips are full OSSD Contract Manager to log a call for service for waste to be collected and disposed

3.1.26 Used cooking oil

- Cooking oil waste is generated from two kitchens
- Used cooking oil must be stored in 20L drums.
- The OSSD Contract Manager must be informed if there is a need to dispose used cooking oil
- Used cooking oil must be disposed at Holfontein hazardous waste disposal site

3.1.27 Cartridges

- Empty toner of cartridges must be returned to the Information Management for recycling
- In cases of disposal OSSD Contract Manager will supply IMD with open top 210L drums
- Once the drums are full IMD will notify OSSD Contract Manager for her or him to send a request for collection and disposal

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4. Handling of Chemical and Oil Spillages

- All operating and maintenance practices or processes involving the use transfer or transporting of oils shall include specific requirements for the correct handling, storage and treatment / containment of oil spills
- All containment sumps must be kept clean and free of oil, water and silt The drain valves must be locked
- Drums containing oil shall be in predefined areas The locations of these pre-defined areas shall be determined by the OSSD Contract and the Environmental Department
- Each area of potential chemical and oil spillage should have access to spill kits in order to clean up any minor oil spillage In the event of major oil spillages, specialists will be arranged for clean-up This shall be done by the responsible department
- All oil (hydrocarbon) and chemical spill incidents within Eskom shall be reported in line with the requirements of the Safety, Health and Environmental Incident Management Procedure All oil (hydrocarbon) spills shall be assessed using the Spill assessment criteria checklist as a guide and feedback on the assessment, based on the Spill assessment feedback form at minimum, which shall be uploaded as records to the incident management system for reportable events
- Minor oil spill and leaks can be cleaned using suitable absorbent materials which are available from materials management
- Oil spills from the rupture of large tanks or spills will require more sophisticated equipment and would involve the services of a suitably and well equipped response team of service provider
- The need for immediate corrective action to limit and contain the spillage from polluting any environmental medium should be actioned
- The spill and all contaminated mediums should be cleaned and safely disposed of in the appropriate bins and skips
- Appropriate personal protective equipment shall be used depending on the hazardous chemical substance and shall be informed by the SDS
- A clean – up operation will only be considered complete once the recovered oil is safely removed and the area affected has been restored
- In the event of a Chemical or Oil Spillage the SDS's must be used for the emergency response including clean-up of such chemical /oil spilled

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5. Waste separation and storage

- APS has different colour coded bins to manage and store all waste streams produced throughout all its operations
- White wheelie bins and skips are used to store general waste, thus from domestic waste, paper waste, food waste and etc
- Red wheelie bins and skips are used to store hazardous waste
- Yellow and black open skips are used to store coal rejects
- Yellow closed skips at the asbestos yard are used to temporary store asbestos or asbestos containing material
- Scrap metals are also stored at the scrap yard in designated compartments
- Waste oil is drained and stored in red, blue and green 210L drums
- Waste grease is stored in red, blue and green 210L drums

6. Waste handling, collection, transportation, disposal and recycling**Storage, collection and transportation of waste**

- (a) the containers in which any waste is stored, are intact and not corroded or in any other way rendered unfit for the safe storage of waste,
- (b) Adequate measures are taken to prevent accidental spillage or leaking,
- (c) The waste cannot be blown away,
- (d) Nuisances such as odour, visual impacts and breeding of vectors do not arise, and pollution of the environment and harm to health are prevented

Waste Disposal to Landfill

- (5) Unless otherwise directed by the Minister to ensure a better environmental outcome, or in response to an emergency so as to protect human health, property or the environment-

- (5) Waste generators must ensure that their waste is assessed in accordance with the Norms and Standards for Assessment of Waste for Landfill Disposal set in terms of section 7(1) of the Act prior to the disposal of the waste to landfill,

- (b) Waste generators must ensure that the disposal of their waste to landfill is done in accordance with the Norms and Standards for Disposal of Waste to Landfill set in terms of section 7(1) of the Act, and

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€ Waste managers disposing of waste to landfill must only do so in accordance with the Norms and Standards for Disposal of Waste to Landfill set in terms of section 7 (1) of the Act

Sub regulation (1) (a) applies to all waste generators, excluding-

(a) Generators of waste listed in items (2) (a) and (b) of Annexure 1 to these Regulations, and

(b) Generators of business waste that is collected by a municipality

(3) Sub regulation (1)(b) applies to all waste generators, excluding-

(a) Generators of waste listed in item (2) (a) of Annexure 1 to these Regulations, and

(b) Generators of business waste that is collected by a municipality

Record Keeping and Waste Manifest System

The OSSD contract manager must keep all SDCs of waste disposed and must send copies to the environmental department on a monthly basis

Records of waste generation and management

(5) Waste generators must keep accurate and up to date records of the management of the waste they generate, which records must reflect-

(5) The classification of the wastes,

(b) The quantity of each waste generated, expressed in tons or cubic metres per month,

€ the quantities of each waste that has either been re-used, recycled, recovered, treated or disposed of, and

(5) By whom the waste was managed

(5) Subregulation (1) does not apply to generators of waste listed in item (2)(a) of Annexure 1 to these Regulations

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(5) The records contemplated in subregulation (1) must be-

(5) Retained for a period of at least five (5) years, and

(b) made available to the Department upon request

Waste Manifest System

(5) Every holder of waste that has been classified as hazardous in terms of Regulation 4(2) or a waste that is listed in item (2)(b) of Annexure 1 to these Regulations, must be in possession of a waste manifest document containing the relevant information specified in Annexure 2 to these Regulations

(5) Generators of waste classified as hazardous in terms of Regulation 4(2) or waste that is listed in item (2)(b) of Annexure 1 to these Regulations, must complete a waste manifest document containing the information specified in item (2)(a) of Annexure 2 to these Regulations for each consignment of waste transported to a waste manager

(5) Subregulations (1) and (2) do not apply to waste generators who are also the waste manager and manage the waste at the same premises where it was generated

(4) Waste transporters must not accept waste classified as hazardous in terms of Regulation 4(2) or waste that is listed in item (2)(b) of Annexure 1 to these Regulations for transport, unless the waste manifest document accompanies the waste

(5) All transporters of waste classified as hazardous in terms of Regulation 4(2) or waste that is listed in item (2)(b) of Annexure 1 to these Regulations must-

(5) Complete a waste manifest document containing the information specified in item (2)(b) of Annexure 2 to these Regulations for each consignment of waste transported,

(b) Provide the information to the generator before the waste is transported from the premises of the generator, and

€ Provide the information to the waste manager at the time of delivery of the waste to the facility for a waste management activity

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(6) Waste managers must not accept waste classified as hazardous in terms of Regulation 4(2) or waste that is listed in item (2)(b) of Annexure 1 to these Regulations, unless the waste manifest document accompanies the waste

(7) All managers of waste classified as hazardous in terms of Regulation 4(2) or waste that is listed in item (2)(b) of Annexure 1 to these Regulations, must complete the waste manifest document with the information specified in item (2)(c) of Annexure 2 to these Regulations, confirming that the waste load has been accepted and that the waste has been managed

(8) All waste generators, transporters and managers subjected to the requirements of subregulations (1), (2), (4), (5), (6) and (7) must-

(5) retain copies, or be able to access copies/records, of the waste manifest documentation for a period of at least five (5) years, and

(b) Make the waste manifest documentation available to the Department upon request

Waste Manifest System Information Requirements

- (a) (i) Generator's contact details (contact person, physical & postal address, phone, fax, email),
- (ii) Physical address of the site where the waste was generated (if different from (iii)),
- (iii) Contact number in case of an incident or after hours,
- (iv) Origin / source of the waste (process or activity),
- (v) Classification of the waste and Safety Data Sheet,
- (vi) Quantity of waste by volume (m3) or weight (tons),
- (vii) Date of collection / dispatch,
- (ix) Intended receiver (waste manager), and
- (x) Declaration (content of the consignment is fully and accurately described, classified, packed, marked and labelled, and in all respects in proper condition for transportation in accordance with the applicable laws and regulations)

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(5) Information to be supplied by the Waste Transporter-

- (i) Name of transporter,
- (ii) Address and telephone number of transporter; and
- (iii) Declaration acknowledging receipt of the waste

(5) Information to be supplied by the Waste Manager (Consignee)-

- (5) Name, address and contact details,
- (ii) Receiving waste management facility name, address and contact details
- (iii) Waste management facility licence number,
- (iv) Date of receipt,
- (v) Quantity of waste received by weight (tons), and volume (m3) if applicable,
- (vi) Type of waste management applied (re-use, recycling, recovery, treatment, disposal),
- (vii) Any discrepancies in information between the different holders of the waste (related to waste quantity, type, classification, physical and chemical properties),
- (viii) Waste management reporting description and code in terms of the National Waste Information Regulations, 2012,
- (ix) Details on any waste diverted to another waste management facility, and details of the facility, and
- (x) Certification and declaration of receipt and final management of the waste

Duties of persons transporting waste

Any person engaged in the transportation of waste must take all reasonable steps to prevent any spillage of waste or littering from a vehicle used to transport waste

Where waste is transported for the purposes of disposal, a person transporting the waste must, before offloading the waste from the vehicle, ensure that the facility or place to which the waste is transported, is authorised to accept such waste

Where hazardous waste is transported for purposes other than disposal, a person transporting the waste must, before offloading the waste from the vehicle, ensure that the facility or place to which

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the waste is transported, is authorised to accept such waste and must obtain written continuation that the waste has been accepted

In the absence of evidence to the contrary which raises a reasonable doubt, a person who is in control of a vehicle, or in a position to control the use of a vehicle, that is used to transport waste for the purpose of offloading that waste, is considered to knowingly cause that waste to be offloaded at the location where the waste is deposited

- Upon call for service, the designated service provider is responsible for removal or collection of waste throughout the station
- General waste must be removed twice a week during normal conditions
- Hazardous waste must be removed as to whenever required, but it should be removed at least once a month and must not be stored for more than 90 days
- The service provider should provide APS with all the waste manifests and safe disposal certificates for the disposed waste
- The preferred hazardous waste site for the disposal of hazardous waste is Holfontein for, A-thermal Retort Technology, and Clinix Should there be any changes of the disposal sites the Contractor to inform the Service Manager via email within 14 working days after any changes All licences and permits for the disposal sites to be submitted at the commencement of the contract For general waste it is Witbank and Middleburg landfill site
- Waste will be transported in accordance with the obligations imposed on the "operator" and "driver" by GN R 225 to the National Road Traffic Act of 1996, including the associated SANS 10228,10229,10231,10406 and 10206 Codes of Practice
- Waste contractors transporting hazardous waste will be required to provide Eskom with the necessary documents to proof that they are permitted to handle and transport the waste
- Waste transporters must be registered to do so with the National or Provincial Governments A registration certificate must be provided as evidence
- The load must be properly loaded and secured on site prior to transportation
- The transport operator must have Hazchem placards on his vehicle
- The transport operator must ensure that the Hazchem placards are properly fitted to the vehicle

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7. Waste reporting

- Waste generated and its quantities are reported to sustainability division on a monthly basis APS shall register with the South African Waste Information System (SAWIS) in accordance with the National Waste Information Regulations
- Waste reporting is done in accordance with the waste standard Eskom waste management standard 32- 245
- Registration of Business Units and reporting on South African Waste Information System will be done by the Waste Centre of Excellence, on behalf of Eskom
- All waste generated and collected by the service provider must be reported to the Contracts Manager and Environmental department
- Waste is managed by the Operating support services, Contracts Manager
- All safe disposal certificates must be signed by the consignor, driver and waste disposal facility

8. Waste Classification

- Waste must be re-classified every five (5) years, or within 30 days of modification to the process or activity that generated the waste, changes in raw materials or other inputs, or any other variation of relevant factors If waste was subjected to any form of treatment, it must be classified.
- Divisions must ensure that the SDS's for waste classified are prepared in accordance with SANS 10234
- Divisions do not have to prepare the SDS's for pre-classified hazardous waste provided they reflect the product the waste originates from and for mixed waste, the details of the specific hazardous waste/s or hazardous chemical/s in the waste
- SDS's are not required for medical waste and general waste unless it (general waste) was contaminated with hazardous waste

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 take
- (b) Procedures that the employees must apply to their particular type of work,
- € Procedures for dealing with spillages and accidents,

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- (d) Appropriate use of protective clothing, and
 € The risks of the hazardous substances to their health which they are likely to be exposed to

(5) 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

Monitoring and Inspection

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

Reporting

All incidents occurring at the waste facility, excluding those that fall within the ambit of Section 30 of the National Environmental Management Act, 1998 must be reported to the competent authority

- A holder of industrial waste must on demand prove to the Environmental Health Practitioner that they have entered into a suitable agreement with the local Municipality or an accredited service provider for the collection, processing, treatment or disposal of industrial waste

A person involved in activities that cause the generation of special industrial, hazardous, medical or infectious refuse must

- notify Council within seven days of such generation regarding the nature, quantity generated, method of storage, proposed duration of generation and the manner in which it will be removed;
- Offences and Penalties
- (1) A person is guilty of an offence if that person-
 - (a) fails to comply with Regulations 4(2), (3), (4), (5), (6), 5, 6, 7(1), 8(1), 10(1), 10(3), 11(1), (2), (4), (5), (6), (7), (8) or 12, or
 - (b) Provides incorrect or misleading information in any record or document required or submitted in terms of these Regulations

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Annexure 1: Wastes that do not require Classification or Assessment

(1) The wastes specified in item 2 of this Annexure do not require classification in terms of Regulation 4(1), nor assessment in terms of Regulation 8(1)(a)

(2)

(a) General waste-

(i) Domestic waste,

(ii) Business waste not containing hazardous waste or hazardous chemicals,

(iii) Non-infectious animal carcasses,

(iv) Garden waste,

(v) Waste packaging,

(vi) Waste tyres

(vii) Building and demolition waste not containing hazardous waste or hazardous chemicals, and

(viii) Excavated earth material not containing hazardous waste or hazardous chemicals

2)

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(b) Hazardous waste-

(i) Waste Products

- Asbestos Waste,
- PCB waste or PCB containing waste (> 50 mg/kg or 50 ppm), and
- Expired, spoilt or unusable hazardous products

(ii) Mixed Waste

- General waste, excluding domestic waste, which contains hazardous waste or hazardous chemicals, and
- Mixed, hazardous chemical wastes from analytical laboratories and laboratories from academic institutions in containers less than 100 litres

(iii) Other

- Health Care Risk Waste (HCRW)

Waste assessed in terms of the Norms and Standards for Assessment of Waste for Landfill Disposal set in terms of section 7(1) of the Act must be disposed to a licensed landfill as follows

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Waste Type	Landfill Disposal Requirements
Type 0 Waste	The disposal of Type 0 waste to landfill is not allowed. The waste must be treated and re-assessed in terms of the Norms and Standards for Assessment of Waste for Landfill Disposal.
Type 1 Waste	Type 1 waste may only be disposed of at a Class A landfill designed in accordance with section 3(1) and (2) of these Norms and Standards, or, subject to section 3(4) of these Norms and Standards, may be disposed of at a landfill site designed in accordance with the requirements for a Hh / HH landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2 nd Ed., Department of Water Affairs and Forestry, 1998).
Type 2 Waste	Type 2 waste may only be disposed of at a Class B landfill designed in accordance with section 3(1) and (2) of these Norms and Standards, or, subject to section 3(4) of these Norms and Standards, may be disposed of at a landfill site designed in accordance with the requirements for a GLB+ landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2 nd Ed., DWAF, 1998).
Type 3 Waste	Type 3 waste may only be disposed of at a Class C landfill designed in accordance with section 3(1) and (2) of these Norms and Standards, or, subject to section 3(4) of these Norms and Standards, may be disposed of at a landfill site designed in accordance with the requirements for a GLB+ landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2 nd Ed., DWAF, 1998).
Type 4 Waste	Type 4 waste may only be disposed of at a Class D landfill designed in accordance with section 3(1) and (2) of these Norms and Standards, or, subject to section 3(4) of these Norms and Standards, may be disposed of at a landfill site designed in accordance with the requirements for a GLB- landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2 nd Ed., DWAF, 1998).

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Waste listed in section 2(a) of Annexure 1 to the Regulations and destined for disposal to landfill must be disposed of as follows-

Listed Waste	Landfill Disposal Requirements
(i) Domestic waste	Disposal only allowed at a Class B landfill designed in accordance with section 3(1) and (2) of these Norms and Standards, or, subject to section 3(4) of these Norms and Standards, at a landfill site designed in accordance with the requirements for a GLB+ landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Ed , DWAF, 1998)
(ii) Business waste not containing hazardous waste or hazardous chemicals	
(iii) Non-infectious animal carcasses	
(iv) Garden waste	
(v) Post-consumer packaging	Disposal only allowed at a Class C landfill designed in accordance with section 3(1) and (2) of these Norms and Standards, or, subject to section 3(4) of these Norms and Standards, at a landfill site designed in accordance with the requirements for a GLB+ landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Ed , DWAF, 1998)
(vi) Waste tyres	
(vii) Building and demolition waste not containing hazardous waste or hazardous chemicals	Disposal allowed at a Class D landfill designed in accordance with section 3(1) and (2) of these Norms and Standards, or, subject to section 3(4) of these Norms and Standards, at a landfill site designed in accordance with the requirements for a GLB- landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Ed , DWAF, 1998)
(viii) Excavated earth material not containing hazardous waste or hazardous chemicals	

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(3) Unless assessed in terms of the Norms and Standards for Assessment of Waste for Landfill Disposal set in terms of section 7(1) of the Act and disposed of in terms of section 4(1) of these Norms and Standards, the following wastes included in section 2(b) of Annexure 1 to the Regulations and destined for disposal to landfill must be disposed of as follows-

Listed Waste	Landfill Disposal Requirements
(i) Asbestos Waste.	Disposal only allowed at a Class A landfill designed in accordance with section 3(1) and (2) of these Norms and Standards, or, subject to section 3(4) of these Norms and
(ii) Expired, spoilt or unusable hazardous products	
(iii) PCBs (or rather PCB containing waste (>50ppm))	Standards, at a landfill site designed in accordance with the requirements for a Hh / HH landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Ed , DWAF, 1998)
(iv) General waste, excluding domestic waste, which contains hazardous waste or hazardous chemicals	
(v) Mixed, hazardous chemical wastes from analytical laboratories and laboratories from academic institutions in containers less than 100 litres	

(4) Waste that has been classified in terms of the Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste (2nd Edition, 1998, Department of Water Affairs and Forestry) prior to the Regulations coming into operation, may be accepted and disposed of as set out below for a period not exceeding three (3) years after the date of coming into operation of the Regulations-

Waste	Landfill Disposal Requirements
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Hazardous Waste - Hazard Rating 1 or 2	Disposal only allowed at a Class A landfill designed in accordance with Section 3(1) and 3(2) of these Norms and Standards, or, subject to Section 3(4) of these Norms and Standards, at a landfill site designed in accordance with the requirements for a HH landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Ed , DWAF, 1998)
Hazardous Waste - Hazard Rating 3 or 4	Disposal only allowed at a Class A landfill designed in accordance with section 3(1) and (2) of these Norms and Standards, or, subject to section 3(4) of these Norms and Standards, at a landfill site designed in accordance with the requirements for a Hh landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Ed , DWAF, 1998)
Hazardous Waste - Delisted	Disposal only allowed at a Class B landfill designed in accordance with section 3(1) and (2) of these Norms and Standards, or, subject to section 3(4) of this Norms and Standards, at a landfill site designed in accordance with the requirements for a GLB+ landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Ed , DWAF, 1998)
General Waste	Disposal only allowed at a Class B landfill designed in accordance with Section 3(1) and (2) of these Norms and Standards, or, subject to Section 3(4) of these Norms and Standards, at a landfill site designed in accordance with the requirements for a general waste site, G S/M/L B-/B+ as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Ed , DWAF, 1998)

(5) Notwithstanding the requirements of section 4(1), (2) and (3) of these Norms and Standards, waste may be disposed of at landfills with a higher level of containment design than specified, subject to the restriction in section 5(2)(a)(ii) of these Norms and Standards

5 Waste Disposal Restrictions

(1) The following prohibitions and restrictions on the disposal of waste to landfill comes into effect after the timeframes indicated for each waste from the date of the Regulations coming into operation-

Waste Prohibited or Restricted in terms of Disposal	Compliance Timeframe
(a) Waste which, in the conditions of a landfill, is explosive, corrosive, oxidizing (according to SANS 10234 or SANS10228)	Immediate
(b) Waste with a pH value of <6 or >12	Immediate
(c) Flammable waste with a closed cup flashpoint lower than 61° Celsius	Immediate
(d) Reactive waste that may react with water, air, acids or components of the waste, or that could generate unacceptable amounts of toxic gases within the landfill	Immediate
(e) Waste compressed gases (according to SANS 10234 or SANS 10228)	Immediate

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(f) Untreated Healthcare Risk Waste (HCRW)	Immediate
(g) (i) POPs pesticides listed under the Stockholm Convention, (ii) Other waste pesticides	Eight (8) years Four (4) years
(h) Lead acid batteries	Immediate
(i) Other batteries	Eight (8) years
(j) Re-usable, recoverable or recyclable used lubricating mineral oils, as well as oil filters, but excluding other oil containing wastes	Four (4) years
Waste Prohibited or Restricted in terms of Disposal	Compliance Timeframe
(k) Re-usable, recoverable or recyclable used or spent solvents	Five (5) years
(l) PCB containing wastes (>50 mg/kg or 50 ppm)	Five (5) years
(m) Hazardous Waste Electric and Electronic Equipment (WEEE) - Lamps	Three (3) years
(n) Hazardous Waste Electric and Electronic Equipment (WEEE) - Other	Eight (8) years
(o) Waste tyres Whole	Immediate
(p) Waste tyres Quartered	Five (5) years
(q) Liquid waste-	
(i) Waste which has an angle of repose of less than 5 degrees, or becomes free-flowing at or below 60° C or when it is transported, or is not generally capable of being picked up by a spade or shovel, or	Six (6) years
(ii) Waste with a moisture content of > 40% or that liberates moisture under pressure in landfill conditions, and which has not been stabilised by treatment	
(r) Hazardous waste with a calorific value of	
(i) > 25MJ/kg	Four (4) years
(ii) > 20MJ/kg	Six (6) years
(iii) > 10 MJ/kg	Twelve (12) years
(iv) > 6% TOC	Fifteen (15) years
(s) Brine or waste with a high salt content (TDS > 5%), and a teachable concentration for TDS of more than 100 000 mg/l	Eight (8) years

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(t) Disposal of garden waste	Five (5) years
(i) 25% diversion from the baseline at a particular landfill of separated garden waste	
(ii) 50% diversion from the baseline at a particular landfill of separated garden waste	Ten (10) years
(u) Infectious animal carcasses and animal waste	Immediate

(2) The following prohibitions and restrictions on activities related to the disposal of waste to landfill comes into effect after the timeframes indicated for each activity from the date of the Regulations taking effect-

Prohibited or Restricted Waste Disposal Activities	Timeframe
(a) Disposal of-	
(i) Type 1 Waste that has been treated, with waste listed in	Five (5) years
paragraph (2)(a) of Annexure 1 to the Regulations,	Five (5) years
(ii) Waste classified as hazardous in terms of regulation 4(1), or waste listed in paragraph (2)(b) of Annexure 1 to the Regulations, with waste listed in paragraph (2)(a) of Annexure 1 to the Regulations, and	
(iii) Type 4 Waste with any waste other than Type 4, unless part of treatment	Five (5) years

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