	Work Instruction	CAMDEN POWER STATION
---	-------------------------	-----------------------------

Title: **Waste Management Procedure**

Document Identifier: **229/12295**

Alternative Reference
Number:

Area of Applicability: **Camden Power Station**

Functional Area: **Environmental Management**

Revision: **07**

Total Pages: **25**

Next Review Date: **10.2027**

Disclosure
Classification: **Controlled Disclosure**

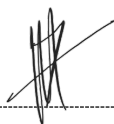
Compiled by



Z Budeli
Environmental Officer

Date: 16 October 2024

**Functional
Responsibility**



T Mpongo
Manager Environmental

Date: 16 October 2024

Authorized by



J. Bore
General Manager

Date: 16/10/2024

Content

	Page
1. Introduction.....	4
2. Supporting Clauses	4
2.1 Scope.....	4
2.1.1 Purpose.....	4
2.1.2 Applicability	4
2.1.3 Effective Date	4
2.2 Normative/Informative References	4
2.2.1 Normative.....	4
2.2.2 Informative References	4
2.3 Definitions	5
2.3.1 Environment:	5
2.3.2 Environmental aspects:	5
2.3.3 Environmental Management System:	5
2.3.4 Recycling:.....	5
2.3.5 Re-use:.....	5
2.3.6 Storage:.....	5
2.3.7 Waste:	5
2.4 Abbreviations	6
2.5 Roles and Responsibilities	6
2.6 Process for Monitoring.....	6
2.7 Related/Supporting Documents.....	6
3. Camden Power Station Waste Management Process.....	7
3.1 Waste Classification	7
3.2 Management of waste streams.....	8
3.2.1 On-site Waste management	8
3.2.2 Minimum requirements of Waste Storage Containers.....	8
3.2.3 Cooling Tower Sludge	9
3.2.4 General Waste	9
3.2.5 Asbestos	9
3.2.6 Building rubble.....	10
3.2.7 Medical waste.....	10
3.2.8 Sanitary waste.....	10
3.2.9 Ferrous and non-ferrous metals.....	10
3.2.10 Used oils	11
3.2.11 Oily sludge.....	11
3.2.12 Oil filters	11
3.2.13 Chemical and laboratory waste.....	11
3.2.14 Fluorescent tubes and sodium lamps	11
3.2.15 Used PPE and rags	12

CONTROLLED DISCLOSURE

3.2.16 Conveyor belts and rubber	12
3.2.17 Contaminated soil.....	12
3.2.18 Oil absorbing fibre, booms and cushions	12
3.2.19 Silica gel.....	12
3.2.20 Batteries	13
3.2.21 Paint/hazardous waste containers	13
3.2.22 Used de-greaser or solvents.....	13
3.2.23 Hydraulic hoses/pipes	13
3.2.24 Boiler/FFP ash and coal rejects	13
3.2.25 Sandblasting grit.....	14
3.2.26 Electronic waste	14
3.2.27 Handling of spillage inside the Hazardous Waste Storage Yard	14
3.2.28 Sewage Waste	14
3.2.29 Used cooking oil.....	14
3.2.30 Handling of rain water inside the Hazardous Waste Storage Yard.....	15
3.2.31 Scrap Metal Management.....	15
3.2.32 Scrap wood	15
3.2.33 Ozone-depleting substances	15
3.3 Training	16
3.4 Waste separation and storage.....	16
3.5 Camden Power Station's recycling process.....	16
3.6 Waste handling, collection, transportation and disposal.....	17
3.7 Waste classification and assessment	17
3.8 Waste skips and bins requirement.....	18
3.9 Waste reporting	18
4. Document Acceptance (Stakeholders).....	19
5. Revisions.....	19
6. Development Team	19
7. Acknowledgements	20
Appendix A – Different waste streams generated at Camden Power Station	21
Appendix B – Classification of Hazardous and Medical waste generated at Camden Power Station	23
Appendix C – Hazardous Waste Drum Labelling information and the sticker	25
Appendix D – Camden Power Station waste recycling plan	26

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30

1. Introduction

This procedure focus on addressing all waste related issues and will outline the process of handling, collection and disposal of all waste streams that will be generated during Camden Power Station's operations.

2. Supporting Clauses

2.1 Scope

2.1.1 Purpose

The purpose of this procedure is to guide Camden Power station's employees and its contractors on how to handle, store, treat and dispose waste and to ensure that all waste related legislations and regulations are not contravened in any way during the process.

2.1.2 Applicability

This document is applicable to all the persons affecting/influencing Camden Power Station's Environmental Management System and all the waste streams produced.

2.1.3 Effective Date

This document is effective from the day it is authorised by the approving manager.

2.2 Normative/Informative References

2.2.1 Normative

- [1] 004/2554 Business organizational Roles and Responsibilities
- [2] 32- 245 Eskom waste management standard
- [3] 240-157325463 PC Lifecycle Management
- [4] 32-727 Eskom SHEQ Policy
- [5] Government Gazette, No. 10008, Volume 578

2.2.2 Informative References

- [6] ISO 14001:2015- Environmental Management Systems- Requirements with guidance for use
- [7] National Environmental Management Act (Act No 107 of 1998)
- [8] National Environmental Management Waste Act (Act No 59 of 2008)
- [9] 240 133087117 Environment Incident Management Procedure

CONTROLLED DISCLOSURE

2.3 Definitions

2.3.1 Environment:

Surroundings in which an organisation operates, including air, water, land, natural resources, flora, fauna, humans and their interrelationships.

2.3.2 Environmental aspects:

Element of an organisation's activities or products or services that interacts or can interact with the environment.

2.3.3 Environmental Management System:

Used to manage environmental aspects, fulfil compliance obligations and address risks and opportunities.

2.3.4 Recycling:

A process where waste is reclaimed for further use, which process involves the separation of waste from a waste stream and the processing of that separated material as a product or raw material.

2.3.5 Re-use:

To utilise „articles or effluent“ from the waste stream again for a similar or different purpose to reduce using resource. At Camden water is re-used for different purposes as the quality decline to the point of ashing and fulfilling the Zero Liquid Effluent Discharge

2.3.6 Storage:

The accumulation of non-recyclable waste in a manner that does not constitute treatment or disposal of that waste

2.3.7 Waste:

Waste means

- (a) any substance, material or object, that is unwanted, rejected, abandoned, discarded or disposed of, or that is intended or required to be discarded or disposed of, by the holder of that substance, material or object, whether or not such substance, material or object can be re-used, recycled or recovered and includes all wastes as defined in Schedule 3 to this Act; or
- (b) any other substance, material or object that is not included in Schedule 3 that may be defined as a waste by the Minister by notice in the Gazette,
 - (i) but any waste or portion of waste, referred to in paragraphs (a) and (b), ceases to be a waste-

CONTROLLED DISCLOSURE

- (ii) once an application for its re-use, recycling or recovery has been approved or, after such approval, once it is, or has been re-used, recycled or recovered;
- (iii) where approval is not required, once a waste is, or has been re-used, recycled or recovered;
- (iv) where the Minister has, in terms of section 74, exempted any waste or a portion of waste generated by a particular process from the definition of waste; or
- (v) where the Minister has, in the prescribed manner, excluded any waste stream or a portion of a waste stream from the definition of waste.

2.4 Abbreviations

Abbreviation	Explanation
EMS	Environmental Management System
HWSY	Hazardous Waste Storage Yard
N/A	Not Applicable
SHEQ	Safety Health Environmental & Quality
ZLED	Zero Liquid Effluent Discharge

2.5 Roles and Responsibilities

Roles and responsibilities of this document or relevant to the content of this documents are outlined in the Business organizational roles and responsibility policy.

2.6 Process for Monitoring

Implementation of this work instruction will be monitored and assessed during internal reviews/assessments and /or external audits and reviews to assess adherence to the work instruction verification of data and ensure that waste is being managed effectively and correct figures are reported.

2.7 Related/Supporting Documents

32-245 Eskom Waste Management Standard.

CONTROLLED DISCLOSURE

3. Camden Power Station Waste Management Process

To outline the internal and external communication relating to Camden Power Station's Environmental Waste Management System.

3.1 Waste Classification

The waste produced at Camden Power station is classified as either General waste or Hazardous waste. The types of waste produced at Camden Power station includes but not limited to the following:

- General waste
- Paper
- Scrap metal
- Food waste
- Garden waste
- Building rubbles
- Non contaminated PPE
- Lagging
- Oil sludge
- Fluorescent tubes
- Hazardous Chemicals and laboratory waste
- Fabric Filter Bags
- Sludge
- Medical waste
- Contaminated PPE and/ or oily rags
- Contaminated saw dust and contaminated soil
- Herbicides waste
- Coal rejects
- Asbestos waste
- Solid sewage waste
- Solvents
- Paints waste
- Solid sewage waste
- Dried sewage waste
- Cartridges
- Resin

CONTROLLED DISCLOSURE

- Sand blasting grid
- Coal spillage
- Used cooking oil
- Ash
- Microbial reagent
- And any other waste type produced by the service providers at Camden Power Station.

3.2 Management of waste streams

Waste streams at Camden Power Station will be managed according to the guidelines provided in 32-245 Eskom Waste Management Standard and shall at a minimum adhere to the points provided under each heading.

3.2.1 On-site Waste management

On-site waste management handling, storage, collection, transportation and disposal need to adhere to the following conditions:

- a. All waste containers must be sufficient strength and structural integrity to ensure that it is unlikely to burst or leak in its ordinary use.
- b. Containers must be handled in accordance with the appropriate safety requirements and any waste lost during the opening, handling and storage must be contained.
- c. Waste must be store in covered containers except for when waste is added or emptied .
- d. Waste containers used for the storage of waste shall not be corroded; they shall be intact to prevent any spillages .
- e. All containers shall have proper lids to prevent windblown litter or rain access.
- f. In instances where colour coding is used, the waste receptacle shall be clearly marked "Hazardous waste" and the kind of hazardous waste stored e.g. hazardous waste-oily rags
- g. All waste must not be stored for more than 90 days at the hazardous waste storage yard .
- h. Access to the hazardous waste storage facility must be strictly controlled to prevent unauthorised entry.
- i. More information on the minimum requirements for waste storage is stipulated in Eskom Waste Management Procedure 32-245.

3.2.2 Minimum requirements of Waste Storage Containers

Waste storage containers shall at a minimum adhere to the following:

- a. All waste containers must be sufficient strength and structural integrity to ensure that it is unlikely to burst or leak in its ordinary use.
- b. Containers must be handled in accordance with the appropriate safety requirements and any waste lost during the opening, handling and storage must be contained.
- c. Waste must be store in covered containers except for when waste is added or emptied.

CONTROLLED DISCLOSURE

- d. Waste containers used for the storage of waste shall not be corroded; they shall be intact to prevent any spillages .
- e. All containers shall have proper lids to prevent windblown litter or rain access.
- f. In instances where colour coding is used, the waste receptacle shall be clearly marked "Hazardous waste" and the kind of hazardous waste stored e.g. hazardous waste-oily rags
- g. All waste must not be stored for more than 90 days at the hazardous waste storage yard.
- h. Access to the hazardous waste storage facility must be strictly controlled to prevent unauthorised entry.
- i. More information on the minimum requirements for waste storage is stipulated in Eskom Waste Management Procedure 32-245 .

3.2.3 Cooling Tower Sludge

Cooling tower sludge accumulates with the operation of the cooling tower system. The following process is followed:

- a. The sludge is removed from the cooling tower ponds and dried.
- b. The sludge shall be classified to determine correct disposal.
- c. The sludge should be disposed of according to its classification.

3.2.4 General Waste

General waste shall at a minimum adhere to the following:

- a. White 6m³ collection bins/drums and skips shall be placed strategically throughout the station
- b. The cleaning services contractor/s shall collect general/domestic waste from the satellite bin and place this waste into skips designated for this type of waste.
- c. The appointed waste management contractor transports the skips to the permitted landfill site.
- d. Records of all waste disposed of as well as of the valid licence/permit/registration documents for the waste handler/s and disposal site/s, will be kept by the Environmental Management Department for reporting purposes.
- e. Domestic waste is generally mixed waste comprising of paper, wood, plastic, glass, garden refuse, perishable food-stuff refuse and other non-hazardous material.
- f. However, wastepaper shall be shredded before disposal. When a truck load of wastepaper is available, it will be transported to the waste recycling contractor.
- g. Garden refuse will be disposed as general waste and disposed of at the designated disposal site.

3.2.5 Asbestos

Asbestos waste shall at a minimum adhere to the following:

- a. Asbestos stripping and handling on site will be done by the suitable, registered service provider and the Occupational Hygiene Officer shall monitor.

CONTROLLED DISCLOSURE

- b. Asbestos waste must be disposed of in double impermeable sealed and labelled plastic bags or in a leak proof container, capable of sealing properly in order to prevent spillages.
- c. Asbestos shall be stripped in accordance with an approved plan as accepted by the Department of Labour.
- d. The company, responsible for removing and disposing of the waste, must comply with Eskom's safety and health regulations on site and must provide safety equipment to the safe handling of the waste. He must also provide an Emergency Response procedure with the actions to be taken in the event of spillages during loading and transportation.

3.2.6 Building rubble

- a. All building rubble is reclaimed back for filling and soil erosion control provided the Environmental Section as conforming to legal requirements has verified the quality and the quantity of the waste.
- b. The Environmental Section will indicate where the building rubble can be disposed.
- c. Building rubble should be weighed before disposal and the weigh bridge ticket must be sent to environmental department for reporting purposes.

3.2.7 Medical waste

- a. Medical waste is generated at medical centre at the station, which caters for the basic medical requirements of the workers/contractors, and it provide assistance in case of emergencies. The medical waste stream would normally contain used bandages, needles, syringes, dressings, medicine containers, tissues and other similar items. Medical waste is classified as a hazardous waste as it can cause infections.
- b. Medical waste shall be stored in the medical waste bins provided at the clinic.
- c. Waste shall be removed according to the contracted agreement and records shall be kept by the Medical Centre with the support of the Environmental Management Department.
- d. Medical waste shall be removed by an appropriate licensed waste contractor and incinerated by the licensed incinerator service provider.

3.2.8 Sanitary waste

- a. Sanitary waste will be collected and removed by an appropriate registered and incinerated at the registered incineration site.
- b. Manifest for the sanitary waste will be kept by the Ops Support on a monthly basis and must be submitted to the Environmental Management Department for reporting purposes.

3.2.9 Ferrous and non-ferrous metals

- a. All scrap metals will be reclaimed for recycling.
- b. Normal ferrous metals will be deposited in the scrap metal enclosure at the waste transit area, where it will be removed by the approved contractor.

CONTROLLED DISCLOSURE

- c. Non-ferrous metals such as brass and copper will be kept in a place of safe storage until sold through the national contract.
- d. Records of scrap metal sales will be kept by the Materials Management Section on a monthly basis and submitted to the Environmental Management department for reporting purposes.

3.2.10 Used oils

- a. Used oil is considered hazardous, as they can, if not correctly disposed of, cause hydrocarbon pollution of soils and water resources. Hydrocarbons do not degrade easily and are difficult to treat.
- b. Used oils is placed in 210 litre drums, specifically for this purpose, from where it is collected by the contractor for recycling and submission of manifest certificates shall be made to Environmental Management Department.

3.2.11 Oily sludge

- a. Oily sludge is treated as hazardous and cannot be recycled due to contamination with material other than oil.
- b. Oily sludge will be disposed of as hazardous waste.

3.2.12 Oil filters

- a. No vehicle oil filters will be catered for on-site and must be replaced off-site as per vehicle/fleet maintenance contract.
- b. Oil filters will no longer be disposed at any hazardous landfill sites as per the legislation.
- c. Oil filters will be transported and recycled by a registered service provider. The legislation has changed regarding the oil filters, all disposal facilities are no longer disposing oil filters. All oil filters will be collected by a registered service provider for recycling.

3.2.13 Chemical and laboratory waste

- a. Chemical waste is generated at Water Treatment Plant and the laboratories.
- b. Waste chemicals are hazardous waste and must be disposed of in labelled sealed, leak proof containers and disposed of accordingly.
- c. Safety Data Sheets must be made available prior arrangements for disposal of chemicals.
- d. Any containers containing chemicals must be disposed of at the hazardous waste disposal sites.

3.2.14 Fluorescent tubes and sodium lamps

On 3 August 2016, new regulations which prohibit all hazardous lighting lamps under classification WEEE (Hazardous Waste Electrical and Electronic Equipment) in any shape or form into landfill, came into effect. (Government Gazette, No. 10008, Volume 578, No 36784, dated 23 August 2013, page 44). This kind of waste shall be handled as follows:

- a. Used fluorescent tubes will be placed in the fluorescent tube boxes.

CONTROLLED DISCLOSURE

- b. When filled, these boxes must be sealed and transported to the on-site hazardous waste storage yard for collection and disposal at a registered hazardous waste site
- c. No waste shall be stored at the workshop. All waste must be taken to the hazardous waste storage irrespective of the quantity.
- d. Storage of fluorescent tube area must have plastic liners to prevent ground/soil contamination in case of breakages.

3.2.15 Used PPE and rags

- a. Drums will be available at all workshops and strategical dedicated areas for used PPE and rags.
- b. When filled, the drums must be sealed and transported to the on-site hazardous waste storage yard.

3.2.16 Conveyor belts and rubber

- a. Conveyor belts and rubber entering the waste stream at the station are from the plant.
- b. Conveyor belts and rubber will be resold through material management and recycling through the national contract.

3.2.17 Contaminated soil

- a. Soil contaminated due to oil spills can cause hydrocarbon pollution. Hydrocarbons do not degrade easily and are difficult to treat.
- b. Contaminated soil must be removed and transported to a registered hazardous waste disposal site by a registered waste removal company.
- c. Contaminated soil could also be bio-remediated *in situ* if the Environmental Department deems it a better clean-up option.
- d. Soil which has undergone bio-remediation must be assessed a period interval to ensure that the bio-remediation has been successful in removing all hydrocarbon contamination.

3.2.18 Oil absorbing fibre, booms and cushions

- a. Oil absorbing material (e.g Drizit) will be used when an oil leakage/spillage occurs. Once used, this material is hazardous and must be disposed of as hazardous waste.
- b. In an emergency, ash may also be used to absorb spilled oil and the oil contaminated ash must be disposed of as hazardous waste.
- c. The Environmental Management Department will arrange correct disposal of any hazardous waste generated by the Station related to oil leaks/spillages.

3.2.19 Silica gel

- a. Silica gel (containing cobalt chloride) is used as a moisture indicator in transformer respirators.

CONTROLLED DISCLOSURE

- b. If possible moisture rich silica gel should be baked and re-used on site.
- c. When contaminated completely, silica gel is to be placed in a hazardous waste drum labelled 'silica gel' and adequately controlled so that the container is not used for any other waste.
- d. Once sufficiently full, the drum is to be sealed and taken to HWSY which will then be disposed of at a registered hazardous waste disposal site.

3.2.20 Batteries

- a. All used batteries are to be treated as hazardous waste and placed in hazardous waste drums labelled 'batteries'.
- b. The drums for spent batteries are located in the stations units control rooms and must be adequately controlled so that they are not used for any other waste.
- c. Once sufficiently full, the drums are to be sealed and sent to the Station HWSY for collection and disposal at a registered hazardous waste disposal site.
- d. Appreciated measures should be taken to prevent any accidental leak or release of acid.

3.2.21 Paint/hazardous waste containers

- a. Empty paint/hazardous waste containers are generated by various contractor's/Eskom employees.
- b. Spent hazardous waste containers are to be compacted (if possible) and placed in hazardous waste drums.
- c. Once sufficiently full, the drums are to be sealed and sent to the Station's HWSY for collection and disposal at a registered hazardous waste disposal site.

3.2.22 Used de-greaser or solvents

- a. Used degreaser and solvents are mostly used by contractors for cleaning purposes.
- b. Spent (used) degreasers and solvents will be poured into appropriately labelled hazardous waste drums.
- c. When sufficient (not more than $\frac{3}{4}$) full, the drums are to be sealed and sent to the Station's HWSY for collection and disposal at a registered hazardous waste disposal site.

3.2.23 Hydraulic hoses/pipes

- a. All hydraulic hoses and pipes used on the equipment will be disposed a hazardous waste and placed in hazardous waste drums.
- b. Once sufficiently full, the drums are to be sealed and sent to the Station's HWYS for collection and disposal at a registered hazardous waste disposal site.

3.2.24 Boiler/FFP ash and coal rejects

- a. Ash is produced as part of the normal operation of coal fired boiler and fuel gas cleaning plant.

CONTROLLED DISCLOSURE

- b. Ash is pumped from the Station via concrete trenches and ash pipelines towards the registered Ash Dam on site.
- c. In emergency conditions, if ash is emptied directly onto the concreted station floor from the boiler/fuel gas cleaning ants, it must be manually picked up (e.g. using shovels) and put into the production waste skips within 24 hours.

3.2.25 Sandblasting grit

- a. The sandblasting itself it is usually not hazardous but the material safety data sheet must be available to verify that the constituents of the grits are not hazardous.
- b. Spent sandblasting grits will be treated as hazardous unless proven otherwise by means of chemical analysis results from an accredited laboratory and disposed of at a registered hazardous disposal site.

3.2.26 Electronic waste

- a. Electronic waste is also referred to as 'E-waste' and includes all discarded electronic devices such as computers, telephones, cables, air-conditioners and hand held electrical equipment, as well as photocopying machine and printer cartridge which have an intelligent electronic device/chip as a component.
- b. Copper and cable waste must be placed in the correctly labelled/colour-coded skips or bins.
- c. The Environmental Department must be informed of other electronic waste for collection and will ensure that appropriate recycling takes place.
- d. Electronic waste that is not suitable for recycling will be disposed of as hazardous waste at a registered landfill site.
- e. In terms of PC Lifecycle Management, all data or critical information shall be securely destroyed/sanitised prior to the disposal, redeployment, replacement of such assets to prevent unauthorized retrieval of sensitive cyber security or reliability data.

3.2.27 Handling of spillage inside the Hazardous Waste Storage Yard

- a. In the event of spillages on the floor of the HWSY, the responsible person shall cover it with oil absorbent, pick it up with a shovel and place it into the 210L drums.

3.2.28 Sewage Waste

- a. Sewer from septic tanks will be collected as per the Waste Management Contract.
- b. Frequency for collection will be increased as and when required based on the risk drains being full.

3.2.29 Used cooking oil

- a. Used cooking oil shall be stored in the drums from the point source (Canteen).
- b. The canteen supervisor shall ensure that the safe storage containers are requested in a timely manner from the HWSY.

CONTROLLED DISCLOSURE

3.2.30 Handling of rain water inside the Hazardous Waste Storage Yard

- a. Waste supervisor who is in charge of the HWSY must contact the Environmental Management Officer if the level of the rain water in the sump reaches the level of the inlet to the sump.
- b. The Environmental Management Officer will give a go ahead to unlock the valve that links the sump with the dirty water drain if it is evident that there is no spillage on the floor of the storage yard.
- c. If the water in the sump has oil, the water will be pumped into 210L Drums and disposed as Hazardous waste.
 - Hazardous waste collected in satellite bins on site must conform to National Environmental Management Waste Act, operation (NEMWA).
 - Spillage waste material must be handled as per NEMWA, General.

3.2.31 Scrap Metal Management

- a. Scrap metal skips are placed outside the HWSY
- b. When the skips are full material management is contacted to inform the recyclers to come collect the scrap, copper, etc.
- c. When a scrap metal skip is required, Material Management personnel are contacted, and a skip is provided.
- d. Copies of the weight bridge records shall be submitted to Environmental Management Department.

3.2.32 Scrap wood

- a. Scrap wood skips are placed outside unit 1 and 8.
- b. Scrap wood shall be disposed of as general waste at Holfontein landfill site or any registered land fill site.

3.2.33 Ozone-depleting substances

- a. The ODSs are split into two groups: chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs).
- b. Annexure C Group 1 HCFC Substances will be Phased out by 1 January 2040 in South Africa and consumption will be restricted to zero.
- c. Business units are required to compile an ODS inventory indicating ODS types, their location, and their application, as well as quantities in storage and use. The inventory must be maintained, audited and reported annually. This must be reflected through business division performance indicators.
- d. Suitable storage facilities must be provided for the transition phase-out programme. The stockpiling of the ODSs, listed in Appendix A to the GN 351 Regulations Regarding the Phasing Out and Management of ODSs, is prohibited.

CONTROLLED DISCLOSURE

- e. Portable fire extinguishers containing halon must be replaced and the contents disposed of through the Halon Bank of South Africa.
- f. No trading with ODSs may be allowed. Used ODSs products containing ODSs must be sent to the registered ODS bank holder for recovery and recycling.
- g. A person who imports or exports ODSs listed in Appendix A must, annually, at the end of January every year, report to the department the total quantities imported or exported for the previous year.
- h. ODSs must be in line with Appendix J on waste-reporting requirements as contained in this standard.
- i. Discharge or release of ODSs into the atmosphere is prohibited and the PS must get a certified company that will reclaim or destroy any ODSs.

3.3 Training

Training must be provided to all employees working with waste and to all contractors that might be exposed to waste. Only trained persons must be allowed to handle hazardous waste.

Training certificates and/or records should always be available for audit purposes within respective departments and/or section and through Training Department.

3.4 Waste separation and storage

Camden Power Station has different colour coded bins and skips to manage all waste streams produce throughout all its operations:

- a. White bins and skips are used to store general waste, such as paper, food waste etc.
- b. Red bins and skips are used to store hazardous waste except for the liquids.
- c. Black open skips are used to dispose coal rejects.
- d. Yellow bags marked with an "A" are used for asbestos or asbestos containing material.
- e. Green skips are used to store scrap metals.
- f. Waste oil and grease is drained and disposed in red drums.

3.5 Camden Power Station's recycling process

Camden Power Station recycles the following products, paper, plastic bottles and cans.

- a. 210 litres of orange lockable bins with an opening on top are used to recycle the cans used throughout the station and these bins will be placed at strategic recycling areas to serve this procedure.
- b. 50 litres black bins are used to recycle papers produced from the offices and the bins will be placed in the offices and any other strategic recycling areas.
- c. 210 litres of light orange bins with an opening on top are used to recycle the cans used throughout the station and these bins are placed at strategic recycling areas around the power station to serve this procedure.

CONTROLLED DISCLOSURE

3.6 Waste handling, collection, transportation and disposal

- a. ERI is a service provider for removal or collection of waste throughout the station.
- b. General waste must be removed three times a week during normal conditions.
- c. Hazardous waste must be removed as and whenever required, but it should be removed at least once in a week and must not be stored for more than 90 days on site.
- d. The appointed plant cleaning service provider is responsible to ensure that the waste bins and skips from the inside and outside the plant is emptied and sorted to the outside waste skips to ensure that ERI collects at the strategic areas.
- e. ERI is responsible for the supply and collection of bins and skips around the station.
- f. Camden Power Station uses Holfontein hazardous waste disposal site, Msukaligwa general waste disposal site, Camden Power Station Asbestos dump site, A-Thermal and Ash dams for treatment and disposal of waste generated on site.

3.7 Waste classification and assessment

- a. Waste shall 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 waste, changes in raw materials or other inputs or any other variation of relevant factors.
- b. Waste that has been subjected to any form of treatment will be re-classified.
- c. Waste classification and assessment done in accordance with GN 634, Annexure A.
- d. Waste listed in Annexure 1 Regulations do not require classification in terms of SANS 10234.
- e. Waste that does not require classification or assessment are as follows:
 - (i) General waste such as:
 - Business waste not containing hazardous waste or hazardous chemicals;
 - Non-infectious animal carcass;
 - Garden waste;
 - Waste packaging;
 - Waste tyres;
 - Building and demolition waste not containing hazardous waste or hazardous chemicals; and
 - Excavated earth material not containing hazardous waste or hazardous chemicals.
 - (ii) Hazardous waste such as:
 - Asbestos waste;
 - PCB waste or PCB containing waste (>50 mg/kg or 50 ppm); and
 - Expired, spoilt or unusable hazardous products.

CONTROLLED DISCLOSURE

(iii) Mixed waste such as:

- General waste, excluding general 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.

(iv) Other waste such as:

- Health Care Risk Waste (HCRW).

3.8 Waste skips and bins requirement

To ensure that the above process for waste management at Camden Power Station is effective and satisfy the duty of care principle, the Waste skips or bins supplied at Camden Power Station by any service provider must be:

- a. In good and acceptable condition.
- b. Not be corroded.
- c. Not have leaks.
- d. Be in the specified colours as per this procedure.
- e. Easily handled and user friendly.
- f. Have labels.

3.9 Waste reporting

Waste generated and their quantities are reported to sustainability under Waste Management section on a monthly basis.

Waste reporting is done in accordance with the waste standard (**Eskom Waste Management Standard (32- 245)**).

All waste generated and collected by the service provider must be reported the Environmental department in the station.

CONTROLLED DISCLOSURE

4. Document Acceptance (Stakeholders)

This document has been seen and accepted by:

Name	Designation
Fikile Sithole	Senior Advisor Environmental Management

5. Revisions

Date	Rev.	Remarks	Compiler/Reviewer
October 2024	07	Revised section 3.5 & 3.2.33	Z Budeli
April 2023	06	Revised section 3.1 & 2.1.3	A Bogopa
March 2022	05	Revised section 3.2	FN Sithole
July 2019	04	Revised the definition of waste on section 2.2	KP Hlungwani
April 2018	03	Revised section 3.2.1 & 3.2.2	PP Nthlane
April 2016	02	General updates on waste management processes	PP Nthlane
October 2013	01	Original issue	FN Sithole

6. Development Team

N/A

CONTROLLED DISCLOSURE

7. Acknowledgements

N/A

CONTROLLED DISCLOSURE

Appendix A – Different waste streams generated at Camden Power Station

A.1 Waste streams

General	Recycle	Hazardous	Ash Dam	Medical
Food products	Fluorescent tubes	Silica gel	Coal rejects	Bandages
Garden waste	Batteries (all types)	Oil	Ash	Cotton wool
Building rubble	Oil (not containing PCBs)	Oil rags	Sewage sludge	Needles and sharps
Highlighter	Cartridges (all types- printer, copier, fax)	Oil filters	(any substance agreed upon with the Department of Forestry, Fisheries & the Environment (DFFE) and Department of Water and Sanitation (DWS))	Empty medicine containers
White board	Paper	Oil absorbent material		Blood from wounds
Marker	Plastic	Empty chemical containers		Specimen bottles
Pritt Stick Glue	Glass	Aerosol cans		Gauze
Roller ball refills	Scrap metal	Safety solvents		Expired medical suppliers
Tipex	Soft drink cans and plastic bottles	Paraffin		Contaminated gloves
Sandwich plastic bags	Waste paper	Paint		Anatomical waste
Tea bags	Xerox paper boxes	Broken thermometers (Mercury)		
Cigarette Ash & Butts	Transparency sheets	Broken Keno meters (mercury)		
Bones (food)	Message pads	Herbicides		
Pap	Massaging pads	Fabric Filter Bags		
Staples	Envelopes	Circumferential seals		
Stuffy diskettes	Broken glass	Duracell Alkaline batteries		
Serviettes	Copper cable	Silicone		
Tea/coffee	Stainless tubing	Tins of spray paint		
Stirrer (wooden sticks)	Fax cartridges	Endorsing ink		
Message pads		Acetone		
Paper clips		Cleaning rags		
Transparency sheets		Electrical cleaner drums		
Sunlight Dishwashing liquid		Aerosols \grease		
Rynol hand cleaning		Copier ink		
		Glues (all types)		
		Silicone sealer		

CONTROLLED DISCLOSURE

General	Recycle	Hazardous	Ash Dam	Medical
Artline permanent markers Toilet paper Sandwich remains Packing (off cuts) Polystyrene Empty tins Cassettes Sawdust Rubber insertion Wooden pieces Wrapping for parts Porcelain (electric insulator) Lagging (non-asbestos) Polygyrid screens (cooling towers)	Empty paper bags Air conditioner valves Coupling Nuts and bolts Gaskets Fences and poles Rubber (conveyor)	Herbicides containers Manometer fluid spillages Liquid crystal displays PPE (e.g. dust masks and gloves that have been contaminated by chemical) Electronic Modules (all types) Video display units Rags with safety solvents or other chemicals Refrigerant canisters (chlorodifluoromethane) Resins Blower filters PCB containing oils SF6 gas chlorine gas Cylinders Sludge (from any dam, station drain or plant process) Computer/electronic waste Blasting grit used to remove heavy metals or chemicals Raw sewerage		

CONTROLLED DISCLOSURE

Appendix B – Classification of Hazardous and Medical waste generated at Camden Power Station

B.1 Hazardous and Medical Waste streams

Hazardous waste name	Class	Hazard group	Origin of waste	Type of landfill
Used oil	1	High Hazard	Workshops/Plant	Class A Landfill
Used oil filters	1	High Hazard	Workshops/Plant/vehicle servicing garage	Class A Landfill
Oily rags	1	High Hazard	Workshops/Plant/vehicle servicing garage	Class A Landfill
Oil absorbent material	1	High Hazard	Workshops/Plant/vehicle servicing garage	Class A Landfill
used paraffin	1	High Hazard	Workshops	Class A Landfill
Fluorescent tubes	1	High Hazard	Electrical Maintenance Department (EMD)	Recycle
Silica gel	1	High Hazard	Electrical Maintenance Department (EMD)	Class A Landfill
Medical waste (sharps & swaps)	2	High Hazard	Medical centre	Class A Landfill
Printer cartridges	1	High Hazard	Offices	Class A Landfill
Empty paint tins	3	High Hazard	Outside Auxiliary plant/Projects	Class A Landfill
Used batteries	1	High Hazard	Plant	Class A Landfill
Used grease	1	High Hazard	Workshops/Plant/vehicle servicing garage	Class A Landfill
Sand blasting grits	1	High Hazard	Workshops/Project	Class A Landfill
Used degreaser	1	High Hazard	Workshops/Plant	Class A Landfill
Used Fabric Filter Bags	1	High Hazard	Boiler plant	Class A Landfill


CONTROLLED DISCLOSURE

Hazardous waste name	Class	Hazard group	Origin of waste	Type of landfill
Sludge from the Waste Water Recovery	1	High Hazard	Waste Water Recovery Dams	Class A Landfill
Sludge from the 7yr dam	1	High Hazard	7 year dam	Class A Landfill
Sludge from the clarifiers	1	High Hazard	Clarifiers	Class A Landfill
Sewage digesters sludge-pre settlement sump	1	High Hazard	Sewage plant	Class A Landfill
Sewage dry bed sludge	1	High Hazard	Sewage plant	Class A Landfill
Cooking oil	1	High Hazard	Canteen	Class A Landfill
Waste of electrical and electronic equipment	1	High Hazard	Buildings and the plant	Recycle

CONTROLLED DISCLOSURE

Appendix C – Hazardous Waste Drum Labelling information and the sticker

The drums that will store hazardous waste will reflect the following information written on the drum containing waste and in the sticker that will be attached on the drum for additional information: the date on which the waste was first placed in the container; the date on which waste was placed in the container for the last time when the container was filled, closed and sealed or covered; the date when, and the quantities of, waste added and the waste removed from the containers or storage impoundments, if relevant; the specific categories of waste in the container or storage impoundments as identified in terms of the National Waste Information Regulations, 2012 and the classification of the waste in terms of Regulation 4 once it has been completed. An example of the sticker that will have additional information is shown below.

CLASS:		WARNING HAZARDOUS WASTE		SAWIC D01310 - 01			
	WASTE TYPE			DEPARTMENT			
	DANGERS			ABSORPTION ROUTE			
	Poisonous	Brain Damage		EYES	LUNGS	SKIN	MOUTH
	Corrosive	Liver Damage		Safety Goggles	Respiratory Protection Ventilation	Gloves Safety Shower	Face Shield
Explosive	Others						
Flammable							
Oxidizing							
Harmful / Irritant							
24 HOURS EMERGENCY No. 5485	Is MSDS - Available			Intervention and other protection			
	YES	NO		End of Shift	Biological Monitoring		
				Annually			
HANDLING AND STORAGE:							
ENVIRONMENTAL EFFECTS:							
N.B. Minimum requirements for the storage of Hazardous Waste on site should not exceed 90 days Hazardous Waste Drums are to be removed within 75 days from the plant to allow arrangement for final disposal							
Accumulation Start Date							

CONTROLLED DISCLOSURE

Appendix D – Camden Power Station waste recycling plan

To implement the programme that is managed at Head Office: Waste Centre of Excellence, Camden Power Station will implement the following:

Type of waste	Current Disposal method	Quantities disposed	Recycled Quantities in 2016/ 2017 FY	Recycling Target 2017/ 2018 FY	Future Reduction method
Construction (rubble)	Landfill site	1731.15 Tons	1731.15 Tons	100%	N/A
Municipal (General)	Landfill site	15908.50 (m3)	0	Recycle 20%	Composting at the landfill
E-waste (Cartridges)	DESCO	255Kg	255Kg	100%	N/A
Metals	Recycled/ Columbus	1718.30 (Tons)	1718.30(tons)	100%	N/A
Paper	Recycled	1470.2(KG)	170.20(KG)	Recycle 50%	Improve waste separation on site
Plastic	Recycled	791.74 (KG)	791.74KG	100%	N/A
Glass	Recycled	0KG	0KG	100%	Recycling by supplier
Other wastes (empty drinking cans)	Recycled	784.89KG	784.89KG	100%	N/A
Cooking oil	Recycled	920L	920L	100%	N/A
Waste oil	Mpumalanga Oil	132 L	132 L	100%	N/A

CONTROLLED DISCLOSURE