Eskom	**Management System Procedure**	Matimba Power Station

Title: **Waste management procedure**

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1. Introduction

Matimba Power Station as the generator of waste develops, implement and maintain a waste management procedure. The waste management procedure set-outs steps and processes to be followed by various operational areas within the Station processes.

Section 24 of the Constitution of the Republic of South Africa, Act 108 of 1996, states that 'everyone has a right to an environment that is not harmful to their well-being and also to have the environment protected for the benefit of the present and future generation'; further section 28 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) prescribes the need for 'Duty of Care' for the environment and remediation of environmental damage. It is through these fundamental sections of the Acts that Eskom Matimba Power Station has an obligation to take all reasonable measures to prevent such pollution occurring, continuing or envisaged to occur through generation of waste, thus the rationale to develop the Waste Management Plan.

2. Supporting Clauses

2.1 Purpose

The purpose of this procedure is to:

- Identify and list waste streams generated by Matimba Power Station
- Outline the correct waste control measures, acceptable storage techniques and process for transportation, disposal and management of waste.
- Identify processes for the reporting of waste
- Establish and enhance commitments to waste reduction, reuse, recycle and sustainable management.
- Reduce the operational costs and waste management expenses.
- Develop action plans for achieving the objectives of this procedure.
- Describe processes for waste classification.

2.2 Scope

This procedure is applicable to all activities, products, and services to which Eskom Matimba Power Station has control of, and shall be applicable to all employees and contractors performing work within the scope of Eskom Matimba Power Station.

Adherence to this WMP shall be exercised by all employees, contractors and service providers to ensure proper waste management is applied.

This procedure does not address procedural requirements in terms of pollution of incidents; rather the waste removal from pollution incidents e.g. spillages are covered by the incident procedure and the environmental management plans.

2.3 Applicability

NOTE: Mark appropriate block/s with a "X" ***(Select at least one)***	All	Head of department	Head of function	Head of section	Administration	Auxiliary	Civil	Control & Instrument	Electrical	Mechanical	Projects	Support	Training	Shifts	Other (Specify): ....
Matimba Staff	x														
Operating															
Maintenance															
Engineering															
Risk Management															
Human Resources															
Finance															
Production															
Contractors	x														

2.4 Normative/Informative References

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.4.1 Normative

[1] ISO 9001 Quality Management Systems.

[2] Eskom - Waste Management Standard 32-245

[3] Eskom – Requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing materials, equipment and articles 32-303

[4] Health Care Risk Waste Management Procedure, EPC 32-404

[5] ISO 14001:2004 Environmental Management Systems.

[6] SANS 10206 – The handling, storage and disposal of pesticides

[7] CSIR (2011). *Municipal Waste Management – Good Practices.* Edition 1. CSIR, Pretoria.

[8] GN R921/2013 – NEM: WA: List of waste management activities that have or are likely to have, a detrimental effect on the environment.

[9] GN R926/2013 – NEM: WA: National Norms and Standards for Storage the storage of waste

[10] GN R549/2014 – NEMA : Regulation for phasing out of PCB materials and PCB contaminated materials.

[11] Data Media : Disposal of magnetic tapes: http://www.datamediasource.com/download/DMS_%20Disposal_guidelines.pdf [Accessed, 28 December 2015]

2.4.2 Informative

[12] Section 24 of The South African Constitution, 1996 (Act No. 107 of 1996)

[13] National Water Act, 1998 (Act No. 36 of 1998)
[14] National Environmental Management Act, 1998 (Act No. 107 of 1998)]
[15] National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)
[16] Hazardous Substances Act, 1973 (Act No. 15 of 1973)
[17] Health Act, 1977 (Act No. 63 of 1977)
[18] National Road Traffic Act, 1993 (Act No. 85 of 1993)
[19] Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)
[20] SANS 10228 – The Identification and Classification of Dangerous Goods for Transportation
[21] SANS 10234 – Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
[22] SANS 10248 – Management of Healthcare Waste
[23] SANS 10263-0:2010 – Warehousing of dangerous goods.12
[24] SANS 290:2007 – Minerals Insulating Oils – Management of Polychlorinated biphenyls (PCBs)
[25] Lephalale Local Municipality: Waste Management Bylaw, 2008

2.5 Definitions

Definition	Explanation
Asbestos	Any materials that contains or is made of the following minerals: amosite, crocidolite, fibrous actinolite, fibrous anthophylite, chrysotile and fibrous tremolite.
Colour coding	Means the use of colour on a container/bag or any form of waste receptacle, to identify the category of waste contained.
Disposal	Approved deposit, discharge, dumping, placing, or release of any waste material into or on air, land or water in an approved, specified facility, e.g. near surface or geological repository, or the approved direct discharge of effluents into the environment without the intention of retrieval.
General waste	means waste that does not pose an immediate hazard or threat to health or to the environment, and includes— 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
Hazardous waste	Any waste that contains organic or inorganic matter or compounds that may, owing to the physical, chemical and toxicological characteristics of that waste, have detrimental impacts on human health and the environment.
Health care general waste	the portion of waste that poses a minimum degree of risk to human health and the environment, i.e. from administrative and housekeeping activities, e.g. paper, pens, flowers, food packaging, plastics cool drink bottles, old mops, etc.
Health care risk waste	human and animal anatomical waste, infectious human and animal waste, sharps, chemical waste, pharmaceutical waste and radioactive waste generated by healthcare professionals, healthcare facilities and other non- healthcare professionals, e.g. tattooists and taxidermists
Recycle	Set of processes (including biological) for converting recovered materials that would otherwise be disposed of as wastes into useful materials and or products.
Reuse	Using a waste product again for the same or a different purpose without further manufacture, e.g. use of second-hand boxes for packing goods or for storage of household goods.
Operational Area (Storage)	An area where waste is handled including the storage areas
Temporary storage	Means a once off storage of waste for a period not exceeding 90 days.

Definition	Explanation
Waste	Is defined by Waste Act (59 of 2008) as any substance, whether or not that substance can be reduced, reused, recycled and recovered: - That is a surplus, unwanted, rejected, discarded, abandoned or disposed of - Which the generator has no further use for purpose of production - That must be treated of disposed of, or - That is identified as waste by the Minister by notice of gazette, and includes waste generated by mining, medical or other sectors, but: i) A by-product is not a waste, and ii) Any portion of waste once reused, recycled and covered ceases to be waste.
Waste Classification	A process for establishing whether waste is hazardous based on the nature of its physical, health and environmental hazardous properties (Hazard classes); and the degree or severity of hazard posed (Hazard categories).

2.6 Abbreviations

Abbreviation	Explanation
ACW	Asbestos Containing Waste
ACM	Asbestos Containing Material
CSIR	Centre for Scientific and Industrial Research
EMD	Electrical Maintenance Department
GN	Government Notice
Hazchem Waste	Hazardous Chemical Waste
HCGW	Health Care General Waste
HCRW	Health Care Risk Waste
NEMA	National Environmental Management Act (Act No.107 of 1998)
NME:WA	National Environmental Management: Waste Act (Act No. 59 of 2008)
PCB	Polychlorinated Biphenyl
PPM	Parts Per Million
SANS	South African National Standards
WMP	Waste Management Plan
WMCR	Waste Management Classification Regulations

2.7 Roles and Responsibilities

Stakeholder	Responsibilities
Eskom – Matimba Power Station	• Overall waste management and monitoring • Ensuring legal and statutory requirements compliance • Implementation of this WMP throughout the station operations • Allow business case for the sound management of waste. • Monitor compliance to environmental management plans for waste management areas.
Environmental Manager	• Advise the station on best ways of implementing the requirements of this procedure • Advise the station and waste committee on any changes in the legal requirements pertaining to the management of waste. • Advise the station on the best practises and best available technology in management of waste. • Ensure that this procedure is implemented and follow up on the trainings required to ensure compliance. • Compile monthly, six monthly and annual reports for office. • Plan and execute waste management audits as required by the waste licenses. • Send waste audits reports as per relevant licence to relevant authorities • Conduct weekly plant walks to monitor station waste management practices • Consolidate on daily production and bi weekly environmental report • Research on more ways to reduce waste and present it to the waste management committee
Mr/Ms Waste	• Chair waste management committee meetings and gatherings. • Escalates waste management issues to management
Waste Management Committee	• Conduct annual continual improvement evaluation • Review this procedure every 3 years or as the need arise. • Conduct monthly waste plant walks

	• Holds monthly waste committee meetings • Continuously review waste management objectives for effectiveness purposes. • Be advocates for waste management throughout the station. • Develop, implement and continuously review strategies for improvement of waste management.
Waste Service Providers	• Management of temporary waste storage yards • Provision of human resources as directed by the contract with Eskom Matimba Power Station. • Timeous collection and transportation of waste to the respective landfill site or incinerator facility. • Provision of appropriate waste transportation and equipment. • Develop operational procedure/plan for the management of temporary storage yards • Implement and work in compliance to the environmental management plan. • Ensure that waste is removed from the storage yards within the maximum allowable storage time. • Ensure that proper measures are taken to prevent spillages. • Comply with all legal requirements, as well as Eskom and Matimba Power Station SHEQ Policies.
Contractors	• Provision of temporary waste storage yards at their respective laydown areas. • Develop and implement a waste management strategy for their respective site/operations. • Provision of waste management receptacles for all waste types. • Ensure separation of waste at source. • Remove waste on weekly basis or as and when required to the Eskom Matimba Power Station temporary storage facilities. • Comply with rules and instructions of the waste management facilities. • Prevent accumulation of waste to unacceptable levels. • Put proper measures to prevent waste spillage

2.8 Process for Monitoring

Compliance to this procedure will be monitored during site inspections, plant walkabouts, waste reviews, internal and external audits.

2.9 Related/Supporting Documents

- Matimba Power Station Environmental Management System Manual,
- Eskom Waste Management Strategy
- Matimba Power Station Industry Waste Management Plan
- Waste Reporting Template: 240-47176064
- PCB Inventory Template: 240-51752992
- Weekly Inspection Check sheet: F/244/001
- Job Observation Form: F/244/005.

3. WASTE MANAGEMENT

3.1 Chain of command for Waste Management

Waste Management in Matimba Power Station shall not follow the traditional "end of pipe" approach which focuses on the management of waste post its generation, rather it shall encompasses the source reduction and reuse of materials to avoid excess generation of waste. The waste hierarchy approach which includes the 3Rs of waste management i.e. Reduce, Reuse and Recycle as well as energy recovery shall be employed.

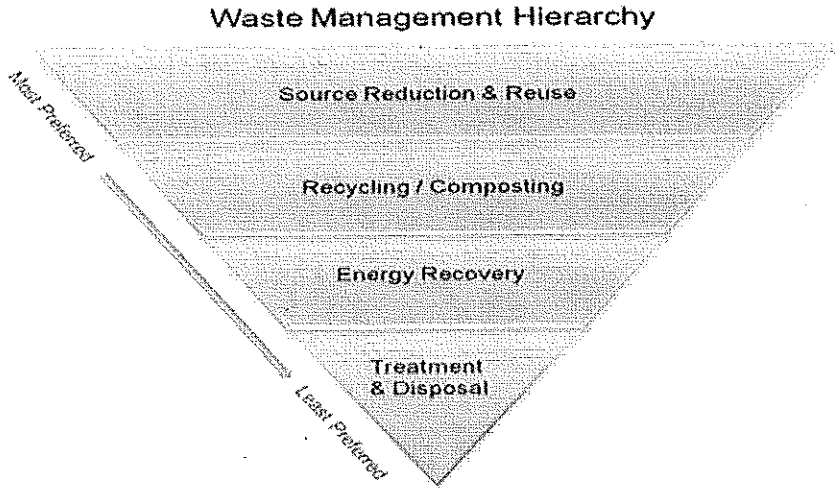

Figure 1: Hierarchy of Waste Management in Matimba (CSIR, 2011)

3.2 Waste Categorisation

In line with the National Environmental Management: Waste Act, Act No. 59 of 2008, the Waste Classification and Management Regulations, GNR 634:2013, Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste (DWAF, 1998) and SANS code 10228, waste in Matimba Power Station is categorised as follows:

3.2.1 General Waste

General waste is the waste that does not pose immediate and significant threat to the public health and the environment, when properly managed. The general waste in Matimba includes-

- Paper and cardboard
- Domestic waste
- Lagging fibre/cotton
- Plastic and rubber
- Glass, and
- Organic waste, i.e. food and garden waste
-

3.2.2 Industrial waste

Industrial waste is non-hazardous waste which is largely incompatible and requires proper and specific management. Industrial wastes produced in Matimba are:

- Wood waste i.e. packaging/pallets
- Scrap metals
- Builders rubble
- Clear and grub materials, e.g. site preparation waste, Wood cuttings from the gardens
-
- Inert

3.2.3 Hazardous waste

Hazardous waste has the potential to cause significant effects on public health and the environment, even in low concentrations due to its biological, chemical, physical and toxicological properties. Hazardous waste within Matimba operations includes:

- Flammable solids and substances;
  - Oil and hydrocarbons contaminated materials
  - Paint containers
- Flammable liquids and oily waste

  - Lubrication oils
  - Transformer oils
  - Grease
  - Fuel oil
  - Other hydrocarbons
  - Spills
- Chemical waste
- Contaminated soils and Saw dust
- Oil contaminated water
- Used cooking oil
- Ash
- Sewage Sludge
- Sludge from water treatment plant
- Used silica gels
- Water treatment resins
- Dead animals
- Coal discards/residue
- Silt from the dams

4. Waste Management Handling, Storage and Disposal

The management of waste in Matimba Power Station shall be undertaken in a manner which minimises environmental impacts and support the waste management hierarchy indicated in figure 1 of this procedure. All waste generated by Matimba Power Station operations/activities shall be disposed (as least preferred method of management) of at a licensed and permitted landfill site which is operated in line with environmental legislation and is acceptable in relation to Eskom policies.

4.1 General and Hazardous Waste Storage Requirements

The following are the requirements for the storage of waste throughout Matimba Power Station waste management areas:

a) General Waste

- Waste storage facilities must be registered with competent authority as per GN 926/2013 or be within the set limitations as per GN 921/2013.
- Access to the storage facility must be strictly controlled to prevent unauthorised entry
- Notice signs written in at least 3 languages spoken in Lephalale area must be on display at the entrance of the storage area. The notice must highlight the operational hours, the name and contact details of the responsible person.
- Waste receptacles used for storage of waste must in no way be unfit for the purposes of storing the intended waste.
- All receptacles must have closing mechanism to prevent litter with exception to containers for inert and incompatible waste (e.g. builders' rubble, and wood waste).
- The area must at all times be free of litter or improper storage of waste
- Management of the area shall ensure that employees working at area are adequately trained on waste to be received, and the storage requirements of the facility.

b) Hazardous Waste

- Hazardous waste storage area must be registered with the competent authority or be authorised under the GN 921/2013 or under older version regulation for it to be accepted and used for storage purposes.
- Hazardous waste shall be stored for disposal only at the hazardous waste storage yard, known as temporary hazardous storage yard
- Other area where waste is stored, they shall have a bund to contain any accidental spillage. Waste at these areas shall not be stored for more than 2 days.
- All waste containers used for storage of waste shall not be corroded; they shall be intact to prevent any likeable spillage.
- All containers shall be equipped with closing mechanism to prevent windblown litter or rain access.
- The colour for hazardous waste receptacle in Matimba is orange.
- In instances where colour coding is not used, the waste receptacle shall be clearly marked "Hazardous Waste" and the kind of hazardous waste stored, e.g. Hazardous Waste – Oily Rags.
- All waste must not be stored for more than 90 days at Hazardous waste storage yard.

4.2 Domestic Waste

- Recyclable domestic waste such as cans, paper, plastic, box etc. must be separated from the rest of domestic waste and stored in designated receptacle for recycling.
- White skips shall be used for storage of domestic waste destined for disposal.
- All domestic waste containers must have closing mechanism to prevent windblown litter and attraction of monkeys.
- Operational Support (OPS Support) shall be responsible for provision of waste containers through the waste contract throughout the Matimba Power Station.
- OPS Support shall be responsible for the timely emptying of domestic waste containers.
- All *contractors* shall be responsible for waste management within their laydown areas, and their eating areas.
- Burning and littering of waste is strongly prohibited.

4.3 Scrap Metal

- Management of scrap metal is conducted through a supplier contracted by Matimba Power Station.
- All scrap metal generated through works or activities in Matimba must be handled through the contract.
- Skips for storage of scrap metal are strategically distributed within all the units, at various workshops and at the waste sorting yard, the positioning of the skips is easily identifiable in station layout appendix 1
- Skips for storage of scrap metal are easily identifiable with green colour.
- The user shall immediately after realising that the skip is full notify the Materials Management Department or the Environmental Section (Please refer to appendix 2 for relevant contact people)
- Request for additional scrap metal skips must be done through the environmental section.
- Records of recyclable figures including costs must be sent to Environmental department before the 3rd of every month

4.4 Other incompatible Waste

- The management of incompatible waste shall be conducted in a manner which limits high volumes accumulation of waste.
- Operational Support shall ensure that open skips are procured through waste management contract.
- Producers of incompatible waste shall take all reasonable steps to ensure that waste is stored in correct skip.

- All reasonable measures must be taken to reduce the production of incompatible waste by sending some of the packaging materials to the suppliers or producers.
- In instances where the incompatible waste cannot be reduced all reasonable measures must be undertaken to reuse and recycle the waste to benefit of the station.
- The disposal of incompatible waste shall be the last resort, and it shall be conducted within the requirements of the law, local bylaws and Eskom policy commitments.

4.5 Management of Priority Waste

Priority wastes are waste declared by the Minister of the Department of Environmental Affairs in terms of the Waste Act. Prioritisation applies to wastes that pose a serious threat to health and the environment. In most cases the management option is to limit and prohibit the generation of the waste. Asbestos either ACM or ACW, and PCB (PCB contaminated material or PCB waste) are some of the priority waste found in Matimba and requires vigorous and rigours management to ensure compliance with statutory requirements.

4.5.1 Asbestos Waste

- Asbestos waste in Matimba Power Station shall be handled as per the Asbestos regulation, 2001 and the Eskom Procedure 32-303: Requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing materials, equipment and articles.
- Further, all asbestos containing waste (ACW) shall be treated as priority waste as per section 14 of the National Environmental Management Waste Act, (Act No. 59 of 2008), section 17 of the Asbestos Regulations (2001), and as per the regulation for prohibition of asbestos used issued under Environmental Conservation Act (Act No. 73 of 1989)
- Due to its precarious effects to human health, all exposed/damaged asbestos containing materials shall be handled using the precautionary principle by:
  - Barricading the affected area to prohibit access to unauthorised personnel.
  - Immediately notifying the environmental section of the identified hazardous materials
  - ACW shall be wetted using water prior to being lifted, removed or dismantled from any structure.
- The storage, transportation and disposal of the ACW must be conducted as follows:
  - The storage containers must have closing mechanisms to prevent airborne particles or fibres
  - Small pieces of ACW and the disposable PPE worn during the asbestos work must be bagged and sealed in an air tight container
  - Containers for storage of ACW must comply with Section 21 of NEMWA, and also be in line with requirements of SANS 10234 and 10228:2010
  - Transportation of ACW shall be in accordance with the requirements of SANS 10231 and 10228:2010

-The disposal of ACW must be done in accordance with asbestos regulation, 2001

-Any liquids or sludge containing asbestos must be collected into a sealable tank/drum and be disposed of at licensed landfill site.

-Copy of safe disposal certificate must be kept by Environmental Section.

4.5.2 Management of PCB and PCB contaminated

- Management of PCB material, PCB contaminated materials and PCB waste shall be undertaken as per requirements of SANS 290, Eskom PCB phase out standard 32-1135, and all phase out plans and actions shall be within the set regulatory target dates as per GN R549/2014.
- Matimba Power Station is a registered PCB holder as per requirements of GN R549/2014, registration through head office. The registration number is 14/11/11/PCB/001.
- Matimba must develop and maintain a PCB inventory (template to be used: 240-51752992)
- Matimba shall develop, maintain and implement a PCB management and phase out plan for all materials containing PCB of more than 50ppm.
- PCBs are classified as persistent organic pollutant and have adverse health effects (carcinogenic):

  -No person shall be allowed to work on PCBs without proper training and made aware of risks phased.

  -The handling and management of PCB contaminated material or waste shall be conducted in manner that does not cause environmental pollution or endanger human life.

  -PCB waste shall be handled as per requirements of SANS 290

  -Records of PCB analysis phase out and disposal certificates shall be kept on file and maintained by environmental function.

4.6 Hazardous Chemical Waste

The management of hazardous chemical (Hazchem) waste in Matimba seeks to ensure safe storage, pick-up, transportation and disposal of hazchem waste at licensed facility for the category of waste. Due to its ignitable, volatile, corrosiveness and toxic inherent, hazchem waste must be handled with care for the protection of both human health and the environment.

The containers for storage of all hazardous waste shall be identified by an orange or red colour. The containers must be clearly labelled to easily identify the stored waste, and the date of accumulation.

4.6.1 Fluorescent tubes and bulbs

- The new waste management legislation prohibits the crushing of waste onsite as crushing is an activity which requires licensing, as such this kind of waste in Matimba shall be handled as follows:

- After Electrical Maintenance Department (EMD) or its appointed contractor has done the lightening replacements, the old bulbs/tubes must be contained in applicable box and transferred to the temporary hazardous waste storage facility.
- Maintenance technical support shall be responsible for supplying the boxes for the storage of fluorescent tubes. (Please see appendix 2 for contact details of relevant personnel).
- Sodium or fluorescent bulbs shall be stored in 210L drum and the drum be labelled "Hazardous waste – fluorescent bulbs".
- EMD or its appointed contractor shall be responsible for labelling of waste receptacle and to notify maintenance technical support or the hazardous waste contractor once the drum is full.

- No waste shall be stored at a workshop for more than 30 days; all waste must be transferred to the hazardous waste storage irrespective of the quantity.
- The waste at hazardous waste storage must be stored for period not exceeding 90 days from the date of accumulation.

4.6.2 Laboratory Waste

- All hazchem waste generated from the laboratory must be stored in 210L drums.
- The waste must be stored in terms of their hazard class and compatibility (Acids must be separated from bases and flammables)
- The Lab Supervisor or Responsible manager shall ensure that appropriated containers are provided.
- The containers must be of good conditions: not leaking, rusted and be compatible with waste being stored (**NB: acids cannot be stores in a metal container**)
- The waste containers must be closed at all times except when it's necessary to add or remove waste.
- No waste shall be stored at the satellite storage area for more than 30 days.
- Once containers are full or the 30 days period approaches the responsible personnel shall inform hazardous waste contractor or employ other avenues to remove the waste to the temporary hazardous waste storage.
- Empty chemical containers shall be treated as hazardous waste and also be transferred to the hazardous waste storage facility.

4.6.3 Molten Sulphur

- Molten sulphur must be stored in 210L drums, the container must be marked "hazardous waste – sulphur".
- Solid waste sulphur from the SO3 plants must be contained into the 210L drums and be labelled as such.
- The containers must have lids and be closed at all times.

- Ops Support must ensure that all the sulphur waste collected into drip trays are continuously removed and contained into the 210L drum.
- The drums must be stored at designated satellite storage area for period not more than 30 day.
- Once the drums are full or the 30 days period approached, Ops Support shall make arrangements for removal of sulphur waste or notify the hazardous Waste contractor.

4.6.4 Waste Oil, Oily rags, and contaminated materials (Soils and absorbents materials)

- Maintenance technical support shall ensure that the containers for storage of hazardous waste are kept on stock and readily available.
- The strategy for management of used oil and grease shall be to recycle the waste prior to decision for disposal is undertaken.
- Hazardous waste such as contaminated soils and contaminated spill absorbents shall be contained in skips to reduce the amount of trips for disposal purposes.

4.6.5 Batteries

The nature of Matimba Power Station business results in generation of defected, and out of life batteries of different types and magnitude.

The strategy for the management of all defected and out of life batteries shall be repaired, reused, recycled and as a last resort after exhausting all available methods be disposed of at a hazardous landfill site.

The management, handling and disposal of valve regulated, lead acid and nickel cadmium batteries shall be conducted in a manner that does not result in environmental contamination or endanger anyone's health.

The System Engineer for the DC system together with Environmental Officer shall during the process for decommission of the out of life or defected DC system, ensure

- Appropriate measures are undertaken to prevent any accidental leak or release of acid or harmful gases
- Employ all available measures to ensure that the batteries are recycled and can only be disposed of at hazardous landfill site after all attempts to recycle has proved to be futile.
- Keep all the records of the quantities of the decommissioned batteries for recycling or disposal.

4.6.6 Medical Waste

- The management of health care waste shall be in accordance with SANS 10248
- The primary storage area for medical waste shall be at the medical centre until the waste is legitimately collected.
- All medical waste shall be contained into a corrected receptacle.

- Expired medicines/drugs shall be collected into bio-hazard container in their original container until they are removed by licensed contractor (Decanting of medicines is prohibited).
- An inventory of the amount of waste generated and removed from station must be kept updated at all times.
- The Medical Station together with Environmental Section shall keep records of all waste removed from site. These records shall at all times be readily available for scrutiny.

5. Waste Classification

Waste classification in South Africa is done according to the global harmonisation system (GHS), facilitated by SANS 10234. The classification of waste is regulated in terms of the NEM: WA regulation 634 of 2013.

In Matimba Power Station the process for classification of waste will involve grouping of waste that pose similar risks to the environment and human health, this will facilitate proper waste management practices and appropriate disposal.

Following the waste management strategy presented in figure 1 above, in events where waste cannot be avoided, reused or recycled, such waste will be classified for proper disposal, unless such waste forms part of pre-classified list.

Waste classification in Matimba Power Station will involve one or more of the following steps:

1) Establish if waste should be classified as priority waste
2) If not priority waste, establish if the waste should be classified as liquid waste.
3) If the waste is not priority or liquid waste, establish if the waste is of the type that forms part of the pre-classified waste as per GN 634 of 2013
4) If the waste isn't priority waste, liquid waste or part of pre classified waste, establish if it has certain hazardous characteristics and can therefore be classified as hazardous waste.
5) If the waste is found out to be without hazardous characteristics, the waste needs to be chemically assessed to determine what class of waste it is. **Precautionary principle** should apply if waste is not chemically analysed.

NB: Precautionary principle should apply on all liquid waste and other waste suspected to be containing hazardous substances; therefore waste that has not been classified and doesn't form part of pre-classified waste, should be handled as hazardous waste.

6. Training

All employees, permanent contractors and outage contractors working in the plant and in area susceptible to produce waste shall undergo training in relation to waste management issues. The training shall include:

a) This procedure- Waste Management Procedure PS/240/001
b) Relevant Waste Management Legislation

c) Waste recognition and recycling

d) Waste minimisation

e) Energy and water conservation measures.

The above mentioned trainings can be provided in the forms of toolbox talks.

Waste management contractors or service providers shall undergo competency trainings relevant to the hazards they are exposed to in dealing with waste. The waste training shall cover but not limited to:

a) Asbestos handling

b) Handling of PCB waste and oils

c) Hazardous and chemical substances and waste trainings

d) Waste legislations

7. Inspection, Monitoring, Auditing and Reporting

7.1 Inspection and Monitoring

Regular monitoring must be conducted to track waste management throughout the station. This shall be done through a series of formal and informal inspections at regular intervals.

Table 1. Schedule of Inspections.

Activity	Resources	Responsibility	Frequency
Daily Site Inspection	Site Diary or Daily Diary	Waste Contractor – Plan Contractors – work areas	Daily issues recorded in site diary.
Biweekly Environmental Inspections	Environmental Inspection checklist	Environmental Officer	Weekly
Monthly Waste Walkabouts		Waste Committee	Monthly

7.2 Reporting

The following reports shall be prepared by the environmental section:

- Monthly Waste Report
- Six Monthly Waste Report
- Annual Waste Report

- Monthly Waste Action(s) Reporting

8. Review and Continual Improvement

a) Waste Management Review

The efficacy and proper implementation of this procedure will be reviewed every 3 years or sooner as necessary. The review will be undertaken by the waste management committee, and shall comprise of:

- Reviewing the results of the waste audits
- Evaluation of the waste objectives
- Evaluation of the operation of the waste management activities and this procedure
- Evaluation of waste management practices to suitability with environmental management system.

b) Continual Improvement

The continual improvement of this procedure will be realised by continual evaluation of environmental management performances against environmental policy, strategies, objectives and targets as well as the legal compliance. The evaluation will be conducted for the purpose of identifying the opportunities for improvement, the process will:

- Consider new developments in waste management practices and technology to ensure Best Management practices are employed to minimise waste generation and maximise reuse and recycling.
- Review the monitoring results and identify areas of opportunity for improvement of environmental management which leads to improved environmental performance.

The evaluation for continual improvement shall be conducted by waste committee at least once a year.

9. Record(s)

The following records must be used in conjunction with this procedure:

Type of record	Retention time	Responsibility
Monthly Waste Report	Life of Station	Environmental Function
Six Monthly and Annual Priority Waste Report	Life of Station	Environmental Function
Weekly Inspection Reports	Year (Fiscal Year)	Ops Support and Technical Support
Audit Reports	3 Years	Environmental Function
PCB and Asbestos Inventories	Life of Station	Environmental Function
PCB Phase out Plan	5 Years	Environmental Function

Waste Classification Reports	5 Years	Environmental Function.
Waste Disposal Certificates/Manifests	Life of Station	Environmental Function

10. Addenda / Appendix

10.1 Appendix 1: Station waste receptacles layout

10.2 Appendix 2: Contact details of relevant personnel for waste management.

10.3 Appendix 3: Pre-classified Waste (Schedule 1 of WMCR)

11. Acceptance

This document has been seen and accepted by:

Name	Designation
Rhulani Mathebula	Power Station Manager
Ariam Mabelane	Maintenance Manager
Pontsho Poto	Risk and Assurance Manager (Acting)
Mpho Sibanda	Finance Manager
Ralph Meyer	Manager Projects
Riaan Nel	Manager Outages (Acting)
Isabella Sekgothe	Safety Manager
Tshifhiwa Matamela	Environmental Manager
Louise Harmse	Manager Training (Acting)
Sydney Radipabe	Production Manager
Adriaan Besseling	Production Manager
Rosinah Hlaka	Coal Manager
Wikus Jv Rensburg	Engineering Manager
Tshidi Rahlogo	Human Resource Manager (Acting)
Obakeng Mabotja	Operation Manager b

12. Revisions

Date	Rev.	Compiler	Remarks
2002/05/31	0	F Molefe	New Procedure
2005/12/15	1	P Mohlala	Align with cooperate procedure
2006/03/15	1.1	P Mohlala	Align with cooperate procedure
2008/02/09	2	S More	Align with cooperate procedure
2009/03/02	2.1	S More	Inclusion of job observations and inspection check sheet.
2010/01/13	3	S More	Align to cooperate procedure and NEM-Waste Act 59/2008
2010/07/12	3.1	Sarina More	Align to cooperate procedure
2011/11/16	4	Freddy Nong	Inclusion of disposal of carcasses
2016/04/08	5	MC Mamabolo	Major amendments.

13. Development Team

The following people were involved in the development of this document:

- MC Mamabolo

14. Acknowledgements

- Beverley Monametsi – Centre of Excellence Waste Management