Eskom	Tutuka Power Station Work Instruction	Environment File 7

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1. INTRODUCTION

Tutuka Power Station supports Eskom Holdings SOC Limited in upholding government's commitment to the management ensuring the protection of the environment. The Eskom Waste Management Standard [8] is the tool that is used to uphold the principles of the National Environmental Management Act, (Act 107 of 1998) and the National Environmental Management Waste Act, (Act 59 of 2008) as amended, not excluding other relevant environmental legislations and international agreements to which South Africa is a party, as well as the Occupational Health & Safety Act, 1993 (Act 85 of 1993) and its regulations, and municipal by-laws, as amended. Industrial areas such as Power Stations generate large volumes of both general and hazardous waste, by proactively managing these wastes the station can prevent environmental degradation, contamination of natural resources and promote good housekeeping.

2. SUPPORTING CLAUSES

2.1 SCOPE

The scope of the waste management work instruction outline the handling of different waste streams, collection, disposal methods as well as reporting requirements for all waste streams.

The Waste Management Work Instruction deals with the storage, collection, transportation, disposal reporting of general-and hazardous waste at Tutuka Power Station. Purpose

- The purpose of this work instruction is to:
- manage the storage, removal, recycling, reusing, reducing and disposal of general-and hazardous waste at Tutuka Power Station by Station Cleaning and Eskom Rotek Industries
- To ensure waste produced by Tutuka Power Station is properly and safely managed from its generation through handling, storage and removal by a competent registered service provider to a registered landfill site.
- Outline the correct waste management control measure, acceptable storage and process for management, transportation and disposal of waste.
- Establish and improve commitments to waste reduction, reuse, recycle and sustainable management.
- Reduce the operation costs and waste management expenses.
- Identify and list all waste streams generated by Tutuka Power Station.
- To align waste management practices with Tutuka Waste License.

2.1.1 Applicability

This document is applicable throughout Tutuka Power Station and its subsidiaries confined to the scope of the Tutuka’s Environmental Management System.

2.2 NORMATIVE/INFORMATIVE REFERENCES

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

2.2.1 Normative

[1] Hazardous Substances Act, No. 15 of 1973
[2] Environmental Incident Management Procedure 240 – 133087117
[3] Environmental Management System Manual – Tutuka Power Station
[4] Environmental, Occupational Health and Safety Incident Management Procedure 32-95
[5] SANS 10248 -1, 2008: Management Of Healthcare waste
[6] GN R225 in terms of the National Road Traffic Act 93 of 1996
[7] Waste Classification and Management Regulation: GN R.634, 23 August 2013.
[8] Gert Sibande District Municipality Waste By Laws Published 10 Feb 2017
[9] Eskom Waste Management Standard, 32 – 245
[10] SANS 10248 -1, 2008: Management Of Healthcare waste
[11] National Environmental Management Waste Act (Act 59 of 2008)
[12] National Environmental Management Act (Act 107 of 1998)
[13] SANS ISO 14001 Environmental Management System: Requirements with guidance for use
[14] National Waste Management Strategy (NWMS) of 2020
[15] Occupational Health and Safety Act (Act 45 of 1993) Government Notice R 155, Asbestos Regulations.
[16] Requirements for the Safe Processing, Handling, Storage, Disposal and phase out of Asbestos 32-303
[17] GNR 625 of National Waste Information Regulations 13 August 2012
[18] GNR 634 Waste Classification and Management Regulation 23 August 2013
[19] GNR 635 Norms and Standards for the Assessment of Waste for Landfill Disposal 23 August 2013
[20] GNR 636 Norms and Standards for Disposal to Landfill 23 August 2013
[21] 15OPPR ASH-010
[22] 15 ENG-GEN 1536 Hazardous Waste Site Operating Philosophy
[23] GNR 847 Waste Tyre Regulations 17 August 2017
[24] Tutuka Power Station The Asset Disposal Of Wooden Scrap Material ENV GEN/F672
[25] Tutuka Integrated Waste Management License 12/9/11/L/456/6/R1

2.2.2. Informative

[1] ISO 9001 Quality Management Systems.
[2] ISO 14001: 2015 Environmental Management Systems
[3] ISO 45001: 2018 Occupational Health and Safety Management System
[4] SANS 10108: The classification of Hazardous Locations and selection of apparatus for use in such locations.

[5] SANS 60079-10: 2005: Classification of Hazardous Area.

[6] SANS 10234 Waste Classification

[7] Deficiency Authorisation Reference No. UF.012/2 "Toxic Waste Storage Site

2.3 DEFINITIONS

a) **Controlled disclosure:** controlled disclosure to external parties (either enforced by law, or discretionary).

b) **Asbestos-related work:** asbestos-related work refers to any work involving asbestos, irrespective of the extent of the work. This includes for example, inspections conducted at sites where substandard conditions in relation to asbestos, or cleaning of asbestos roofs, removal of seals and packing, where the potential exposure to asbestos dust exists. Copies of notification correspondence shall be kept on site for verification and auditing purposes

c) **Asbestos:** any material that contains or made of the following minerals: amosite, crocidolite, fibrous actinolite, fibrous anthophylite, chrysotile and fibrous tremolite.

d) **Disposal:** the burial, deposit, discharge, abandoning, dumping, placing or release of any waste into, or onto, any land.

e) **Employee:** includes full time and contracted workers as defined by the OHS Act.

f) **Environment:** the surroundings within which human exist and that are made up of: The land, water and atmosphere of the earth; Micro-organisms, plant and animal life; any part of combination of (I) and (II) and the interrelationships among and between them. The physical, chemical, aesthetic and cultural properties and conditions of (me), (II) and (III) that influence human health and well-being as defined in NEMA.

g) **E-Waste:** means unused or redundant electronic material or equipment.

h) **Healthcare Waste**: means waste generated at a health establishment and includes both healthcare general waste and healthcare risk waste

i) **General Waste:** waste that does not pose an immediate hazard or threat to health or to the environment and includes: general waste; building and demolition waste business waste; and inert waste.

j) **Hazardous Waste:** 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.

k) **Production Waste:** this includes Coal and Ash only.

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

m) **Re-use:** to use again or more than once (e.g. material from waste products).

n) **Waste recovery:** Is using wastes as an input material to create valuable products as new outputs.

o) **SANS 10234**: means the latest edition of the South African National Standard Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

p) **Sewage waste**: is the solid that remain after treatment of raw sewage sludge at the sewage treatment plant.

q) **Waste:** Any substance, material or object (irrespective of whether it can be re-used, recycled or recovered). That is [surplus], unwanted, rejected, discarded, abandoned or disposed of, or intended or required to be discarded or disposed of and includes all waste as defined in schedule 3; ¬ [which is of no further production use for generator]; or ¬ Any other substance declared by the Minister as waste.

r) **Waste disposal facility:** 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

s) **Waste transporter:** means any person who conveys or transfer waste (a) between the generator and a waste management facility or (b) between waste management facilities

t) **Waste manifesto system**: means a system of control documentation that accompanies a load of hazardous waste transported from one point generation to the waste management facility.

u) **Waste classification:** a process for establishing whether waste is hazardous based on the nature of physical, health and environmental hazardous properties (hazard class), and the degree or severity of the hazard posed (hazard categories)

v) **Waste management officer**: means a waste management officer designated in terms of section 10 of the National Waste Management Act (Act no 59 of 2008).

2.4 ABBREVIATIONS

Abbreviation	Description
AIA	Asbestos Inspection Authority
EMD	Electrical Maintenance Department
EO	Environmental Officer
DWAS	Department of Water and Sanitation
Gx	Generation
MM	Materials Management
MMD	Mechanical Maintenance Department
NEMA (Act 107 of 1998)	National Environmental Management Act (Act 107 of 1998)
NEMWA (Act 59 of 2008)	National Environmental Management: Waste Act (Act 59 of 2008)
OHS (Act 85 of 1993)	Occupational Health and Safety Act (Act 85 of 1993)
OPS	Operating
$S0_3$	Sulphur Trioxide
WMCO	Waste Management Control Officer
ERI	Eskom Rotek Industries
E- Waste	Electronic Waste
GN	Government Notice
PCB	Polychlorinated Biphenyl

Abbreviation	Description
SANS	South African National Standard
LAB	Lead Acid Battery

2.5 ROLES AND RESPONSIBILITIES

2.5.1 Power Station Manager

The Power Station is responsible for:

a) Providing all the resources necessary to sustain the waste management process.

b) Supporting initiative that will ensure continual improvement.

2.5.2 Environmental Management Manager:

Environmental Management Manager is responsible for:

a) Advise the station on the best ways of implementing the requirements of the work instruction

b) Advise the station on the changes in legal requirements pertaining to the waste management

c) Providing all resources necessary to sustain the waste management

d) Verify the waste register on monthly basis, or otherwise delegate the responsibility of verifying the waste register

e) Sign off the register to ascertain that the information contained is correct

2.5.3 Environmental Senior Advisor/Officer

The Environmental Officer is responsible for:

a) Ensure that all waste on site is managed in an environmentally acceptable manner in accordance with legislative requirements and Eskom Standards and Procedures.

b) Conducts inspection on all waste disposal sites and report any non-conformances to the authorities

c) Ensure the implementation and updating of this procedure

d) Ensure that all waste storage areas are adequately demarcated as to the type of waste to be stored and ensure waste containers are suitable colour coded to a uniform system

e) Ensures that waste is disposed of before it becomes a nuisance or causes a negative impact on the environment.

f) Ensure that waste management services providers provide waste manifesto/ disposal certificates and applicable documents. Keep accurate and up to date records of the management of the waste generated at the station, of which it must reflect but not limited to the following;

Quantity of each waste generated, expressed in tons, kilograms, litres or cubic metres per month

The waste transporter must sign for the waste his/she is carrying.

g) Compile monthly, six monthly and annual waste reports as per the requirements of the Risk and Sustainability Division: Waste Management Centre of Excellence

h) Ensure that the necessary training and awareness pertaining waste management are carried out to all employees and contractors as and when required

2.5.4. HOD/Line Managers

HOD and Line Managers shall be accountable for:

a) Ensuring that persons handling domestic or hazardous waste have undergone suitable training in safe and responsible handling thereof.

b) Communicating the procedure and ensuring adhere to this work instruction by their respective departments/sections

c) Contaminated area/s are cleaned properly and timeously

2.5.5. Chemical Services Manager

Chemical Services Manager is responsible for:

a) Ensuring that all waste chemicals are disposed according to the contents of this work instruction.

b) Promoting the safe storage of all chemicals.

c) Immediately reporting and addressing any chemical spillages that may occur.

d) Ensuring that all operating staff is trained and aware of waste management practices and safety data sheets of materials handled.

2.5.6. Medical Centre

The Senior Sister shall be responsible for:

a) The safe storage of Medical Waste

b) Notify the contract supervisor or Environmental Management when there is a need to collect and dispose medical waste

c) The safekeeping of records for disposal including manifests and destruction records.

2.5.7. Electrical Maintenance Manager

Electrical Maintenance Manager shall ensure that:

a) Defective fluorescent tubes and sodium lamps are safely collected, stored and delivered to the facility

b) The correct PPE for handling fluorescent tubes is available and issued to all personnel responsible for collecting fluorescent tubes from the offices

c) Ensure that inventory of fluorescent tubes changed and disposed is kept

2.5.8. Occupational Hygiene Officer

The Occupational Hygiene Officer is responsible for ensuring that:

a) Asbestos stripping and handling onsite comply with legal and other requirements.

b) Asbestos shall be stripped and reported upon in accordance with an approved plan accepted by the department of labour.

c) The development and maintenance of asbestos inventory.

d) Ensuring that the project manager is made aware that records of waste disposal are submitted to Environmental Management Department.

2.5.8. Operating Department

a) Provision of colour coded waste bins and skips

b) Removal and disposing of hazardous and general waste to Tutuka waste disposal facilities (Hazardous and General Waste site).

c) Ensuring waste removal service providers are trained to conduct services.

d) Ensuring that waste removal service providers comply with Tutuka Waste Instruction.

2.5.10. Material Management Department

a) Responsible to coordinate the proper storage and removal of scrap metals, recyclable oil, wooden waste and conveyor belts from site.

b) Provides quantities of waste recycled and disposed to the WMCO on a monthly basis.

2.5.11. Business Services Department

a) Coordinate and report the proper storage and removal of sanitary waste onsite.

b) Ensure that service providers for horticultural services comply with the waste instruction.

2.5.12. All Tutuka Employees and Contractors

a) Are responsible to use provided bins for different waste types.

b) Ensure communication of all applicable procedures and work instructions in the approved safety file. Comply with all applicable procedures and work instructions in the approved safety file.

2.6 PROCESS FOR MONITORING

2.6.1 Waste Management Process

Tutuka Power Station is a power generating plant. It uses resources such as coal, water and fuel oil to generate electricity. During this process, general and hazardous waste is produced. The waste is managed and controlled by Corporate Eskom policies and procedures for waste management.

2.6.2 Waste Classification

Waste must be classified as directed in GNR 634 of August 2013 in accordance with SANS 10234. The classification process must be conducted once in a 5 year cycle.

Waste as listed in Annexure 1 (2) GNR 634 of August 2013 has been pre classified by the regulations and thus does not require further classification.

All waste classified as hazardous waste must have accompanying safety data sheets. Safety data sheets must be available and communicated to relevant staff who may manage the particular waste.

2.6.3 Equipment and Infrastructure

a) Tractor and front-end loader
b) Yellow bins and skips for general waste.
c) Orange bins and skips for Hazardous waste.
d) Maroon skips for scrap metal.
e) Paper recycling bins for paper.
f) Cartridge recycling bins for printer cartridges.
g) Florescent tubes boxes for florescent tubes and sodium lamps equipment's
h) Yellow sharp containers for used needles
i) Infectious waste boxes with red plastic bags on it for biological waste
j) Dark green plastic containers for expired medication

2.6.4 Minimum requirements for waste storage

Any container or storage impoundment holding waste must be labelled in accordance to Tutuka waste bins/ skips colour coding in cases 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.
c) The date when, and quantities of, waste was added and waste removed from the containers.
d) The specific category of waste in the container or storage impoundment as identified in terms of the National Waste Information Regulations, 2012 and;
e) Where possible waste shall be kept separately and must not be mixed at all times.
f) Waste generator must ensure that their waste is reused, recycled, treated and/or disposed of within eighteen (18) months of generation, except hazardous waste must be remove or disposed within ninety (90) days.

2.6.5 Minimum requirements for waste transportation

a) Contractors transporting hazardous waste must be adequately trained in handling and transportation of hazardous waste.
b) WMCO shall ensure that all waste streams collected and transported outside of Tutuka Power Station reach the final intended destination by keeping record of waste manifests and disposal certificates in accordance to
c) All vehicles transporting hazardous waste outside of Tutuka must ensure that waste containers or materials transported are adequately labelled in accordance to SANS 10233.

d) All vehicles transporting hazardous waste outside of Tutuka must adhere to Eskom standards, procedures, and to other legal requirements including the municipal bylaws.

e) Contractors transporting hazardous waste outside from Tutuka must be registered and/ or approved with the relevant authorities as waste transporters if so applicable.

f) Contractors transporting hazardous waste from the station to a disposal facility must have an emergency preparedness plan. All relevant people's party to the emergency preparedness plan must conduct an emergency preparedness drill at least once annually.

2.7 RELATED/SUPPORTING DOCUMENTS

Waste Reporting Template 240-47176064.

3. WASTE MANAGEMENT INSTRUCTION

3.1 Waste Control Areas

Waste disposal facilities are licensed under the Tutuka Integrated Waste Management License 12/9/11/L/456/6/R1. All waste disposal areas must have the appropriate signage as stipulated in the license and be access controlled. Waste disposal facilities must be operated within their design parameters.

A. General Waste Disposal Site

The site is situated on the western side of the power station and is currently in use. General waste, builder rubble and garden refuse are disposed of there. Builder rubble and garden refuse are used as land fill, paper and cartridges are collected from the offices, and recycled. The general waste disposal site is being operated as per procedure 15OPPR ASH-010.

B. Ash Disposal Site

The Ash Disposal site is situated on the Eastern side outside the Power Station. The purpose of the site is to dispose all ash generated during electricity generation process.

There are two types of removal. The first method is the dry ash removal where ash is transported to the ash disposal site by the overland conveyor. The second method is the conditioned wet ash removal in which ash is transported by trucks to the ash disposal site. The coal burnt produces ash, which is dumped at the designated area and the area is operated and rehabilitated as per procedure 15OPPR ASH-004 .

C. Hazardous Waste Disposal Site

The hazardous waste disposal facility is located on top of the ash disposal site on a prepared area. The hazardous waste facility is access controlled. All hazardous waste entering the site must be recorded with the site control officer or supervisor. Monthly records and quantities of the waste disposed must be submitted to the WCO.

3.2 DISPOSAL INSTRUCTION

Waste Management at Tutuka shall be conducted in a manner that does not impact negatively on the environment in accordance the principles of the waste hierarchy which includes waste prevention, reduction, reuse, recycling, energy recovery and the last option being waste disposal.

3.2.1 Medical Waste

The Senior Sister in charge of the Medical Centre must ensure that:

a) All medical waste is immediately placed in either a sharps container or a medical waste disposal box, depending on the nature of the waste.

b) The lid of the medical waste container always remains closed.

c) Latex gloves are always used when handling medical waste.

d) The primary storage site will be at the medical centre dressing area until the medical waste is collected.

e) All expired medication shall be stored into the Bio-hazard container in their sealed original containers (no decanting) at the medical centre until they are removed.

f) The approved medical waste collector comes to collect the medical waste when it reaches a weight agreed upon or in less than 90 days.

g) All healthcare risk waste containers provided by supplier are colour-coded/ labelled as recommended by SANS 10248

h) Records of quantities collected and safe disposal certificates are provided to the WMCO

i) Accidental spillage of healthcare waste in the occupational health facility are treated as incidences and are managed according to the Environmental, Occupational, health and Safety Incident management procedure 32 – 95

j) Cleaners must be made aware that they must not handle any healthcare risk waste, no matter the situation.

k) An inventory of the amount of waste and the date removed is kept

l) . The Waste is disposed of, at a registered hazardous waste disposal facility.

3.2.2 Fluorescent Tubes and Sodium Lamps

a) Florescent tubes or any hazardous lighting waste shall be placed in a recycling box that is lined with plastics with a lid. The boxes are stored in an access controlled area in the control of EMD. EMD and Environmental department to facilitate the recycling processes with Operations support.

3.2.3 Sanitary waste

a) All sanitary waste shall be placed in a lined bin placed at the ladies bathrooms.

b) Waste shall be collected twice a month and disposed of as per legal requirements

c) The business services department shall provide records of the quantities of sanitary waste collected and safe disposal records on the last day of each month.

d) No sanitary waste to be disposed at Tutuka landfill sites.

3.2.4 Batteries (Lead Acid Batteries (LAB) & Other Batteries)

a) Expired or spent LAB (Excluding other batteries) are placed in a recycling box once fully or when required it will be collected OPS support and the WMCO shall facilitate the recycling processes

b) Vehicles LAB are exchanged with the supplier when replacing them.

c) Alkaline batteries must be deposited at the environmental office. WMC shall deposit batteries at recycle points that are available off-site and keep records,

d) Records of quantities collected shall be kept by the WMCO.

3.2.5 Asbestos Waste

a) All Asbestos related work shall be conducted in accordance to section 20 of the Asbestos regulation, 2001 procedure 32-303: Requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.

b) All asbestos waste generated from any work shall be handled by authorised personnel

c) All asbestos containing waste shall be treated as priority waste as per section 14 of the National Environmental Management Waste Act (Act 59 of 2008), section 17 of the Asbestos Regulations (2001), and as per the regulation for prohibited of asbestos

d) All damaged / exposed asbestos containing materials shall be handled using the precautionary principles by

- Barricading the affected area to prohibit access to unauthorized personnel
- Immediate notify the WMCO of the identified hazardous materials
- Asbestos containing waste shall be wetted using water prior to being lifted, removed or dismantled from any structure;
- Waste Manifests and disposal certificates must be submitted to Environmental Department for reporting.

3.2.6 Laboratory waste and their empty containers

a) Empty Chemical containers from use in the station laboratory, Spiral Reverse Osmosis and Brine Concentration Plant must be stored separately in a demarcated area prior disposal.

b) Empty chemical containers must be disposed of at the hazardous waste facility and the records of the quantity disposed of must be logged at the disposal facility.

c) Resin from the demin plant is placed in mega bags and disposed of at the hazardous waste disposal facility. The records of disposal must be logged by the disposal facility supervisor as received.

d) Lime waste and disposal is extremely rare and occurs when there is major maintenance of the lime silos. Lime is loaded and transported to the hazardous waste facility.

e) The records of disposal must be logged by the disposal facility supervisor as received.

f) Hazchem waste generated from the laboratory shall be stored in 210 L drums

g) The waste must be stored in terms of their hazard class and compatibility (e.g. acid must be separated from bases and flammables)

h) The lab supervisor or responsible manager shall ensure that appropriated containers are provided

i) The containers must of good condition, not leaking, not rusted and is compatible with waste being stored (.g. acid cannot be stored in metal container)

j) The waste containers must be closed at all times except when it's necessary to add or remove waste

k) The waste shall be disposed of at a registered hazardous waste disposal site

l) Safe disposal records shall be provided to the WMCO.

3.2.8 Management of Oil contaminated waste including oil filters

a) Oil contaminated waste includes soiled rags, oil filters, soiled personal protective equipment and oil contaminated soil

b) Oil contaminated waste is stored in orange bins placed in strategic areas around the power station, and when bins are full or when and as required, the waste will be collected to the waste disposal sites.

c) No oil contaminated waste shall be mixed with general waste

d) All oil contaminated waste including oil filters shall not be stored for more than 90 days.

e) Oil contaminated soil must be bio remediated. Where this cannot be done, it must be removed and placed in 210 drums and disposed at the hazardous waste facility.

f) Oil filters that are replaced must be disposed of at a hazardous waste facility. The number quantities disposed of must be recorded as received at the disposal site.

3.2.9. Ash

Ash from the station is disposed of at the Ash Disposal Facility.

Ash waste is measured in Kilo tonnes (kt) and is calculated from the coal burnt as per the formula below;

$$\text{Ash produced} = \frac{\text{Ash in coal (\%)} \times \text{Coal Burn (tonnes)}}{1000}$$

Ash spilled shall be cleaned by the cleaning contractor and transported to the Ash Disposal Facility.

3.2.10. Fly Ash management

The station has 21 monitoring station located in strategic areas, to monitor fly ash. Monitoring is done monthly by an independent contractor and monitoring reports are provided to the WMCO.

3.2.11. Ash sludge management

a) Ash sludge from the cooling towers and dirty dams are removed as and when required and will be disposed of at the Ash Disposal Facility.

b) Ash sludge from clarifiers that is contaminated with oil must be placed in 210l oil drums and disposed of at the hazardous waste facility.

c) Heavy vehicles transporting ash from the station to the disposal facility must ensure that there is sufficient containment of the cargo do prevent ash spillages. Where spillages occur, it is the responsibility of the transporter to clear the road of the spilled ash within 24hours from the spill.

3.2.12. Sewage waste

a) No sewage sludge must be reclaimed.

b) Sewage waste is handled as hazardous waste and disposed of at the hazardous waste disposal site

c) Chemical services department is responsible to manage sewage waste.

d) Records and safe disposal certificates shall be kept by the WMCO

3.2.13. Used Grease

a) Used grease will be stored a specific labelled container in the plant.

b) Full container shall be disposed of at the hazardous waste disposal site.

c) Records of quantities collected are provided to the WMCO.

3.2.14. Electronic waste

a) Printer cartridges are stored by IT department inside a labelled box.

b) When the cartridges waste bin is full, collection for recycling are facilitated by the WMCO.

c) Records of quantities collected by service provider certificates are provided to the WMCO for reporting.

3.2.15. General Waste

a) General waste items which the station is able to recycle e.g. used paper, cartridges LAB and must be separated from the rest of the general waste and disposed of in the recycling bins provided.

b) The WMCO is responsible to coordinate the provision of recycling bins, as well as the timely emptying of these bins.

c) Non-hazardous items which have potential re-sale value upon being scrapped must be sent to the GED Yard. This excludes scrap metal which must be disposed of in the scrap metal skips positioned in the Station and scrapped computer hardware which is normally sold via the Stores section

d) Records of the volume of waste disposed are provided to the WMCO

e) General waste is collected by ERI & station cleaning as and when required and disposed of at the general landfill site.

3.2.16. Food waste and used cooking oil

a) Food waste & cooking oil waste from the kitchen is removed daily from the kitchen and stored in drums with lids in the temporary storage room.

b) Food waste & waste is removed twice a week by a designated farmer.

c) Cooking oil is stored in drums at the storage room and is removed and disposed of at the hazardous waste facility.

d) Aluminium cans are removed by designated service provider for recycling. Records are given to catering department.

e) Catering officers keeps records of the quantity of food waste collected and send it to the environmental department on the last day of each month.

3.2.17. Printing paper

a) Printing paper is stored in allocated paper recycling boxes in the offices.

b) When the boxes are full a paper recycling company is called for collection by the WMCO.

c) Confidential paper is to be shredded by the responsible section before disposal.

d) Records of quantity of paper collected for recycling are provided to the WMCO.

3.2.18. Scrap Metal

a) Metal skips are distributed between the all the units, and at various other points around the station

b) Only a registered scrap metal recycler is used to collect scrap metals as and when required.

c) The Material Management Department is responsible to coordinate the removal of full scrap metal skips and providing new ones.

d) Records of quantities and income received (if any) shall be sent to the WMCO on the monthly basis.

3.2.19. Waste Oil

a) Re-usable waste oil is collected by appointed service provider.

b) Waste oil that in not reusable is contained in oil drums and disposed of at the hazardous waste facility.

c) Auxiliary services notify OPS when various oil drums in the station are full.

d) Oil drums must be placed in a designated area on an impermeable surface. Routine clean-up for the surfaces upon which oil drums are placed must be cleaned by Operation Support contractor

e) OPS support contractor to collect oil drums and oil in the station

f) Materials Management department is managing oil recycling contractor and the quantity and income is communicated to WMCO.

3.2.20. Waste Tyres & Conveyor Belts

a) Expired or old vehicle tyres are exchanged with the supplier, when fitting new ones

b) Conveyor belts must be managed according to Waste Tyre Regulations [21] as best practice.

c) Conveyor belts must be stored in a demarcated area which has a fire break for the mitigation of fire risk.

d) Record Income (if any) received and the quantities must be communicated to the WMCO on the last day of each month

3.2.21. Lagging Waste

Lagging is used as material providing for heat insulation for pipes, tanks and other vessels.

a) Lagging waste has been classified as hazardous waste material after its intended use in the units. This is due to the contamination of fugitive dust, pulverised coal and oil that may be released in the units during operation.

b) Lagging waste must be disposed of at a type 2 waste disposal facility.

c) Beneficiation of lagging waste remains an opportunity for Tutuka.

3.2.22. Wooden Waste

Wooden scrap material at Tutuka Power Station is primarily in the form of pallets which are used to package inbound material from various sources.

a) All the wood waste accumulated on site prior 2020 shall, in the absence of documented evidence proving the contrary, be provisionally managed as potentially hazardous material.
b) The selling of wooden scrap material is to be allowed provided:

- The prospective buyer follows process as prescribed through Materials Management Department.
- The prospective buyer attaches his or her signature to the indemnity form [22], by so doing satisfying themselves to the contents thereof.

3.3. AUDITING

a) General and Hazardous waste management will be audited during predetermined environmental audits as per required.
b) Internal audits on the activities as prescribed in this procedure will also be undertaken as per the Site audit schedule.
c) Internal audit to the Tutuka Integrated Waste Management License [23] will be conducted quarterly as scheduled.

3.4. REPORTING

a) All departments producing waste should report the amount of waste generated or recycled and the income received (if any) by the last of each month to the Environmental department.
b) Reporting shall be done in accordance with Annexure K of the Eskom Waste Management Procedure, 32 – 245.
c) A waste register is kept on site detailing the amount of waste produced for the month, how much waste was recycled and how much waste was disposed of
d) Monthly reports shall be sent to Sustainability Davison: Waste Management by the Environmental department.
e) Biannual report reports shall be sent to Sustainability Division: Waste Management by the Environmental department.

3.5. RECORDS

a) All certificates of safe disposal and waste inventories shall be retained for five (5) years.
b) This procedure shall be retained for the life of the power station, unless it is deemed no longer necessary by the Power Station General Manager or when it is superseded.
c) This procedure shall be reviewed every three years from the date of last review
d) Document to be retained are as follow;
    - Records of all waste removal

- Records of inspections
- Records of audits

4. AUTHORIZATION

This document has been seen and accepted by:

Name	Designation
M Mokgawa	Environmental Manager
T Maseko	Risk and Assurance Manager
B. Gwebu	Shift Manager (Operating)
P. Nkanyane	Ash manager
S. Khumalo	Medical centre
N. Makhubo	Medical centre
R. Simelane	Catering Services Business Services Manager (Acting)
V. Mahlaba	Chemical services
Hlengiwe Dlamini	Coal Manager
Qinisani Nkwanyana	Stores Manager

5. REVISIONS

Date	Rev.	Compiler	Remarks
February 2021	6	S Bambo	Inclusion 2.6.2; 3.2.17; 3.2.18; 3.2.19 Amendment 3.2.15; 3.2.12; 3.1, 3.2.16 Inclusion of normative references Tutuka Integrated Waste Management License 12/9/11/L/456/6/R1 and Waste Management Act Regulations
Dec 2018	5	S Sibiya	Document was reviewed in order to align our operations with the latest legislations and major changes were made on the following 2.1.1, 2.1.2, 2.2.1, 2.2.2., 2.3.1, 2.4, 2.5.1, - 2.5.4, 2.6.2, 2.6.3 (new), 3.2.1, 3.2.3 (new), 3.2.4, 3.2.5, 3.2.6 (new), 3.2.7 (new), 3.2.8 (new), 3.2.9 (new), 3.2.10 (new), 3.2.11 (new), 3.2.13 – 3.2.18 & 3.3. The current revision will be revision as and when required.

Date	Rev.	Compiler	Remarks
February 2021	6	S Bambo	Inclusion 2.6.2; 3.2.17; 3.2.18; 3.2.19 Amendment 3.2.15; 3.2.12; 3.1, 3.2.16 Inclusion of normative references Tutuka Integrated Waste Management License 12/9/11/L/456/6/R1 and Waste Management Act Regulations
July 2017	4	S. Sibiya	Document was reviewed in order to ensure compliance and major changes were made in the following points **2.6.2, 3.2.2, 3.2.3, & 3.2.9**.
January 2015	3	S. Sibiya.	Document was due for revision and major changes made in the following points**: 1; 2.1.2; 2.2; 2.3; 2.4; 2.5; 2.6 & 3.** Current revision to be revised in 2018.
October 2011	2	W. Mogwase.	Document was due for revision and changes were made in the following points: 14; 15 and the appendix added.
December 2009	1	N. Vilane.	Document revised and minor changes made in the document.
January 2009	0	N. Nongauza.	To ensure that waste is disposed of in a legally manner. New revision.

6. DEVELOPMENT TEAM

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

- S. Bambo

7. ACKNOWLEDGEMENTS

N/A