	Waste Management Procedure	Tutuka Power Station Environment File 7
---	-----------------------------------	--

**Title: Tutuka Power Station Waste
Management Procedure**

Unique Identifier:

14RISK ENV-013

Alternative Reference Number: 00260

Area of Applicability:

Tutuka Power Station

Functional Area:

Environmental

Revision:

8

Total Pages:

28

Next Review Date:


October 2027

Disclosure

CONTROLLED DISCLOSURE

Classification:

Compiled by



M Mokgawa

Environmental Manager

Date: 04-11-2024

Functional Responsibility

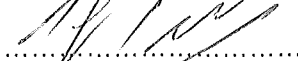


L Nyakane

**Risk and assurance manager
(Acting)**

Date: 04-11-2024

Authorized by



P Potgieter

**Business enablement manager
(Acting)**

Date: 04/11/2024

File name: Tutuka Power Station Waste Management Procedure

Template ID: 32-4 (Rev 11) Document template (for procedures, manuals, standards, instructions, etc.

Formatted by: EDC_07.09.2023.

CONTENTS

	Page
1. INTRODUCTION	3
2. SCOPE.....	3
2.1. Purpose.....	3
2.2. Applicability	3
2.3. Effective Date.....	4
2.4. Normative/Informative References	4
2.5. Definitions	6
2.6. Abbreviations	7
2.7. Roles And Responsibilities	8
2.8. Eskom Strategic Waste Implementation Plan (SWIP).....	8
3. WASTE MANAGEMENT HIERARCHY	9
3.1. Waste Generation.....	9
3.2. Waste Storage	10
3.3. Waste Recycling	10
3.3. Waste Collection.....	11
3.5. Waste Disposal	12
3.6. Training And Awareness	12
3.7. Waste Audits And Reviews.....	12
3.8. Reporting	13
3.9. Waste Records	13
4 ACCEPTANCE	14
5 REVISIONS	15
6 DEVELOPMENT TEAM	15
7 ACKNOWLEDGEMENTS	15
Table 1: Roles And Responsibilities	16
Table 2: Waste Streams And Management Actions	19

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 in any manner or form by third parties without the written consent of Eskom Holdings SOC Ltd, © copyright Eskom Holdings SOC Ltd, Reg No 2002/015527/30

Tutuka Power Station: Waste Management Procedure

1. INTRODUCTION

Tutuka Power Station waste management procedure is developed to provide guidance to all waste generators, transporters, and waste disposal contractors on how waste will be managed within the station. The procedure outlines a proactive process to ensure that the management of wastes in the station pursues the Eskom goal of zero waste generation. Where zero generation of waste is not possible, the procedure outlines mitigation measures to manage waste in a responsible and legal manner.

The station is committed to ensure compliance to the waste management legislation and other applicable legal requirements including the Eskom SHEQ policy. The station main goal of achieving zero waste generation is characterised by its commitment to the waste management hierarchy (i.e., Prevent waste generation, minimise waste generation, recycle and re-use). A critical enabler of this goal is building long-term collaboration and partnership with all stakeholders within the station. Tutuka power station considers waste disposal as the last resort if all the other options of the waste hierarchy fail.

2. SCOPE

The scope of this procedure is to ensure that the station is aligned with the legislation requirements that must be adhered for various waste stream generated within the station. Some waste stream can pose significant health and environmental impacts. The waste management procedure outlines the process that will be followed once the waste is generated.

2.1 Purpose

- ✓ The purpose of the waste management procedure is to give the overall direction and governance during the generation, separation of waste at the source, storage of waste inside the waste bins and skips, collection, transportation, recycling, and disposal waste.
- ✓ Establish and improve commitments to waste reduction, reuse, recycle and sustainable management.
- ✓ Reduce the operational costs and waste management expenses.
- ✓ Identify and list all waste streams generated by Tutuka Power Station.

2.2 Applicability

This document is applicable throughout Tutuka Power Station including all employees, contractors, visitors and suppliers confined to the scope of the Tutuka's Environmental Management System.

Tutuka Power Station: Waste Management Procedure

2.3 Effective Date

When the document is authorised/approved.

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

- Eskom Computer Disposal Strategy: 240-637 47890
- Eskom Documentation Management Standard :32-644
- Eskom Generation division strategic waste management implementation plan: 240-81652977.
- Eskom Health Care Risk Waste Management Standard: 240-115842952
- Eskom Holdings Environmental Management Strategy:240-82410629
- Environmental Incident Management Procedure: 240 –133087117
- Environmental Management System Manual, Tutuka Power station:14RISK ENV-010
- Eskom Polychlorinated Biphenyl phase-out standard:240-8908008
- Eskom's Procurement and Supply Chain Management Procedure: 32-1034
- Eskom Requirement for safe processing, Handling, storing, Disposal and phase-out of asbestos and asbestos-containing material, equipment and articles: 32-303.
- Eskom Safety, Health, Environment and Quality (SHEQ) Policy:32-727
- Environmental Waste Standard:32-245
- Tutuka power station Document Management Work Instruction:14SHEQ PC-001

Tutuka Power Station: Waste Management Procedure

2.4.2 Informative

- Asbestos Abatement Regulations: GNR 1196, 10 November 2020
- GN R225 in terms of the National Road Traffic Act : 93 of 1996
- Gert Sibande District Municipality Waste By Laws :No.2780 of 2017
- Hazardous Substances Act: No. 15 of 1973
- Lekwa Local municipality, refuse removal by-law :No.9, 2007
- National Environmental Management Act: 107 of 1998
- National Environmental Management Waste Act: Act 59 of 2008
- National Norms and Standard for storage of waste: GN R926, 29 November 2013
- National Norms and Standards for Disposal of Waste to a Landfill: GNR 636, 23 August 2013
- National Road Traffic Act 93 of 1996
- National Waste Information Regulations: GNR 625, 13 August 2012
- National Waste Management Strategy (NWMS) :2020
- SANS 60079-10: 2005: Classification of Hazardous Area.
- SANS 10248 -1, 2008: Management Of Healthcare waste
- SANS 10108: The classification of Hazardous Locations and selection of apparatus for use in such locations.
- SANS Codes for Transportation of Hazardous Waste – 10228 to 10234, 10206, and 10265, at a minimum
- SANS ISO 14001 Environmental Management System: Requirements with guidance for use
- Waste Classification and Management Regulation: GN R.634, 23 August 2013.

Tutuka Power Station: Waste Management Procedure

2.5 Definitions

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

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 Alan verification and auditing purposes.

Bin liner: A plastic bag approved by the Municipality which is placed inside a bin with a maximum capacity of 0,1 cubic meters. These bags must be of a dark colour, 950 mm x 750 mm in size, of low density minimum 40 micrometer diameter or 20 micrometre diameters high density;

Building Waste: refuse generated by demolition, excavation or building activities on premises.

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

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

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

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.

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

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.

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.

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

Production Waste: this includes Coal and Ash only.

Tutuka Power Station: Waste Management Procedure

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.

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

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

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.

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)

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.

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

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.

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

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.

2.6 Abbreviations

Abbreviation	Description
NEMA	National Environmental Management Act (Act 107 of 1998)
NEMWA	National Environmental Management: Waste Act (Act 59 of 2008)
OPS	Operating Support
WMCO	Waste Management Control Officer
E- Waste	Electronic Waste
SANS	South African National Standard

Tutuka Power Station: Waste Management Procedure

2.7.Roles and Responsibilities

Table 1 below outlines the roles and responsibilities of all stakeholders involved in waste management of the station. The stakeholder includes the waste generators, transporters as well as the individuals responsible for recycling and disposal of waste.

2.8 Eskom Strategic Waste Implementation Plan (SWMIP)

Tutuka power station has adopted the strategic objective SWMIP which requires the station to focus on the following key objectives:

2.8.1 Ensure compliance with waste legislation.

- Raise awareness, roles and responsibilities clarifications.
- Undertake waste management licenses audits/review.
- Ensure that waste is transported to the authorized facility.
- Timeously close out waste management findings or compliance gaps.
- Ensure compliance with the SAWIS reporting.
- SAWIS reporting internal target is the 20th of the following month for the previous month reporting.
- Tracking the phase out plans of asbestos in the station.

2.8.2 Waste reduction, reuse, and recycling

- Funding of projects related to waste reduction, reuse and recycling.
- Separation of waste at the source.

2.8.3 Ensure closure of hazardous and general landfill sites.

- Make financial provision for final closure and rehabilitation of landfills.

2.8.4 Implement the Just Energy Transition

Tutuka Power Station: Waste Management Procedure

3. WASTE MANAGEMENT HIERARCHY

Waste Management at Tutuka power station 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. The station has adopted the waste management hierarchy as indicated below. The station is committed to reduce the amount of waste that is generated from its operation, in instances where wastes are generated the option to re-use and recycle the waste is implemented. Waste disposal is the considered as the last option when all other options fail.



3.1 Waste Generation

Waste generators 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. Table 2 below indicates the waste streams and management action to minimise the risk associated with the waste.

Tutuka Power Station: Waste Management Procedure

3.2 Waste Storage

Section 6 (3) of the waste classification & management regulations GN R634 outlines the labelling requirement for waste containments. In compliance with the requirements of GN R634, the station will ensure that any container or storage impoundment holding waste are labelled, or where labelling is not possible, records kept reflects the following:

- ✓ The date on which 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, sealed or covered.
- ✓ The date when, and quantities of, waste was added, and waste removed from the containers.
- ✓ The specific category of waste in the container or storage impoundment as identified in terms of the National Waste Information Regulations, 2012
- ✓ Where possible waste shall be kept separately and must not be mixed at all times.

Any container or storage impoundment holding waste must be labelled in accordance with Tutuka Power Station waste bins/ skips colour coding and/or labelling requirements as indicated below:

- ✓ Yellow wheely bins and skips for general waste.
- ✓ Orange wheely bins and skips for Hazardous waste.
- ✓ Maroon skips for scrap metal.
- ✓ Paper recycling boxes and White wheely bins for paper.
- ✓ Green wheely bins for recyclables- plastic bottles and cans.
- ✓ Florescent tubes boxes for florescent tubes and sodium lamps equipment's
- ✓ Yellow sharp containers for used needles at the medical centre.
- ✓ Infectious waste boxes with red plastic bags on it for biological waste.
- ✓ Dark green plastic containers for expired medication.
- ✓ Sharps container or a medical waste disposal box.

3.3 Waste Recycling

General waste items which the Station is able to recycle e.g., used paper, cartridges and empty drums must be separated from the rest of the general waste and disposed of in the recycling bins and boxes provided.

Note: Non-hazardous items which have potential re-sale value upon being scrapped or collected will go through the procurement process handled by Investment Recovery department.

Tutuka Power Station: Waste Management Procedure

3.3 Waste Collection

Waste collection shall be done as per schedule by the responsible department. However, it remains the responsibility of all department to notify the responsible department about the collection requirements.

All waste should be removed from site within 90 days from the date of generation.

Handling and collection of waste will be conducted by competent employees who are trained to handle the waste stream.

3.4 Waste transportation

Only competent and authorised personnel will transport waste. WMCO shall ensure that all waste streams collected and transported outside of Tutuka Power Station reach the final intended destination.

All vehicles transporting hazardous waste outside of Tutuka must ensure that waste containers or materials transported are adequately labelled in accordance to SANS 10233 and must adhere to Eskom standards, procedures, and to other legal requirements including the municipal bylaws.

Contractors transporting waste outside from Tutuka must be registered and/ or approved with the relevant authorities.

Any person transporting waste shall take all reasonable measure to prevent any spillage of waste or littering from the vehicle used to transport waste.

All waste that is transported off site needs to be accompanied by a waste manifest document. This is a legal document that contains the waste generator's details, the waste transporter's details, and the waste manager's details. The manifest document will also detail how the waste stream is to be managed and will contain emergency contact details.

The generators of the waste are responsible for ensuring that all waste leaving the site is accompanied by a waste manifest document and, in the case of hazardous waste, a safety data sheet (SDS). Once the waste management facility has reused/recycled/treated/disposed of the waste, a safe disposal certificate will be issued to the generator of the waste.

Tutuka Power Station: Waste Management Procedure

3.5 Waste Disposal

Tutuka power station has existing authorised landfill sites for general waste and hazardous waste. The station strives to comply with the conditions outlined in its licenses. All landfill sites have strict access control.

General Waste Disposal Site

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

Hazardous Waste Disposal Site

The Hazardous waste disposal site is situated on the Eastern side outside the Power Station. It is located on top of the existing ash disposal facility. The area assists with the disposal of some hazardous waste streams including grease.

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 conveyors. 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.

3.6 Training and Awareness

Employees and Contractors handling and transporting hazardous waste must be adequately trained in handling and transportation of hazardous waste.

The vehicles used for transportation of hazardous substances must comply with all traffic laws, municipal by laws and the relevant SANS standard.

3.7 Waste Audits And Reviews

The station has an existing General waste license and Hazardous waste license. Both licenses have conditions that requires the station to conduct 4 quarterly internal audits and 1 annual internal audit each.

Tutuka Power Station: Waste Management Procedure

3.8 Reporting

- ✓ All departments producing waste should report the amount of waste generated or recycled and the income received (if any) on the last day of each month to the Environmental department.
- ✓ Reporting shall be done in accordance with Annexure K of the Eskom Waste Management Procedure, 32 - 245.
- ✓ 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 off.
- ✓ Monthly, Quarterly, and annual reports shall be sent to Generation: Waste and Biodiversity Centre of excellence.

3.9 Waste Records

- ✓ The following documents must be retained by the generator of the hazardous waste for a minimum: Manifest ,Weighbridge ticket from the Eskom weighbridge (if available) and waste management facility and Safe disposal certificate from the waste management facility,
- ✓ Waste registers with the type and amount collected for disposal shall be available on site.
- ✓ Submit records (Waste manifest and disposal certificates to WMCO).
- ✓ All certificates of safe disposal and waste inventories shall be retained for five (5) years.
- ✓ This procedure shall be reviewed as and when required or after every three years from the date of last review.
- ✓ Records of inspections, reviews and audits shall be stored as per documents management work instruction.
- ✓ Manual records that need to be destroyed shall be shredded prior recycling/disposal. The station Document Management Work Instruction shall be used for guidance. The destruction of registered records will be guided by the retention period Standard list for records retention periods available on G\TUTUKA\TDS:14RISK BA-016: List of records retention periods.
- ✓ Electronic records that need to be destroyed will follow the process outlined in the Eskom Computer Disposal Strategy: 240-637 47890.
- ✓ Records of quantities and income received (if any) shall be sent to the WMCO on the monthly basis for all waste that is recycled.
- ✓ The records will be retained for a period of at least five (5) years and is made available to the authorities upon request.

Tutuka Power Station: Waste Management Procedure

Acceptance

This document has been seen and accepted by:

Name	Designation
Bruce Moyo	Power Station General Manager
Pieter Potgieter	Middle Manager Business Enablement
Johann Pretorius	Middle Manager Operating (Acting)
Lele Masote	Middle Manager Engineering
Babalelo Razwiedani	Middle Manager Finance
Lameck Nyakane	Middle Risk and Assurance Manager (Acting)
Jason Nokana	Middle Manager Human Resources
Mbongeni Nogampula	Middle Manager Maintenance
Mahlodi Moloto	Middle Manager Maintenance
Mxolisi Ntanz	Middle Manager Projects
Elvis Maremene	Middle Manager Production
Lyborn Xivambu	Middle Manager Compliance
Kagiso Molokoane	Middle Manager Engineering
Frans Mametsa	Material Management Manager (acting)
Michael Mukwevho	Manager: Chemical services
Lillian Mokhasinyane	Officer Documentation
Muzi Maseko	Production Manager
Prince Nkanyane	Ops Support Manager
Nobantu Makhubo	Snr Advisor Professional Occupational Health
Ronald Simelane	Catering Officer
Xoli Jila	Senior Environmental Advisor
Refiloe Mabeba	Environmental Officer
Rendani Nematshema	Environmental Officer
Phallang Mokoena	Officer Assets Disposal
Enoch Sindani	Manager Fire Risk Management
Ben Khwela	Manager Support Services
Zamashenge Buthelezi	Senior Technician Operating

Tutuka Power Station: Waste Management Procedure

4 REVISIONS

Date	Rev.	Compiler	Remarks
October 2024	8	M Mokgawa	Update References. Align to the approved Industrial Waste management strategy. Update roles and responsibilities (Table 1), Update waste streams (Table 2)
August 2023	7	C. Phosa	Document was due for revision
January 2021	6	W. Mogwase	Document was due for revision.
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.
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.

5 DEVELOPMENT TEAM

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

- Monica Mokgawa
- Charlotte Phosa

6 ACKNOWLEDGEMENTS

N/A

Tutuka Power Station: Waste Management Procedure

TABLE 1:ROLES AND RESPONSIBILITIES

Responsible Role Players		Responsibilities	Frequency
Power Station Manager	General	Accountable to ensure that the station complies with the conditions of the waste licenses ,permits and all waste related legal requirements	Ongoing
		Accountable for the implementation and compliance to the station's waste management plan.	
Middle Manager Risk and Assurance		Responsible to ensure that the station complies with the conditions of the waste licenses ,permits and all waste related legal requirements	Ongoing
		Provide adequate resources for the effective management of waste in the station.	
Environmental Manager		Ensure that the waste management procedure is implemented, maintained, and updated as and when required.	As and when required
		Ensure compliance to the waste licenses conditions including arranging applicable audits.	
		Ensure that the necessary training and awareness pertaining waste management are carried out to all employees and contractors as and when required (including material).	
		Provision of colour coded waste wheely bins and ensure that all bins are labelled.	
		Ensure that enough recycling boxes are available and allocated to responsible departments	Quarterly
		Initiate targeted interventions to improve compliance requirements to waste management	
		Update and align the station waste management procedure with legal and other requirements.	As and when required
		Provision of colour coded waste skips and ensure that all skips are labelled.	
		Ensure that contracts are in place to assist the station with waste management and where necessary engage relevant department including eskom investment recovery department to ensure that contracts are in place.	

Tutuka Power Station: Waste Management Procedure

Ops Support Manager	Ensure that all vehicles transporting waste are compliant and has correct certificates for transporting waste.	Before waste transportation.
	Removal and disposing of hazardous and general waste to Tutuka waste disposal facilities (Hazardous and General Waste site).	As per schedule.
	Ensure that waste is collected.	As per schedule.
	Ensure that all personnel working with hazardous substance are trained, competent to execute the work.	As and when required.
	Ensure that drivers of waste transport are competent and has legal documents/certificate for the job.	Before waste transportation.
Waste Control Officer	Report waste related incidents as per incident management process and ensure compliance until incident is closed.	As and when required.
	Ensure that all applicable information is submitted to authorities within the stipulated time frames	As and when required.
	Allocate waste storage bins, boxes etc. and keep records of the signed allocation records	As and when required.
	Consolidate the waste statistics on monthly basis and keep copies of the disposal records.	Monthly
	Ensure that the station has templates that are compliant to legislation for waste removal, waste disposal including waste manifest.	As and when required.
	Compile monthly, six monthly and annual waste reports as per the requirements of the Risk and Sustainability Division: Waste Management Centre of Excellence	Monthly, Quarterly, and annually
	Ensure that necessary approvals are available for waste management	As and when required.
	Ensure that Quarterly waste audit are conducted.	Quarterly
	Findings from the audits/reviews are captured on SAP QIM, communicated, and tracked weekly for closure	As and when required.

Tutuka Power Station: Waste Management Procedure

Investment Recovery & Material Management Department	Ensure that contracts management by their department are in place	All time
	Ensure that contractors are available for collecting waste	As and when required
	Provides quantities of waste recycled and disposed to the VMCO on a monthly basis.	Monthly
Waste Generators	Responsible to store the waste in the correct waste storage equipments.	Daily
	Clearly define the streams and quantities of waste in your area to ensure that proper waste removal arrangements are in put in place.	Ongoing
	To report shortage of bins and skips as well as overflowing bins	As and when required
	Conduct inspection and raise awareness about waste management in your area of operation	Weekly
	Orientate new employees and contractors on the waste management processes in the station	As and when required
	Inform the responsible department when assistance is required for waste collection.	Ongoing
Contract Manager/Line Managers/Supervisors	Submit waste statistics on the 1 st of every month to the stat waste control officer. Original copies of the disposal records must be available on request	1 st of every month
	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.	Ongoing
	Ensures that waste is disposed off before it becomes a nuisance or causes a negative impact on the environment. The waste transporter must sign for the waste his/she is carrying	
	Ensure that all waste related findings from Audits/reviews are actioned and closed within the stipulated time frames.	
Contract Manager/Line Managers/supervisors	Keep accurate and up to date records of the management of the waste generated.	Ongoing
	Ensure that waste services providers provide waste manifesto/ disposal certificates documents.	Ongoing
	Submit all waste related documents to the environmental officer.	Monthly

Tutuka Power Station: Waste Management Procedure

TABLE 2:WASTE STREAMS AND MANAGEMENT ACTIONS

Waste stream	Storage equipments /facility	Recycling/Disposal	Management action
2.1.General Waste			<p>-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 Records of the volume of waste disposed are provided to the WMCO</p> <p>-General waste is collected by ERI & station cleaning as and when required and disposed of at the general landfill site.</p>
Municipal Waste	Yellow wheely bins and skips	Tutuka General landfill site	OPS Support department is responsible for waste collection and disposal.
Organic Waste: Garden waste	Arrange for removal	Tutuka General landfill site	OPS Support department is responsible for waste collection and disposal.
Organic Waste: Food waste	Canteen bins	Collection by Farmer	<p>-Food waste from the kitchen is removed daily from the kitchen and stored in drums with lids in the temporary storage room.</p> <p>-Food waste & cooking oil waste is removed twice a week by a designated farmer.</p> <p>-Catering officers keep records of the quantity of food waste collected and send it to the environmental department on the last day of each month.</p>

Tutuka Power Station: Waste Management Procedure

Organic Waste: Wood waste	Arrange for removal	Tutuka landfill site	General	OPS Support department is responsible for waste collection and disposal.
Plastic: Polyethylene terephthalate (Used Food Packaging)	Yellow wheely bins and skips	Tutuka landfill site	General	OPS Support department is responsible for waste collection and disposal.
Used cooking oil	End-user to dispose at hazardous landfill site	Disposal		Disposed by kitchen staff member as and when required.
Paper: White grades	Recycling Boxes/White wheely bins	Recycling		-Printing paper is stored in allocated paper recycling boxes in the offices. -When the boxes are full a paper recycling company is called for collection by the WMCO -Confidential paper is to be shredded by the responsible section before disposal.
Paper: Brown grades	Recycling Boxes/White wheely bins	Recycling		-Printing paper is stored in allocated paper recycling boxes in the offices. -When the boxes are full a paper recycling company is called for collection by the WMCO -Confidential paper is to be shredded by the responsible section before disposal.
Plastic bottles and cans (soft drinks)	Green wheely bins	Recycling		Investment recovery department is responsible for the management/selling of recyclables.
Conveyor belts	Notify materials management/stores in advance before removal	Recycling		Investment recovery department is responsible for the management/selling of recyclables.

Tutuka Power Station: Waste Management Procedure

Empty Drums	Notify materials management/stores in advance before removal	Recycling	Investment recovery department is responsible for the management/selling of recyclables.
Scrap metals	Notify materials management/stores in advance before removal	Recycling	<p>- Eskom scrap must be returned to stores for recycling by the investment recovery team.</p> <p>-Metal skips are distributed between the all the units, and at various other points around the station.</p> <p>-Only a registered scrap metal recycler is used to collect scrap metals as and when required.</p> <p>-The Material Management Department is responsible to coordinate the removal of full scrap metal skips and providing new ones.</p> <p>Note: Metal equipment contaminated with PCB-contaminated oil may not be sold. Such metal equipment must be destroyed by thermal destruction.</p>

Tutuka Power Station: Waste Management Procedure

2.2.Hazardous Waste			
Mercury containing waste (i.e fluorescent tubes)	End-users to notify environmental department when recycling/disposal is required	Recycling	<p>-All fluorescent lamps and tubes are considered hazardous waste when discarded because they contain mercury and must be collected and recycled at an authorised recycling facility. Fluorescent tubes or any hazardous lighting waste shall be placed in a recycling box provided by environmental department.</p> <p>-Environmental department to facilitate the recycling processes.</p> <p>-Fluorescent lamps and tubes should not be crushed on site.</p>
Batteries	End-users to notify materials management department when recycling/disposal is required	Disposal	<p>-Investment recovery department is responsible for the management/selling of expired or spent LAB (Excluding other batteries).</p> <p>-Vehicles LAB are exchange with the supplier when replacing them.</p> <p>-Records of quantities collected shall be kept by the WMCO.</p>

Tutuka Power Station: Waste Management Procedure

<p>Asbestos containing waste.</p>	<p>End user/Line Manager to notify R & A department prior the activity.</p>	<p>Disposal</p>	<p>-Responsible Manager concerned with the collection, transport, and disposal of asbestos waste is responsible for complying with the provisions of the OHS Act, Asbestos Regulations, ECA, NEMWA, Standard 32-303, and all applicable legislation.</p> <p>-Manager has to ensure that steps are taken to prevent the release of asbestos. -Asbestos containing waste shall be wetted using water prior to being lifted, removed, or dismantled from any structure.</p> <p>-All asbestos waste shall be transported in accordance with SANS 10228 and SANS 10229.</p> <p>-All asbestos waste generated from any work shall be handled by authorised personnel.</p> <p>-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 used issued under the Environmental Conservation Act (Act no; 73 of 1989).</p> <p>-All damaged / exposed asbestos containing materials shall be handled using the precautionary principles by</p>
--	---	-----------------	---

Tutuka Power Station: Waste Management Procedure

Used Fuel Oils	Notify materials management/stores in advance before removal	Recycling/disposal	<p>-Barricading the affected area to prohibit access to unauthorized personnel. -Immediate notify the WMCO of the identified hazardous materials.</p>
Ash	Ops department support	Disposal	<p>-After removal of excess oil, sawdust, suitable absorbents, or solvents shall be used to complete the clean-up of the spill.</p> <p>-This might include the removal of leaking equipment, cleaning of pavements, removal of contaminated soil and vegetation, as well as disposal of clean-up equipment.</p> <p>-The absorbing material shall be bagged and disposed of at a registered hazardous waste site.</p> <p>-Materials Management department is managing oil recycling contractor and the quantity and income is communicated to WMCO.</p>
			<p>-Ash spilled shall be cleaned by the cleaning contractor and transported to the Ash Disposal Facility.</p> <p>-Ash shall be disposed off at the ash disposal facility</p>
Silt	End-user to ensure that proper arrangements are made for disposal.	Disposal	<p>-Ash sludge from the cooling towers and dirty water dams are removed as and when required and will be disposed of at the Ash Disposal Facility.</p> <p>Note: No sludge will be placed on bare soil.</p>

Tutuka Power Station: Waste Management Procedure

E-Waste (Computers, Electric and electronic tools, Cartridges)	Notify materials management/stores in advance before removal	Recycling	<ul style="list-style-type: none"> -Printer cartridges are stored by IT department inside a labelled box. -When the cartridges waste bin is full, collection for recycling is facilitated by the WMCO. -Eskom Computer Disposal Strategy: 240-637 47890. -Records of quantities collected, and destruction certificates are provided to the WMCO. -Investment recovery department is responsible for the management/selling.
Health Care Risk Waste	Notify environmental in advance before removal	Disposal	<ul style="list-style-type: none"> -The lid of the medical waste container always remains closed. -Latex gloves are always used when handling medical waste. -The primary storage site will be at the medical centre dressing area until the medical waste is collected. -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. -The approved medical waste collector comes to collect the medical waste when it reaches a weight agreed upon or in less than 90 days. -All healthcare risk waste containers provided by supplier are colour-coded/ labelled as recommended by SANS 10248

Tutuka Power Station: Waste Management Procedure

			<ul style="list-style-type: none"> -Records of quantities collected, and safe disposal certificates are provided to the WMCO -Immediately placed in either a sharps container or a medical waste disposal box, depending on the nature of the waste. Primary storage site will be at the medical centre dressing area. -The lid of the medical waste container always remains closed. -Latex gloves are always used when handling medical waste -All expired medication shall be stored into the Bio-hazard container in their sealed original containers (no decanting).
Sewage sludge	Chemical services to dispose at hazardous landfill site	Tutuka Hazardous waste disposal site	<ul style="list-style-type: none"> -No sewage sludge must be reclaimed. -Sewage waste is handled as hazardous waste and disposed of at the hazardous waste disposal site -Chemical services department is responsible to manage sewage waste. -Records and safe disposal certificates shall be kept by the WMCO
Conveyor Belts	Notify materials management/stores in advance before removal	Collected	<ul style="list-style-type: none"> -Investment recovery department is responsible for the management/selling. -Expired or old vehicle tyres are exchanged with the supplier, when fitting new ones -Conveyor belts must be collected by a registered company -Record Income (if any) received, and the quantities must be communicated to the WMCO on the last day of each month
Lagging	End-users to notify environmental department when disposal is required	Hazardous waste disposal site	<ul style="list-style-type: none"> -Never store lagging on bare soil. -Proper containment such as municipal waste storage plastics to be used. -Lagging waste to be removed on site within 90 days

Tutuka Power Station: Waste Management Procedure

Sanitary Waste	SHE bins in all ladies bathrooms	Disposal	<ul style="list-style-type: none"> -Waste shall be collected twice a month and disposed of as per legal requirements -The Occupational safety and hygiene department shall provide records of the quantities of sanitary waste collected and safe disposal records on the last day of each month. -No sanitary waste to be disposed at Tutuka landfill sites
Chemical Containers	End-user to dispose at hazardous landfill site	Tutuka Hazardous waste disposal site	<ul style="list-style-type: none"> -All Hazchem waste generated from the laboratory shall be stored in 210 L drums. -The waste must be stored in terms of their hazard class and compatibility (e.g., acid must be separated from bases and flammables). -The lab supervisor or responsible manager shall ensure that appropriated containers are provided. -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). -The waste containers must be closed at all times except when it's necessary to add or remove waste. -The waste shall be disposed of at a registered hazardous waste disposal site.

Tutuka Power Station: Waste Management Procedure

			-Safe disposal records shall be provided to the WMCO.
Chemicals and oil contaminated drums	End-user to dispose at hazardous landfill site	Hazardous waste disposal site	<p>-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.</p> <p>-No oil contaminated waste shall be mixed with general waste</p> <p>-All oil contaminated waste including oil filters shall not be stored for more than 90 days.</p>
Grease	End-user to dispose at hazardous landfill site	Hazardous waste disposal site	<p>-Used grease will be stored a specific labelled container in the plant.</p> <p>-Full container shall be disposed of at the hazardous waste disposal site.</p> <p>-Records of quantities collected are provided to the WMCO.</p>
Fugitive dust	Monitoring conducted by Environmental department	Samples collected by suppliers	-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.