 Eskom	PLAN	Kusile Power Station Project
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Title: **Waste Management Plan**

Document Identifier **240-135473821**

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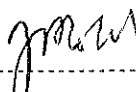
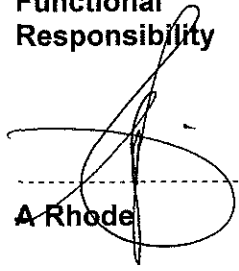
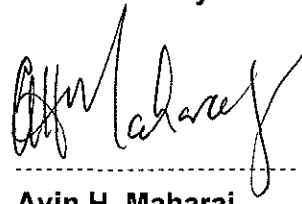
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## 1. Introduction

Eskom is currently constructing the Kusile Coal Fired Power Station and associated/ ancillary infrastructure near Emalahleni (formerly known as Witbank), Mpumalanga Province. A number of contractors are involved in the construction, completion and commissioning of the different activities for this project. Due to the various construction activities involved in this project, large volumes and varieties of waste are currently being generated.

Sound waste management is better achieved when an Integrated Waste Management is implemented. Integrated Waste Management is better achieved when system is underlined by sound environmental principles. These principles are derived from section 2 of the National Environmental Management Act, (Act 107 of 1998). The following principles apply to waste management.

**A Precautionary approach** will be followed in that harm to health and the environment is prevented when waste is generated, treated and disposed of. Kusile Power Station project (KPSP) as the generator of waste has to abide by the **Duty of Care principle** by ensuring that waste is disposed of in a manner that is environmentally sound and responsible. Management of waste must follow an **Integrated and Holistic approach** by Integrating health, safety and environment in to the management approach and managing all aspects as a whole. By following the **Best Practical Environmental Option** one selects and implements the most sustainable management option in terms of the environment and the people surrounding it. The last principle that has to be considered in waste management is the **Polluter Pays principle**. This principle indicates that the costs for remediation and prevention of further pollution will fall on the responsible party.

## 2. Supporting Clauses

### 2.1 Scope

- The Kusile Waste Management Plan (KWMP) is configured to efficiently identify, control, collect, transport, store, reduce, re-use, recycle, and dispose project waste stream during execution.
- Ensure compliance with applicable regulatory and permit requirements relating to waste management.
- To minimize environmental impacts to the construction site and its surroundings during construction.

#### 2.1.1 Purpose

This document is set to indicate the procedure that has to be followed during handling, storage, transportation and disposal of waste that is generated from the activities on site.

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**2.1.2 Applicability**

This document is applicable to KET, the contractors and stakeholders

**2.1.3 Effective date**

From the date of authorisation

**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] 32-727 Eskom Safety, Health, Environment and Quality (SHEQ) Policy
- [2] 32-245 Eskom Waste Management Standard.
- [3] Regulation 6 of GN 634 (the Waste Classification and Management Regulations of August 2013)
- [4] Construction Environmental Management Plan (September 2007)

**2.2.2 Informative**

- [5] The Constitution of RSA Act, (Act 108 of 1996)
- [6] National Environmental Management Act, (Act 107 of 1998)
- [7] National Environmental Management. Waste Act, (Act 59 of 2008)
- [8] National Water Act, (Act 36 of 1998)
- [9] National Waste Information Regulations, GN 625, 13 December 2012
- [10] Regulations regarding the control of the import of waste, GN 22, 21 January 2019
- [11] Waste Tyre Regulation, GN 1064, 29 September 2019
- [12] Hazardous Chemical Substances Act, (Act 15 of 1973)
- [13] Atmospheric Pollution Prevention Act, (Act 45 of 1965)
- [14] Medicines and Related Substances Amendment Act (Act 59 of 2002)
- [15] National norms and standards for the assessment of Waste for Landfill (GNR 634, 635, 636, August 2013)
- [16] National Norms and Standards for the Sorting, Shredding, Grinding, Crushing, Screening, Chipping or Bailing of General Waste, GN 1096, 11 November 2017, GN 926,
- [17] Waste Classification and Management Regulations, GN 634, 23 August 2013
- [18] National Norms and Standards For the Remediation of Contaminated Land and Soil Quality, GN 331, 2 May 2014

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- [19] National norms and standards for the storage of waste (GN 926, GG 37088)
- [20] SANS ISO 14001 Environmental Management System Requirements with guidance for use
- [21] SANS 10248 Management of Health Care Waste
- [22] SANS codes for transportation of hazardous waste - 10228 to 10234, 10206, 10265 at minimum.
- [23] Emalahleni Local Municipality waste bylaws or any of its applicable requirements
- [24] Occupational Health and Safety Act (Act No 85 of 1993) and Construction Regulations
- [25] Basel Convention on the trans-boundary movement of hazardous waste and their disposal
- [26] Nkangala District Municipality Waste bylaws
- [27] Waste Pricing Strategy
- [28] FIDIC & NEC

## 2.3 Definitions

Definition	Explanation
<b>Cradle to Grave</b>	Cradle to grave cycles or assessments is an assessment that tracks the life of a product from the point of creation until the disposal of the product takes place. A policy of controlling a Hazardous Waste from its inception to its ultimate disposal.
<b>Contaminant</b>	means any substance present in an environmental medium at concentrations in excess of natural background concentrations that has a potential to cause harm to human health or the environment.
<b>Containers</b>	means a disposable or re-usable vessel in which waste is placed for the purposes of storing, accumulating, handling, transporting, treating or disposing of that waste, and includes bins, bin-liners and skips,
<b>Contractor</b>	Any person(s) or company that is contracted to the Kusile Power Station Project.
<b>Duty of Care</b>	This requires that any person who generates, transports, treats or disposes of waste must ensure that there is no unauthorised transfer or escape of waste from his control. Such a person must retain documentation both the waste and any related transactions. In this way, he retains responsibility for the waste generated or handled.
<b>Disposal</b>	The burial, deposit, discharge, abandoning, dumping, placing or release of any waste into, or onto, any land.
<b>Engineer</b>	The engineer is herein referred to Eskom.

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<b>Incineration</b>	Any method, technique or process to convert waste to flue gases and residues by means of oxidation
<b>General Waste</b>	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; and (e) any waste classified as non-hazardous waste in terms of the regulations made under section 69, and includes non-hazardous substances, materials or objects within business, domestic, inert, building and demolition wastes.
<b>Hazardous Waste</b>	Any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment and includes hazardous substances, materials or objects within business waste, residue deposits and residue stockpiles
<b>Kusile</b>	It refers to Kusile Power Station Construction Project
<b>KET personnel</b>	Is a combination of personnel that act on behalf of the Project Engineer administer the various Contracts fairly between the Employer and Contractor as well as personnel that act on behalf of the Project Manager to ensure Project Specifications are met.
<b>Manifest</b>	Is a shipping document that tracks hazardous waste from the point of generation to ultimate disposal
<b>Method Statement</b>	A written submission by the Contractor to the Site Director / Engineer and ECO in response to Environmental Specification or a request by the Client, setting out the construction equipment, materials, labour and method the Contractor proposes using to carry out an activity, identified by the relevant specification or the Site Director when requesting the Environmental Method Statement, in such detail that the Site Director / ECO is enabled to assess whether the Contractors' proposal is in accordance with the Specifications and/or will produce results in accordance with the Specifications
<b>Minimum Requirement</b>	A standard by means of which environmentally acceptable waste disposal practices can be distinguished from environmentally unacceptable waste disposal practices.
<b>Treatment</b>	Any method, technique or process that is designed to- (a) change the physical, biological or chemical character or composition of a waste; or (b) remove, separate, concentrate or recover a hazardous or toxic component of a waste, or € destroy or reduce the toxicity of a waste, in order to minimise the impact of the waste on the environment prior to further use or disposal

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<b>Recycle</b>	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.
<b>Recovery</b>	The controlled extraction or retrieval of any substance, material or object from waste
<b>Re-use</b>	To utilise the whole, a portion of or a specific part of any substance, material or object from the waste stream for a similar or different purpose without changing the form or properties of such substance, material or object,
<b>Storage</b>	The accumulation of waste in a manner that does not constitute treatment or disposal of that waste
<b>Subcontractor</b>	means any person named in the Contract as a subcontractor, or any person appointed as a subcontractor, for a part of the Works, and the legal successors in title to each of these persons.

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<b>Waste</b>	<p>(a) any substance, material or object, that is unwanted, rejected, abandoned, discarded or disposed of, or that is intended or required to be discarded or disposed of, by the holder of that substance, material or object, whether or not such substance, material or object can be re-used, recycled or recovered and includes all wastes as defined in Schedule 3 to this Act; or</p> <p>(b) any other substance, material or object that is not included in Schedule 3 that may be defined as a waste by the Minister by notice in the Gazette, but any waste or portion of waste, referred to in paragraphs (a) and (b), ceases to be a waste-</p> <p>(i) once an application for its re-use, recycling or recovery has been approved or, after such approval, once it is, or has been re-used, recycled or recovered,</p> <p>(ii) where approval is not required, once a waste is, or has been re-used, recycled or recovered,</p> <p>(iii) where the Minister has, in terms of section 74, exempted any waste or a portion of waste generated by a particular process from the definition of waste, or</p> <p>(iv) where the Minister has, in the prescribed manner, excluded any waste stream or a portion of a waste stream from the definition of waste</p>
<b>Waste classification</b>	<p>a, Means whether a waste is hazardous based on the nature of its physical, health and environmental hazardous property( hazard classes) and</p> <p>b, The degree or severity of hazard posed( hazard categories)</p>
<b>Waste disposal facility</b>	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.
<b>Waste management Contractor</b>	The Waste Management Contractor is a contractor appointed by the Engineer for general waste management on the project site.
<b>Waste minimisation Programme</b>	A programme that is intended to promote the reduced generation and disposal of waste
<b>Waste transfer facility</b>	A facility that is used to accumulate and temporarily store waste before it is transported to a recycling, treatment or waste disposal facility.
<b>Waste treatment facility</b>	Any site that is used to accumulate waste for the purpose of storage, recovery, treatment, reprocessing, recycling or sorting of that waste.
<b>Waste Stream</b>	A continuous flow of waste from an industry, activity, process group .

## 2.4 Abbreviations

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Abbreviation	Explanation
CFL	Compact Fluorescent Lamps
DFFE	Department of Forestry, Fisheries and the Environment
DHSWS	Department of Human Settlement, Water and Sanitation
EA	Environmental Authorization
EMP	Environmental Management Plan
ECO	Environmental Control Officer
EO	Environmental Officer(s)
FGD	Flue Gas Desulphurisation
FIDIC	International Federation of Consulting Engineers
GCD	Group Capital Division
ISO	International Organisation for Standardisation
KET	Kusile Execution Team
KPSP	Kusile Power Station Project
KIWMP	Kusile Integrated Waste Management Plan
NEMA	National Environmental Management Act (Act 107 of 1998)
NEMWA	National Environmental Management Waste Act (Act 59 of 2008)
PCB	Polychlorinated Biphenyl
PPE	Personal Protective Equipment
RoD	Record of Decisions
SANS	South African National Standards
SDS	Safety Data Sheet
SES	Standard Environmental Specification

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## **2.5 Roles and Responsibilities**

### **2.5.1 Environmental Manager**

- To minimize environmental impacts resulting from waste to the construction site and its surroundings

### **2.5.2 Eskom Environmental Personnel**

- Enforce, administer, implement and maintain KIWMP
- Ensure that waste manifests and Safety Disposal Certificates (SDC) (s) are provided
- Ensure that KWMP requirements are understood by all working for or on behalf of Kusile Power Station Project.
- Provide support and advice to contactors on waste management issues.
- Develop waste management monthly register.
- Conduct waste awareness
- Review and approve waste management method statement.

### **2.5.3 Site Services Manager**

- Ensure provision of waste receptacles for the storage of general waste and hazardous waste where possible
- Removal of waste skips from different work and/or laydown areas for temporary storage at the central waste area
- Monitor the overall central waste area for compliance.
- Remove and transport the waste for appropriate disposal at licenced waste disposal facility.

### **2.5.4 Contractor's responsibilities include:**

- Responsible for implementation and monitoring of this document.
- Management of hazardous waste.
- Compile waste management method statement aligned to the project KWMP.
- Conduct waste management awareness.
- Appoint competent personnel to ensure compliance to this plan and other related requirements
- Enforce waste avoidance, reduction, re-use, recycling, recovery, treatment and with disposal as the last option.
- Ensure that sub-contractors operations are aligned with this document.

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- Inform KET personnel when general waste skips and wheelie bins require services.
- Submit required documents and records for waste management.
- To make requisition of wheelie bins, and skips etc to Site Services department

## 2.6 Process for Monitoring

Kusile Power Station Project SHE department maintains the regulatory compliance mandate to assess compliance to the performance of contractors on issues relating to waste management. Various methods that are used to monitor the compliance are as follows:

- Site inspections
- Audits (Internal and External); and
- Weekly and Monthly reports

## 2.7 Related/Supporting Documents

[29] 240 – 124913036 Waste management removal

[30] 240 – 124873238 Authorisation for the removal of waste

[31] 240-124910344 Disposal sheet

## 3. Document Content

### 3.1 Waste Classification/ Identification

Waste streams are identified and updated as and when required.

#### 3.1.1. General Waste

General waste will be collected in waste bins or skips located throughout the offices, laydown areas and construction areas.

Waste Streams	Source/	Method of management
Food Waste	Canteens and offices	Disposed
Building Rubble	Construction activities	Disposed
Wood	Packaging	Disposed as general waste
PPE	Employees and expired ones	Disposed

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<b>Lining material off cuts</b>	Construction activities	Recycled and Disposal
<b>Paper, Plastic, Cans and Cardboard</b>	Offices and canteen,	Recycled
<b>Scrap Metal</b>	Construction activities	Recycled
<b>Waste tyres</b>	Mobile equipment's	Returned to supplier
<b>Ceiling boards</b>	Buildings	Disposed
<b>Copper off-cuts</b>	Electrical installation	Recycled
<b>Old furniture</b>	Offices	Re-used, Recycle and Disposal

### 3.1.2 Hazardous waste

Hazardous waste has the potential to cause significant adverse effects on the environment and health. Supreme caution shall therefore be taken to ensure that waste of this nature is properly handled, stored, transported and disposed at registered landfill site. All hazardous waste shall be properly stored in containers and these containers shall only be allowed in bunded areas with 130% capacity. This will be transported to the central waste storage facility for further sorting for recycling or disposal by the Contractor.

<b>Waste Streams</b>	<b>Source</b>	<b>Method of Management</b>
<b>Used Oil</b>	Mobile equipment's	Disposed and or Recycled
<b>Contaminated soil</b>	Incidents	Disposed and or Recycled
<b>Contaminated Water</b>	Plant process water, Batch plants, Drip trays and bunds	Disposed and or Recycled
<b>Hydrocarbons Contaminated Waste</b>	Hydrocarbons spills	Disposed and or Recycled
<b>Medical Waste</b>	Clinics ,VCT campaigns, SHE bins and Covid 19 waste	Treatment/ Disposed

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<b>Sewage</b>	Ablution facilities and conservancy tank.	Treatment
<b>E-waste</b> (desk top, battery, projector, two way radio, printer cartridge, lap top, telephone, cell phone and calculator)	Offices	Disposed and or Recycled
<b>Fluorescent bulbs, High intensity discharge lamps, Neon lamps, Mercury vapour.</b>	Offices and the plant	Disposed and or Recycled
<b>Soil contaminated sludge/urine</b>	Sewage spills	Disposed
<b>Hydrocarbons contaminated waste, e.g. oil filters</b>	Mobile equipment	Recycling and or disposal
<b>Left-over Insulation material</b>	Boiler and Turbine	Disposed
<b>Resin &amp; Resin Containers</b>	Production of Glass Reinforce Plastic (GRP)	Disposed
<b>Pesticides containers</b>	Control of pests	Disposed
<b>Herbicides containers</b>	Control of weeds	Re-used
<b>Galvanised pipe off-cuts</b>	Water reticulation	Disposed
<b>Fibre glass off-cuts</b>	Building activities	Disposal
<b>Empty cement bags</b>	Batching and building activities	Disposed
<b>Chemical (Thinners, Glue, Lead, Aerosol, Paint, LP Gas canisters (small) and Oil) containers</b>	Painting and maintenance	Disposed
<b>Sewage contaminated pipes/ toilet seats/ bowls/drip trays</b>	Servicing of conservancy and ablution facilities	Disposed
<b>Used Batteries</b>	Mobile equipment.	Returned to supplier
<b>Ash</b>	Boiler combustion	Disposed
<b>Coal rejects</b>	Mills, Spills	Disposed
<b>Gypsum</b>	FGD,	Disposed
<b>FGD blow down liquids</b>	FGD,	Disposed
<b>Treated sewage sludge</b>	Sewage treatment plant	Disposed
<b>Crystalliser salts</b>	FGD	Disposed
<b>Resin</b>	FGD	Water treatment plant

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Filter press solids	Waste Water Treatment Plant	Disposed at the ash dump
Filter bags	Fabric Filter Plant	Disposed

Further discussion on some of identified waste streams.

### 3.1.2.1 Lamps

No crushing of any lamp shall be allowed on site

- Lamps will be collected and stored in an appropriate container
- No lamps shall be stored on the ground
- Waste container shall be sealed to avoid exposure to environment and human health
- Personnel responsible for handling fluorescent tubes must wear gloves and masks to prevent inhaling fumes or cuts on the hands
- When these containers are full, an approved contractor must be informed to collect, recycle or dispose the waste in a safe manner. Florescent tubes must be stored in a sealed container or suitable receptacles from services provider.

The recycling of fluorescent tubes or any other mercury containing lamps has now been licenced in South Africa. This must be done by a service provider that is licenced and registered to recycle hazardous waste.

### 3.1.2.2 Bio/Medical Waste

Contractors will be responsible for storage of bio/medical waste in approved waste containers according to applicable legislation

Sharps are syringes, needles, disposable scalpels and blades. Sharps shall be kept in a yellow container marked "Danger" in red. Chemical waste such as solvent and disinfectants shall be kept in a dark appropriate container with an international hazard label.

Waste containers shall be totally enclosed and access shall be limited to authorised employees only. This will not be stored for the duration outside the permit conditions and will be transported by an authorised body directly off site for disposal at an approved waste management facility. The same will apply to the Kusile Medical Centre.

Old, expired medicines and related substances shall be removed from site as stipulated in applicable legislation and shall be returned to the supplier.

### 3.1.2.3 Sewage

Ablution facilities and conservancy tanks shall be pumped and disposed at on site treatment plant of site to an approved Waste treatment facility. Sewage from chemical toilets is removed offsite at approved waste treatment plant. A register/log will be kept of quantities removed and disposed. A registered vehicle shall transport waste to a Waste treatment facility.

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#### 3.1.2.4 Mercury containing equipment

Mercury-containing equipment is managed as a hazardous waste and includes devices, items, or articles that contain varying amounts of elemental mercury. Mercury-containing equipment includes but not limited to the following.

- Thermometers, Manometers, Relay switches, Mercury regulators, Pressure gauges, Sprinkler system contacts, Silent switches

#### 3.1.2.5 Prohibited use of Oil

Used oil is prohibited from being.

- Used as dust suppressant (road oiling)
- Used as insect or weed control.
- Disposed of on land or to sewers and other water systems
- Burned as a fuel or incinerated

#### 3.1.2.6 Used Oil Filter Management

Before disposing of used oil filters, the following activities should be performed:

- Properly contain the used oil filters
- Properly label the container as "Used Oil Filters."
- Transport to a licensed facility
- Manage the oil removed from the filters as used oil.
- These shall be disposed as hazardous waste

#### 3.1.2.7 Polychlorinated Biphenyl (PCB) Management

Sources of PCB or PCB containing equipment shall not be allowed on site. All potential sources of PCB-containing equipment or material must be tested and proven to be PCB free prior to exposing workers to materials and equipment that may contain PCBs

#### 3.1.2.8 Discovery of PCB-Containing Equipment or Material

Upon discovery of potential PCB-containing equipment or material, work must cease immediately and the appropriate supervisor must be notified. The Contractor shall demarcate the area and notify the Engineer immediately

#### 3.1.2.9 Hazardous Material Safety Data Sheet

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The Contractor must complete a Hazardous Material Profile for all hazardous materials brought onsite. The Hazardous Material Safety Data Sheet must be provided to the Engineer before the material can be brought onsite.

### **3.2. Waste Classification**

- Classification of waste is a legal requirement and Waste generators must ensure their waste is correctly classified.
- Waste shall be kept separate for the purpose of classification and shall not be mixed with other wastes prior to classification.
- Waste that has been subjected to any form of treatment as well as any waste generated as a result of the treatment process must be re-classified under SANS 10234.
- Safety data sheet for the hazardous waste generated shall be made available prior transportation to waste disposal facility.

All waste generated at the project must be classified in accordance with SANS 10234 within one hundred and eighty (180) days of generation with the exception of the waste stream mentioned below:

#### **(a) General Waste**

- Domestic Waste
- Business waste not containing hazardous waste or hazardous chemicals;
- Non-infectious animal carcasses,
- Garden waste;
- Waste packaging,
- Waste tyres,
- Building and demolition waste not containing hazardous waste or hazardous chemicals; and
- Excavated earth material not containing hazardous waste or hazardous chemicals.

#### **(b) Hazardous Waste**

- Expired, spoilt or unusable hazardous products and Health Care Risk Waste (HCRW); and
- Mixed waste - general waste which contains hazardous waste or hazardous chemicals

### **3.3. Waste Storage**

A waste handling/management contractor will operate and manage the waste facility under the supervisor of the Engineer. Storage of general and hazardous waste shall be undertaken as per applicable legal and other requirements.

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### 3.3.1 Description of on-site waste storage facility

The waste facility will accept all hazardous waste types as set out in the National norms and standards for the storage of waste. Sufficient waste skips will be available at the facility to accommodate waste. Waste skips will be weather proof and scavenger proof. It will not be corroded and will be kept in a good condition at all times. Skips will be placed on a slab and bunded area, which will drain into an interceptor to collect contaminants and runoff. Waste skips will be clearly marked and visible for all waste types stored at the facility. Access to on load, offload skips will be done in a safe manner. The waste facility will be in line with and will be constructed in accordance with the Environmental Management Plan Annexure D Standard Environmental Specification and with the National norms and standards for the storage of waste.

As a way to reduce waste generation and disposal, non-hazardous waste will be separated at the source and collected for recycling off site. Dedicated personnel managing sorting areas will be placed at the point to avoid mixing of waste.

The central waste storage facility will make provision for the storage of contractors' hazardous waste for a maximum period of 180 days. Transportation of hazardous waste to the waste disposal facility is the responsibility of the contractor. All hazardous waste entering the central waste storage facility will be recorded by the Operator of the central waste storage facility.

Activities in the waste storage facility shall be managed to prevent and minimise pollution, incidents and address complaints timeously. Method statements are developed and approved for dealing with daily activities within the waste storage facility.

### 3.4 Inspection

The Contractor's representative will inspect all general and hazardous waste areas for leaks, container integrity, storage practices, spill prevention/control equipment and supplies, and fire extinguishers. Inspections must be documented.

### 3.5 Waste Disposal

General and hazardous waste must be transported by the respective responsible Contractors to a designated facility that treats, recycles, or disposes of a particular type of waste. Waste will be transported in accordance with the obligations imposed on the "operator" and "driver" by GN R 225 to the National Road Traffic Act of 1996, including the associated SANS 10228, 10229, 10231, 10406 and 10206 Codes of Practice. Prior to sending waste offsite, the Contractor must notify the receiving facility and secure an agreement of acceptance. The agreement will be in writing. Copies of the signed manifest must be provided to the Engineer at the time waste is transported offsite. Vehicles transporting waste shall comply with applicable legislation.

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### 3.6 Record keeping and Reporting

Kusile Power Station has been registered on the National Waste Information System established in terms of section 60 of the National Environmental Management Waste Act, 2008 as hazardous waste generator (excess of 20kg per day). The waste information registration number is D01793-01. This must be provided to all waste transporters and waste managers (waste disposal facilities) for reporting purposes. Waste generators must keep accurate and up to date records of the management of waste they generate. Records must reflect:

- Classification of the waste,
- Waste manifest, safe disposal certificate and waste disposal notes/slips,
- Quantity/ies of each waste that has either been re-used, recycled, recovered, treated or disposed of expressed in tons or cubic metres per month, and
- Waste handler or manager (transporter and disposal facility)

In addition, KET and contractors must keep the following records

- Signed copy (s) of Kusile Power Station Authorisation for the removal of waste from site
- Agreement between service provider and contractor for waste removal

Contractors must submit records contemplated above to KET Environmental Department on a Monthly basis or upon request.

Waste manifest should be submitted to the project within 30 days of waste having been removed from site. Safe disposal certificates for hazardous waste removed from site must be submitted within 60 days of waste having been disposed of.

KET Environmental Department must compile a monthly waste report and biannual waste report for submission to relevant stakeholders. Eskom Waste Centre of Excellence is responsible for reporting volumes of waste treated and/or disposed of within Eskom's owned waste facilities (e.g. Ash Disposal Facilities).

Kusile Ash Dump Facility is operated by Eskom Kusile Generation Business Unit. Submission of records of waste handled and/or landfilled at the facility is managed by Eskom Kusile Generation Business Unit.

### 3.7 Contractors Waste Management Plan or Method Statement

This plan or Method Statement shall address the following as a minimum:

- Contractor's responsibilities, coordination, communication, monitoring, reporting, and recordkeeping during the project.

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- Specific and required construction practices with respect to the KWMPs that apply to this project.
- Plans for advising Sub Contractors of waste management, non-conformance and issuance of non-conformance notices
- Plans for initiating corrective action and back charges to the Contractor if they do not comply with waste management non-conformance notices
- Anticipated waste levels throughout the Contractors programme
- Plan for reduction and recycling of waste streams.

### **3.8 Waste Management general Practices**

The waste must be stored in a manner that does not constitute a fire, health, safety and environmental hazard and must be contained or banded so as not to result in a spill or leachate

The waste must be collected with sufficient frequency to inhibit the propagation or attraction of vectors such as animals, insects or the creation of a nuisance and/or odour

#### **3.8.1 Waste Collection Areas**

Waste separation shall be done at the source and at the temporary waste storage facility for recycling and or disposal. General waste except wood and steel will be stored in containers that are scavenger and weather proof.

The Engineer will identify central waste collection areas on the general construction platform Contractor will supervise these central waste collection areas and must adhere to the regulation thereof. The waste management services provider will supply sufficient skips to allow for the proper collection of all waste General waste must be segregated at source and Contractors must adhere to request for recycling The waste containers will be emptied as and when required, with the exception of scrap metal and copper recycling containers

Waste containers for general waste or recycling must be of adequate size and number to handle the amount of waste being generated

Contractors are not permitted to remove, tamper, move or interfere with the skips/containers placed in the central waste collection area

#### **3.8.2 Waste Minimisation**

KET Management is committed to reduce the amount of waste sent to waste management facilities by ensuring that where possible waste is minimised; reused, recycled, recovered and waste disposal as the last option in order to protect the environment and reduce projects carbon footprint.

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Recycling shall as far as possible be undertaken for recyclable materials such as, paper, cardboard, tins, glass, plastic, scrap metal, electronic waste, waste tyres, cartridge, batteries, oil rags, used thinners, used oil, fluorescent tubes and any other recyclable waste stream

Contractors are required to develop waste inventory to assess disposal options considering the waste hierarchal approach and ensure that disposal of waste is the last resort. Records of recyclable waste must be submitted to the project on a monthly basis or upon request.

### **3.9 Spill Prevention and Control**

The Contractor shall have trained personnel to manage spills or employ a qualified service provider to develop a Spill Prevention and Emergency Control Plan for hazardous material that will be stored on site in the event that the Contractor does not have the expertise or capacity to do so.

### **3.10 Activities and requirements**

All activities concerning waste and waste handling will have traceable documentation and recordings. *KPSP will only use permitted / licensed waste disposal facilities and these will be in line with applicable legislation.* Waste management facilities used by the project will be audited annually by the Contractor or as required by the Engineer.

Regular audits should be done on the service provider as well as the waste management facilities to ensure compliance to applicable legislation

### **3.11 Waste management Complaints**

Waste management complaints received from adjacent landowners, community officials, or other parties, will be forwarded to the Engineer. The Engineer will document and compile these complaints in a project log or project complaints register. This will be maintained on site for the duration of the project. As a minimum, this log will describe the complaint, date of complaint, party filing complaint, corrective measures implemented

### **3.12 Permit Conditions and Approval Requirements**

Waste generator will identify all relevant plans and regulations needed to implement conditions outlined in this plan.

### **3.13 Monitoring and Measuring**

The Contractor shall ensure that the following monitoring and measuring parameters are followed.

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**3.13.1 Waste Management Facilities**

Waste streams to be disposed of at specific site permitted to receive such waste. Only authorised waste management facilities, classified as per National norms and standards for the assessment of Waste for Landfill shall be used to dispose waste.

**3.13.2 Certificates of Safe Disposal**

Submission of safe disposal certificates shall be done within 60 days after disposal

**3.13.3 Waste Reconciliation**

Waste Quantities of waste shall be reconciled where applicable. Waste destination sites shall acknowledge that the correct waste disposal plans has been adhered to by signing off deliver note.

**3.14 Non Conformance**

KET Environmental will monitor Contractors' activities to determine whether such activities are in compliance with the KIWMP. If an apparent non-conformance of this plan requirement occurs, the Contractor will be advised formally/informally of the non-conformance and require that the non-conformance be corrected. If there is a conflict among project environmental requirements within the KWMP, Government regulations will apply

Contractors will be informed of the non-conformance by one of the following methods:

- Weekly and weekend inspections and reports. Non-conformances are submitted to the contractors for preventative and corrective actions.

**3.14.1 Non Conformance Report (NCR)**

Repeat non-conformances not addressed will be issued with an NCR which must be formally closed by the Contractor within the agreed time with the Engineer

Upon receipt of the non-conformance report, the Contractor shall state, in writing, the corrective action taken, date and sign the original notice, and return it to Engineer for review and further processing by the date set out in the on conformance report.

If the engineer considers a non-conformance to pose harm to the environment or to human health, the Contractor's representative will be directed to cease work immediately in that area. The potential harm condition will be corrected to the satisfaction of the Engineer.

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### **3.15 Compliance**

Construction activities shall comply with section 30 of NEMWA and any relevant environmental legislation, by minimising impacts on the surrounding environment, the public and adjoining landowners. The Contractor is expected to comply with conditions set out in the Environmental Authorisation (EA), Construction Environmental Plan (cEMP), National norms and standards for the storage of waste and Water Use Licences including all other relevant legislations.

This plan does not absolve the Contractor from complying with any conditions as set out on the above paragraph with respect to environmental protection and duty of care. However, it does ensure a certain level of consistency among the Contractors' individual activities and the monitoring of Contractors' conformance with the requirements.

### **3.16 Communication to the public**

Relevant risks related to waste management shall be communicated to the Contractors on site & external parties on a regular basis or as per occasion through environmental meetings, emails or other mode of communication.

### **3.17 Training Requirements**

Amongst others Induction training and onsite awareness through toolbox talks serve as waste management awareness in terms of waste management onsite. Contractors must continuously provide awareness to all employees under their responsibility. As a minimum training/ awareness for employees working with waste shall amongst others include the following:

- Precautionary measures that need to be taken,
- Procedures that they need to apply to their particular type of work;
- Procedures for dealing with spillages and accidents;
- Appropriate use of protective clothing, and
- The risks of the hazardous substances to their health which they are likely to be exposed to.

Training records (signed attendance register and material shared) must be kept on site. Only trained persons must be allowed to handle hazardous waste.

### **3.18 Waste Pricing Strategy**

The Economic drive as a strategy from waste management will be implemented as required by the Waste Pricing Strategy from the Waste Regulations where it's applicable to Kusile Power Station. Implementation of the strategy is realised through execution of recycling programmes.

## **4. Acceptance**

This document has been seen and accepted by:

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J Mashaba	Human Resources Manager
M Makgwane	Senior Manager Project
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S Ndou	Manager Project Control
P Matshitela	Quality Manager
T Railo	Engineering Manager
M Nkabinde	Stakeholder Manager
N Nyambe	Security Manager
S Foku	Commissioning Manager

## 5. Revisions

Date	Rev.	Compiler	Remarks
March 2018	1	AL Mahada	Supersedes 240-126456962
July 2020	2	AL Mahada	Supersedes 240-135473821

## 6. Development Team

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## **7. Acknowledgements**

Thanking Kusile Power Station Project Senior Managers, Environmental Department and Support Services Department.

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