Eskom	Specification	Hendrina Power Station

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1. INTRODUCTION

Eskom strives to ensure that Zero Harm befalls its employees, contractors, the public and the environment. Contractors (principal and sub- contractors, service providers, and consultants) have the crucial responsibility for implementing measures to prevent damage to the environment. The Contractor shall take full responsibility for protecting the natural environment and eliminating or minimising the negative impacts on the environment when rendering services to Eskom Hendrina Power Station.

The Contractor shall prevent or limit the occurrence of environmental incidents which may cause negative impact to the environment, limit the consequences of such accidents and shall return the environment to a state as close as possible to its condition prior to any such incidents occurring. Nothing specified or omitted herein shall absolve the Contractor of any legal compliance obligations or responsibilities in this regard. The requirements of this Specification apply to all areas under the Contractor's control, including but not limited to the working areas, contractor's yards and offices, all access/ haul routes and all labour work stations. The contractor will be liable for legal contravention/s resulting from their action/s and a Polluter Pay Principle shall apply.

2. SCOPE

2.1 Purpose

The purpose of this procedure is to set out the minimum requirements to ensure compliance with environmental legislation as well as Eskom Hendrina Power Station Licenses/ permits, standards and procedures. All suppliers including principal and sub-contractors as well as consultants shall ensure conformance to the Power Station's Environmental Management System (EMS) before performing any work. The EMS documents can be obtained from the Environmental Management Department after the contractor's appointment.

2.1.1 Integrated Business Improvement objectives

IBI verification mechanisms and Error Prevention tools that can be applied include Compliance to approved policies, procedures, controls and standards.

2.1.2 Applicability

This procedure is applicable to all Contractors/ Suppliers and all the activities and processes carried out for and on behalf of Hendrina Power Station that affect the services rendered.

	All	Group Manager	Line Manager	Supervisor	Safety & Health	Environmental	Quality	IBI	Commercial	Financial	Support Services	Training	Auxiliary	Civil	Control & instrumentation	Electrical	Mechanical
Hendrina Power Station personnel	×																
Hendrina Power Station contractors	×																
Risk & Assurance																	
Compliance																	
Business Services																	
Human Resources																	
Engineering																	
Maintenance																	
Outage Management																	
Project Management																	
Operating																	
Production																	

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

- Temporary Hazardous Waste Storage Facilities License (12/9/11/L440/6)
- Landfill Site Permit (B33/2/210/141/P9)
- Atmospheric Emission Licence (17/4/AEL/Mp312/11/16)
- Integrated Water Use Licence (24046033)
- Bulk Water Use License (27/2/1/C211/1/1)
- Flammable Liquids and Substances Certificates
- Environmental authorisation
- Environmental Management System and Scope Procedure (HSMPIN001)
- Roles, Responsibilities and Authorities (HSPPIN028)
- Planning Procedure (HSPPIN040)

- Documented Information (HSPPIN037)
- Management Review (HSPPIN020)
- Non-Conformity and Corrective Action (HSPPIN034)
- Monitoring, Measurement, Analysis and Evaluation (HSPPIN023)
- Internal Audit and Evaluation of Compliance Procedure (HSPPIN036)
- Emergency Preparedness and Response (HSPPIN032)
- Competence Training and Awareness (HSPPIN029)
- Communication Procedure (HSPPIN006)
- Waste Management (HSPPIN003)
- Prevention Clean-Up Of Chemicals Hydrocarbon Spills (HSPPON003)
- Aspects & Impacts Register and Objectives & Targets (COMP/306)
- Alien Invasive Species Monitoring, Control and Eradication Plan (HSPPIN044)

2.2.2 Informative

South African National document(s):

- Constitution of South Africa Act, No 108 of 1996
- National Environmental Management Act of South Africa, Act 107 of 1998
- ISO 14001: Environmental Management System Requirements.

Eskom National document(s):

- Environmental Aspects, Impacts, Objectives and plan procedure (240-91213801)
- Environmental Incident Management Procedure (240-133087117)
- Eskom Land and Biodiversity (32-736)
- Safety, Health, Environment and Quality (SHEQ) Policy (EPL 32-727)
- Procedure Manual for Environmental, Occupational Health and Safety Incident Management, 32-95

2.3 Definitions

- All applicable definitions will be as per the latest revision of the OHS Act, act 85 of 1993; environmental Management System: ISO14001and all other applicable legislations.

– **Agent:** means any external person who acts as a representative for the client and has formally been appointed as such by the client.

- **Client:** means Eskom representative (Internal – Asset Owner), also referred to as the contract administrator/custodian or agent or project manager (as defined in the contract). He/she is the person responsible for ensuring that the works or services are executed in terms of the contract, as well as adherence to legislation pertaining to the contract.

- **Contractor:** means an employer, as defined in section 1 of the OHS, who performs construction work for the client either directly or through an agent, and includes principal contractors.

- **Subcontractor:** means a contractor who is employed by a principal contractor and has no direct formal contractual agreement of employment with the client.
- **Construction work -** means any work in connection with:

a) The construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or

b) The construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work;

- **Design:** in relation to any structure, includes drawings, calculations, design details, and specifications.
- **Designer:** means any of the following persons:

a) a person who prepares a design

b) A person who checks and approves a design

c) A person who arranges for any person at work under his/her control (including an employee of his/hers, where he/she is the employer) to prepare a design

d) An architect or engineer contributing to, or having overall responsibility for, the design

e) A building-services engineer designing details for fixed plant

f) A surveyor specifying articles or drawing up specifications

g) A contractor carrying out design works as part of a design and build project

h) A temporary works engineer designing form work and false work

i) An interior designer, shop fitter, and landscape architect

- **Duty of care to the environment**: anybody who causes or has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing, or recurring. If such harm to the environment is authorised by law, or cannot reasonably be avoided or stopped, such person must minimize and rectify such pollution or degradation of the environment.
- **Employee:** means a person who performs work for an employer. This includes any person who has entered into, or works under, a contract of service, apprenticeship, or learner ship with an employer, whether the contract is explicit or implicit, oral or in writing, whether the remuneration is calculated by time or work done and paid for in cash or in kind, and includes a situation where such a person is under the control, instruction, and supervision of Eskom, namely:

a) A casual employee employed for the purpose of the employer's business;
b) a person who has entered into a contract of service or of apprenticeship or learner ship with the employer;
c) a person provided to Eskom by a TES (temporary employment service) or a labour broker and who works under the control, instruction, and supervision of an Eskom employee;
d) a part-time worker;
e) a temporary worker;
f) an occasional employee;
g) an unattached learner;
h) a bursary-holder while under the supervision of Eskom;
i) any family member or visitor of a teleworker in the event of an incident, if present, and involved in performing work for, or on behalf of the teleworker at the house deemed to be the employee's (section 37);
j) Any contractor, where no written agreement is available, as required in terms of section 37(2) of the OHSA, will be regarded as an employee; and
k) Any contractor's employees who perform any work under the instruction and/or supervision of an Eskom employee, where the instruction given directly resulted in an injury.

- **Employer:** means any person who employs or provides work for any person and remunerates that person or expressly or tacitly undertakes to remunerate him/her.

- **Method statement:** means a written document detailing the key activities to reduce the hazards identified in any risk assessment. In the case of internal work, it includes procedures, safe work procedures, and work standards.

- **Procurement practitioner:** means a qualified buyer who assists the client/agent during the commercial process to enter into contracts for the procurement of goods and services.

- **Pollution:** means any change in the environment caused by: substances; radioactive or other waves; or noise, odours, dust, or heat, emitted from any activity, including the storage or treatment of waste or substances, construction, and the provision of services, whether engaged in by any person or an organ of state, where that change has an adverse effect on human health or well-being or on the composition, resilience, and productivity of natural or managed ecosystems or on materials useful to people, or will have such an effect in the future.

- **Polluter Pays Principle:** Commonly accepted practice that those who produce pollution should bear the cost of managing it to prevent damage to human health or the environment.

- **Principal contractor**: means an employer, who performs construction work and is appointed by the client or the client's agent to be in overall control and management of a part of, or the whole of, a construction site.
  - **Note:** where construction work is performed within Eskom by an Eskom internal service provider, that individual or department will be regarded as the internal service provider for the purpose of this specification.
- **Project:** means an activity or a group of activities that has a defined start and end date, a defined scope, and a defined sum of money allocated to complete the activities.
- **Project manager:** means the person who has the responsibility for the successful planning and execution of a project. The project manager must satisfy the certification requirements set by the South African Council for the Project and Construction Management Professions.
- **Risk assessment:** means a programme to determine any hazard at a construction site and to identify the steps needed to remove, reduce, or control such hazard.

- All applicable definitions will be as per Environmental Management System (EMS) ISO 14001: 2015

- **Environment:** Surroundings in which an organization (3.1.4) operates, including air, water, land, natural resources, flora, fauna, humans and their interrelationships
  - Note 1 to entry: Surroundings can extend from within an organization to the local, regional and global system.
  - Note 2 to entry: Surroundings can be described in terms of biodiversity, ecosystems, climate or other characteristics.
- **Environment Management System** (EMS): Part of the management system used to manage environmental aspects fulfil compliance and address risks and opportunities
- **Policy:** intentions and direction of an organization related to environmental performance as formally expressed by its top management
- **Ramp Down:** Reduction in the production output
- **Interested Party:** Person or organization that can affect, be affected by, or perceive itself to be affected by a decision or activity. Examples: Customers, communities, suppliers, regulators, non-governmental organizations, investors and employees.
- **Environmental Aspect:** Element of an organization's activities or products or services that interacts or can interact with the environment
  - Note 1 to entry: An environmental aspect can cause (an) environmental impact(s). A significant environmental aspect is one that has or can have one or more significant environmental impact(s).

- Note 2 to entry: Significant environmental aspects are determined by the organization applying one or more criteria.

– **Environmental Impact:** Environmental impact changes to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects.

– **Environmental Objective:** Objective set by the organization consistent with its environmental policy.

– **Risks and Opportunities:** Potential adverse effects (threats) and potential beneficial effects (opportunities).

– **Compliance obligations (legal and other requirements):** Legal requirements that an organization has to comply with, and other requirements that an organization has to or choses to comply with.

Note 1 to entry: Compliance obligations are related to the Environmental Management System.

– Note 2 to entry: Compliance obligations can arise from mandatory requirements, such as applicable laws and regulations, or voluntary commitments, such as organizational and industry standards, contractual relationships, codes of practice and agreements with community groups or non-governmental organizations.

- **Borrow area:** Any areas within designated boundaries, approved for the purpose of obtaining borrow material.
- **Borrow material**: Any material, be it gravel, sand or soil obtained from designated areas for use as bedding material or fill. It does not include rock or stone or any material obtained from commercial sources.
- **Borrow pit**: The excavated pit in a borrow area.
- **Clearing: T**he clearing and removal of vegetation, whether partially or in whole, including trees and shrubs
- **Contaminated water**: Water contaminated by the Contractor's activities, e.g. concrete water as well as runoff from equipment, construction camps, ablution facilities and personnel wash areas.
- **Demolish:** The demolition and complete removal and disposal of buildings, sheds, poles, concrete and any other objects and structures.
- **Grubbing:** The removal and disposal of roots and stumps of trees and vegetation.
- **Hazardous substance:** A substance governed by the Hazardous Substances Act as well as the Hazardous Chemical and Substances Regulations. In addition, any other substance that, in the reasonable opinion of the Engineer, can have a deleterious effect on the environment will be regarded as a potentially hazardous substance.

- **Heritage resource:** As per the provisions of the National Heritage Resources Act (No 25 of 1999), means those heritage resources that are of cultural significance or other special value for present and future generations, and which are accordingly considered part of the national estate. In this regard, the national estate includes those items identified in terms of Section 2 of the Act.
- **Invasive alien vegetation**: Vegetation which either does not naturally occur in the country and/or region or which under certain conditions proliferates and becomes problematic since it outgrows other plants and may represent a significant maintenance cost.
- **Natural vegetation:** All existing species, indigenous or otherwise, of trees, shrubs, groundcover, grasses and all other plants found growing on the site.
- **Pollution Incident:** Any incident that may or has caused damage to or the contamination of the natural environment.
- **Sensitive area:** Any area that is denoted as sensitive by this Specification or Engineer due to its particular attributes, which could include the presence of rare or endangered vegetation, the presence of heritage resources (e.g. archaeological artefact or graves), the presence of a unique natural feature, the presence of a watercourse or water body, the presence of steep slopes (in excess of 1:4) etc.
- **Solid waste:** All solid waste, including construction debris, chemical waste, excess cement/ concrete, wrapping materials, timber, tins and cans, drums, wire, nails, food and domestic waste (e.g. plastic packets and wrappers).
- **Spoil:** Excavated material which is unsuitable for use as material in the Works or is material which is surplus to the requirements of the Works.
- **Topsoil:** A varying depth (up to 300 mm) of the soil profile irrespective of the fertility appearance, structure, agricultural potential, fertility and composition of the soil.
- **Watercourse:** Any river, stream and natural drainage channel whether carrying water or not.
- **Water body:** Body containing any form of water and includes dams and wetlands, whether ephemeral or permanent. In this regard, wetland means any area that is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the area is covered by shallow water. Specifically, an area is classified as a “wetland” if it meets at least one of the following criteria:

    a) The area predominantly supports hydrophytes, at least periodically;

    b) The substrate(soil) is predominantly undrained hydric soil; and/ or

    c) The substrate is non-soil, and is saturated with water or covered by shallow water at some time during the growing season.

2.4 Abbreviations

Abbreviation	Explanation
ISO	International Organization for Standardization
SHEQ	Safety, Health, Environment and Quality
SHE	Safety, Health, Environment
EMS	Environmental Management System
KPIs	Key Performance Indicators
EMP	Environmental Management Programme
SMT	Senior Management Team
IBI	Integrated Business Improvement
EIA	Environmental Impact Assessment
AEL	Eskom Academy of Learning
KPA	Key Performance Area
SHE Reps	Safety Health and Environmental Representatives
MW	Megawatts
NEMA	National Environmental Act
MSDS	Materials Safety Data Sheet
CBD	Convention on Biological Diversity
EIA	Environmental Impact Assessment

2.5 Roles and Responsibilities

2.5.1 Eskom: Project Manager

The Contract Manager, as defined in the contract is responsible for managing the contract between the Employer and the Principal Contractor, shall ensure that the SHE specifications and baseline risk assessment are issued with tender enquiries and that the Principal Contractor's SHE plan is approved prior to commencement of work. He/she must ensure that all the statutory and Eskom requirements, the SHE specifications and SHE plan requirements, are adhered to by the Principal Contractor and its Sub-contractors at all times.

5.5.2 Eskom: Contract Manager

The Contract Manager, as defined in the contract is responsible for managing the contract between the Employer and the Principal Contractor, shall ensure that the SHE specifications and baseline risk assessment are issued with tender enquiries and that the Principal Contractor's SHE plan is approved prior to commencement of work. He/she must ensure that all the statutory and Eskom requirements, the SHE specifications and SHE plan requirements, are adhered to by the Principal Contractor and its Sub-contractors at all times.

2.5.3 Principal Contractor: Project/Site Construction Manager

The Principal Contractor Project/Site Manager carries accountability and responsibility for the health and safety of his/her employees and Sub-contractor employees within the working area, as contemplated by section 37(2) of the OHS Act. None of the additional safety requirements specified by the Employer reduce the Principal Contractor's Project/Site Manager accountability and responsibility for the health and safety of his/her employees and Sub-contractor employees within the working area.

a) A Principal Contractor shall provide and demonstrate to the client a suitable and sufficiently documented safety, health and environmental plan, based on the client's documented safety, health and environmental specifications

b) A Principal Contractor shall take reasonable steps to ensure co-operation between all contractors/sub-contractors.

c) A Principal Contractor shall provide any contractor/sub-contractor who is making a bid or appointed to perform construction work for the Principal Contractor with the relevant sections of the safety, health and environmental specifications.

d) Appoint each contractor/sub-contractor in writing for the part of the project.

e) A Principal Contractor must take reasonable steps to ensure that each contractor / sub contractor's safety, health and environmental plan is implemented and maintained on the construction site. It shall include periodic audits at intervals as required by legislation and as mutually agreed upon between the Principal Contractor and the contractor/sub-contractor.

f) To stop any contractor/sub-contractor from executing any construction work, which is not in accordance with the Principal Contractors and/or contractor/sub contractor's safety, health and environmental plan or which poses a threat to the health and safety of persons and the environment.

g) To ensure that where changes are brought about to the design and construction, sufficient safety, health and environmental information and appropriate resources are made available to the contractor/sub-contractor.

h) To ensure that every contractor/sub-contractor is registered and in good standing with the Compensation Fund or with a licensed compensation insurer, prior to work commencing on site.

i) Principal Contractor to ensure that Eskom Hendrina Power Station's Medical Centre and Safety Officer for contractors receives a copy of valid letter of good standing).

j) To ensure that potential contractors/sub-contractors submitting tenders have made provision for the cost of safety, health and environmental measures during the construction process.

k) The Principal Contractor shall discuss and negotiate with the contractor/sub-contractor the contents of the contractor/sub contractor's safety, health and environmental plan before final approval of the plan for implementation.

l) The Principal Contractor shall ensure that a copy of his safety, health and environmental plan as well as a copy of the contractor/sub contractor's safety, health and environmental plan is available to the client.

m) The Principal Contractor shall hand over a consolidated safety, health and environmental report to the client upon completion of the construction work.

n) The Principal Contractor shall compile a comprehensive and updated list of all the contractors/sub-contractors on site, the agreements between them and the type of work being done.

o) A Principal Contractor shall not appoint a contractor/sub-contractor, unless he/she is satisfied that the contractor/sub-contractor which he/she intends to appoint, has the required competencies and resources to perform the work efficiently, effectively and according to safety, health and environmental requirements, relevant legislation and the relevant Eskom Hendrina Power Station Standards and Procedures.

It must also be noted that:

a) The Principal Contractor's Site Manager shall provide a list of names and contact telephone numbers of all his/her strategic employees as well as the subcontractor's employees on site. This list shall be updated as and when new subcontractors commence on site.

b) The Principal Contractor's Site Manager shall keep a record of all employees, including the subcontractor's employees, including date of induction, relevant skills, and licenses, and be able to produce this list at the request of the Eskom project manager. These records shall be filed in the SHE file

c) The Principal Contractor shall ensure that its managers and supervisors give clear and unambiguous instructions for the work in hand to the personnel for whom they are responsible. The instructions shall include, but not necessarily be limited to:

- Description of the objective/scope of work;
- Sequence of work/method statements;

- Hazard identification and risk assessment (prior to commencement of work);
- Precautionary/preventative measures that are to be taken; and
- Identification of sensitive features that may be impacted on by the project.

2.5.5 Principal Contractor and Sub-contractor Supervisors

The Principal Contractor shall ensure that the performance of all specified work is supervised, throughout the contract period, by a sufficient number of competent appointed representatives of the principal contractor and/or subcontractor, who have experience in the type of work specified.

- Note 1: No work may commence and/or continue without the presence of appointed supervisors during performance of the contracted work. In determining the number of appointed competent supervisors, the nature and scope of work being performed shall be taken into consideration. It must also be noted that the required appointed construction supervisor (OHS Act CR 8(7) may not leave the site unless there are a sufficient number of appointed competent subordinate supervisors (OHS Act CR 8(8)) on site to assist with supervision.

2.5.5.1 Environmental Officer

The Principal Contractor shall, according to the project risk profile, employ the services of a Full-time Environmental Officer or Part-time during its term of contract. A suitably qualified senior staff member employed full time on site by the Contractor shall be responsible for environmental monitoring and control. This position shall be designated as the Environmental Officer (EO). The EO shall be a person with adequate environmental knowledge to understand and implement these Specifications, as determined by the Client. As a minimum requirement the EO should poses a tertiary qualification in a relevant Environmental Management/ Sciences or Geography field and two years of experience in environmental management. The duties of the EO will include:

a) Liaison with the Client's Project manager/ Contract manager and the Environmental management department;
b) Monitoring of all of the Contractor's activities for compliance with the various environmental requirements contained in this Specification;
c) Monitoring of compliance with other relevant environmental legislation;
d) Development of requisite Environmental Method Statements, Procedures or Instructions;
e) Instituting remedial action in the event of non-compliance;
f) Implementation and management of environmental protection measures;
g) Keeping a register of public complaints and recording and addressing any public comments or issues;
h) Routine recording and reporting of environmental activities on a daily basis;

i) Recording and reporting of environmental incidents; and

j) Environmental induction and presentation of the Environmental Awareness's to the Contractor's staff.

2.6 Process for Monitoring

Conformance to this specification shall be assessed by the Employers' representative during site inspections and audits as stipulated in the specification. Suppliers shall be audited regularly, as set out in the audit plan.

3. RELATED/SUPPORTING DOCUMENTS

The Principal Contractor and its Sub-contractors on the project site shall comply, as a minimum, with all relevant National legislations, and conform to South African National Standards and with the Employers Policies, Standards and Procedures, which include, but are not limited to the following:

- The Constitution of the Republic of South Africa (particularly section 24 of the Bill of Rights)
- Occupational Health and Safety (OHS) Act, act 85 of 1993 and all applicable regulations
- National Environmental Management Act 1998 (Act 107 of 1998)
- Environment Conservation Act 1989 (Act 73 of 1989)
- National Water Act, 1998 (Act 36 of 1998)
- National Environmental Management Waste Act, 2008(Act 59 of 2008)
- National Environmental Management: Air Quality Act, 2002(Act 32 of 2002)
- Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983)
- Civil and Building Work Act
- Mine Health and Safety Act, 1996 (Act 29 of 1996) and Regulations (Where Applicable)
- Explosives Act, 2003 (Act 15 of 2003)
- Compensation for Occupational Illness and Diseases Act, 1996(Act 93 0f 1996)
- Any other applicable South African legislation
- Applicable South African National Standards (SANS)
- Any other applicable South African legislation
- Applicable South African National Standards (SANS)
- Applicable International Standards
- National Roads Traffic Act, 1996(Act 93 of 1996)

- Eskom Operating Regulations for High-voltage Systems (ORHVS)
- Eskom Plant Safety Regulations (Low-voltage Regulations)
- Work-at-height Procedures, 32-418
- Eskom's Implementation of Life Saving Rules, 39-47
- Eskom's Procurement and Supply Chain Management Procedure, 32-188
- Eskom's Disciplinary Code Standard, 32-196
- Project and Power Station Environmental Management Plan (EMP)

3.1 HAZARDOUS SUBSTANCES

3.1.1 General

The storage and disposal of hazardous chemical substances (as defined in the Regulations for Hazardous Chemical Substances) and their waste, is regulated through other legislation, which should be complied with *i.e.* the Occupational Health and Safety Act. All hydrocarbons, including petrol, diesel, engine oil, hydraulic oil, shutter oil and curing compound, pose a risk of causing water and soil contamination and accordingly shall be regarded as potential hazardous substances from an environmental perspective. Specific requirements in this regard are outlined below.

3.1.2 Fuel (petrol and diesel)

Fuel may be stored on site in an area approved by the Project manager/ Contract manager. The fuel storage area shall be located in an area where it is unlikely to pose a significant risk in terms of water pollution. The Contractor shall ensure that diesel is stored in appropriate storage tanks or in bowsers. The tanks/ bowsers shall be situated on a smooth impermeable surface (concrete) with a permanent bund. The impermeable lining shall extend to the crest of the bund and the volume inside the bund shall be 130% of the total capacity of all the storage tanks/ bowsers (110% statutory requirement plus an allowance for rainfall). The floor of the bund shall be sloped, draining to an oil separator. Provision shall be made for refuelling at the fuel storage area, by protecting the soil with an impermeable layer, appropriate for the type of traffic.

If fuel is dispensed from 200 ℓ drums, only empty externally clean drums may be stored on the bare ground. All empty externally dirty drums shall be stored on an area where the ground has been protected. The proper dispensing equipment shall be used, and the drum shall not be tipped in order to dispense fuel. The dispensing mechanism of the fuel/ oil storage drum shall be stored in a waterproof container when not in use. The Contractor shall prevent unauthorised access into the fuel storage area. No smoking shall be allowed within the vicinity of the fuel storage area. The Contractor shall ensure that there is adequate fire-fighting equipment at the fuel stores.

3.1.3 Paints, solvents and other chemicals

The Contractor shall ensure that the use of oil based paints, chemical additives, cleaners and other chemicals is strictly controlled, and that no contamination of the environment, particularly of watercourses and water bodies, occurs as a result of their use.

3.1.4 Herbicides and pesticides

Where the use of herbicides, pesticides and other poisonous substances has been specified or approved by the Environmental department, they shall be stored, handled and applied with due regard to their potential harmful effects and in adherence with the approved Method Statement. The Contractor shall strictly adhered to the manufacturer's specifications regarding applications rates, storage and safety precautions. Herbicides shall not be used within 50m of any watercourse. Unused chemicals shall not be disposed of on site, but shall be disposed of at a waste site licensed for such disposal.

3.2 PUMPING

Where dewatering is required, pumps shall be placed over a drip tray in order to contain fuel spills and leaks. The Contractor shall take all reasonable precautions to prevent spillage during the refuelling of these pumps. The Contractor shall ensure that none of the water pumped during any dewatering activities, is released into the environment without the Project manager/ Contract manager approval.

3.3 DUST AND EMISSIONS

3.3.1 Fugitive Dust Control Programme

A dust control programme shall be implemented by the Contractor to maintain a safe working environment, minimise nuisance for surrounding residential areas, prevent damage to the natural vegetation of the area and protect topsoil. The Contractor's shall take all reasonable and appropriate measures to minimise the generation of dust because of his activities, and his dust control programme shall, as a minimum, address the following:

Schedule of spraying water on dust prone portions of the Working Area, particularly gravel, coal and ash access roads, paying due attention to the control of runoff. High traffic sections shall either be paved or treated via the application of suitable dust suppressing agents:

a) Speed limits for vehicles on unpaved roads and minimisation of haul distances;

b) Measures to ensure that material loads are properly covered during transportation;

c) Schedule for wheel cleaning and measures to clean up public roads that may be soiled by construction vehicles;

d) Minimisation of the area disturbed at any one time and protection of exposed soil against wind erosion, e.g. dampening with water, covering with straw or applying suitable dust suppressing agents;

e) Location and treatment of material stockpiles taking into consideration prevailing wind directions and location of sensitive receptors; and

f) Reporting mechanism and action plan in case of excessive wind and dust conditions.

All employees must be made aware of the inherent dangers of dust. Employees must take such measures as may be necessary to decrease the generation of dust and post warning signs. The use of Thermal Insulation Materials containing Asbestos is not allowed at Eskom Hendrina Power Station. Where any process necessitates the breaking up, grinding, pulverising, crushing or cutting of Asbestos cement products the Project Manager and the Occupational Hygienist must be notified immediately of the quantity and location. Where employees are exposed to dusts such as Silica, Asbestos Cement, Fibreglass and Cement, etc. adequate protective clothing and appliances must be provided.

3.3.2 Particulate and Gaseous Emissions

Hendrina Power Station is responsible for ensuring compliance with the conditions of this licence by any person acting on his, her or its behalf, including but not limited to, an employee, agent, sub-contractor or person rendering a service to the holder of the licence. Gaseous and Particulate emissions at Hendrina Power Station are governed by limits, as stipulated in the Atmospheric Emission License. All contractors are to ensure that all processes and apparatus used when rendering service at Hendrina Power Station does not cause excessive particulate and gaseous emission as stipulated in the license and mitigation measures for preventing or reducing atmospheric emissions, are at all times properly maintained and operated. All contractors are to ensure that they inform the environmental department if any changes in the process of production increase, or any changes to the type and quantities of input materials and products, or to production equipment and treatment facilities. The Power station has an obligation to observe the general duty of care by undertaking the necessary measures to minimize or contain the atmospheric emissions. The measures are set out in section 28(3) of the NEMA.

3.2 PROTECTION OF NATURAL FEATURES AND HERITAGE RESOURCES

The Contractor shall not deface, paint, damage or mark any natural features (e.g. rock formations) situated in or around the Site for survey or other purposes unless agreed beforehand with the Project manager/ Contract manager. Any features affected by the Contractor in contravention of this clause shall be restored/ rehabilitated to the satisfaction of the Project manager/ Contract manager. The infrastructure associated with the Hendrina Power Station have either been sited to avoid known sites of heritage significance, or the requisite permits for the demolition/ disruption of these sites has been obtained by the Employer. The Contractor shall, however, make provision for accidental discovery of further heritage resources. The Contractor shall take reasonable precautions to prevent any person from removing or damaging any heritage resources (including but not limited to fossils, coins, articles of value or antiquity, graves and structures and other remains of archaeological interest) discovered on the Site, immediately upon discovery thereof and before removal.

The Contractor shall inform the Project manager/ Contract manager of such a discovery and carry out the Project manager/ Contract manager's instructions for dealing therewith. In the event that Works within the vicinity of the discovery are suspended, the area shall be cordoned off until such time as the Project manager/ Contract manager authorises resumption of the Works in writing. The Project manager/ Contract manager will take all necessary actions to ensure that delays are minimised.

3.3 PROTECTION OF WATERCOURSES, WATER BODIES AND WETLANDS

The Contractor shall ensure that all watercourses and water bodies are protected from contamination or degradation as a result their activities. All watercourses and water bodies shall be protected from direct or indirect spills of pollutants such as solid waste, sewage, cement, oils, fuels, chemicals, aggregate tailings, wash and contaminated water or organic material resulting from the Contractor's activities. In the event of a spill, prompt action shall be taken to clear the polluted or affected areas and the Project manager/ Contract manager shall be notified immediately. The Contractor shall not work within the flood plain or any watercourses or waterbodies without the written approval of the Project manager/ Contract manager as required for the execution of the work. The Contractor shall not permit his employees to make use of any natural watercourse or waterbody for the purposes of swimming, personal washing and the washing of machinery or clothes.

During the execution of the Works, the Contractor shall take appropriate measures to prevent pollution and contamination of the riverine environment e.g. including ensuring that construction equipment is well maintained, using drip trays, provision of bins, monitoring etc; Where earthwork is being undertaken in close proximity to any watercourse, slopes shall be stabilised using sandbags or geotextile fabric to prevent sand and rock from entering the channel; and No excavation or construction shall be permitted within any wetland area, unless exceptional circumstances require that such excavation or construction cannot be avoided, in which regard the Project manager/ Contract manager shall be the sole arbiter of whether or not such excavation or construction in a wetland area can or cannot be avoided.

Where, in the opinion of the Project manager/ Contract manager, excavation or construction within a wetland area cannot be avoided in the execution of the Works, the extent of any disturbances shall be kept to an absolute minimum. The various soil layers shall be removed and stockpiled separately. Following the completion of the construction activities, the soil layers shall be returned in the reverse order to which they were removed. Where possible, the Contractor shall ensure that no construction equipment traverses any seasonal or permanent wetland. Where seasonally wet areas must be traversed, the Contractor shall obtain the prior approval of the Project manager/ Contract manager and shall ensure that this only occurs during the dry season.

3.4 PROTECTION OF FLORA AND FAUNA

According to Eskom Land and Biodiversity (32-736), South Africa contains the 3rd highest level of biodiversity of all the countries in the world (National Biodiversity Assessment, 2011). South Africa is a signatory to the Convention on Biological Diversity (CBD) as of 2 November 1995 and accordingly has made a commitment to the three objectives of the CBD namely; “the conservation of biological diversity, the use of the components of biological diversity in a sustainable manner, and the fair and equitable sharing of the benefits of biological diversity”. Biodiversity is defined as “the variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and also includes diversity within species, between species, and of ecosystems”.

The contractor shall endeavour to protect biodiversity, to maintain and enhance the benefits from ecosystem services and to promote the sustainable management of living natural resources through the adoption of practices that integrate conservation needs and development priorities. The contractor shall ensure that in the planning, construction, operation, maintenance and decommissioning of its activities, measures are in place to limit the impact of its infrastructure, land-use and use of other resource on biodiversity, whilst complying with all applicable laws standards, guidelines and policies. The contractor shall strive towards minimising the impact of our activities on ecosystems and where reasonably possible, enhance ecosystem services through responsible land management practices. Enhancement may be undertaken to achieve a potential no net loss and possible net gain, in biodiversity. Hendrina Power Station shall endeavour to be informed of the potential changes in biodiversity caused by climate change which could have potential impact on Power Station activities and infrastructure and mitigate as deemed necessary.

The major pressures on South Africa's biodiversity are "the loss and degradation of natural habitat in terrestrial and aquatic ecosystems; over harvesting of species, especially in the marine environment; over-abstraction of water, especially for irrigation; invasive alien species; and climate change". Policy Except to the extent necessary for the execution of the Works, flora shall not be removed, damaged or disturbed nor shall any vegetation be planted without authorisation. At the commencement of the Contract, the Environmental department will identify to the Contractor indigenous flora or any rare or endangered flora that shall be preserved. The Contractor shall thereafter demarcate such and undertake all necessary measures to ensure the protection of such flora. The Contractor shall ensure that the Working Area is kept clean, tidy and free of rubbish that would attract animal pest species, and that no feeding of animals occurs. The Contractor's employees shall be prohibited from collecting firewood from the surrounding areas, and this shall be supplied by the Contractor from a legitimate supplier.

3.5 PREVENTION AND CONTROL OF FIRES

The Contractor shall take adequate precautions to ensure that the fire hazard on and near the Site is reduced to a minimum. Fires may only be lit at sites specifically prepared for the purpose and approved by the Project manager/ Contract manager. The Contractor shall ensure that there is basic fire-fighting equipment available on Site at all times, and any fires that occur shall be reported to the Project manager/ Contract manager immediately. Smoking shall not be permitted in those areas where it is a fire hazard. Such areas shall include the workshop and fuel storage areas, any areas where the vegetation or other material is such as to make likely the rapid spread of an initial flame and any other areas not designated as smoking areas.

All eating areas shall include provision for a smoking area. The Contractor shall not be permitted to use burning as a disposal method. This procedure also guides the Power Station's personnel to comply with National Veld and Forest Fires Act (101 of 1998). Therefore it is critical to make fire breaks in order to contain veld fires in all areas that are owned by Hendrina Power Station. Fire breaks can be made in many ways including: by burning a strip of veld as a fire barrier, grading/ ploughing a barrier, by mowing and by applying herbicide to remove or control the vegetation. To manage fire breaks at Hendrina Power Station to minimize or prevent and control the fire spread resulting from veld fire that may start within Hendrina Power Station site or from the neighbouring lands into the Power Station property and have negative consequences to the environment and property.

3.6 EMERGENCY PROCEDURES

Hendrina Power Station shall respond to the actual emergency situations and accidents and prevent or mitigate associated adverse environmental impacts. The potential for emergencies exist and all contractors must be familiar with the emergency response and preparedness.

3.6.1 Environmental Incidents

The Principal Contractor and its Sub-contractors shall ensure that:

All environmental incidents such as pollution (air, water, land, noise, etc.), bird kills, animals killed, and plants destroyed, public complaints, etc. must be reported to the Project manager/ Contract Manager and/or environmental practitioner within 24 hours of their occurrence, as per the Eskom Procedure Manual for Environmental, Occupational Health and Safety Incident Management, 32-95; and Environmental Incident Management Procedure (240-133087117).

- All environmental incidents occurring on site must be recorded, detailing how each incident was dealt with. Proof thereof must be kept in an incident register.

Telephone numbers of emergency services, including the local firefighting service, shall be posted conspicuously in the Contractor's office near the telephone. The Contractor shall develop emergency procedures that will enable rapid and effective response to all types of environmental emergencies.

3.6.2 Fire

The Contractor shall advise Fire department and affected stakeholders of a fire as soon as one starts and shall not wait until he can no longer control it. The Contractor shall ensure that his employees are aware of the procedure to be followed in the event of a fire.

3.6.3 Accidental leaks and spillages

The Contractor shall ensure that his employees are aware of the emergency procedure(s) to be followed for dealing with spills and leaks, which shall include notifying the Project manager/ Contract manager and the relevant authorities. The Contractor shall ensure that the necessary materials and equipment for dealing with spills and leaks is available on Site at all times. Treatment and remediation of the spill areas shall be undertaken to the reasonable satisfaction of the Project manager/ Contract manager. The area shall be cordoned off and secured. The Contractor shall maintain spill kits on site at all times and shall ensure that there is always an adequate supply of absorbent material available in the spill kits to absorb/ breakdown and, where possible, be designed to encapsulate minor spillage.

3.7 CLEARING OF VEGETATION

The object of vegetation clearing is to trim, cut or clear the minimum number of trees and vegetation necessary for the safe construction and operation of the power station. No clearing of trees or vegetation shall occur prior to the Contractor obtaining written permission from the Project manager/ Contract manager, who shall designate in detail the exact areas to be cleared and the time at which it shall be done. The Contractor shall ensure that the clearance of vegetation is strictly restricted to that required to facilitate the execution of the Works. Any natural vegetation, particularly trees, within or immediately adjacent to the Working Area, which do not require removal, shall be fully protected against damage. Vegetation clearance shall be restricted to the construction camp, approved access roads, approved stockpiling and laydown areas, batching plant sites and portions of the Working Area where vegetation interferes with construction activities. Site clearance shall occur in a planned manner, and cleared areas shall be stabilised as soon as possible. The detail of vegetation clearing shall be subject to the Principal Agent’s approval. All cleared vegetation shall either be mulched and mixed into the topsoil stockpiles or disposed of at an approved disposal site. The disposal of vegetation by burying or burning is prohibited without the requisite permit from the local authority.

3.7.1 Erosion and sedimentation control

The Contractor shall take all reasonable measures to limit erosion and sedimentation due to the construction activities and shall include in the design of the site works measures to prevent such occurrences. The Works shall be phased, and development staged so that stripped areas are kept to a minimum. The Contractor shall ensure that the stabilisation of cleared areas is actively managed in order to prevent and control erosion.

3.7.2 Alien invasive vegetation

The Contract shall remove all alien invasive vegetation from their yard and working area for the duration of the project. In general, clearance of alien invasive vegetation shall be undertaken by hand, using chainsaws and hand held implements, with vegetation being cut off at ground level, and not uprooted. To prevent re-growth, cut stumps of re-sprouting alien invasive species, such as gums (*Eucalyptus* species), Port Jackson (*Acacia saligna*), Golden wattle (*Acacia pycnantha*) and Australian myrtle (*Leptospermum laevigatum*), shall be treated *with an approved* herbicide or any approved herbicide, at the application rate specified by the manufacturers. The Contractor shall ensure that the person applying the herbicide is certified to do so and shall provide the Project manager/ Contract manager with proof of such certification. Topsoil that is contaminated with seeds of alien invasive species shall not be used for rehabilitation purposes.

3.7.3 Eating areas

The Contractor shall designate eating areas for his staff at all location within the Working Area where work is taking place. These eating areas shall be clearly demarcated and shall be provided with bins with lids. The Contractor shall ensure that their employees do not consume meals anywhere other than at these eating areas and that noise is limited. All eating areas shall include provision for a smoking area. Any cooking on Site is prohibited.

3.8 WATER USE

Water is a scarce resource in South Africa and water shall be conserved wherever possible. The Contractor shall minimise the use of water and shall immediately attend to any wastage. Subject to the prior approval of the Project manager/ Contract manager, water for construction purposes may be abstracted from watercourses/ water bodies or agricultural sources in the surrounding area. Abstraction of water from a watercourse or water body will require a permit from the relevant department (authority), and abstraction from an agricultural source will require the owner's permission. The Contractor shall be responsible for obtaining the necessary approvals from the Environmental management department prior to undertaking such abstraction.

3.9 SOLID WASTE MANAGEMENT

The management of solid waste on site shall be strictly controlled and monitored. The quantities of waste generated on site shall be minimised. Littering shall be avoided. The Contractor shall provide sufficient weatherproof and scavenger-proof bins on Site to store the solid waste produced on a daily basis. Solid, non-hazardous waste shall be disposed of in the bins provided and no on-site burying, dumping or burning of any waste materials, vegetation, litter or refuse shall occur. Bins shall not be allowed to become overfull and shall be emptied to the Skips provided by the Power Station. All solid waste shall be disposed of off-site at an approved landfill site. In instances where the Contractor disposes waste, certificate of disposal are to be shared with the Environmental management department.

3.10 WASTE WATER MANAGEMENT

3.10.1 General

a) Pollution could result from the release, accidental or otherwise, of contaminated runoff from plant, and include discharge of contaminated water, chemicals, paints, solvents, oils, fuels, sewage, runoff from stockpiles, solid waste, litter, etc. Accordingly, the Contractor shall establish a waste water management system to address the prevention of pollution as well as suitable methods for the disposal of contaminated water. In this regard:

b) Appropriate pollution control facilities necessary to prevent discharge of water containing polluting matter or visible suspended materials into watercourses or water bodies shall be designed and implemented;

c) Runoff from contaminated g areas shall be strictly controlled, and contaminated water shall be collected, stored and either treated or disposed or directed to the appropriate containment;

d) Runoff from vehicle wash bays, workshops and diesel/ fuel tank areas shall pass through oil traps. The oil sludge thus collected shall be disposed of at an approved waste disposal site, i.e. licensed for such material;

e) All spillage of oil onto concrete surfaces shall be controlled by the use of an approved absorbent material;

f) Water collected during the dewatering activities shall be pumped to settlement ponds complying with the requirements.

Natural storm water runoff not contaminated by construction operations and clean water can be discharged directly to watercourses and water bodies, subject to the Environmental department approval. Water that has been contaminated with suspended solids, like soils and silt, may be released into watercourses or water bodies only once all suspended solids have been removed from the water by settling out these solids in settlement ponds.

4. TRENCHING, EXCAVATIONS, AND FLOOR OPENINGS

- The Principal Contractor and its Sub-contractors shall comply with the following requirements:

– Digging, excavation, or driving a peg, pile, or spike into the ground by the contractor may not commence without written authorisation from the Project manager/ Contract manager representative.

– Prior to commencing work on any excavation or trench, the Principal Contractor and or its Sub- contractors shall determine the location of all underground installations, that is, sewer, telephone, water, fuel, electric, etc. Overhead hazards shall be assessed and dealt with prior to commencement of work.

– Adequate precautions shall be taken by the contractor to prevent slumping of excavations, as well as to prevent rocks and loose material falling onto workers.

– All excavations done by the contractor are to be clearly demarcated and barricaded to prevent accidental access.

– Only solid barricading will be used in areas where a fall hazard is present. Solid barricading and/or hole covers shall be provided around all holes or openings to prevent any person being.

- Barricading must be placed as close as reasonably possible to the excavation.
- If an excavation or trench endangers the stability of buildings or walls, shoring, bracing, or underpinning will be provided. Excavations and trenches that are adjacent to backfilled excavations or trenches, or that are subject to vibrations from railroad traffic, road traffic, blasting in open-cast mining, or the operation of machinery (for example, shovels, cranes, trucks), must be secured by a support system, shield system, or other protective system (that is, sheet pile shoring, bracing).
- Where it is impracticable to provide fixed guard railing, effective removable barriers shall be provided at all unguarded openings in guard railings or floors, and these shall be maintained in position at all times until the hazard no longer applies.
- No material to be within 3m of the excavation edges.
- All excavations must be on register and inspected daily before work commences and after inclement weather by the contractor's appointed competent person, declared safe, and his/her findings noted in the said register.

4.1 PEST CONTROL

Pest Management is to be conducted as per Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act 36, of 1947. The Contractor shall notify Environmental department if it notices unusual levels of the following pests:

- Birds, bats, snakes, cats, dogs and all other vertebrates other than commensal rodents.
- Termites and other wood-destroying organisms.
- Mosquitoes, spiders, wasp and bees
- Pests that primarily feed on outdoor vegetation
- Ground area to be inspected for rodent burrows
- Existing bait stations to be inspected for rodent activity.
- If activity is noted, the client must be notified
- All offices and toilets to be treated for cockroaches and rodents.
- Indoor populations of rodents, insects, including cockroaches and bed bugs),
- Outdoor populations of potentially indoor-infesting species that are within the property

4.2 HORTICULTURE

Eskom Hendrina Power Station is serviced by a supplier to address all horticulture requirements in the Power Station areas excluding inside contractors yards. Horticulture activities include amongst others

- Mowing and trimming
- Garden Bed cleaning and maintenance
- Irrigation
- Weeds control (manual or chemical)
- Pruning
- Raking and sweeping
- Management of litter

Contractors are to ensure that the above services are addressed in their yards

5. SHEQR REQUIREMENTS

Health and Safety requirements: The Health and safety Requirements will be dealt with in accordance with the Safety and Health management Systems

Environmental requirements: The Environmental Requirements will be dealt with in accordance with the environmental management system

Quality requirements: The Quality Requirements will be dealt with in accordance with the Quality Management System.

6. RECORDS TO BE KEPT

As per Documented Information Procedure (HSPPIN037)

7. NOTES / FORMS / APPENDICES / ANNEXURES

Contractors may be required to complete annexure documents listed below during or after the tendering process whenever it is necessary.

- **ANNEXURE A:** TENDER RETURNABLE FORM
- **ANNEXURE B:** ENVIRONMENTAL EIA SCREENING CHECKLIST
- **ANNEXURE C:** ENVIRONMENTAL MANAGEMENT PLAN TEMPLATE

8. ACCEPTANCE

This document has been seen and accepted by:

Name	**Designation**
Hans De Wet	Manager: Safety Risk Manager (Acting)
Aletta Nel	Senior Advisor: Integrated Business Improvement
Josephine Phaleng	Senior Advisor: Quality Assurance
Lettie Malaza	Manager: Risk and Assurance Manager
Steven Hlophe	Senior Advisor: Configuration Management
Godfrey Cothama	Senior Advisor: Quality Assurance

9. REVISIONS

Date	Rev.	Compiler	Remarks
September 2020	0	Ben Madiope	Fist issue

10. DEVELOPMENT TEAM

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

- Ben Madiope
- Justice Ramagoma
- Lukas Masango

11. ACKNOWLEDGEMENTS

To all colleagues involved in the development and review of this document

ANNEXURE A: TENDER RETURNABLE FORM

ESKOM **F/ESK108 Rev** 1

HENDRINA POWER STATION (TENDER RETURNABLE)
ENVIRONMENTAL PROCEDURE/POLICY NO'S HSPPI024 AND HSPPIN005
Environmental Requirements for Tenders/Quotes
Enquiry No: .....
Suppliers/Contractor to ensure that they comply with all environmental legislations and other Environmental requirement.
Which Product/s are you tendering/quoting on or planning to use that may have an environmental Impact? Describe

Tender/ Quote No: .....

1. Buniness registration	**Mark With "X"**			
What is the nature of your business?	Manufacuring ☐		Construction ☐	
	Maintenance ☐		Other ☐	
	Supply ☐			
	Service ☐			
	If "Other" Describe			
2. Packaging				
What type of packaging do you use for your product?	Plastic ☐		Steel ☐	
	Wood ☐		Other ☐	
	Cardboard Box ☐			
	Polystyrene ☐			
	If "Other" Describe			
3. Transportation				
What type of transportation do you use for your product?	Tanker ☐		Railway ☐	
	Tractor ☐		Bike ☐	
	Truck ☐		Other ☐	
	LDV ☐			
	If "Other" Describe			

4. Legal requirements		
Which Environmental Legislation and other Environmental requirements are applicable to your activities	National Environmental Management Act	☐
	Environmental Conservation Act	☐
	National Water Act	☐
	Hazardous Substances Act	☐
	Other	☐
	If "Other" Describe ……	
5. Material Safety Data Sheets (MSDS)		
Do you have Material Safety Data (MSDS) available for your products?	**Yes** ☐ **No** ☐	
	If "No" Describe ……	
Is the MSDS in a 16 point from?	**Yes** ☐ **No** ☐	
	If "No" Describe ……	
How is compliance meet?	Describe ……	
6. Environmental Impacts		
6(a)**What are the potential Environmental Impacts that could arise from your activities/products?**	Describe ……	
6(b)**What control measures are in place to mitigate the impacts?**	Describe ……	
7. Environmental Emergency		

What are the potential Environmental Emergencies that could arise from your activities (from manufacturing, transportation and use of the product etc)?	Describe .....
What measures are in place to deal with the emergencies?	Describe .....

8. Environmental Management	
Do you have an Environmental Management System in place?	**Yes** ☐ **No** ☐ If "Yes" Describe ..... If "No" Describe .....

9. Environmental Training	
What type of Environmental Training has been conducted?	General Environmental Awareness ☐ Oil Spillages ☐ Environmental Law ☐ Other ☐ If "Other" Describe ..... To Whom? .....

10. Pollution Prevention				
Have your Company initiated a program for the following:	Recycling	Yes ☐	No ☐	
	Pollution Prevention	Yes ☐	No ☐	
	Reduction in resource consumption	Yes ☐	No ☐	
	Use of environmentally friendly products	Yes ☐	No ☐	
	Describe			

Total

Name of Company: _____

Compiled by: _____
Designation: _____
Signature: _____
Date: _____

Accepted by the Emlover/Purchaser:
Name: _____
Designation: _____
Signature: _____
Date: _____

ANNEXURE B: ENVIRONMENTAL EIA SCREENING CHECKLIST

Eskom	**Hendrina Power Station** **Environmental Screening Checklist (B)**	**Reference №**	F/ESK 316
		Revision	0
		Date	
Project No:	Project Title / Description:		

Definitions according to Environmental Impact Assessment (EIA) 2014 regulation GNR 327

"development" means the building, erection, construction or establishment of a facility, structure or infrastructure, including associated earthworks or borrow pits, that is necessary for the undertaking of a listed or specified activity, **[including any associated post development monitoring,]** but excludes any modification, alteration or expansion of such a facility, structure or infrastructure, including associated earthworks or borrow pits, and excluding the redevelopment of the same facility in the same location, with the same capacity and footprint;
"decommissioning" means to take out of active service permanently or dismantle partly or wholly, or closure of a facility to the extent that it cannot be readily re-commissioned;
"expansion" means the modification, extension, alteration or upgrading of a facility, structure or infrastructure at which an activity takes place in such a manner that the capacity of the facility or the footprint of the activity is increased;

SECTION 1 **DESCRIPTION OF THE PROJECT**

NO	REVIEW QUESTION	Applicable	YES	NO	DESCRIPTION
	Is the following information available for the project:				
	Total Ground footprint of new area to be disturbed				
	Size of building or infrastructure				
	Pipe diameter				
	Peak throughput in terms of flow				
	Distance of linear infrastructure				
	Depth of excavation needed				
1	**Will construction, operation or decommissioning of the Project involve the following activities which will cause physical changes in the locality(topography, land use, changes in water bodies)**				
1.1	Clearance of existing land, vegetation and buildings?				
1.2	Pre-construction investigations such as boreholes, soil testing and waste analysis including asbestos type waste?				
1.3	Construction activities such as excavating.				
1.4	Demolition of buildings and other structures				
1.5	Underground works such as removal of pipes, tanks and installation of cables, etc.				
1.6	Installation of facilities for treatment of any waste stream				
1.7	Any new roads				
1.8	Diverting of pipelines				

1.9	Stream crossing				
NO	**REVIEW QUESTION**	**Applicable**	**YES**	**NO**	**DESCRIPTION**
1.10	Abstraction or transfer of water from groundwater or surface water				
1.11	Any additional drainage systems required				
1.12	Require ablution facilities(lined to septic tanks or main sewage line)				
2	**Will construction or operation of the Project use natural resources such as land, water, materials or energy esp. resources which are non-renewable or in short supply.**				
2.1	Water				**Volume of water needed:**
2.2	Top soil and gravel				
2.3	Energy including electricity and fuels				
3	**Will the Project involve use, storage, transport and handling of hazardous substances or material which could be harmful to the environment.**				
3.1	Water resources				
3.2	Land and soil				
4	**Will the Project produce waste types such as solid, effluent and liquid during the construction, operation or decommissioning**				**Please indicate types and disposal sites**
4.1	Municipal waste(household or commercial waste)				
4.2	Hazardous or toxic waste(including radioactive waste)				
4.3	Other industrial process waste				
4.4	Sewage sludge or other sludge types				
4.5	Construction or demolition waste				Packaging material, plastic, cardboard, cable off-cuts. These will be disposed of according to the Waste management procedure HSPPIN/003.
4.6	Redundant machinery or equipment				
4.7	Contaminated soils or other material				
5	**Will the Project release pollutants or any hazardous, toxic or noxious substance to the air**				
5.1	Emissions from combustion from mobile sources or construction activities				
5.2	Emission from material handling including storage and transport				
5.3	Dust or odors from handling of material including construction materials, sewage and waste				
6	**Will the project cause noise and vibration or release of light, heat energy or electromagnetic radiation**				
6.1	From operation of equipment e.g. engines, ventilation plant, crushers				
6.2	From industrial processes				
6.3	From construction of demolition				
6.4	From piling of material				
7	**Will the Project lead to risk of contamination of land or water from releases of pollutants onto the ground, surface water and groundwater.**				
7.1	From handling, storage, use or spillage of hazardous or toxic materials				

7.2	From discharge of sewage or other effluent				
7.3	By deposition of pollutants emitted to air, onto the land or into water				

REMARKS – Environmental Manager
The checklist is updated from EIA regulations that were promulgated on the 4th December 2014 (R. 983, R. 984 and R. 985) to 2014 EIA amendments GNR 324; 325; 326 and 327 Listing Notices.

Activity	Compiled	Reviewed	Approved	Recorded
Designation			**Environmental Manager**	
Name				
Signature				
Date				

ANNEXURE C: ENVIRONMENTAL MANAGEMENT PLAN TEMPLATE

[Company Name and Logo]

ENVIRONMENTAL MANAGEMENT PLAN

CONTRACTOR'S REPRESENTATIVES CONTACT DETAILS			
Name	Position	Contact Number/s	Email

[Project Brief Description]

[Location]

[Date]

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EXAMPLE

NO.	OBJECTIVES AND GOALS	MANAGEMENT AND MONITORING ACTIONS	IMPLEMENTATION PROGRAMME	
1	Spill Prevention		RESPONSIBILITY	IMPLEMENTATION AND FREQUENCY
1.1	To prevent the spillage of hazardous chemical substances.	All hazardous chemical substances, including fuels, oils, greases and hydraulic fluids are to be stored in bunded areas. The bund should have capacity to contain 110% of the volume of the chemical substances stored there.	Contractor	From the start of construction. Continuous.
1.2	To manage and contain spillages of hazardous chemical substances.	When chemicals are stored on site then a spill kit must be available.	Contractor	From the start of construction. Continuous
		An emergency procedure for the clean-up of spillages must be developed. The contractor's site manager must be familiar with the procedure and equipment. Job specific training, to be provided to members working in such areas, must include awareness of hazardous chemicals and emergency procedures.	Contractor	At start of construction.
		Chemical spills are to be regarded as an environmental incident.	Contractor	As and when required
		Hazardous chemicals (including those used for cleaning and spill clean ups) are not to be released into environment. These materials are to be contained and disposed as hazardous waste.	Contractor	From the start of construction. Continuous

NO.	OBJECTIVES AND GOALS	MANAGEMENT AND MONITORING ACTIONS	IMPLEMENTATION PROGRAMME	
2	Waste Management		RESPONSIBILITY	IMPLEMENTATION AND FREQUENCY
2.1	To minimise waste production	Waste materials that can be returned to the supplier must be identified and proper arrangements are to be made for make this to happen.	Contractor	During construction. As required.
		Recyclable materials are to be salvaged and arrangements made for these to be removed from site for recycling.	Contractor	During construction. As required.
13.2	To ensure the appropriate disposal of general waste.	All areas are to be kept free of litter. Littering will not be tolerated. The burning of waste on site is prohibited. Rubbish bins must be provided and the site cleared.	Contractor	During construction. Weekly.
		All general waste is to be removed and disposed at a permitted waste disposal site that can accept such waste.	Contractor	During construction. Weekly
13.3	To ensure the appropriate disposal of hazardous waste.	All hazardous waste produced on site, including used oils, lubricants and workshop waste, is to be consolidated and kept in a receptacle within a bunded area.	Contractor	During construction.
		Soils that have become contaminated with fuel, oils or greases are to be bio remediated or disposed of as hazardous waste.	Contractor	As required.
		Hazardous waste is to be removed from site for disposal at a permitted hazardous landfill site.	Contractor	During construction. Monthly