

# **ENVIRONMENTAL MANAGEMENT PLAN FOR THE UPGRADE AND OPERATION OF OKAPYA SUBSTATION (OKAPYA VILLAGE)**

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## Details of Project Staff

This scoping report was generated by staff permanently employed by NamPower within the Safety, Health, Environmental and Wellness Section.

The following individuals took part in the execution of the scoping process:

### ***Project Manager – Scoping Report and Construction and Operational Phase EMP's***

Mr Daniel Louw served as the project manager for this assessment. He was responsible for ensuring that the correct procedures are adhered to as it pertained to the sourcing of specialist services and the payment of the specialist in terms of services rendered. All communication with regards to the project should be addressed to him and he can be contacted at:

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Mr Louw has over 20 years experience in the field of SHE and has no vested interest in the outcome of this assessment.

### ***Environmental Assessment Practitioner***

The Environmental Assessment Practitioner (EAP) for this site was Calvin Sisamu, a fulltime employee of NamPower for the past 8 months. Calvin , has a Bachelor's Degree level Certificate in Environmental Engineering, National Diploma in Land Management and a Masters of Philosophy Environmental Management. He has been working in the environmental field since 2005, including being the Environmental Control Officer and Radiation Safety Officer in training for Reptile Uranium Namibia a uranium exploration company and Environmental Compliance Officer for Swakop Uranium (Husab Mine) in the Namib Desert. The EAP has no vested interest in the outcome of the process.

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## LIST OF TERMS, ACRONYMS AND ABBREVIATIONS

DEA	Department of Environmental Affairs
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EMA	Environmental Management Act no 7 of 2007
EMP	Environmental Management Plan
MET	Ministry of Environment and Tourism
SHEW	Safety, Health, Environment and Wellness
PCO	Pest Control Officer
MSDS	Material Safety Data Sheet

### **DEFINITIONS**

**Contractor:** Means a person (other than a NamPower employee) or a company contracted/ legally appointed by NamPower to perform work for NamPower on a NamPower site/premises.

## 1. INTRODUCTION

The purpose of this document is, to provide an indication of the anticipated impacts the operation of the Okapya Substation on the receiving environment. This EMP document will ensure sound environmental performance by all contractors and NamPower employees during the operation of this plant.

## 2. AIMS

The aim of this operational EMP is to detail the management actions required to implement the mitigation measures identified thereby ensuring that any operational phase activity is carried out in a manner that takes cognisance of sustainable development and is in line with National legislation. These actions are required to minimise negative impacts and enhance positive impacts associated with the operations.

It is important to note that an EMP is a working document and therefore may be updated and amended as new information (e.g. environmental data), policies, authority guidelines and technologies develop especially during both construction and operational phase of this Substation .

The operational EMP is concise and practical to ensure easy implementation and compliance by all involved in this project during the operation of the substation.

Positive and negative impacts as well as impacts which may affect both the social and natural environment have been considered in order to provide a complete picture of the impacts that the project may have on the receiving environment.

## 3. ROLES AND RESPONSIBILITIES

It is the responsibility of NamPower to ensure that all management actions are carried out. The successful implementation of the EMP is, however dependant on clearly defined roles and responsibilities by several stakeholders, each fulfilling a different but vital role to ensure sound environmental management during each phase of the project.

The following roles and responsibilities have been identified as it pertains to this project:

### ***Project Manager***

- Is responsible for the enforcement of the EMP
- Must make sure that SHE requirements are included in the tender documents sent to the contractor
- Must ensure that a SHEW clause is included in the contract document and communicated to the contractor before the inception of the project.
- Must ensure that the contractor remains in compliance with the requirements of this EMP, through regular communication and monitoring.

### ***NamPower SHEW***

- To ensure that all requirements with regards to this EMP are fulfilled.
- Assist the Project Manager in ensuring the contractor remains in compliance with this EMP.
- Provides SHEW inductions for the contractors and their employees
- Organize and implement monitoring and audit functions, in consultation with the Project Manager
- Report back to the Project manager on contractor compliance to the EMP before the project close-off and final payment is made to the contractor

### ***Contractor***

- Is responsible for the implementation of the EMP
- Ensuring all tasks undertaken under the scope of work, are in accordance both with NamPower's SHEW policies and procedures as well as to the requirements of this EMP.
- Putting in writing a system of communication, in which all incidents and accidents are reported to the SHEW section
- Ensuring that all employees receive a SHEW induction before the start of the project.
- Ensuring that the work being done does not create a nuisance to any being working, residing or living on adjacent properties or within the immediate surroundings of the site.

NamPower has the right to ban any employee from the site, which have not attended a SHEW induction, until the time that they receive induction. NamPower also has the right to stop all construction activities if it is found that a gross violation of the EMP is taking place.

## **4. RECORDING AND REPORTING**

The Environmentalist assigned by NamPower to the project, shall submit an environmental compliance report at regular intervals (to be agreed at the onset of the project), in writing, to the Project Manager. These reports shall include a description of all activities on site, problems identified, non-conformances noted and remedial action implemented.

Records relating to compliance monitoring shall be kept on site and will be made available for inspection by relevant competent authority which in this instance will be the Ministry of Environment and Tourism. Matters shall also be discussed during site meetings and project meetings.

## **5. ENVIRONMENTAL MANAGEMENT AND TRAINING**

Before any work is commenced on the site, the Contractor shall ensure that adequate environmental awareness training of site personnel takes place and that all employees receive an induction presentation on the importance and implications of the EMP. The Contractor shall liaise with the Project Manager prior to the commencement date to fix a date and venue for the induction and to agree on the content.

The Contractor shall provide a suitable venue and ensure that the specified employees attend the course. Contractor shall ensure that all attendees sign an attendance register.

As a minimum, training must include:

- Explanation of the importance of complying with the EMP,
- Discussion of the potential environmental impacts of construction activities,
- The benefits of improved personal performance,
- Employees' roles and responsibilities, including emergency preparedness,
- Explanation of the mitigation measures that must be implemented when carrying out their activities,
- Explanation of the specifics of this EMP and sensitive areas,
- Explanation of the management structure of individuals responsible for matters pertaining to the EMP.

The contractor shall keep records of all environmental training sessions, including names, dates and the information presented.

## 6. DESCRIPTION OF ACTIVITIES TO BE UNDERTAKEN

One of the main purposes of the environmental assessment process which was carried out for this project was to understand the significance of potential impacts associated with the proposed activity. Issues or impacts of less significance were screened out of the assessment process, with supporting reasons to ensure that the study focuses on the potentially "significant impacts" identified for the proposed site. Potentially significant impacts may be experienced in terms of waste (hazardous and general waste) increased resource use, habitat destruction and socio-economic aspects. It must be noted that the proposed site is located within an already environmentally disturbed area.

**Below is a summary of the mitigation measures.**


**OPERATIONAL PHASE EMP**

<b>COMPONENT</b>	<b>OBJECTIVE</b>	<b>MANAGEMENT MEASURES</b>	<b>RESPONSIBILITY/ PARTNERSHIPS</b>
<b>SCOPE</b>	To ensure that the provisions of the EMP are implemented during operation	<ul style="list-style-type: none"> <li>• The contractor shall appoint a person from the construction team to take responsibility for the implementation for all provisions of this EMP.</li> <li>• An Environmentalist must be assigned to the project in order to carry out regular inspections and site visits</li> </ul>	Contractor and Environmentalist
<b>ENVIRONMENTAL AWARENESS</b>	Raise Awareness	<ul style="list-style-type: none"> <li>• SHEW will provide induction to new employees and contractors</li> <li>• Environmental legal requirements and obligation are to be communicated.</li> </ul>	Environmentalist
<b>PHYSICAL ENVIRONMENT</b>	To minimise potential impacts from improper housekeeping practices during operation	<p align="center">2.1. Waste Management</p> <ul style="list-style-type: none"> <li>• Collection and disposal of solid waste should be done by a competent contractor to the approved landfill.</li> <li>• Prohibit fly-dumping of any solid waste to the land</li> <li>• Separate waste containers must be provided for: Hazardous waste, General waste and construction waste.</li> <li>• These waste containers must be clearly marked and the waste must not be mixed.</li> <li>• Containers shall be provided with lid or netting to prevent the waste from being removed by scavengers or wind.</li> <li>• Waste containers must not be over-filled.</li> <li>• Illegal dumping and littering shall not be tolerated.</li> <li>• Sites where waste is stored must be adequately protected from animals that might frequent the area.</li> <li>• Ensure that the work site and the surroundings are kept in a neat condition at all times and that windblown litter is cleared on a daily basis.</li> <li>• Waste generated during operation must be disposed of on a regular basis at the closest approved waste management site .</li> <li>• The workforce must be sensitised to dispose of waste in a responsible manner and not to litter.</li> <li>• No waste may be burned or buried on site.</li> <li>• No waste may remain on site after any operational activities have been carried out.</li> </ul>	Contractor and Environmentalist



		<ul style="list-style-type: none"> <li>• Ablution facilities must be available in the following ratio: one (1) toilet to 15 employees. Toilet facilities may not be placed within 100 m of any watercourse.</li> <li>• Provision must be made such that these toilets be emptied and cleaned by the service provider on a bi-weekly or weekly basis depending on how quickly the toilets get full. This measure will avoid the spill over of sewage.</li> </ul> <p>2.2. Hazardous Materials</p> <ul style="list-style-type: none"> <li>• A register shall be kept on all hazardous substances and be available for inspection at all times.</li> <li>• Material safety data sheets should be readily available.</li> <li>• Storage areas shall display the required safety signs.</li> <li>• No fuel shall be stored on site</li> <li>• Hazardous substances must be stored in a well-ventilated area, and behind lock and key.</li> <li>• Electrical equipment e.g. transformers which contain hydrocarbons, are to be stored on impervious surfaces at lay down areas.</li> <li>• Used oils, fuel, paints, grease and solvents must be stored in drums or other suitable containers, which must be labelled, sealed and removed from the site to an appropriate disposal site or recycling facility.</li> <li>• Areas shall be monitored for spills and any spills shall be contained, cleaned and rehabilitated immediately.</li> <li>• Oil contaminated soil must be collected, stored and removed for disposal at an appropriate waste storage facility. The area, from which the contaminated soil was taken, must be filled with new soil. The new soil must be free of contamination, and must not be taken from a spot within a 100-metre radius of where the spill occurred.</li> <li>• The contractor shall submit a oil spill management procedure prior to starting work on site</li> <li>• Drip trays must be available for all vehicles that are intended to be used during operational phase. These trays must be placed underneath each vehicle while the vehicles are parked. The drip trays must be cleaned every morning and the spillage handled as hazardous waste.</li> <li>• Ensure all staff is adequately protected and educated about the safe and proper handling and disposal of hazardous substances;</li> <li>• Hazardous substances must be stored according to the MSDS.</li> </ul>	
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		<ul style="list-style-type: none"> <li>• In the event of a hazardous chemical spill on site, the following actions shall be taken:</li> <li>• Stop the source of the spill immediately;</li> <li>• If no permanent bund wall exists, shovel a soil bund wall around the source;</li> <li>• Absorb the chemical spill as quickly as possible with the spill kit absorption material;</li> <li>• Make the necessary arrangements for clean-up by the appropriate spill response team;</li> <li>• Collect contaminated soil, water and other contaminated material and dispose at the hazardous waste site. Obtain a waste manifest;</li> <li>• Ensure adequate firefighting equipment is available on site;</li> </ul> <p>2.3. Maintenance of Vehicles</p> <ul style="list-style-type: none"> <li>• No maintenance activities will be allowed on site during operation .</li> <li>• No on-site workshop envisaged.</li> <li>• Spill control kits to be readily available e.g saw dust.</li> </ul> <p>2.5 Access roads</p> <ul style="list-style-type: none"> <li>• Access to the site shall be by means of approved access roads only. No unauthorised access is permitted.</li> <li>• The contractor shall not drive faster than 20km/hr when entering the construction site and symbolic signs shall be placed at the entrance to the site to inform all drivers and visitors. The speed limit will be strictly enforced.</li> <li>• All possible steps shall be taken to minimize the disruption of traffic flow in the area of the Ruacana Substation and Solar PV development.</li> <li>• Parking outside the site where traffic may be affected shall not be allowed;</li> <li>• Appropriate warning signs shall be placed at the entrances / exits of the site. These signs shall be in addition to the normal signage present indicating to road users the nature of the activity occurring in the immediate vicinity.</li> </ul>	
<p><b>1. NATURAL ENVIRONMENT</b></p>	<p>To minimise damage to the natural environment during operation</p>	<p>3.1 Water resources</p> <ul style="list-style-type: none"> <li>• Ground water shall not be polluted under any circumstances.</li> <li>• Storm water shall be managed to ensure that it does not become polluted.</li> </ul>	<p>ECO, Site Supervisor and Contractor</p>

		<ul style="list-style-type: none"> <li>• Care must be taken to ensure that diverted flood water does not increase the risk of flooding for neighboring properties</li> <li>• Redirect diverted flow back to natural flow paths.</li> <li>• Water must be used sparingly.</li> <li>• Water may only be taken from private owned property on a basis agreed upon between the Contractor and custodian (NamPower) of the water resource.</li> <li>• Dirty water will only be discharged from the site to the environment after treatment and subject to the appropriate permit or license.</li> </ul>	
<p><b>2. SANITATION</b></p>		<ul style="list-style-type: none"> <li>• Adequate toilet facilities are to be provided at the substation , if the substation is to be manned.</li> <li>• Discharge of waste from toilet into the environment and burial of toilet waste is strictly prohibited.</li> </ul>	
<p><b>3. BIODIVERSITY</b></p>		<ul style="list-style-type: none"> <li>• Manual vegetation or herbicide application to be conducted in line with NamPower Procedure.</li> <li>• No hunting or killing of birds and wildlife.</li> </ul>	
<p><b>4. EMERGENCIES</b></p>			

## **7. NON-COMPLIANCE PROCEDURES DURING OPERATIONS**

NamPower Regional Manager (North), Area Superintendent and District Supervisor shall ensure that the requirements outlined in this EMP is implemented and enforced during operation.

## **8. ENVIRONMENTAL MONITORING AND AUDITING**

Environmental monitoring must be conducted at least once every month during construction and operation. Benefits derived from the monitoring and final audit process might include:

- identification of environmental risk;
- development or improvement of the environmental management system;
- avoidance of financial and time loss;
- avoidance of legal sanctions;
- increase in staff awareness;
- identify potential cost savings;

Commonly, the environmental monitoring or audit of a site will cover all management procedures, operational activities & systems, and environmental issues and will be carried out by the NamPower SHEW section.

## **9. DOCUMENTATION, RECORD KEEPING AND REPORTING PROCEDURES**

It is vital that an appropriate document handling and retrieval system be developed for all EMP documentation. This will ensure that there is adequate EMP documentation control and will facilitate easy document access and evaluation. EMP documentation must include:

- EMP implementation activity specifications;
- Induction records;
- site inspection reports; and
- monitoring reports;

Responsibilities must be assigned by the NamPower responsible persons/contractor to relevant personnel for ensuring that the EMP documentation system is maintained and that document control is ensured through access by and distribution to, identified personnel.

Document control is important for the effective functioning of an EMP. A document handling system must be established to ensure adequate control of updating and availability of all documents required for the effective functioning of the EMP. This procedure applies to the EMP as well as procedures and policies relating to the EMP, which must be controlled (i.e. identified, registered and changes recorded).