



**ENVIRONMENTAL IMPACT CONTROL REPORT  
FOR THE**

**CONSTRUCTION OF TWO (2) 10km 132 KV  
POWERLINES FROM NGWEDI MTS TO THE  
EXISTING BAKUBUNG SUBSTATION AND  
NGWEDI MTS TO EXISTING STYLDRIFT  
SUBSTATION IN BONAJALA DISTRICT OF  
NORTH WEST PROVINCE**

**DEA AUTHORISATION NUMBER:**

**14/12/16/3/1/856**

**MONTHLY REPORT: MONITORING  
COMPLIANCE & AUDIT 1**

**June 2016**

**Commissioned by:**

**Eskom Holdings SOC Limited (North West Operating  
Office)**

**P.O. Box 1903,  
Rustenburg,  
0300**

**Contact Person: Mrs Katlego Mlambo**

**Tel: +27(0) 14 565 1137 Fax: 086 539 6357**

**E-mail: [MotlhaKN@eskom.co.za](mailto:MotlhaKN@eskom.co.za)**

**Prepared by:**

**Shumani SHE Specialists**

**78 Dorp Street,  
Polokwane, 0700**

**Contact Person: Ms Nyasha Mapira**

**Tel: +27(0) 15 297-2410 Cell: +27(0) 79 352 8155**

**Fax: +27(0) 86 2327 476**

**E-mail: [nyasha@shumanishe.co.za](mailto:nyasha@shumanishe.co.za)**



## Table of Contents

List of abbreviations.....	4
1. Definitions.....	5
1.1. Auditing.....	5
1.2. Environment.....	5
1.3. Environmental Aspect.....	5
1.4. Environmental Authorisation.....	5
1.5. Environmental Feature .....	5
1.6. Environmental Impact.....	5
1.7. Environmental Management Programme (EMPr).....	6
1.8. Hazardous Waste .....	6
1.9. Monitoring .....	6
1.10. Pollution.....	6
2. Introduction .....	7
3. Offences and penalties of non-compliance to EMPr .....	8
4. Environmental control measure .....	8
5. Areas of inspections.....	8
6. Environmental aspects.....	9
7. Environmental Induction .....	9
8. Sites of inspection .....	9
8.1. Access to site (Site accessible) .....	9
8.2. Ablution facilities .....	10
8.3. Plant on site .....	11
8.4. Use of PPE .....	12
8.5. House keeping.....	12
8.6. Waste Management .....	13
8.7. Air quality management .....	13
8.8. Spills of oil, fuel and cement.....	13
8.9. Soil and groundwater pollution .....	14
8.10. Vegetation Management .....	14

8.11. Soil Erosion control .....	14
8.12 Safety .....	15
9. Compliance Summary .....	16
10. Recommendation.....	16

## List of abbreviations

<b>Shumani SHE</b>	Shumani Safety Health & Environment Specialists
<b>DWA</b>	Department of Water and Environmental Affairs
<b>ECO</b>	Environmental Control Officer
<b>ECR</b>	Environmental Control Report
<b>EMPr</b>	Environmental Management Programme
<b>NEMA</b>	National Environmental Management Act, 1998 (Act No. 107 of 1998)
<b>EA</b>	Environmental Authorisation
<b>DEDECT</b>	Department of Economic Development, Environment, Conservation and Tourism
<b>DAFF</b>	Department of Agriculture, Forestry and Fisheries

# 1. Definitions

## **1.1. Auditing**

An environmental audit is a methodological examination including tests, checks, and confirmation of environmental procedures and practices with the view of verifying whether they comply with internal policies, accepted practices and legal requirements and the conditions of the EMPr and the EA.

## **1.2. Environment**

The surroundings in which humans exist and which comprise: The land, water and atmosphere of the earth, Micro-organisms, plant and animal life, Any part or combination of all the above said interrelationships among and between them, The physical, chemical, aesthetic and cultural properties and conditions of the foregoing that can influence human health and well-being.

## **1.3. Environmental Aspect**

These are components of the company's activities, products and services that are likely to interact with the environment.

## **1.4. Environmental Authorisation**

Is a written document from the relevant environmental competent authority in terms of the National Environmental Management Act (Act 107 of 1998), with or without conditions, that is an approval of a planned activity and the implementation thereof and the mitigating measures required to prevent or reduce the effects of environmental impacts during the life of a contract.

## **1.5. Environmental Feature**

These are elements and attributes of the biophysical, economic and social environment.

## **1.6. Environmental Impact**

These are changes to the environment resulting from an environmental aspect (an activity) on the environment, whether desirable or undesirable. An impact may be the direct or indirect consequence of an activity.

### **1.7. Environmental Management Programme (EMPr)**

A detailed plan of action prepared to ensure that recommendations for enhancing positive impacts and or limiting or preventing negative environmental impacts are implemented during the life-cycle of a project.

### **1.8. Hazardous Waste**

Any waste that contains organic or inorganic elements or compounds that may cause impacts to the inherent physical, chemical or toxicological characteristics of that waste have a detrimental impact on health and the environment.

### **1.9. Monitoring**

Compliance monitoring is a continuous and systematic process to ensure that the conditions and the requirements in the Environmental Authorisation and Environmental Management Programme (EMPr) are being adhered to.

### **1.10. Pollution**

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

## 2. Introduction

**Shumani SHE Specialists** was appointed by **Eskom** as an independent Environmental Assessment Practitioner (EAP) to conduct an Environmental Impact Control, Monitoring Compliance and Audits so as to give environmental inputs and advices on the construction of two (2) 10km 132kV power lines from Ngwedi MTS to the existing Bakubung substation and from Ngwedi MTS to the existing Styldrift substation in Bojanala District North West province.

This Environmental Management Programme (EMPr) for the construction includes the principles, approaches, procedures and methods that will be used to control, monitor and minimize the environmental impacts of all construction and operational activities associated with the project. It is intended to complement the project's compliance so as to minimise all the social and adverse environmental impacts on site and adhered to the Environmental Authorisation/EMPr conditions.

This report serves as a report back on the contractor's compliance with the EMPr compiled for the construction of the infrastructure. This report constitutes the detailed Environmental Audit Report for the aforesaid development. The project is just beginning and was initiated by a site walk through of the two (2) lines when the surveyor finished pegging. The walk through and inspection as the contractor was on site were conducted by the ECO, **Nyasha Mapira for Shumani S.H.E Specialists on 15<sup>th</sup> , 20<sup>th</sup> and 28<sup>th</sup> of June 2016 on site**. Site inspection was also conducted during the visits, especially the camp site inspection.

### 3. Offences and penalties of non-compliance to EMPr

Any avoidable non-compliance with the conditions of the EMPr is considered sufficient ground for the imposition of a penalty. Possible offence can be:

- Unauthorized damage to natural vegetation
- Hazardous material, negligence spills and leaks of deteriorative substances.
- Lack of sufficient ablution facilities, inappropriate maintenance of ablution facilities
- Inappropriate solid waste management (clean up, collection and separation)
- Excessive cement concrete and contamination of soil
- Insufficient fire control and unauthorized fire onsite

### 4. Environmental control measure

The scope of environmental monitoring audit for this project is limited to compliance to the conditions and requirements of the EMPr. Verification of compliance included the following activities:

- Determining and verifying whether all conditions stipulated in the EMPr and Environmental Authorization (EA) are being adhered to. A checklist based on the EMPr was drawn and is being used for monitoring.
- Determining and verifying whether environmental targets prescribed in the EMPr are being adhered to.
- Determining and verifying whether the implementation of the EMPr has successfully prevented environmental pollution and damage.
- Determining and verifying the overall effectiveness and applicability of the environmental management practices.

### 5. Areas of inspections

- Access to site (Site access and control)
- Ablution facilities (chemical toilets)



- Plant on site
- Use of PPE
- Waste Management
- House keeping
- Air quality management
- Spills of oil, fuel and cement
- Soil and groundwater pollution
- Vegetation Management
- Fauna (killing and hunting or feeding of animals on site is strictly prohibited)
- Soil erosion Control (where the contractor or the resident engineer identify an area susceptible to erosions, rehabilitation must be employed)
- Use of concrete and cement onsite

## 6. Environmental aspects

- Documentation of contractor and the local waste management authority.
- All contractors to establish environmental files which should contain copies of: EA, EMPr and waste management activities records (general waste, ablution).

## 7. Environmental Induction

Environmental induction of the team was conducted by Eskom and the contractor was handed the EMPr and EA at contract signing. The Site Manager must be familiar with the documents and follow the stipulation. The ECO will continue with monitoring compliance and educate the contractor on environmental protection and conservation during the entire construction period. Feasible mitigation measures will be

## 8. Sites of inspection

### 8.1. Access to site (Site accessible)

**Findings:** One contractor is responsible for the construction of the two lines. The site office is at a caravan park. The site provides accommodation for the workers, offices, storage yard and parking space for the vehicles. The storage area is neither fenced, gated nor manned.



**Storage Area**

**Recommendations:** Whilst the accommodation and office area is inside the Lodge premises and is not feasible to fence it, the storage area which is outside the Lodge perimeter fence must be fenced, gated and manned by a security personnel. A visitor's register must be maintained by the security personnel.

## **8.2. Ablution facilities**

**Findings:** The camp site has sufficient ablution facilities including toilets and shower facilities. There are separate facilities for male and female. The team composition is all male. The facilities were not in a hygienic state at the day o inspection. No toilet roll and hand washing soap was available in the toilets. The team working on the power line has not yet started in earnest. No mobile toilet was seen on site.



**Ablution Facilities at the camp site**

**Recommendation:** All toilets should be regularly cleaned to improve and maintain the hygiene condition. Toilet paper and hand washing soap must be available. The two teams working on the power line must have a mobile toilet. A contract agreement with the service provider for the toilets must be availed to the ECO and a copy filed and kept at the site offices. The toilets must be serviced at least twice per week. **Sewer waste must be taken to the nearest municipal sewer works. Proof of such disposal must be sent to the ECO monthly and copies filed at the site office.**

### **8.3. Plant on site**

**Findings:** This is the beginning of the project, the surveyor had just finished pegging the lines. The activity going on was familiarisation with the line and delivering the poles on position. Hence the plant on site include: the caravans for staff accommodation, truck to deliver the poles, bakkies for transportation of the workers and trailers. A container for storage has also been delivered at the camp site storage area.



**Recommendation:** All plant should be investigated before used and in case of oil leakages drip trays must be provided for all standing plants.

#### **8.4. Use of PPE**

**Findings:** All workers were found to be wearing proper PPE.



**Recommendation:** All PPE should be replaced when worn-out. No worker is to be allowed onsite without proper PPE.

#### **8.5. House keeping**

**Findings:** The site is kept in order. Material in the caravan park must be put in the storage yard. Storage areas must be barricaded and labelled accordingly.



**Material in the caravan park area**

**Recommendations:** Different storage areas must be signed and demarcated. Material must be stored in designated areas to maintain order. Nets are neater than barricading tap. Hazardous material must be stored separately in a bunded area with impermeable floors to prevent seepage into the ground.

### 8.6. Waste Management

**Findings:** The camp site has bins in strategic points all over. Empty beer bottles were seen lying around. No litter was seen on the powerline.

**Recommendation:** Keep surrounds of the site office clean by keeping litter and placing in the bins place at strategic positions. The power line team must carry refuse bag to collect all waste and dispose at the camp site temporarily. Waste disposal licences and consent letters must be obtained from Municipality and submitted to the ECO. All records relating to waste management should be stored for verification. Hazardous was must be disposed at a hazardous waste facility.

### 8.7. Air quality management

**Findings:** Access to the camp site and the power line route is by gravel roads. Where spraying is not practical, vehicles must move at speeds as low as 20km/h to minimise dust emission.

### 8.8. Spills of oil, fuel and cement

**Findings:** No evidence of oil nor cement spills was observed during inspection. Oil spill kit is available on site.



**Recommendation:** An accidental spillage respond report should be prepared for spillages. The area need to be cleaned up. Oil spillage should be avoided at all costs as they degrade the soil. Service equipment, do daily checks, put drip trays under all standing equipment and clean-up any contamination. The principle is avoid, minimise, mitigate and clean-up in that order. Contractor should make use of accidental spillage respond kit to clean minor spillages onsite.

### **8.9. Soil and groundwater pollution**

**Findings:** No soil and ground water pollution was observed on site.

**Recommendations:** As above.

### **8.10. Vegetation Management**

**Findings:** Vegetation clearance for the corridors has not yet started. However during walk through of the power lines, the ECO observed some fire wood cutting practice outside the corridor. This was noted as current and prevailing practice in the area.

No protected trees were identified within the corridors hence no need for tree cutting licences.



**Recommendation:** Only clear vegetation within the project footprint and were it is necessary. No vegetation must be cleared at river crossings within the riparian zone. Avoid disturbing the Elands riparian zone as much as possible. Trim were necessary.

### **8.11. Soil Erosion control**

No evidence of erosion due to the power line construction activity was noted.

**Recommendations:** However the area is erosion prone especially along water ways. Hence due care must be taken to prevent further erosion especially at poles at the edges of waterways and pans on both lines. Designated access roads must be followed by the construction team. Cross the waterways at designated crossing points. Avoid sensitive areas such as water ways when creating access roads as much as possible. Consultation and approval from the ECO and Eskom Environmental Officer must be sort before opening an access road.

### **8.12 Safety**

All workers must have Personal protective Equipment (PPE). PPE being used includes work suits, safety shoes, hard hats, gloves, dust mask, goggles and ear plugs. Workers have been observed using the appropriate PPE for tasks at hand.

Firefighting equipment and first aid boxes must be on site. The team must have a First Aider and a Safety Representative. Risk assessment must be done with the team members daily.

The emergency information table must be available and displayed at camp site.

## 9. Compliance Summary

The Contractor shows general **compliance** to the conditions of the EA and the EMPr compiled for the project during inspections and the reporting stage. This level of compliance is not acceptable. A more detailed assessment will be undertaken taking into account all aspects as the project start in earnest. A numerical figure of compliance will be included in the report then. Some environmental compliance recommendations are being observed in the camp site and construction site. The EMPr document is present onsite and is used as a point of reference. The Site Manager have an understanding of the development impact and the mitigation measures recommended in the EMPr.

## 10. Recommendation

Environmental awareness induction was conducted for the construction teams. Environmental awareness should be included into tools box talks that safety representative conduct with the employees. This should be done regularly to remind the workers of environmental awareness issues that need to be adhered to during construction. All construction sites should be provided with chemical mobile toilets and clean drinking water. Service providers for the chemical mobile toilets should provide the contractor with disposal documentation from local authority.

General waste disposal should be done in a local authorised facilities and records of such actions stored in the environmental file for verification. Under no circumstances contractor will burn waste material accumulated onsite as this is strictly prohibited. **All noted environmental aspects should be resolved before the next site meeting failure to do so will entail stoppage of work.**