

	SCOPE OF WORK	Lethabo Power Station
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Title: **Supply of Coal Reference materials for a period of 5 years on an as and when required basis, at Lethabo Power Station**

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1. INTRODUCTION

This scope of work defines the process which will be followed to supply Chemical Services Coal Laboratory with Coal Reference Materials for a period of 5 years, on an as and when required basis at Lethabo Power Station.

2. SUPPORTING CLAUSES

2.1 SCOPE

This procedure deals with the method to supply Coal Reference materials for a period of 5 years on an as and when required basis, at Lethabo Power Station.

2.1.1 Purpose

The aim of this document is to determine the process which must be followed to supply Coal Reference materials for a period of 5 years on an as and when required basis, at Lethabo Power Station.

2.1.2 Applicability

This document shall apply to Chemical Services, Eskom Lethabo Power Station and the Contactor.

2.2 NORMATIVE/INFORMATIVE REFERENCES

2.2.1 Normative

- Procurement Strategy

2.2.2 Informative

- ISO 9001

2.3 DEFINITIONS

None

2.3.1 Classification

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

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2.4 ABBREVIATIONS

- COA - Certificate of Analyses
- PPE - Personal protective equipment
- SOW - Scope of work
- CRM - Certified Reference Material
- CSM - Chemical Services Manager
- ARM - Accredited Reference Material

2.5 ROLES AND RESPONSIBILITIES

The overall responsibility for ensuring that the content of this procedure is followed shall lie with Contract Manager, Supervisor and Technician.

Contractor

- All contractors shall work within the parameter of the job description and scope of work. To keep all instructions/ procedures on hand and supply Eskom power station with reference to be included in this document and supply record and history requirements.
- Must perform work to the highest standard and regarding to the safety regulations, hold points and notify Eskom Supervisor/ Contract Manager when work is completed.

Contract Manager

Ensure that:

- All workers have appropriate PPE.
- All workers are familiar with the risk assessment, safety precautions and hazards.
- The work is carried out by authorised or competent person.
- Ensure that all documents are accurately completed and signed before doing service entry on SAP.
- Oversee all the operations in work package.

Technician

- Must do proper stock control inspections to identify when stock needs replenishment and keep the records.
- The Technician is responsible for the on-job technical clarifications to the contractor.
- Ensure Coal Reference Material delivered are quality checked and the records are kept.
- Must maintain the system after ad hoc delivery by the contractor following the approved quality control plan.

2.6 PROCESS FOR MONITORING

- Scope of Work approval process
- Procurement Strategy Approval process
- Internal Audits
- Quality control Graphs

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2.7 RELATED/SUPPORTING DOCUMENTS

- Quality control records

3. SCOPE OF WORK

3.1 Supply of Coal Reference materials for a period of 5 years on an as and when required basis, at Lethabo Power Station Station.

Scope description, purpose and applicability

Supply of Coal Reference materials for a period of 5 years, on an as and when required basis, at Lethabo Power Station to enable proper operation to ensure quality of results.

3.2 Reference Material types and functional locations

This work is applicable to the following Coal Reference Materials:

Location	Type
Chemical Services Coal Laboratory	Coal Pulp Reference Material (assigned dry base values falling within value ranges as stated in SOW)
Chemical Services Coal Laboratory	Coal Reference Material for Abrasiveness Index (assigned values falling within value ranges as stated in SOW)
Chemical Services Coal Laboratory	Coal Reference Material for Hardgrove Index (assigned values falling within value ranges as stated in SOW)
Chemical Services Coal Laboratory	Set of 4 Coal Reference Materials to be used for Hardgrove Index calibration: (assigned values falling within value ranges as stated in SOW)

3.3. Detailed scope of Work

- Frequency of supply will be as and when required by Lethabo PowerStation, Chemical Services ,Coal Laboratory.
- Coal Reference Materials to be delivered to Chemical Services, Coal Laboratory, Lethabo Power Station.
- Certified values of Coal Reference Materials are to be provided by a competent producer accredited to ISO 17034.
- Certificate of analyses (COA) to be provided with the Coal reference material. COA to be in English

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3.3.1. Coal Pulp Reference Materials:

- Assigned dry base values must fall within value ranges as stated below;
- Coal Pulp Reference Materials must be a Certified Reference Material (CRM) or Accredited Reference Material (ARM);
- Coal Pulp to be -212µm, <60 mesh;
- Packaging: 200g Coal Powder, packaged in an opaque sealed container;
- Coal CRM/ARM assigned values are to be traceable to a network of competent laboratories using validated test methods;
- Certified values obtained for Coal CRM/ARM to be conducted and based on the latest version as per ISO standards below:
 - ISO Volatile matter (%) - ISO 562,
 - ISO Ash (%) - ISO 1171 and
 - Calorific Value (MJ/kg) - ISO 1928.
- Assigned Dry base values to be indicated on COA and must to fall within value ranges as stated below:
 - ISO Volatile matter: 20-23%;
 - ISO Ash: 38-42%;
 - Calorific Value: 15-18 MJ/kg.
- Standard deviation and Uncertainty of measurement to be noted for Dry Base values on COA.

3.3.2. Coal Reference Material for Abrasiveness Index:

- Assigned value must fall within value range 450-500mgFe
- Coal Reference Material for Abrasiveness Index may be a Standard Reference Material or a Certified Reference Material (CRM) or Accredited Reference Material (ARM)
- Top size to be less than 4.75mm, greater than 600µm
- Packaging: 10kg Coal
- Measurement of Uncertainty in mgFe to be provided on COA.

3.3.3. Coal Reference Material for Hardgrove Index:

- Assigned value must fall within value range 60-64 units
- Coal Reference Material for Hardgrove Index may be Certified Reference Material (CRM) or Accredited Reference Material (ARM);
- May not be of the same batch as HGI ARMs used for calibration of HGI
- Sample size: <1.18mm, >600 µm
- Packaging: 1kg Coal
- Measurement of Uncertainty to be provided on COA.

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3.3.4. Set of 4 Coal Reference Materials to be used for Hardgrove Index (HGI) calibration:

- Assigned values for set of 4 HGI ARMs must fall within value range 40-110 unit.
- Acceptable ranges for each of the 4 HGI ARMs will be about 40,60, 80 and 110 units as per SANS 5074 or closest available HGI reference material values available, in order to make a set of four.
 - HGI ARM/CRM at 40-42 units
 - HGI ARM/CRM at 52-60 units
 - HGI ARM/CRM at 65-80 units
 - HGI ARM/CRM at 90-110 units
- Coal Reference Materials for Hardgrove Index may be Certified Reference Material (CRM) or Accredited Reference Material (ARM);
- Sample size: <1.18mm, >600 µm
- Packaging: 1kg Coal
- Measurement of Uncertainty to be provided on COA.

4. AUTHORISATION

This document has been seen and accepted by:

Name	Designation
Kutlwano Mahlangu	CSM

5. REVISIONS

Date	Rev.	Compiler	Remarks
20/10/2025	00	Annalize Wentzel	None
24/10/2025	01	Annalize Wentzel	Added: COA to bein English

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