 Eskom	Scope of work	Camden Power Station
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Title Coal sampling, preparation and analyses of Coal delivered to Camden Power Station for a period of 36 Months

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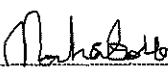
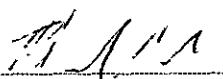

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Compiled/Reviewed by	Supported by	Authorized by
		
M. M. M. M.	M. M. M. M.	M. M. M. M.
Snr Sup Tech Chemistry	Snr Chemist Inst Chemist	Chemical Services Manager
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1. Introduction

Coal is the combustible sedimentary rock that is made of organic and inorganic fractions. "Sedimentary rock" – rock formed by the deposition of sediments transported by water and wind

Camden Power Station receives coal from different Suppliers, and as coal is received it is stored on the stockpile until required in the power station. The coal is sampled at the conveyor belt (18) for analysis using an automated sampler. Manual Sampling for Conveyor E1 at the front-end loader.

Sampling It is the process or technique of selecting a representative part of a population for the purpose of determining parameters or characteristics of the whole population.

Sample preparation refers to the ways in which a sample is treated prior to its analysis. Sample preparation is a very important step in most analytical techniques, because the techniques are often not responsive to the analyte in its in-situ form or the results are distorted by interfering species.

Analysis Is the process of breaking a complex substance into smaller parts in order to gain a better understanding of it. Or it is a detailed examination of a complex substance in order to gain a better understanding of it. We analyse coal to check if the coal qualities are within the specifications so that it can be accepted or rejected.

1.1 Scope

1.1.1 Purpose

The purpose of this document is to stipulate the process of handling coal samples as they arrive at the coal laboratory, up to the point where they are discarded.

1.1.2 Applicability

Camden Chemical Services

1.1.3 Effective date

Date of Authorisation

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1.2 Normative/Informative References

1.2.1 Normative

- [1] ISO 9001 Quality Management Systems
- [2] Coal Manual sampling SANS18283
- [3] ISO 17025
- [4] SANS18283

1.3 Roles and Responsibilities

Supplier Responsibility

- Supplier will be responsible for attending Chemical Service Monthly meeting, Safety Representative will be responsible to attending Camden Central SHE meeting
- Supplier will be responsible for Sampling, Transporting, Preparation, and analysis of coal samples
- Reporting the reports on time
- Complying to Eskom Safety Requirements

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1.4 Process for Monitoring

17025 Accredited laboratory will be required to perform the following

1 4 1 Sampling and sample Preparation

1 4.1 1 The sampling must be done to ensure that representative sample is collected either by manual or mechanical sampling (incremental sampling) as per ISO 18283 or ISO 13909

1 4 1 2 The samples must be prepared in accordance with the latest issue of ISO 13909.

1.4 1.3 The following will be required when doing preparation

- A Pulp sample for proximate analysis
- B Hard grove Index
- C Abrasive Index
- D Total Moisture
- E Split sample will be used for size analysis (PSD)

1 4.1 4 Particle size distribution (Size analysis) shall be done on the following screen sizes

- A +40mm
- B +26 5mm
- C +19mm
- D +13 2mm
- E. +6 7mm
- F +3 35mm
- G. +1mm
- H. -1mm

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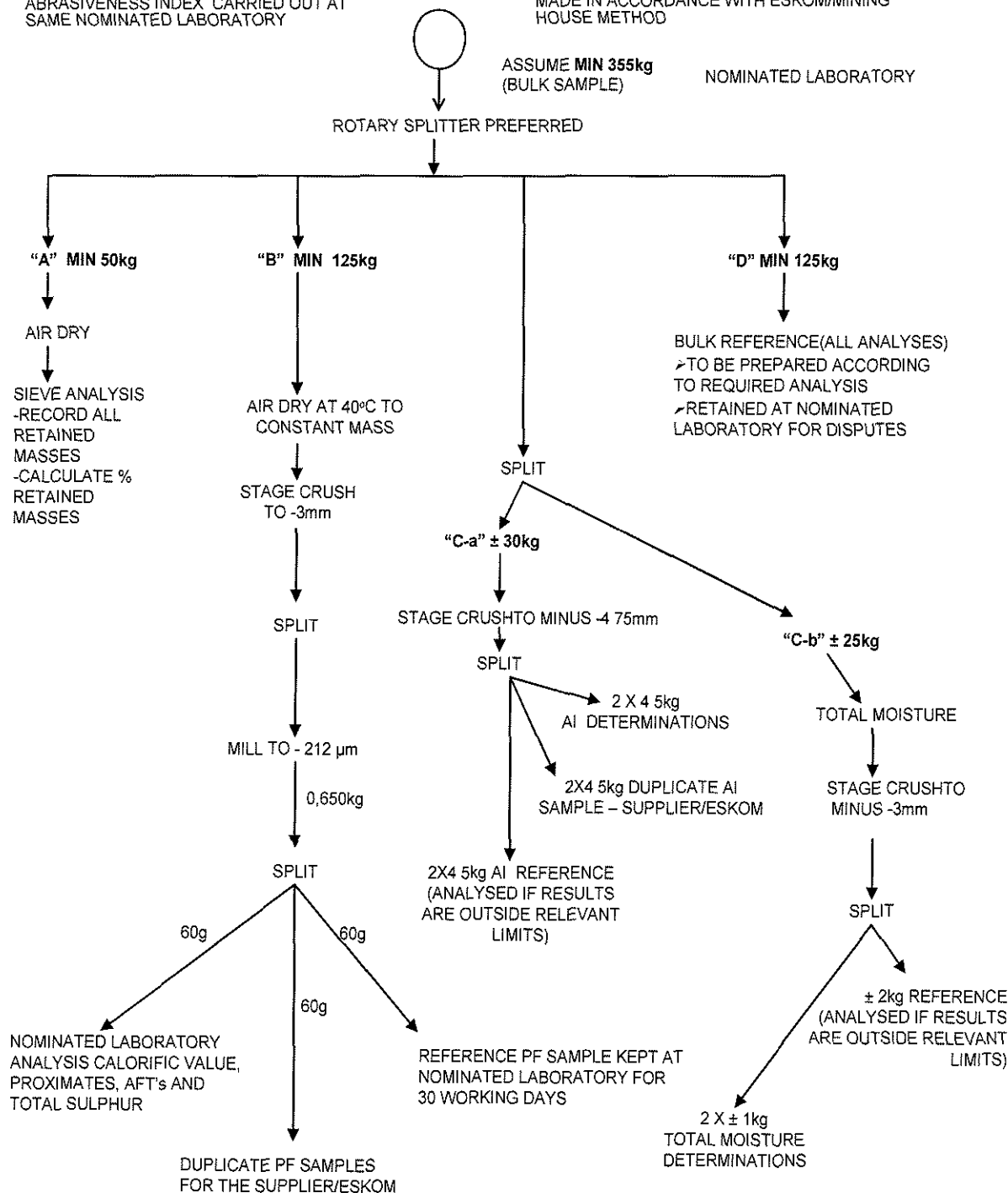
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Sample Preparation: Coal with 40mm Nominal Top Size

- BULK SAMPLE COLLECTED MANUALLY OR AUTO MECHANICALLY
- MAJORITY OF SAMPLE PREPARATION AND ANALYTICAL DETERMINATIONS CARRIED OUT AT NOMINATED LABORATORY (MUTUALLY AGREED UPON BY ESKOM AND SUPPLIER)
- PREPARATION OF SAMPLES AND DETERMINATION OF ABRASIVENESS INDEX CARRIED OUT AT SAME NOMINATED LABORATORY

- SAMPLE PREPARATION CARRIED OUT IN ACCORDANCE WITH ISO 18283
- ANALYTICAL DETERMINATIONS MADE IN ACCORDANCE WITH RELEVANT ISO METHODS
- ABRASIVENESS INDEX DETERMINATIONS MADE IN ACCORDANCE WITH ESKOM/MINING HOUSE METHOD



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1.4 1.5 Pulverised sampling will be split into two samples, 1 sample will be delivered to Camden coal laboratory and the other will be analysed by the approved laboratory

1 4 2 Trucks sampling and analysis

Trucks sampling will be done on the bases of as and when required

Full analysis will be required, and results reporting should be done in the next 72 hrs

1 4 3 Ad hock Moisture analysis

Adhoc Moisture analysis will also be done on the basis of as and when required

(This is the analysis of Mills and conveyer samples) Moisture analysis will be done on site

1.4 4 Sample transportation

Eskom will not be responsible for transportation of coal from Camden site to the laboratory
Approved Laboratory will take transport responsibility

1 4 5 Coal Sample Analysis.

1 4 5 1 The following analysis will be performed on the samples

- A Calorific value
- B Total Sulphur
- C Total moisture
- D. Ash Fusion Temperatures
- E Abrasive Index
- F. Hard grove Index
- G particle size analysis

1.4 5.2 All Analysis will be done in according to the latest approved ISO standards

1 7 5 2 Analysis will be done using 17025 SANAS Accredited laboratory

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1.4.6 Reporting of Results:

1.4.6.1 Analysis and sampling will be done daily according to the appropriate ISO requirements

1.4.6.2 Reporting turns around will be 24 hrs after receiving the sample

1.4.6.3 Results will be communicated Electronically

2. Revisions

Note: Start with the latest Revision History in the first row and go backwards

Date	Rev.	Compiler	Reason for change
19/07/2022	1	HB Makhakela	Compiling Coal contract

3. Development Team

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

- ~~_____~~
- ~~_____~~
- ~~_____~~
- ~~_____~~
- ~~_____~~

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