

 Eskom	Scope of Work	Camden Power Station
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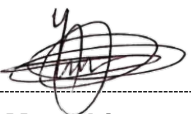

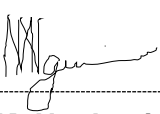
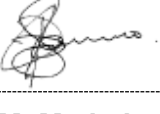
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## **1. Introduction**

This document details all the maintenance work that needs to be done with regards to Ash and Coal plant equipment at Camden Power Station.

## **2. Scope**

The scope is limited to Ash and Coal plant equipment at Camden Power Station.

### **2.1.1 Purpose**

The purpose for this scope of work is to define the requirement for the maintenance, repairs and services of Ash & Coal plant equipment.

The objective of this contract is for the Contractor to provide maintenance inspections, repairs and service/overhaul of Ash and Coal plant equipment at Camden Power Station on a full time basis.

### **2.1.2 Applicability**

This document applies to the contractor who will be executing maintenance, repairs and services of Ash & Coal plant equipment

### **2.1.3 Normative References**

- [1] <http://mbsa.eskom.co.za/PMTemplates/MainTStrategy> - Maintenance Execution Strategy for Coal Handling Plant
- [2] <http://mbsa.eskom.co.za/PMTemplates/MainTStrategy> - Maintenance Execution Strategy for Coal Handling Plant
- [3] 004 9646 - Operating Technical Specifications Coal Plant Rev 02
- [4] 004 9645 Operating Technical Specification Ash handling Plant Rev 03
- [5] ISO 9001 Quality Management Systems
- [6] PSR & ORHVS
- [7] Safety Entry regulations
- [8] SANS 1313-1:2012 - Conveyor belt idlers Part 1
- [9] SANS 1313-3:2012 - Conveyor belt idlers Part 3
- [10] SANS 1669-1:2005 - conveyor belt pulleys Part 1
- [11] SANS 1669-2:2005 - conveyor belt pulleys Part 2

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#### 2.1.4 Informative References

- [1] Occupational Health and Safety Act 85 of 1993  
[2] Doc No 004/4830 Camden Power Station Safety, Health and Environment Specification.

#### 2.1.5 Abbreviations

Abbreviation	Explanation
ECSA	Engineering Council of South Africa
ISO	International Organization for Standardization
QCP	Quality Check Procedure
CBM	Condition Based Maintenance
EOD	Electrical Operating Desk
PSR	Plant Safety Regulations
SOW	Scope of Work
RP	Responsible Person
HVR	High Voltage Regulations
PTW	Permit to Work
WM	Works Management

#### 2.2 Roles and Responsibilities

**Common Plant Engineering** – Is responsible to draw up the scope & set-up an Ash & Coal Plant maintenance contract as per terms set-out in the SOW

**Common Plant Maintenance** – Is responsible to review the scope for the maintenance contract

**Procurement** - Is responsible to ensure that the procurement process is properly followed in setting up the Ash & Coal plant maintenance contract

#### 2.3 Process for Monitoring

Procurement ensures that maintenance contract is set-up according to the terms given in the SOW

#### 2.4 Related/ Supporting Documents

N/A

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### 3. Scope of Work

The work consists of maintenance inspections, repairs and service/overhaul of Ash and Coal plant equipment at Camden Power Station on a full time basis.

- The contractor is expected to take permits as per the plant safety & HV regulations. The contractor must have responsible persons for each activity during normal working hours and on standby (and for multiple activities when required by the client, if it is deemed to be safe)
- The contractor is further expected to liaise on a daily basis with the operating contractor to plan work and to optimize the availability of the plant
- The contractor must have representation in the maintenance meeting as well as in the production meeting
- The contractor shall issue new PPE to employees when it is no longer effective. All PPE and masks must be SABS approved.
- The contractor shall provide suitable facilities (e.g. Lockers) for employees.
- The minimum wage must be paid to all employees and will be audited from time to time. Only allowable deductions are allowed e.g. Deductions for the provision of PPE will not be allowed.

#### 3.1 MAINTENANCE REQUIREMENTS

The Contractor to conduct routine inspections, mechanical repairs and inspections in accordance with the details and inspection frequencies on maintenance strategy, defects loaded on SAP system. Contractor will be requested by the client to do plant modifications as per engineering instruction.

All work should be executed by qualified and trained personnel using the correct tools and equipment to ensure a reliable plant. Quality inspections to be done on all critical tasks with Eskom personal signing it off.

##### 3.1.1 Maintenance Scope and Philosophy

The maintenance contract requires that the ash plant systems and coal plant systems are maintained according to a defined maintenance programme developed by the Employer. With each and every system the planned maintenance activities are listed with periods at which stage the activity is to be carried out. The scope of work will focus on a specific plant area & equipment. This programme is dynamic and the Contractor will be responsible for it being updated according to the maintenance strategy.

The Contractor will perform the following Mechanical maintenance according to Employer approved schedules.

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**a) Running maintenance/ Inspections**

Running maintenance/ inspections is seen as the weekly/daily walk downs that will be done by the Contractor. During these walk downs qualified & experienced artisans will do inspections while the plant is in operation. All defects or potential failures will be recorded in SAP as a base for recording. The Inspections will be documented by the Contractor, complete paperwork and load defects.

The defects will be listed and corrective actions will be planned according to the priority of the defects. The detailed planning of critical/major activities, together with QCPs and risk assessments will be done by the Contractor and approved by the Contract Supervisor. Where Permits to Work are required, the work will be planned with the Production Manager of Camden Power Station via the Common Plant maintenance personnel.

**b) Planned maintenance**

Planned maintenance schedules initiated by Employer will be followed to prevent any potential breakdowns or failures of equipment. These Maintenance Schedules will be generated from the SAP PM system and consists out of daily inspections, weekly inspections, Monthly & Quarterly, yearly activities and as required.

**c) Corrective Maintenance**

All unpreventable and unforeseen plant failure occurrences, replacement of damaged equipment.

**d) Condition based maintenance**

The purpose of the maintenance strategies and Condition Based Maintenance is to enable the monitoring of the physical condition and potential failure modes of equipment. Plant performance performs most of the Condition Based Monitoring.

The list of CBM work orders will be included in the above-mentioned list of planned maintenance schedules.

**3.1.2 QCP's, Safe Work Procedures and Job Observations**

- Contractor to develop and submit for approval QCP's
- QCP's with action plans, safe work procedures and job observations shall be produced at the request of the Employer.
- QCP's must be signed and approved by quality controller, engineer and ash and coal Supervisor.

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### 3.1.3 Works Management Process

Planning will be done on a daily basis between the employer and the contractor. The daily plan will include corrective and planned maintenance schedules.

When a particular task requires pre-planning, the employer may request a program from the contractor. The program to be submitted with all the activities specified in the scope of work, indicating at least the following:

- Timeline of each activity,
- Working calendar (number of work hours per day, days per week),
- All known interfaces with other activities of the Employer or Others, including scaffolding, lagging, electrical and instrumentation work.

Updating of the plan for the works will be done daily; more regular updating may be required. The employer will be entitled to change the plan at any time as and when other tasks take precedence.

An activity for which a Corrective or Planned maintenance schedule has been issued, will only be recorded as complete when the SAP work order issued for this activity is submitted with all relevant details, signatures and returned to Works Management for SAP loading

The Employer has a planning system called SAP PM, which records all corrective maintenance identified and all planned maintenance schedules. All the Employer's documentation will be used in each and every activity performed on the respective plant with accurate information of the required actions undertaken to restore the system back to working condition. All PM's completed to be verified and approved by Ash and Coal Plant Supervisor. All man-hours, staff used, material used, corrective or planned actions taken must be recorded on the corrective maintenance (CM) or planned maintenance (PM) documentation which is forwarded to WM for recording.

Camden Power Station reserves the right to do quality checks at any time. It will be the philosophy of this contract that if a problem is identified while carrying out an inspection, a defect is raised to rectify the problem as corrective maintenance.

The client planners will undertake all scheduling activities, corrective maintenance is catered for in the same way.

This contract is for both planned (PM) and unplanned corrective maintenance (breakdowns) and stand-by personnel should be provided for such.

Response time for call-outs after hours (Monday until Friday), over weekends and all public holidays will be one (1) hour from the time the call has been received by the Contractor. Standby lists are to be given and updated at EOD via the Contracts Supervisor. Stand-by and call-out costs are included in the monthly contract amount.

Ash and Coal spillage is viewed to be very important for plant housekeeping and should be actioned as one of the top priorities, any maintenance work related to Ash and Coal spillage to be addresses with urgency.

This contract includes PTW requirements for outside Contractors excluding specialized work for the Ash Plant equipment and Coal Plant equipment, e.g. Belt splicing, new project work.

The contractor will be required to create access for other partners at Ash and Coal plant e.g. Removal & installation of motors, lifting of conveyor counter weight

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Contractor is required to submit a task plan to the supervisor for each planned or breakdown activity, subject to approval by production, planners or managers

### **3.1.4 Spares Management**

The Contractor will contribute to spares management by timeously providing detail of the spares required to the contract supervisor, conduct stores walk-down to identify zero stock levels/obsolete spares and cataloguing critical spares.

### **3.1.5 Experience**

Skills required Experienced and Qualified:-

- Site-Manager
- Supervisors
- Safety officers
- Mechanical artisans
- Alignment Technicians
- Fitter & Turners
- Riggers
- Boiler makers
- Welders
- Semi-skilled workers
- Equipment operators (yellow plant)

*Support Structure:-*

- Drivers (bus/taxi/bakkie)
- General workers

NOTE: Contractor will be responsible for compiling the scope, programme and resource allocation in the entire task given to them and to ensure that all equipment and tools needed to execute that task are available example, rigging equipment which includes slings, crawls, chain blocks, electric hoists up to 5 tons. Machine tools like centre lathe tools for machining, milling machine, grinding machine and portable equipment like grinders drill bits sockets etc.

Contractor to ensure availability of Mobile equipment and drivers on a full-time basis, example, telescopic handler, excavator, fork lift and mobile crane for execution of pipe work and working at heights.

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Contractor to ensure that their employees are trained to operate above mentioned machines and mobile equipment. Basic rigging will be attended by all artisans since their plant requires rigging in most of the activities

### **3.1.6 Plant Safety Regulations**

The Contractor shall do permit application and verify isolations in the plant from all sources of danger as described in the PSR and High Voltage Regulations.

The Employer shall, on request make available a copy of the latest revision of the PSR & HV regulations to the Contractor.

The Contractor shall conform to all rules and regulations applicable to PSR & HV Regulations & requirements and shall complete the Worker's Register prior to working on the plant.

The Contractor shall provide persons at all times who are authorised as a responsible person according to the Plant Safety regulations & High Voltage Regulations respectively for accepting of Plant Permits. It is required that a minimum 50% of the qualified workforce to be authorised. These persons will be required to attend and pass a theoretical course as well as satisfy the examining committee that he is competent before being authorised. Similar authorisations of other Business Units will not be applicable. The RP's shall be authorised for both Ash plant & Coal Plant

### **3.1.7 Drawings**

All drawings detailing the ash plant systems and conveyor plant systems are available from the Camden Power Station Documentation Centre.

### **3.1.8 Rigging Equipment**

The *Contractor*:

- To provide rigging equipment and tools
- To ensure availability of lifting equipment at all times
- To provide module lifting equipment
- Ensure that all rigging equipment are operational and functional at all times.
- Do monthly inspection on own lifting equipment
- Yearly load test on all Eskom lifting equipment will be done by a separate *Contractor* approved by the Eskom common plant.
- Will be responsible for the load testing of his own lifting & rigging equipment.
- Will be responsible to repair or replace own defective lifting equipment

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### **3.1.9 Alignment**

- Contractor to conduct pre-alignment and alignment of Ash and Coal plant equipment
- Contractor to provide alignment equipment and tools (shims)
- Contractor to ensure alignment equipment is calibrated and available at all times
- Contractor to supply client with alignment report/results after completion of work

## **3.2 Coal Plant Maintenance**

The maintenance of the Coal Handling plant involves all Coal conveyors and all their subsystems and components. These subsystems and components may include the following and more:

- All Gearboxes
- All Fluid Drive Couplings
- All Rigid Couplings
- All Gravity Take-up systems and their subsystems
- All the Coal Plant chutes and their subsystems
- All the pulleys and their subsystems
- All the Tripper Cars and their subsystems
- All the Skirting Rubbers
- All the Idlers
- All the Belts
- All the magnet separators and their subsystems
- All the Sampling Hammers and their subsystems
- Sump pumps

### **3.2.1 Conveyor Belt Repairs/replacement**

The Contractor will pull in and clamp any belting or part thereof that may require repair or replacement as well as prepare such jobs so as to allow others to perform splicing, repairs or re-lagging activities.

### **3.2.2 Gearboxes**

The Contractor inspects all gearboxes as per maintenance strategy requirements:

Oil leaks, Excessive operating temperature, Loose bolts, and replaces: Worn seals; Defective bearings.

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The Contractor performs maintenance as per condition monitoring report as-and when required on all gearboxes, performs fault diagnosis when Faults are detected: and tops-up oil, whenever necessary.

The Contractor, furthermore, greases all backstops and anti-run back devices on all drive gearboxes on a weekly basis.

### **3.2.3 Pin-bush and fluid drive couplings**

The Contractor inspects as per maintenance strategy requirements for uneven running due to damaged components, remove covers and inspect for faulty couplings, inspect for uneven running, due to misalignment and non-functional fusible plugs (fluid-drive), due to low oil level or overload.

The Contractor:

Realigns where necessary; and Replaces coupling or damaged components, where necessary. Check oil levels and top-up as required

### **3.2.4 Holdback Units**

The Contractor inspects as per maintenance strategy requirements:

Performs visual inspections and Inspects oil levels regularly and re-fills, if and when necessary.

The Contractor, as per maintenance strategy requirements:

Inspects for oil leaks; and Replaces seals, where necessary; does oil changes to the unit: Visually inspects backstops and labyrinth seals for damages and or faults:

The Contractor monthly cleans internals with degreasing agent and inspects stop lugs for wear/damage. If lugs are damaged/ worn, replace with new. (Never use grease for internal lubrication of backstops).

### **3.2.5 Conveyor Idlers**

The Contractor daily inspects for:

Bearing noise, worn shells, broken bases, material build-up, replaces worn or defective idlers.

Idler frames are marked/ labelled by the Contractor for unique identification for idler replacement purposes

### **3.2.6 Pulleys**

The Contractor to inspects as per maintenance strategy requirements:

Noisy bearings or bearings running at high temperature, remove crown caused by material built up on pulleys.

The Contractor: Replaces worn bearings, faulty seals and replaces pulley if necessary.

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If the lagging is damaged it needs to be replaced, the contractor needs to create access for the lagging contractor by lifting counter weight & obtaining PTW. Lagging is done by a separate Contractor appointed by Eskom.

The Contractor lubricates all bearings in accordance with the accepted planned maintenance schedule.

### 3.2.7 Routine Belt Maintenance

The Contractor visually inspects all conveyor as per maintenance strategy requirements.

The following faults need special attention:

Belt misalignment: In such event, the Contractor immediately trains the belt.

Splice separation: In such event, the Contractor immediately adjusts the scraper or repairs the splice. If splices start to pull apart, the complete splice must be replaced. Belt splices will be done by a separate Contractor approved by the Project Manager. In the event of no belt splice available the contractor will be required to clip-joint the belts to allow continuation of production while proper planning of belt splice is being done.

The contractor needs to do root cause analysis or fault finding to determine and correct any further conveyor belt damages.

#### Belt Splicing

The contractor needs to create access for the splicing contractor by lifting counter weight & obtaining PTW. All conveyor belt splices are done by a separate Contractor with approval from Eskom Common Plant Maintenance.

Damaged splices need to be cut-out and kept for analysis purposes. Damaged or cut out conveyor belt pieces must be removed by the Contractor and taken to the Employer's facility for scrap conveyor belt.

#### Scrapers

The Contractor inspects as per maintenance strategy requirements for improper belt cleaning by scrapers. In such an event the Contractor:

- Replace the blade when worn/damaged
- Adjusts blade tension.
- Ensures when tensioning the scraper that damage to conveyor belt is avoided.

#### Rubber skirting

The *Contractor* inspects as per maintenance strategy:

Inspect for material build up, cuts, out-of-position and gaps.

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In the event of any abnormalities, the contractor will take the necessary corrective actions, create a defect and record of feedback.

Adjusts skirting to prevent spillages or replace damaged skirting rubbers.

### Chutes

The Contractor inspect as per maintenance strategy requirements:

- For Coal build-ups
- Inspects chute liners for wear and erosion and repairs if necessary
- Inspects for missing liner fastener caps and replaces if necessary
- Repair worn-out chute plates

Replacement of chute tiles is done by a separate contractor,

The contractor will be required to create access and obtain PTW for the tilling contractor

### Counter weight

The Contractor inspect as per maintenance strategy requirements:

In the event of any abnormalities, the contractor will take the necessary corrective actions, create a defect and keep record of the incidents.

The Contractor repairs any failures.

The sheave wheels are greased

### Movable chute and floppers

The Contractor

- Inspects rails for deformation as per maintenance strategy requirements and aligns if necessary.
- Inspects tripper car as per maintenance strategy requirements and aligns if necessary.
- Inspects wheels for shape and functionality as per maintenance strategy requirements.
- Inspects and function checks the effective operation of the actuator once as per maintenance strategy requirements.

### Pulley guards

The *Contractor* inspects as per maintenance strategy requirements:

- That all safety guards are in position.
- The guard condition - repaired when loose or broken.
- That all guards are properly secured and that guards comply with legal requirements

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### 3.3 Ash Plant Maintenance

The *Contractor* will perform maintenance according to Employer approved schedules.

The contractor will be responsible for maintaining the ash handling and ash water return plants to the standards specified by Eskom.

Maintaining will include:

- All pumps (Ash, sluice, hopper & seal)
- All pipes
- All valves, NRV's, air release; gearboxes
- Hoppers from slide-gate downwards - including slide-gate (FFP plant and economisers)
- Sluice way Nozzles, pipework & lifting liners
- Sumps, nozzles and pipework
- Ash crushers
- Barge pumps including foot valves, pipe work and valves

#### 3.3.1 FFP plant

The Contractor to inspect as per maintenance strategy requirements

FFP Plant includes the slide gate, square to round, nozzles and ventury pipes and all this will be maintained by Contractor.

The removal or repairs of the gratings within FFP plant and Ash plant, sluice way will also be their responsibility.

All valves including pipework maintenance inside the FFP plant and from the main supply lines will be maintained by Contractor.

#### 3.3.2 Pumps

All pumps in ash plant Camden Power station will be maintained by contractor as per the OEM's manual and as per the maintenance strategy of the ash plant.

Contractor to

- Inspect and service pumps
- Conduct fault finding on all pumps to determine cause of recurring failures
- Remove and replace pumps for maintenance requirements
- Rebuilt pumps when required by client
- Do alignment or repairs as per condition monitoring findings

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### 3.3.3 Ash plant valves & gearbox

The Contractor to maintain valves & gearboxes as per the maintenance strategy and as per the OEM's manual

All the valves & gearboxes in the ash plant, including AWR and sluice system will be maintained and repaired by Contractor

Contractor to Inspect and rebuild valves

Remove and replace valves

Repair valves & gearboxes

### 3.3.4 Ash plant pipe-work

The Contractor to inspect as per maintenance strategy requirements

Contractor to ensure all pipe-work in the ash plant including ash lines will be inspected for wear and planned accordingly to avoid further deterioration of the pipes.

Contractor is required to paint Ash plant pipework as per client requirements

Ultrasonic thickness measurement inspection performed to determine the internal condition and remaining thickness of the piping components is to be done by contractor

Equipment used to inspect the pipe wall thickness or deterioration will be supplied by contractor as part of the service execution.

Ash lines will be rotated as per the ash line strategy and a programme of rotation will be submitted to Common Plant Offices by Contract Site Manager on how and how long will the rotation activity will be completed and indicating all resources need to complete the task.

### 3.3.5 Ash Crushers

The Contractor to inspect & Service Crushers as per maintenance strategy requirements

Remove & Replace worn components

Do fault finding

Press flywheel bush on crusher

Contractor to supply pressing machine

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### 3.3.6 Sluice & sump agitation system

The Contractor to inspect & repair sluice & sump agitation system as per maintenance strategy requirements

Inspect for nozzle blockages and wear

Remove & replace worn out nozzles and pipework

### 3.3.7 Ash water Return System

The Contractor to inspect & service AWR system as per maintenance strategy requirements

Maintenance of Dejagers pump barge pumps, pipework, gearboxes and valves will be carried out by Contractor

AWRR dam will also be maintained by contractor only pipe work, gearboxes and valves.

## 3.4 Types of maintenance and plant excluded from the scope of work

### a) Excluded Type of maintenance

Conveyor belt splicing and repairs, pulley re-lagging; tiling of chutes & sluiceways

### b) Excluded Type of Plant

6.6 kV switch gear, high mast lights, civil works, structural steelwork and sheeting, buildings (Switch gear rooms, control rooms, lifts), all fire protection systems.

## 3.5 Constraints on how the contractor provides the Works Plant Safety Regulations

The Employer shall, on request from the Contractor isolate required plant from all sources of danger as described in the Plant Safety Regulations and High Voltage Regulations.

The Employer shall, on request make available a copy of the latest revision of the Plant Safety Regulations & High Voltage Regulations to the Contractor.

The Contractor shall conform to all rules and regulations applicable to Plant Safety & High Voltage Regulations and shall complete the Worker's Register prior to working on the plant.

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#### 4. Security Management

The Contractor applies for access permits (Contractor's permit) at the Security gate on the start date of the contract. The Contractor personnel shall be required to be in possession of an access permit at all times,

In order to assist Protection Services with the issuing of permits and the identification of personnel on site the successful contractor is to supply a list of all personnel that intends using on site, at least 72 hours prior to entry of the Security Area. This list must be delivered to Protection Services. The list identified with the Contractor's name is to contain the following information;

- Employee name
- Employee ID
- The Employer's Safety Coordinator's signature
- Ash and Coal Plant Maintenance Manager 's signature
- Copy of the first page of the ID book of every employee of the contractor, photocopied to reduce the size to 65%

Access permits must be returned to protection services when the worker/s leave the site, either after completion of the services, or upon earlier termination of service of a worker during the contract period.

To speed up the process of gaining access to the site, the Contractor must compile detailed lists of all tools and equipment (including serial numbers where applicable) to be taken on site before arriving at the Power Station Security gate. An authorised copy of this list must be retained by the contractor - to be used again when the tools and equipment are removed from site after the completion of the services.

Any additional tools or equipment brought to site, or any tools or equipment removed during the contract period must be reported to protection services and all lists amended likewise. Gate release permits will not issued for the removal of any tools or equipment not specified on the tool list.

The Contractor's visitors and all personnel shall conform at all times to the security arrangements in force at the site. Application forms for visitors must be filled in by the Contractor's Site Manager and approved by the Common Plant Maintenance Manager, one day before the visit and submitted to the Employer's Protection Services office. Visitors will not be allowed on site if the necessary forms are not in the possession of the security staff.

The Chief of Protection Services may, with valid cause, remove any, of the Contractor's personnel from the site, either temporarily, or permanently. He may deny access to the site to any person whom, in the opinion of the said Chief of Protection Services, constitutes a security risk.

No unauthorised vehicles will be allowed on site. Only Contractor's Vehicles with displayed Contract Vehicle Permits disks will be allowed on site. Contract Vehicle Applications should be directed to the Common Plant Maintenance Manager.

The Contractor will be restricted to the working areas associated with his place of work. The Contractor is forbidden to enter any other areas, and must ensure that his employees abide by these regulations.

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No recruiting of casual labour may be done on the Employer's premises, including the area outside the Power Station Security Gate.

## **5. Transport**

The Contractor will be responsible for own transport on site as well as for standby purposes. No passengers will be allowed on the back of a bakkie (LDV) even if fitted with a canopy.

## **6. Health and Safety Requirements**

### **6.1 General**

The Contractor must ensure that all his personnel attend a Health and Safety Induction Course prior to starting with their work. The Induction Course can, on request, be provided by the Employer and will be valid for the duration of the services.

Safety Risk Management has the right and authority to visit and inspect the Contractor's workplace or site establishment to ensure that tools, machinery and equipment comply with the minimum safety requirements.

The Common Plant Maintenance Manager shall be entitled to instruct the Contractor to stop work, without penalty to the Employer, where the Contractor's personnel fail to conform to safety standards or contravene health and safety regulations. The Common Plant Maintenance Manager is entitled to call the Contractor to discipline his employees and to submit disciplinary action, and submit a report to the Common Plant Maintenance Manager. The Contractor shall implement additional health and safety precautions where necessary.

The Contractor will provide all his personnel with the required personal protective equipment.

Risk Assessments, Pre-Job Briefs, Post - Job Briefs & Job Observations will be conducted for all jobs.

All Construction Regulation safety requirements should also be adhered to.

- Safety Plan
- Fall Protection Plan (repairing / replacing of pipe using scaffolding)

### **6.2 Pandemic Control Management**

- Contractor to ensure there are resources provided/ allocated incase of a pandemic outbreak
- Contractor to adhere to Eskom processes and guidelines with regards to pandemic management

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### 6.3 Fire Precautions

- Any tampering with the Employer's first aid equipment is strictly forbidden.
- All exit doors, fire escape routes, walkways, stairways, stair landings and access to electrical distribution boards must be kept free of obstruction, and not be used for work or storage at any time. Firefighting equipment must remain accessible at all times.
- In case of a fire, report the location and extent of the fire to the Electrical Operating Desk at extension 3471.
- Take the necessary action to safe guard the area to prevent injury and spreading of the fire.

### 6.4 Reporting of Accidents

The Employer follows an accident prevention policy that includes the investigation of all accidents involving personnel and property. This is done with the intention of introducing control measures to prevent a recurrence of the same incidents. The Contractor is expected to fully co-operate to achieve this objective. The Common Plant Maintenance Manager must be informed immediately of any incidents and any damage to property or equipment must be reported within 12 hours.

**NOTE:** This report does not relieve the Contractor of his legal obligation to report certain incidents to the Department of Labour, or to keep records in terms of the Occupational Health and Safety Act. also Compensation for Occupational Injuries and Diseases Act.

### 6.5 Barricading and screens

The Contractor will provide and install barricades and warning devices to ensure that equipment and persons are not exposed to danger or to prevent access to dangerous areas.

All welding, flame cutting and grinding work shall be properly screened to protect persons from any injury.

All gratings shall be covered with adequate protective screening when-welding or flame cutting in the vicinity.

## 7. Quality Requirements

The Contractor will comply with the Employer's Quality Requirements.

Quality requirements include visual inspection by the employer, who will be entitled to witness progress of work at any time. The Employer shall also have the right to stop work and re-instruct the Contractor, who will comply with the requests.

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The Employer may by arrangement, inspect completed work. If in opinion of the employer, the work does not comply with the quality requirements expected from the Contractor, the Employer shall instruct the Contractor to rectify the faults. The Contractor will comply with the instructions.

## **8. Personnel Qualifications**

The Contractor's Site Manager shall ensure that only qualified & experienced artisans be allowed to work on plant which may cause production losses or safety risk. The Common Plant Maintenance Manager shall be entitled to verify the qualifications of any artisan.

## **9. Services and other requirements provided by the Employer**

This section describes what the Employer is to supply specifically for the purpose of the works.

The Contractor is to supply everything else required to provide the works.

### **9.1 Spares, tools and consumables**

Unless where otherwise indicated all spares will be supplied free by the Employer.

The Contractor will be responsible for all free issue material control functions, including but not limited to receipt, checking, offloading, taking temporary possession and proper storage of all materials, as well as returning any unused or refurbish able items to the Supervisor.

The Contractor must supply all tools and equipment used to maintain the plant. The Employer will supply tools in exceptional cases with the authorisation of the Workshop Supervisor or Common Plant Maintenance Manager.

The contractor to provide own stationery, rags, printing equipment & computers

The contractor to provide own PPE (as per employer requirements) to all employees as required. All PPE and masks must be SABS approved.

The contractor to provide own consumables (including rags)

The contractor shall provide suitable facilities (e.g. Lockers) for employees.

### **9.2 Use of the Employer's Equipment**

If the Contractor requires use of any of the Employer's Equipment, including compressed air, electricity, water supply and cranes, it must be requested via the supervisor.

The Contractor will be responsible for the repair, replacement or correction as necessary of any and all items of plant and /or materials supplied by the Employer which are damaged and /or lost whilst in the Contractor's custody and control.

The Contractor Site Manager must ensure that any one of his employees or Subcontractor, operating hoist equipment belonging to the Employer, is authorised by the Employer.

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**9.3 Accommodation and catering**

The Contractor will be responsibility for the provision of accommodation to his personnel - the Employer does not provide accommodation.

The Contractor or any of his employees or subcontractors will be allowed to use the Employer's dining facilities.

The Contractor or any of his employees or subcontractors may also buy take away meals from the fast foods outlet an Site.

**9.4 Office and Toilet Facilities**

The Employer will provide the Contractor access to office and toilet facilities.

**9.5 Medical Facilities**

The Contractor provides a First Aid service to his employees and subcontractor. In the case where these prove to be inadequate, as in the event of a serious Injury, the Employer's Medical Centre and facilities will be available.

Outside the Employer's office hours, the Employer's First Aid Services will only be available for serious injuries and life threatening situations.

The Employer shall be entitled, however, to recover the costs incurred, in the use of the above Employer's facilities, from the Contractor.

**9.6 Refuse Disposal**

The Employer will provide and empty special colour coded bins for refuse disposal. e Contractor will be responsible for refuse bins for his own site.

The Contractor ensures that all workers under his control strictly adhere to the correct use of refuse bins:

For the full duration of the services, the Contractor is responsible to keep the work area clean of any rubble, and to place all refuse into the bins provided.

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## 10. Boundaries

### 10.1 Coal Handling Plant

Boundary Start: Inlet to the conveyor 18 grizzly bars at the coal stockyard and Conv. E1 in-loading chute including the sampling hammers and conveyor belts and accessories

Boundary End: Discharge off over the bunker tripper car conveyors into the mill bunkers for U1-8 including grizzly bars

### 10.2 Ash Handling Plant

Boundary Start: Boiler sluiceway under the coarse Ash grating for boiler 1-8 (including isolating valves for hopper spray & target nozzles); FFP side: Slide gate (including gate operation) under fly ash & economiser hoppers boiler 1-8 .

Boundary End: The ash discharge line from point 1 to 8 at the ash dams.

### 10.3 Ash Water Return (AWR)

Boundary Start: The suction line from the AWR pump house (De Jagers Pan) and the suction line of the Floating Pump Station (barge) including the an overflow facility, AWR reservoir and the surge tower together with the inlet and out let isolating valves to sluice pumps. Including new Ash dam and AWR




Boundary End: Hopper Sprays at Boilers 1-8; and the hydrovac valves and sluice way nozzles including the venture pipes.

## 11. Limit of the scope

The scope only covers Ash plant & Coal plant.

## 12. Acceptance

This document has been seen and accepted by:

Name	Designation	Signatures
Yamkela Mgwebi	System Engineer – Outside Plant	
Nosipho Mjelo	Snr Advisor - Outside Plant	
Patrick Shange	Snr Supervisor - Outside Plant	

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**13. Revisions**

Date	Rev.	Compiler	Remarks
March 2021	01	Y. Mgwebi	Original Issue

**14. Acknowledgements**

Not applicable.

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