Eskom	Scope of Work	Camden Power Station

Title: **Provision of Industrial Station Cleaning Services**

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Area of Applicability: **Operating**

Functional Area: **Boiler, Turbine, C/P**

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Introduction

Camden Power Station is a Fossil Fired Station which consists of eight generating units and other auxiliary plants. The nature of the plant operation generates a lot of dusts (PF and ash) & oil spillages. Housekeeping of utmost importance. Most plants are critical, cleaning has to be maintained in an excellent condition to ensure its full working capacity without any downtime.

Availability, reliability and performance of this plant is essential in terms of ensuring optimum performance of the plant and hence the need for an Industrial Station Cleaning service contract.

2. Supporting Clauses

2.1 Scope

2.1.1 Purpose

The purpose of this document is to supply scope of work required to provide Industrial Station Cleaning services for the plant areas outlined below at Camden Power Station.

2.1.2 Applicability

- Operating
- Operating Support
- Prospective contractor

2.1.3 Effective date

Authorisation date

2.2 Normative/Informative References

2.2.1 Normative

[1] ISO 9001 Quality Management Systems

[2] OHS Act - Occupational Health and Safety Act and Regulations (Act No.85 of 1993)

[3] 240-105453648 – Fossil Fuel Firing Regulations Standard

[4] 004 4570 - Fossil Fuel Firing Regulations Camden Specific

[5] Plant Safety Regulations (PSR) 36- 681

[6] Operating Regulations for High Voltage Systems (ORHVS) 32-846

2.2.2 Informative

N/A

2.3 Definitions

Red zone areas	Critical plants identified to have high risks of unit trips
Restricted area	Areas where access is limited to authorised personnel only to protect plant equipment.
Confined Space	An enclosed area with limited entry or exit points.

2.4 Abbreviations

Abbreviation	Explanation
PF	Pulverised Fuel
FFFR	Fossil Fuel Firing Regulations
ORHVS	Operating Regulations for High Voltage Systems
PSR	Plant Safety Regulations
HP	High Pressure
PM	Preventative Maintenance
PTW	Permit To Work
LAR	Limited Access Register
DB	Distribution Board
COC	Certificate of Compliance

2.5 Roles and Responsibilities

- **Operating Support** - Is responsible to draw up the scope of work for the provision of Industrial Station Cleaning services contract, set-up industrial station cleaning service contract and manage the services rendered.
- **Engineering** – provide engineering solutions
- **Procurement** - Is responsible to ensure that the procurement process is properly followed in setting-up and awarding the industrial station cleaning service contract
- **Contractor** – execute the contract scope of work, effectively plan all cleaning activities, develop & submit daily inspection sheets, the Contractor is expected to liaise on a daily basis with the contract supervisors to plan his work.

2.6 Process for Monitoring

- Evaluation
- PM
- Checklist
- Assessments

2.7 Related/Supporting Documents

N/A

3. Description

Camden Power Station intends to enter into a contract with a suitably qualified, experienced and well-established contractor with the capacity to execute the scope of work as listed below. It is important to note that the contractor must be reputable with an auditable track record in the field of providing similar services in the industrial cleaning environment.

Provision of the services includes but not limited to the following requirements.

- Site establishment & de-establishment, planning, supervision, and execution of industrial cleaning of production and outage plant at Camden Power Station.
- Furnishing of all materials, equipment, tools, consumables, labour, cleaning chemicals and each expense necessary for the provision of industrial station cleaning services, movement tools and equipment in order to provide a complete service in terms of this scope of work.
- In general, the applied cleaning methods should mostly utilize mechanised cleaning machinery or vacuum equipment. To minimise dust in the plant, manual cleaning methods such as dusting should be minimised only in those areas where use of mechanised cleaning machinery or vacuum plant equipment is not viable, can manually cleaning methods or water wash be applied.
- Cleaning equipment must be highly reliable, robust, self-sustaining and not be dependent on prolonged recharging of its power sources.

NB: All equipment listed under the Technical Requirements shall always be kept on site and must be available 24/7 for the duration of the contract. In case of breakdowns, Services Manager must be informed immediately, and replacement of such equipment must be arranged by the contractor if the equipment is going to be out of service for a prolonged period. In case of regular/scheduled service and maintenance, contractor must submit a service/maintenance schedule to the Services Manager in time for proper planning of activities.

The following are timelines/replacement periods that will be allowed for maintenance of critical equipment and must be complied to. Should maintenance go beyond these maximum allowable periods a replacement must be arranged immediately, failure to do so may lead to contractor being penalised per the NEC contract.

Vacuum Truck – 72hrs with one truck available, immediate replacement if no spare.

HP Machine – 72hrs with one HP Machine available, immediate replacement if no spare.

Portable pump – 72hrs with one pump available, immediate replacement if no spare.

Skid steer – 72hrs with one skid steer available, immediate replacement if no spare.

NB; There must always be at least one equipment available in cases of breakdowns. Should the standby equipment also breakdown, equipment must be replaced immediately to avoid disruption to the services being rendered.

As part of this scope the following types of equipment will be taken into consideration

- **Vacuum Equipment:**

Mobile heavy duty vacuum plant (Vacuum Trucks) for vacuum cleaning, clearing of coal and ash spillage, emptying of sumps/drains, cleaning of pipe trenches, draining water where needed, draining of septic tanks etc (Take note of the required specs on the equipment list)

Industrial portable vacuums to vacuum all the settled ash and pulverised fuel dust on grated floors, cable racks, plant equipment's, plant structures, etc… (Take note of the required specs on the equipment list)

- **High Pressure Cleaning equipment**

Unblocking pipelines and drains, cleaning hard settled ash, etc (Take note of the required specs – min & max operating pressures on the equipment list)

- **Floor washing, scrubbing and sweeping equipment**

In house floors where accessible to be swept and scrubbed with mobile floor sweepers and scrubbers, inaccessible areas must be cleaned manually with manual tools and the dirt from these areas to be swept collected immediately. No piling is allowed.

- **Basement floors washers.**

Given the amount of dirt that settles on these floors, Basement floors at 0ml may be water washed, using water hoses and industrial floor pressure washing machines. Water hoses may only be connected to water points provided for floor washing. The cleaning contractor is responsible for the provision of the hoses and floor washing equipment

NB. USE OF FIRE WATER FOR PLANT CLEANING IS PROHIBITED

3.1 Contract Objectives

The objective of this contract is to provide industrial station cleaning services Camden power station.

The performance of the contactor shall be measured against the evaluated criteria as well as the timely execution. It is of critical importance that these goals are actively pursued for the duration of the contract. The Employer reserves the right to terminate the contract in case of Contractor noncompliance or misrepresentation.

3.2 Requirements from Contractor

The contractor shall meet the following requirements and provide evidence to substantiate compliance where applicable:

3.2.1 The contractor must own the plant / equipment required for the execution of this scope and/or must have a valid lease agreement from the leaser (signed by both parties) for the duration of the contract. (All tools and equipment are compulsory and must be kept on site 24/7 in good working condition).

NB. Lease agreement must also state the availability of all equipment to be rented. All equipment must be on site readily available before the contract start date and they must be kept on site (at Camden Power Station) for the duration of the contract. All the equipment used must be maintained in good working order and must conform to all statutory requirements.

Physical verification of equipment may be requested by the employer during tender evaluation; contractor must avail all equipment for verification. In case of rental the contractor to arrange with the leaser for verification. (All equipment to be quoted on wet rate)

The employer reserves the right to terminate the contract as per the NEC clauses should the contractor misrepresent themselves.

3.2.2 Contractor must be able to supply sufficient work force, to execute the scope

Minimum 204 employees.

- Admin 1
- Site Manager 1
- Site Supervisors 5
- Shift Supervisors 6
- Safety Officers 2
- Riggers 2
- Vacuum Truck – Drivers 2
- Vacuum Truck – Operators 6
- HP Machine – Operators 6
- Cherry Picker – Operators 2
- Road Sweeper – Operator 1

- Skid Steer – Operators 2
- Skid Steer – Operators (Shift) 3
- Ride on Sweepers 2
- Ride on scrubber 2
- General Workers 101
- General workers (Shift) 60

NB. The *Services Manager* may request additional work force depending on the need. Number of Supervisor's on site must be adhered to. (**x11** Supervisors recommended **NB: x6 shift and x5 normal day)**

Refer to Scope of work below and BOQ to quote for all required resources.

- **Normal Working Hours**

  Weekdays

  Monday to Thursday - 07:15 to 16:30 (With 30 minutes lunch from 12:00 to 12:30, employees are only allowed to have lunch at their designated sites only) and

  Fridays - 07:15 to 12:15

  Weekends

  Saturday and Sundays 07:15 to 14:00

NB: Contractor will be required to work overtime; overtime rates must be reflected in the BOQ.

- **Shift work**

  Three shift cycle of 12hr shift –(Ash Plant 36 and Coal Plant 33 employees)

  See break down of resources under ash plant and coal plant scope of work on **page 49 & 54** respectively.

3.2.3 The contractor must have a **weekend team** that will clean 0 – 12 ml, boiler and turbine side from unit 1 – 8; road sweeping and deep cleaning of all units on all accessible areas or units off load or any other area that needs attention that could not be attended to during normal working days due to plant unavailability or while the units are on load (this must be approved by Services manager after reviewing the causes for delays).

(Refer to page **56** under Weekend Team for detailed scope of work)

NB quote according to the requirements below

Working hours (during weekends and public holidays)

07:00 to 14:00

Manpower: - (minimum **39** employees.)

X30 General Workers (Including mobile cleaning equipment operators)

x3 HP Machine Operators

x3 Vacuum Truck Operators

x1 Vacuum Truck Driver

x1 Supervisors

x1 Safety Officer

Equipment:-

x1Vacuum Truck

x1HP Machine

x1Road sweeper

x2Sweeper and scrubber

3.2.4 Contractor must ensure that their site is well established and fully furnished

to accommodate the number of their employees on site. Site must be kept clean at all times; it must comply with all Eskom's requirements and standards.

3.2.5 Contractor and its employees must comply with Eskom's Cardinal Rules and all Regulations applicable to Eskom i.e Fossil Fuel Firing (FFFR), High Voltage (HV) and Plant Safety Regulations (PSR). To supervise work and for access into all restricted areas contractor must have an authorised Responsible Person (RP) and Authorised Supervisor. Training will be provided by Eskom and the contractor will be given 2 months grace period to ensure their staff if fully trained and competent to execute the scope of work as per the contract.

3.2.6 Cleaning of unit on outage (GO) will take place as and when required by the outage coordinator, before, during and after an outage.

3.2.7 Contractor must supply their own cleaning material - including but not limited to solvents and degreasers (Suitable for normal oil and Bunker 150 – Fuel Oil), detergents, floor polish & stripper, rags, etc (Refer to BOQ for other consumables.)

3.2.8 Contractor must supply additional tools to carry out tasks e.g portable lights (without cable joints), torches, DC lights, extensions, rigging tools with valid load tests certificates, blowers, Heat Resistance pipes etc.

3.2.9 Contractor to ensure that all cleaning tools are maintained in good working condition at all times e.g PPE, shovels, brooms, feather dusters, Bins, Wheel barrows, etc… and issuing register must be updated at all times, maintain good housekeeping in the storage area where all tools are kept. Valid test certificates are required for all electrical tools to be used.

3.2.10 Contractor must issue good quality PPE to its employees twice yearly. (Three sets per person per year due to nature of the work)

Contractor's overalls must be branded, be of different colour from Eskom and other contractor's where possible for easy identification. Penalties will be applicable where non-compliance is raised.

3.2.11 Contractor must provide proper PPE for work to be done in the following areas

A) More dusty areas (Respirators & disposable overalls),
B) Wet areas (rain suites and gumboots) and
C) Hot areas (heat resistance suites and boots)
D) HP work (TST suites)

E) Normal PPE - Hard hats with chin strap, Safety boots, Dust masks, Goggles, Ear plugs, Gloves

3.2.12 A fee determined by Finance Department will be charged to the contractor for every contractor's employee issuing of gate pass permit and replacement of lost gate pass permit

3.2.13 All equipment's, machinery and tools required to carry out all the duties stipulated in the works information must always be available and be kept on site for easy access when needed. Contractor must inform the Service Manager immediately in writing in case of breakdown and replace if repairs will take longer as per timelines stipulated above.

3.2.14 All equipment brought to site must be registered with Security and nobody is authorised to issue a removal permit for any equipment that must leave site only the Services Manager or a person delegated by the Services Manager in his/her absence can issue such permit.

3.2.15 The cleaning contractor must take note that Camden Power Station has a duty to achieve or sustain a 5-Star NOSA rating of which housekeeping plays a major role, thus the reliance will be on the contractor for Camden Power Station to achieve this.

3.2.16 The cleaning staff shall always be presentable and conduct themselves in accordance with Camden Power Station accepted practices and comply with all Eskom's Life Saving Rules.

3.2.17 The contractor must be able to handle and clean oil spillages, ash and coal spillages. Disposal of contaminated material and used oil will be arranged by Services manager with relevant contractor to dispose.

3.2.18 The Employer (Eskom) will not tolerate any form of abuse of employees by the contractor; the contractor must always maintain fair labour practices. Strikes, picketing and go slow is not allowed on site the contractor will be penalised should any of these events take place.

3.2.19 Illegal strikes are not allowed on site, and Criminal offences will not be tolerated on site,

will lead to immediate removal of the relevant/affected employee from site.

3.2.20 Contractor to ensure that all medical periodic tests are conducted as required.

3.2.21 Technical and SHEQ internal audits will be conducted monthly to ensure compliance, Contractor is expected to always comply with these requirements therefore noncompliance may lead to work stoppage by Services Manager until compliance is proven and contractor will be penalised failure to correct any defaults, the contract may be terminated as per the NEC clauses.

3.3 SHEQ Requirements

3.3.1 Health & Safety requirements

- The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *works*. Without limitation the *Contractor*:
- will adhere to Eskom's Occupational Health and Safety policies, standards, procedures, directives, OHS Specification/requirements, applicable health and safety laws and regulations and other requirements, as amended.

- may not commence work until the Health and Safety file has been approved by the respective Contract Custodian together with the OHS professional.
- Where applicable, accepts that the *Employer* may appoint him as the "Principal Contractor" (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993) ("the Construction Regulations") for the Site; and undertakes, in and about the execution of the *works*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.
- warrants that the total of the Prices as at the Contract date includes a sufficient amount for proper compliance with, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of works.

3.3.1.1 **Health and safety risk management**

Occupational Health and safety

- The Contractor shall comply with the health and safety requirements contained in OHS Specification and the approved safety file. Eskom reserves the right to review the OHS Specification to address the Operational risks and the contractor shall comply with the latest SHE Specification as amended at no cost**.**
- The OHSACT 37(2) agreement must be signed by Employer and Contractor/service provider's representatives.
- The Contractor OHS professional must conducts internal audits at planned intervals to monitor compliance to the contractual health and safety requirements.
- The Contract Custodian must conduct inspections at planned intervals to monitor compliance to the contractual health and safety and legal requirements.
- The Contractor may be selected during internal and/or external Eskom Power Station audits to verify compliance to legal and contractual OHS requirements. The Contract Custodian will communicate this at relevant time periods and the contractor shall avail themselves for this audit.
- Below are minimum Safety requirements to be adhered to by contractors/service providers, to gain access to Eskom Power Stations:

    a. Valid Medical fitness certificate
    b. Clearance from SAPS or accredited service provider linked to SAPS AFIS system not older than thirty (30) days
    c. Identification document (RSA ID or equivalent)
    d. National Drivers Licence (applicable to drivers)

e. Adherence to the Eskom Life-saving rules 3 Buckle up and 4, Be Sober
f. Applicable risk based Personal Protective Equipment
g. Valid letter of good standing (COIDA or equivalent). Access to site to perform work will be denied should the Letter of good standing be expired.
h. Induction will only be conducted after all documents have been submitted and accepted by Eskom

- The contractor/supplier/consultant who is working alone and not eligible to register with the compensation fund, shall provide Eskom with the member benefit statement of the insurance cover which include life and disability cover to the minimum fund of R500 000.Note: Induction will only be done after the above documents have been submitted and accepted by Eskom.

3.3.1.2 **Contractor/service provider Management Key Performance Indicators (KPI's)**

- Maintain Health and Safety file and compliance with the health and safety plan, Eskom OHS specification and applicable legislation as amended.
- Always maintain good housekeeping where the task is being executed and/or within the area of responsibility.
- Contractor must develop, implement and monitor a near miss reporting strategy/programme (reporting of near misses).
- Comply to Planned Job Observation, BSO, Visible Felt Leadership programmes.
- Maintain Zero Fatalities for the duration of the contract.
- At any given point, the OHS performance must be within the lost time injury (LTI) tolerance level as amended.
- All incidents must be reported immediately or before the end of the shift which the incident took place.
- All incident investigations must be completed within 10 days of the occurrence of an incident.
- Incident investigation recommendations shall be closed within the recommended time frame recorded in the Incident investigation report.
- Close audit findings as per the recommended time frames as per the audit report or action raised in SAP QIM.
- Close Non-conformance as per the recommended time frames in SAP QIM.

  Note: Monitoring of the above-mentioned KPIs will take place through regular audits and inspections.

3.3.1.3 **Contract completion and sign off**

- On completion of the project/contract, Eskom team (led by the Contract custodian) involved in the project together with the Contractor shall conduct the final meeting to identify the gaps prior to the contract close out. Before the final invoice is paid/processed, the Contract custodian shall ensure that the below requirements are met:
- Close all incidents and audit findings.
- Clean the respective yard and ensure good housekeeping where the contractor was working.
- Contractor shall submit safety statistics and a safety file to Eskom BU Safety department for closeout and filling.
- Completion of a closeout report (Annexure D form as per 32-726) to close the contractual work.

All Health and safety requirements (legislative and otherwise) concerning the works must be specified here.

3.3.1.4 Contractor shall comply with all requirements: -

- Letter of good standing
- SHE Plan
- Baseline Risk assessment
- SHEQ Policy
- Safe work procedures
- Annexure B acknowledgement form

3.3.1.5 Monthly internal safety audits will be conducted to verify compliance

3.3.1.6 Contractor must have competent personnel on site for the duration of the contract.

a) X2 Full time Safety Officers for this contract.

The contractor health and Safety officer must be trained in the following:

HIRA, Incident investigation training, Legal liability, Training, knowledge and understanding of ISO 45001, Minimum work experience 2yrs, OHS Diploma (applicable to 3-5 years contract)

b) X5 Supervisors must be trained in the following:

HIRA, Incident investigation training, Legal liability

c) x1 Site Manager must be trained in the following:

HIRA, Incident investigation training, Legal liability

3.3.1.7 All other legal appointments as per the scope of work to be adhered to and safety file must always be up to date and kept on site for audit purposes.

3.3.1.8 Contractor to comply with all safety training requirements according to this scope of work.

3.3.2 Environmental

3.3.2.1 SHE Spec – Provide Environmental Policy.

3.3.2.2 **NEMA Act 107 of 1998, Section 28(3)** Provide Environmental Management Plan must include method statements talking back to the scope of work for each activity.

3.3.2.3 Provide Environmental Risk Assessment including Aspects and Impacts.

3.3.2.4 Proof of Training of employees on environmental risks.

3.3.2.5 **NEMWA Act 59 of 2008** Provide List of all waste streams / waste streams of the packing material

3.3.2.6 Waste management programme and Housekeeping to include method statements of: (procedure of the company will be sufficient)

3.3.2.7 Commitment to keep site clean and remove all material / waste generated while on site.

3.3.2.8 Commitment to clean the site if a spillage or accidental dumping occur. This will include any incidents along the route to Camden PS

3.3.2.9 **HCS Reg 9A of 1998** Provide Hazardous Substances and Material Register for each chemical and hazardous material that might be part of the packing content. If none indicate in your EMP or waste management procedure "no hazardous material"

3.3.2.10 Provide Safety Data Sheet for each hazardous / chemical waste stream as per point

3.3.3 Quality

3.3.3.1 **Quality Management System (QMS) – ISO 9001:2015**

The contractor must establish, implement, maintain and continually improve a QMS that demonstrates the ability to consistently deliver cleaning services that meet:

- Customer requirements
- Regulatory and statutory requirements

Key QMS Requirements:

- Documented procedures for cleaning processes
- Inspection and test plans (ITPs) to verify quality of work
- Control of non-conforming services and corrective actions
- Use of calibrated inspection equipment
- Staff training and competency records
- Clear quality objectives and performance monitoring

3.3.3.2 **Competence, Awareness, and Training**

Staff involved in cleaning activities must:

- Be competent and qualified for their roles (based on education, training, and experience)
- Undergo regular safety and quality training, including:
    - Chemical handling, Working in confined spaces
    - Use of high-pressure equipment
- Be aware of:
    - The implications of their work on product/service quality
    - Customer-specific requirements

3.3.3.3 **Control of Cleaning Materials and Equipment**

- Use of approved cleaning agents and chemicals (with relevant SDS—Safety Data Sheets)
- Proper storage and labelling of chemicals in line with ISO and OHS regulations
- Maintenance and inspection of cleaning tools and equipment (e.g., hydro-blasters, vacuums)
- Equipment calibration where applicable
- All Equipment's use shall be subjected to a pre-determined service schedule

3.3.3.4 **Risk-Based Thinking and Continuous Improvement**

- Identification of risks and opportunities linked to cleaning operations
- Periodic internal audits of cleaning activities
- Implementation of corrective and preventive actions
- Use of customer feedback and incident reports to improve processes

3.3.3.5 **Documentation and Records Control**

- Standard Operating Procedures (SOPs) for all cleaning processes
- Work instructions for specialised cleaning (e.g., sumps, boilers)
- Cleaning schedules and checklists
- Records of:
    - Completed cleaning activities
    - Inspections results

- Non-conformities and corrective actions

3.3.3.6 **Supplier Quality Performance Monitoring Phase**

During the contract execution phase, suppliers shall be monitored by Eskom for performance on quality-related aspects.

The outcomes of such monitoring will enable Eskom to take any appropriate actions pertaining to the supplier.

The monitoring shall be carried out periodically by Eskom or at predetermined intervals during the execution of a contract using agreed key performance indicators. The monitored key performance areas include the following:

- CQP and QCP /ITP
- Delivery
- Design
- Cost
- Management system

Subsequent key performance indicators associated with these areas will include the following:

- Nonconformity monitoring
- Audit and assessment evaluation scoring
- Management system compliance and accreditation
- Achievement of delivery targets as per contractual agreements
- Process improvements
- Correction and corrective action response and closure

3.3.3.7. Internal quality audits will be conducted to verify compliance at predetermined schedules

3.3.3.8. Monthly meetings between contractor and services manager are compulsory

3.4 Technical Requirements

3.4.1 Equipment

3.4.1.1 2X Diesel Vacuum Truck (10m³) with vacuum pipes & couplings

- 1000 Liquid ring (12500 litres Vacuum Tank)
- 1000 Liquid ring (12000 litres VacJet - Combination)

3.4.1.2 2X HP Jetting machine (1000 – 1500 bar) with filtration system including all required accessories. e,g pipe work, couplings, HP GUN and unblocking nozzle.

3.4.1.3 3X Heavy Duty Double cab bakkies

3.4.1.4 1X Road sweeper with enclosed cabin for operator/driver

(NB: No Tractor or Bobcat with boom attachments allowed)

3.4.1.5 2X Skid steer

3.4.1.6 2X Ride on Sweepers (Can be a combination of both sweeper and scrubber)

3.4.1.7 2X Ride on Floor Scrubbers (Can be a combination of both sweeper and scrubber)

3.4.1.8 2X small Walk behind Scrubbers for small passages

3.4.1.9 4X Industrial Portable Vacuum cleaners (380v) with required accessories

3.4.1.10 2X Industrial High-Pressure Washers for basement floors

3.4.1.11 2X Cherry picker (Articulated Boom Lift) 12m and 18m

3.4.1.12 2X Heavy duty portable submersible slurry pumps

Pump type: Submersible; size: 100 mm; capacity: 1983 l/min;

Speed: 1450 rpm; rating: 16; driver: motor 1004 kw;

Potential: 400 v; casing material: steel;

Application: ash plant (Ash slurry with clinkers)

Max head 32.8 m, max flow 3300 l/min,

Power 15 kw, current 26 a, weight 285 kg.

Flexible cable length:30m **(no cable joint permitted)**

(Contractor to supply pipe work and couplings)

3.4.1.13 1X TLB (As and When required)

3.4.1.14 1X Tipper Truck

NB: ALL THE ABOVE-MENTIONED EQUIPMENT IS COMPULSORY AS PER THE SPECIFICATIONS AND MUST BE KEPT ON SITE 24/7 IN GOOD WORKING CONDITION FROM CONTRACT START DATE. (WET RATE)

3.4.2 Competencies (Skilled/Semi-skilled Labour)

3.4.2.1 2X Vacuum Truck Drivers

3.4.2.2 6X Vacuum Truck Operators (No dual Authorisation)

3.4.2.3 6X HP Machine Operators (No dual Authorisation)

3.4.2.4 5X Skid Steerer (Bobcat) Operators

3.4.2.5 2X Rigger (CAT 5 with min 3 years' experience – attach CV and qualifications)

3.4.2.6 1X TLB Operator

3.4.2.7 1X Tipper Truck Operator

3.4.2.8 2X Cherry picker / Scissor's lift Operators (attach working at heights competencies)

3.4.2.9 4x Responsible Person (RP) –for Plant Safety Regulations

This will not form part of evaluations and training will be provided by Eskom

(two months grace period for authorisation)

3.4.2.10 2X Authorised Supervisor – for High Voltage Regulations

This will not form part of evaluations and training will be provided by Eskom

(two months grace period for authorisation)

MACHINE OPERATORS WILL BE USED ACROSS ALL THE INDUSTRIAL STATION NEEDS ON A DAILY BASIS, TASK ALLOCATIONS AND FREQUENCY PROVIDED BELOW IS ONLY A GUIDE.

NB: PROVIDE PROOF OF COMPETENCIES AND CV's WHERE APPLICABLE

(CLEAR CERTIFIED COPIES OF VALID COMPETENCY CERTIFICATES)

3.4.3 Experience

3.4.3.1 Contractor must have minimum 3 years Industrial Station Cleaning experience in a power plant. Full 3-year term (once off orders / short term contracts will not be considered)

- Attach copy of signed contract with contract numbers and Completion certificate for completed projects

3.4.3.2 Traceable reference with (Full names, Company name, physical address, contact numbers, email address)

NB: Site visits for verification of experience will be compulsory.

3.4.3.3 Contractor must be registered with NCCA - National Contract Cleaners Association (attach valid proof of registration)

3.4.3.4 Registered with IWH - Institute of work at heights (attach valid proof of registration)

3.4.3.5 Contractor must submit a comprehensive method statement incorporating the scope of work provided and all resources required e.i equipment and manpower. To demonstrate knowledge and proper interpretation of the scope of work provided by the employer.

3.4.3.6 **x1** Site manager with Technical Diploma, N3/or matric and a minimum of 3 years Industrial cleaning experience, HIRA, Incident investigation training, Legal liability.

(attach CV, qualifications and proof of training)

3.4.3.7 **x5** Supervisors - N3/or matric, minimum of 3 years supervision in Industrial cleaning experience, HIRA, Incident investigation training, Legal liability.

(attach CV, qualifications and proof of training)

3.4.3.8 **x2** Safety Officers – OHS Diploma, N3/or matric, minimum of 3 years' experience

HIRA, Incident investigation training, Legal liability. (attach CV, qualifications and proof of training)

4. Scope of Work for the Provision of Industrial Station Cleaning services.

4.1 Once off

4.1.1 Site establishment

4.1.2 Site De establishment

4.2 Planned tasks (Daily, Weekly, Monthly, Outages)

4.2.1 Turbine and Auxiliaries from Unit 1 – 8 (12ml – 0ml)

4.2.2 Boiler and Auxiliaries from Unit 1 – 8 (52ml – 0ml)

4.2.3 Station switchgear rooms, Incl. Battery chargers & VT rooms

4.2.4 Water Treatment Plant

4.2.5 Sewage plant including all septic tanks

4.2.6 Cooling water Plant (CW Pump houses including Cooling towers east & West)

4.2.7 Fire pump house

4.2.8 Compressor Plant

4.2.9 H2 plant

4.210 Fuel oil plant

4.2.11 Stores

4.2.12 Road and remaining areas (sweeping up to N2)

4.2.13 Dirty water drainage system (Reclamation dam, Oil skimming Plant Effluent pump house)

4.2.14 Unblocking Station Drains

4.2.15 Cleaning of ash line trenches up to new ash dam

4.2.16 Weekend Team

4.2.17 Ash Plant (Shift work 24hrs)

4.2.18 Coal Plant (Shift work 24hrs)

4.3 As and when Required

4.3.1 Cooling Towers x6

4.3.2 Cooling Tower Forebay x2

4.3.3 Unblocking ash line or any pipes.

5. Works information

The following information and schedules only indicate the Employer's estimate of the cleaning activities and the time intervals to be carried out on the different areas of the plant. The Employer may change the works information as the need arises following NEC processes. It remains the contractor's responsibility to ensure that all areas of the plant are kept clean.

6. ONCE OFF

6.1.1 Site establishment

- Contractor is expected to establish the site according to Eskom standards before contract date, at the designated site allocated by the Employer. (NB no payment will be made until site is fully established.)
- Establishment includes mobilising and delivering all equipment to site, furnished containers including all installations (offices, changing, eating & ablution facilities and storage sheds). Containers should come with COCs. Eskom will provide electricity up to Eskom's DB, the contractor will then tap electricity from the designated DB to the containers. During site establishment, no excavation will be permitted without the excavation permit. Service Manager will arrange the permit if needed.
- Provision of PPE, three sets twice a year.
- All Medicals (Inc Hepatitis B and Legionella only for affected employees)
- Contractual safety requirements

6.1.2 Site de-establishment

- Contractor must de-establish the site at the end of the contract
- Site must be left in good condition
- Contractor must disconnect and remove their cables from Eskom's DB, PTW to disconnect will be arranged by Service Manager

7. PLANNNED ACTIVITIES

7.1 TURBINE

7.1.1 Plant areas and perimeters if any -:

At the turbine house, the boundary wall will be a straight line halfway between the turbines on the one unit and the generator of the adjacent unit (from unit 1 to 8 – at 12ml and 0ml). Where there is no adjacent unit, the boundary will be at the turbine house wall (Unit 1 and 8)

Included in the turbine house:

- 12ml – Turbine, Generator, Main oil tanks, Cable spreader room, pipe work, auxiliaries, floors, roofs & gutters

- 9ml – Boiler feed pumps, Steam Feed pumps, LP & HP heaters, pipe work, auxiliaries, oil pumps
- 0ml – Condenser, oil stations, oil sumps, oil tanks, pipe trenches, pipe work, auxiliaries, diesel generator bay, sampling stations.
- And all areas in between the levels mentioned above including staircases and handrails.
- **Minimum 11 general workers, HP Machine operators, Truck driver and 3 Vacuum truck operators.**

7.1.2 Expected nature of rubbish and dirt

The expected nature of rubbish and dirt to be cleaned in the turbine house is expected to be normal dust (ash and PF – pulverised fuel) settling on the plant and equipment. Oil and grease spilling from the machinery because of normal maintenance duties and unexpected failures. Coal and ash dust is expected to be of high significance because of the opening being in between the boiler and the turbine houses. Spillages are expected to be limited to oil spills only.

7.1.3 Estimated industrial cleaning needs

Plant/Equipment to be cleaned	Method	Frequency	Comments
Equipment, components & instruments • Electric panel boards - exterior (open panels not to be cleaned) • Control boxes • Windows • Telephone cubicles • Valves & gauges • Cooling Cubicle	Dust and wipe using cloth, detergent/degreasing fluid, avoid spraying water over the equipment.	Daily	Take care when cleaning moving/rotating plant and instrumentation .
Bulk oil tanks above 12ml (including open space above blue building)	Dust, sweep, clean any oil spillages and empty all bins	Daily	
Cable Spreader Room	Sweep, Dust, Mop & Scrub	Weekly	Do not use water on cables
Pumps	Dust and remove oil and grease.	Daily	Take care when cleaning moving/rotating plant

Motors & Gearboxes	Dust, remove oil and grease.	Daily	Take care when cleaning moving/rotating plant
Actuators **(Critical component - must be locked with cable ties if not do not work on it, report to supervisor)**	Dust. **avoid touching/moving the limit switches this may cause unit trip**	Daily	**RISK OF UNIT TRIP** Avoid touching/moving the limit switches
Drains	HP wash when required, Water wash , Vacuum clean, pick up all rubbish, rubble, discard spares and clean	1 x Monthly	
Main Oil tanks	Dust, remove oil and grease.	Daily	No water or detergent to enter the tank
Fire extinguishers, hydrants and hose reels	Dust and damp clean	Daily	
Recycling stations	Empty bins into local rubbish skips according to colour coding and clean.	Daily	Do not mix waste
Concrete elevated floors (9ml and 12ml)	Sweep, scrub, water wash. Where floor sweepers cannot access, water wash and sweep manually and mop	Daily	
Basement floor (0ml)	Water wash	Daily	Use of fire water for floor washing is prohibited.
Grated floors	Sweep/Dust, water wash where allowed and pick up all rubble and discards.	Daily	
Pipes, heat exchangers, vessels etc.	Dust, vacuum, or damp clean	Daily	Be aware of hot pipes and defective uninsulated areas
Fans and fan ducting	Dust and/or Vacuum	Daily	Take care when cleaning moving/rotating plant

Boiler feed pumps	Sweep floors, Vacuum, dust and damp clean pump	Daily	Take care when cleaning moving/rotating plant
Stator cooling system	Sweep floors, vacuum, dust and damp clean	Daily	Take care when cleaning moving/rotating plant
Turbine & Generator • Turbine Floor • HP casing • HP casing (Side floor Plates) • LP casing • Generator casing • Gearbox casing • Pedestals 1, 3, & 4	Vacuum PF dust and clean on top of the HP turbine, LP turbine and generator. Dust using cherry picker PF and Ash dust should not be swept under the floor plates or the side of the turbine pedestal. PF being swept should collected or vacuumed to prevent buildup of PF on the side of the turbine pedestal or under the floor plates.	Daily	Do not tamper with instrumentation Note: Use a cherry picker for safe working on top of the HP Turbine, LP turbine, and Generator. Working at Heights training will be required. Its important to always hook up at heights.
Seal oil stations	Water wash, use degreaser to clean any spillages. Report any leaks and large spillages to be cleaned by responsible department.	Daily	
Dirty Oil Sumps at 0ml	Empty sump manually into oil drums or suck empty using a vacuum truck, keep different substances separate and dispose of according to requirements associated and make sure sump is kept clean	Daily inspection	Oil removed must be stored at oil stores, disposal will be arranged by the Services Manager.
H2 system at 0ml	Water wash	Daily	No naked flames
C02 system at 0ml	Water wash	Daily	
Drip trays	Empty into receptacle, clean and place back	Daily	
Cable racks and trenches	vacuum clean wherever possible, alternatively, dust and remove rubbish	Monthly	

Pipe trenches	HP wash, water wash and vacuum clean wherever possible, alternatively dig out, and remove rubbish	Monthly	
Pipe racks	Water wash and vacuum clean, alternatively sweep	Monthly	
Concrete trenches	HP wash, vacuum clean wherever possible, alternatively dig out, and remove rubbish	Monthly	
Trench grating	Pick up all rubbish, rubble, discard spares and clean	Daily	
Structures including condenser	Dust using a feather duster, water wash and clean using degreaser to remove any oil spillages.	1 x monthly	Wear safety harnesses where required
Walls	Water wash and scrub, alternatively dust	1 X Monthly	
Steel staircase	Dust, vacuum, pick up all rubbish, rubble and discards	Daily	
Handrails	Dust and damp clean	Daily	
Roof structures of all buildings in the turbine house including gutters	Dust, vacuum clean and dig out, pick up all rubbish, rubble discards and clean (Use cherry picker)	1 X Monthly	Wear safety Harness where required
Crane railing and crane cabins	Cleaning turbine crane rail with broom, portable vacuum and clean crane cabin Use cherry picker to access these areas		Hook up at heights

7.2 BOILER

7.2.1 Plant areas and Perimeters if any -:

At the boiler house, the boundary will be a straight line halfway between two adjacent boiler houses (from unit 1 to 8 – 52ml to 0ml). Where there is no adjacent unit, the boundary will be at the boiler house outer walls (Unit 1 and 8)

Included in the boiler house area are.

- 52ml – Boiler roof structure, building structures, Return Water Tanks, auxiliaries
- 48ml – Boiler structure, pipework, auxiliaries, boiler drum
- 29ml – Boiler structure, pipe work, ducting's, cable racks, soot blowers, deaerator tanks
- 12ml –Boiler structure, pipe work, ducting's, cable racks, handrails, auxiliaries, air heaters, burner front (PF and oil burners), Bunker outlet pipes, Mill feeder landings, sampling plant

- 0ml – Cemented floors/Basement, Ash box, PA fans, Mills, ID fans, FD fans, trenches, sluice ways, cable racks, pipe work
- And all areas in between the levels mentioned above (Scaffolding will be arranged by Employer if needed)
- **Minimum 60 general workers, 2 Cherry picker operators, 3 HP Machine operators, Truck driver and 3 Vacuum truck operator**

7.2.2 Expected nature of dirt.

The expected nature of rubbish and dirt to be cleaned in the boiler house is expected to be normal dust, pulverised fuel (PF) dust and ash dust settling on the plant and the equipment on the upper levels. Same rubbish and dirt maybe expected on the basement floor including ash and coal.

Oil (Fuel oil – Bunker 150) and grease spilling from the equipment's as a result of normal maintenance duties and unexpected failures. Coal and ash dust is expected to be of high significance. Spillage of coal and ash may be significant and oil spills are expected to be minor.

7.2.3 Estimate Industrial Cleaning needs-:

Plant/Equipment to be cleaned	**Method**	**Frequency**	**Comments**
Equipment, Components & Instruments • Electric panel boards (Open panels not to be cleaned) • Control boxes • Windows • Telephone cubicles • Valves Gauges	Dust and wipe using cloth, detergent/degreasing fluid, avoid spraying water over the equipment.	Daily	Take care when cleaning moving/rotating plant
Electric motors	Dust No water wash allowed	Daily	Take care when cleaning moving/rotating plant
Gearboxes	Dust; remove oil and grease	Daily	Take care when cleaning moving/rotating plant
Actuators – **(Critical component)**	Dust and damp clean. avoid touching/moving the limit switches this may cause unit trip	Daily	**RISK OF UNIT TRIP** Avoid touching/moving the limit switches

Plant/Equipment to be cleaned	Method	Frequency	Comments
Fire extinguishers, hydrants and hose reels	Dust vacuum and damp clean	Daily	
Dust bins	Empty into local skip and clean	Daily	
Grated elevated floors 52ml – including RFT tanks where applicable.	Sweep, Vacuum/Dust gratings pick up all rubbish, rubble and discards around this area	Daily	
Boiler House roof, structure of all buildings in the boiler house including gutters	Dust, vacuum clean. Dig out dirt from gutters, pick up all rubbish, rubble discards and clean (Use cherry picker where needed)	1 X Monthly	Wear safety Harness where required
Grated floors 48ml & 29ml	Sweep, Vacuum/Dust gratings pick up all rubbish, rubble and discards around this area	Daily	
DA areas	Dust, vacuum, pick up all rubbish, rubble discards and clean	1X weekly	
Pipes, tanks, vessels etc.	Dust and degrease where necessary	Daily	Be aware of hot pipes and defective uninsulated areas
Buck stays and other boiler structures	Dust and vacuum Water wash not allowed when unit is on load. (permission to be granted by Outage department during outages)	Weekly where accessible or when the unit is offload	
Boiler House walls, beams and structure	Dust using feather dusters Water wash during outages	Weekly	
Soot blowers	Dust using feather dusters	Daily	Moving and rotating equipment (make sure there is no soot blowing taking place)
Top of E-row ducting including Left Hand and Right-Hand air heater ducts	Dust, sweep & Vacuum, use heat resistant PPE and heat-resistant pipes.	1 X Monthly or when the unit is offload	hot surfaces and working at hights competency required

Plant/Equipment to be cleaned	**Method**	**Frequency**	**Comments**
Burners all - A to E row (Restricted area – apply for LAR)	Vacuum clean, Sweep, dust, and damp clean. When required use degreaser to clean oil spillages Blower to be used only during outages for inaccessible areas where vacuum cannot reach.	Daily	NB. Risk of unit trip Report to the unit controller to sign an LAR to gain access to these areas.
Drip trays	Inspect Drip Trays for oil, report to relevant dept for emptying. Empty PF/Ash into bins provided do not dump on the floor	Daily Daily	
Fuel oil stations - 12ml	Dig out when required use detergents to clean oil spillages. HP clean during outages	Daily	
Air heaters including ducting	Sweep area around the air heaters, vacuum clean, degrease and damp clean using detergents when needed. Dust or Vacuum ducting's Clean trenches below air heaters	daily When unit is offload When unit is offload	Take care when cleaning moving/rotating plant No detergents to enter oil system and tank Hook up when working at heights
Cement/concrete floor 12ml	Sweep using sweeper, scrub using scrubbers and remove PF build up. in areas where sweepers and scrubber cannot access, sweep and scrub manually. Dust all elevated pipe work, ducting and walls using cherry picker	Daily	Hook up when working at heights

Plant/Equipment to be cleaned	**Method**	**Frequency**	**Comments**
Mill coal feeders and slide gates (Feeder Landings)	Externally – Dust or vacuum (remove coal build up, spillages) do housekeeping	Daily	Take care when cleaning moving/rotating plant
Mills	Water wash area between mills, avoid spraying electrical equipment, No direct water jets	Daily	Take care when cleaning moving/rotating plant
Ash Boxes	Wash boiler above ash box and do housekeeping, wash floors around ash boxes	Daily	Make sure no ashing activities are taking place
Primary Air, Forced Draught and Induced draught fans and fan ducting	Sweep, Dust, vacuum clean, water wash on the floor when needed. No direct water jets, splash water allowed. Sweep/water wash area around the fans Clean any oil spillages. Remove debris on the suction screens when required	Daily	Take care when cleaning moving/rotating plant No detergents to enter oil system and tank Wear safety harnesses where required
Grated floors at ground floor	Water wash and pick up all rubbish, rubble and discards	Daily	
Cable racks and trenches	Vacuum clean wherever possible, alternatively dust and remove rubbish	Monthly	
Pipe racks/trenches	HP clean, vacuum clean wherever possible, alternatively dig out, and remove rubbish	Monthly	
Concrete trenches	Water wash, vacuum clean, HP wash or alternatively dig out, and remove rubbish	Monthly	
Trench grating	Pick up all rubbish, rubble, discard spares and clean	Daily	

Plant/Equipment to be cleaned	Method	Frequency	Comments
Structures, hangers and supports at ground floor	Dust or water wash (Get permission first)	1 x Monthly	Wear safety Harness where required and obtain permission from the services manager before washing with water
FD fans suction screens	Remove debris using cherry Picker	1 X Monthly	
ID fan suction screens	Remove debris using cherry Picker	1 X Monthly	
Steel staircases and handrails from 48ml to 0ml	Dust, damp clean and pick up all rubbish, rubble discards	Daily	
Goods and passenger lifts	Sweep and Mop.	2X Daily	
Cable racks	Dust and vacuum where possible	1 X Monthly	

7.3 STATION SWITCHGEAR ROOM

7.3.1 Plant areas and perimeters if any -:

Included in this area are:

Switchgear rooms

- Boiler, Turbine, Ash plant and Coal plant Common Plant and Common plant switch gear rooms including New Ash Dam and old AWR Switchgear Room (6.6kv and 380V)
- PM with list of all switchgear rooms to be cleaned will be issued when contract is running.
- All these areas are Red Zone and Live chambers, can only be accessed by an Authorised Personnel with Arc Flash suits CAT 2 PPE (to be provided by Eskom)
- Do not touch or open any board
- Do not clean behind the boards
- Battery rooms, Battery chargers and VT Rooms
- **Minimum 4 general workers and 1 Authorised Supervisor**

7.3.2 Expected nature of rubbish and dirt

Expected nature of the rubbish and dirt to be cleaned is expected to be normal dust, ash and coal dust settling on the plant, equipment and floors. Water spillages are expected to be minimal

7.3.3 Estimated industrial cleaning needs

Plant/Equipment to be cleaned	Method	Frequency	Comments
Switchgear room floors	Sweep, mop and polish Do not clean behind panels	Monthly	If floor polish is to be used, this must be anti-static, tested and approved. Wear CAT 2 PPE
Walls & Windows	Dust and Water Clean	Monthly	**Do not clean if behind the panels**
Cable racks	Vacuum clean wherever possible, alternatively sweep, dust and remove rubbish	Monthly	**Do not clean if behind the panels**
Roof structures of all switchgear rooms including gutters if any	Dust, vacuum clean and dig out, pick up all rubbish, rubble discards and clean (Use cherry picker)	Monthly	Wear safety Harness where required
Battery room charger floors	Sweep, mop and polish **Observe safety warning before entering the battery room.** **Do not touch the batteries.**	Monthly	Use trained personnel Get necessary authorisation for access Wear correct PPE (Chemical resistant – Green Overalls) Refer to Eskom guidelines
VT Rooms floors	Sweep, mop and polish **Do not clean behind the panels**	Monthly	If floor polish is to be used, this must be anti-static, tested and approved. Wear CAT 2 PPE

7.4 WATER TREATMENT PLANT

7.4.1 Plant areas and perimeters if any -:

The area includes the water treatment plant, pipes, structures, tanks, roofs and gutters, sand filter nets, Demin plant, pump areas, trenches and channels.

7.4.2 Expected nature of rubbish and dirt

Nature of dirt to be cleaned is expected to be soil and dust settling on the plant, equipment and floors and loose discarded materials.

BEWARE OF HAZARDOUS CHEMICALS

Spillages may occur occasionally, at water plant in majority it is expected to be water and watery solutions of chemicals which amongst others may include sulphuric acid, ammonia, caustic soda etc, all to be treated with care.

Do not attempt to clean any chemical spillages, avoid touching any chemicals and report any suspected chemicals spills to the services manager.

- **Minimum 2 general workers, 3 HP Machine operators and 3 Vacuum truck operators**

7.4.3 Estimated industrial cleaning needs

Plant/Equipment to be cleaned	Method	Frequency	Comments
Equipment, Components & Instruments Windows Telephone cubicles Valves Gauges	Dust and damp clean using detergent/degreasing fluid, avoid spraying water over the motors.	Daily	Take care when cleaning moving/rotating plant
Electric motors	Dust, avoid direct water jets.	Daily	Take care when cleaning moving/rotating plant
Pumps	Water wash and remove oil and grease, alternatively damp clean	Daily	Take care when cleaning moving/rotating plant
Gearboxes	Dust, remove oil and grease and damp clean. Avoid direct water jets	Daily	Take care when cleaning moving/rotating plant
Drains/Trenches/ Channels	HP/Vacuum clean, pick up all rubbish, rubble, discard debris and clean	1 x weekly	
Dust bins	Empty into local rubbish skip and clean	Daily	

Concrete floors (WTP)	Sweep and mop. Where floor sweepers cannot access, water wash and mop.	Daily	
Grated floors	Water wash where permissible pick up all rubbish, rubble and discards	Daily	
Walls	Water wash	Bi-Monthly	
Pipes, vessels etc.	Dust and damp clean	Bi-weekly	
Cable racks and trenches	Dust and vacuum clean wherever possible and remove rubbish	Monthly	
Pipe trenches	Hp clean, vacuum clean wherever possible, alternatively dig out and remove rubbish	Monthly	
Pipe racks	Water wash and vacuum clean	Monthly	
Concrete trenches	HP & vacuum clean wherever possible, alternatively dig out, and remove rubbish	Monthly	
Trench grating	Pick up all rubbish, rubble, discard debris and clean	2 x weekly	
Structures, hangers and supports	Dust and damp clean or water wash Get permission to wash	1 x weekly	Hook up at heights, where required
Steel staircases	Dust, damp clean and pick up all rubbish, rubble discards	2 x weekly	
Denim water plant	Dust and damp clean pipes and structures Open gratings and HP/vacuum clean trenches or dig out and remove dirt	Weekly Monthly	
Roof structures of all buildings in the water treatment plant including gutters	Dust, vacuum clean and dig out, pick up all rubbish, rubble discards and clean (Use cherry picker)	1 X Monthly	Wear safety Harness where required
Sand filter net cleaning	Use portable pressure washer to wash the net	Weekly or as & When required	Wear safety Harness where required

7.5 SEWAGE PLANT

7.5.1 Plant areas and perimeters if any -:

- All septic tanks in the stations including manholes at Makoya and both Ash dams (New & Old)
- All septic tanks to be emptied as and when required, waste to be disposed at the station's sewage plant.

  (Ensure truck to be used for emptying septic tanks is always clean, there must be no traces of ash or any foreign materials like oil etc…)
- Sewage plant – including new sewage plant pump house next to security gate

  (All equipment's, pipe work, trenches, ponds, tanks, sumps, switchgear rooms)
- **Minimum 1 general worker, 3 Vacuum truck operators and 3 HP Machine operators.**

7.5.2 Expected nature of rubbish and dirt

- Normal dust
- Water
- Sewer

7.5.3 Estimated industrial cleaning needs

Plant/Equipment to be cleaned	Method	Frequency	Comments
Septic tanks (All)	Vacuum empty septic tanks and dispose at Camden Sewage plant Using a vacuum truck	Inspect Daily or empty as and when required	No ash to be disposed at sewage plant – ensure tuck to be used is clean at all times
Unblock Manholes & pipe work	Assist with Unblocking manholes if rods are not working using vacuum truck	as and when required	
Sewage Plant Sump & Pond	To be cleaned manually or with HP Machine	as and when required	
Switch gear rooms	Sweep, dust	Weekly	
Pump station	Sweep and water wash	Weekly	

Plant/Equipment to be cleaned	Method	Frequency	Comments
Trenches	Water wash or HP wash	As & when required	
New sewage plant pump house	Dust all equipment and components Sweep and mop floors Clean and report any oil spillages Conduct housekeeping	Weekly	
New ash dam sewage plant	Dust all equipment and components in switchgear room. Sweep and mop floors Conduct housekeeping	Weekly	

7.6 COOLING WATER PLANT

7.6.1 Plant areas and perimeters if any -:

This area includes six wet cooling towers and forebay, auxiliary plant, cooling water pump houses (east and west) with six vertical cooling water pumps, basement.

Other areas included, are switchgear room, roofs and gutters, cooling water screen washing bay, cooling water pipe trenches, cooling water valve pits.

7.6.2 Expected nature of rubbish and dirt

The nature of the rubbish and dirt to be cleaned is expected to be loose discards, cut grass, soil, mud and normal dust settling on the plant, equipment, oil, chemical and water spills. **Don't attempt to clean chemical spillages or clean acid bund walls.**

- **Minimum 1 general worker, 3 Vacuum truck operators and 3 HP machine operators**

7.6.3 Estimated industrial cleaning needs

Plant/Equipment to be cleaned	Method	Frequency	Comments
Equipment, Components & Instruments Windows Valves Gauges	Dust and damp clean using detergent/degreasing fluid, avoid spraying water over the motors.	Weekly	

Plant/Equipment to be cleaned	Method	Frequency	Comments
Pumps	Dust, remove oil and grease	1x weekly	Take care when cleaning moving/rotating plant
Gearboxes	Dust, remove oil and grease	1x weekly	Take care when cleaning moving/rotating plant
Drains and basement	HP & Vacuum clean any water/mud accumulation, pick up all rubbish, rubble, discard spares and clean	1 x weekly	
Waste bins	Empty into local rubbish skip/container and clean	Daily	
Grated floors	Sweep and pick up all rubbish, rubble and discards	Daily	
Sumps	As needed vacuum suck empty,	Daily inspection	
Pipes	Dust, water wash, scrub	1x weekly	Be aware of hot pipes & slippery surfaces
Floors	Sweep, mop with occasional water wash and scrub. Use degreaser to remove oil	Daily	
Cable racks and trenches	Vacuum clean wherever possible, alternatively dust and remove rubbish	Monthly	
Pipe trenches	HP clean, vacuum clean wherever possible, alternatively dig out, sweep, dust and remove rubbish	Monthly	
Pipe racks	Water wash and vacuum clean	Monthly	
Concrete trenches	HP clean, vacuum clean wherever possible, alternatively dig out, sweep, dust and remove rubbish	1x weekly	
Trench grating	Pick up all rubbish, rubble, discard spares and clean	Daily	
Steel stairwells	Dust, damp clean and pick up all rubbish, rubble discards	Daily	
Handrails	Damp clean	Daily	

Plant/Equipment to be cleaned	Method	Frequency	Comments
Valve pits	Vacuum water and clean settlement	Monthly or when required	
CW screen wash bay	Sweep, pick up all rubbish, rubble discards, water wash	Weekly	
Roof structures of both CW pump houses including gutters	Dig out, pick up all rubbish, rubble discards, clean and water wash (Use cherry picker)	1 X Monthly	Wear safety Harness

7.7 FIRE PUMP HOUSE

7.7.1 Plant areas and perimeters if any -:

Fire pump house located on the east side of the station

All plant equipment, buildings, and support structures. Included in this area are all pipe work, cable, pumps (two jockey pumps & two diesel pumps), diesel tank, sump and trenches.

7.7.2 Expected nature of rubbish and dirt

- Normal dust
- Water
- Minor oil and diesel spillages may be expected in the fire pump house
- **Minimum 1 general worker, 3 Vacuum truck operators and 3 HP machine operators**

7.7.3 Estimated industrial cleaning needs

Plant/Equipment to be cleaned	Method	Frequency	Comments
Equipment, Components & Instruments Control boxes Windows Telephone cubicles Valves Gauges	Dust and damp clean using detergent/degreasing fluid, avoid spraying water over the motors.	Daily	Take care when cleaning moving/rotating plant
Electric motors	Dust and damp clean using degreasing fluid	1 × weekly	Take care when cleaning moving/rotating plant
Pumps	Dust, remove oil and grease	1x weekly	Take care when cleaning moving/rotating plant

Plant/Equipment to be cleaned	Method	Frequency	Comments
Gearboxes	Dust, remove oil and grease and damp clean	1x weekly	Take care when cleaning moving/rotating plant
Drains	Vacuum & HP clean any water/mud accumulation, pick up all rubbish, rubble, discard spares and clean	1 x weekly	
Waste bins	Empty into local rubbish skip/container and clean	Daily	
Pipes	Dust, water wash and damp clean	1x weekly	
Floors	Sweep, sweeping with occasional water wash and scrub using degreaser.	Daily	
Cable racks	Vacuum clean wherever possible, alternatively dust and remove rubbish	Monthly	
Pipe trenches	HP clean, vacuum clean wherever possible, alternatively dig out, and remove rubbish	Monthly	
Concrete trenches	Sweep and HP clean, vacuum clean wherever possible, alternatively dig out, and remove rubbish	1x weekly	
Trench grating	Pick up all rubbish, rubble, discard spares and clean	Daily	
Steel stairwells	Dust, vacuum sweep and pick up all rubbish, rubble discards	1x weekly	
Handrails	Dust and damp clean	Daily	

Plant/Equipment to be cleaned	Method	Frequency	Comments
Bund area	Sweep and clean spillages around the bund area	Daily	
Diesel Tank	Dust and clean fuel spillages on the tank	Daily	

7.8 COMPRESSOR PLANT

7.8.1 Plant areas and perimeters if any -:

Two compressor houses (east and west)

Compressors (electrical & diesel), blowers, trenches, cable racks.

7.8.2 Expected nature of rubbish and dirt

- Normal dust
- Water
- Oil & diesel spills
- **Minimum 1 general worker, 3 HP machine operators**

7.8.3 Estimated industrial cleaning needs

Equipment to be cleaned	Methods	Frequency	Remarks
Compressor houses (East and west)	Dust all equipment and components, Sweep, Pick up all rubbish, rubble, discard spares, mop & polish floors and degrease where necessary	Daily	
	Inspect trenches for blockages	Daily	
	Clean manually or Unblock using HP Machine when necessary using	As & when required	

7.9 HYDROGEN PLANT

7.9.1 Plant areas and perimeters if any -:

All plant and equipment belonging to the Hydrogen plant located behind unit 6 next to the transformer bay. Included are all pipe, cable racks, drain trenches, containing equipment which provides a service to the Hydrogen plant, roof and gutters.

7.9.2 Expected nature of rubbish and dirt

The nature of dirt to be cleaned in the hydrogen plant is expected to be limited to normal dust settling on the plant and equipment, loose discarded dirt. Spark free tools to be used when cleaning this area.

- **Minimum 1 general worker**

7.9.3 Estimated industrial cleaning needs

Plant/Equipment to be cleaned	**Method**	**Frequency**	**Comments**
Equipment, Components & Instruments	Dust all equipment and components Damp clean where permissible	Daily	
Drains	HP/Vacuum clean, pick up all rubbish, rubble, discard spares and clean	Daily	
Dust bins	Empty into local rubbish container and clean	Daily	
Floor	Sweep, mop & polish	Daily	
Cable racks and trenches	Dust and vacuum clean wherever possible and remove rubbish	Monthly	
Trench grating	Pick up all rubbish, rubble, discard spares and clean	2 x weekly	
Structures, hangers and supports	Dust	1 x weekly	

7.10 FUEL OIL PLANT

7.10.1 Plant areas and perimeters if any -:

- Fuel oil off-loading stations (East and West)

All plant, equipment, buildings, and support structures. Included in this area are all pipe work, cable, pumps, off-loading sump and trenches up to the fuel oil pumping plant.

- Fuel oil plant

  All plant, equipment, buildings, support structures, X7 tanks and their bund areas located at the east and west of the power generating plant. Including diesel tanks and bund walls.

  HP and LP Pump houses (east and west), included in this plant are all pipe work, cable, drain trenches, sumps, heaters, pumps, drip trays.

- **Minimum 1 general worker and 3 Vacuum truck operators**

7.10.2 Expected nature of rubbish and dirt

- Fuel oil off-loading

  The nature of dirt to be cleaned is expected to be BUNKER 150 Fuel oil settlements, dust and general rubbish.

  Spillages during tanker off-loading are expected to be regular but of minor quantities, major spillages may occur occasionally.

- Fuel oil pumping plant

  The nature of dirt to be cleaned is expected to be BUNKER 150 Fuel oil settlements, dust and general rubbish. Spillages maybe expected to be regular but of minor quantities, major spillages may occur occasionally.

  NB: Any major oil spillages must be reported to the Services Manager for the relevant department to clean up

  All Fuel oil sumps need to be maintained at lowest levels possible to prevent overflows in case of major spillages.

  Oil may not be stored in batches smaller than 210 litres and may not be stored for long periods, report number of full oil drums to the Services Manager weekly for removal/disposal.

7.10.3 Estimated industrial cleaning needs

Plant/Equipment to be cleaned	**Method**	**Frequency**	**Comments**
Equipment, Components & Instruments Windows Valves & Gauges	Damp clean using detergent/degreasing fluid where permissible.	Daily	Take care when cleaning moving/rotating plant
Pumps	Remove oil and grease, using degreaser	1 x weekly	Take care when cleaning moving/rotating plant

Plant/Equipment to be cleaned	Method	Frequency	Comments
Gearboxes	Remove oil and grease and damp clean.	1 x weekly	Take care when cleaning moving/rotating plant
Drains	HP & Vacuum clean, pick up all rubbish, rubble, discard spares and clean	1 x weekly	
Dust bins	Empty into local rubbish skips and clean	Daily	
Basement floor	Sweep and degrease floors	Daily	
Grated floors	Pick up all rubbish, rubble and discards, clean with degreaser	Daily	
Sumps (off-loading bays Eat & West, HP pump houses - East and west)	Inspect sump level, and report to the services manager when full for responsible department to empty the sumps to avoid overflow	Daily inspection	
Drip trays	Empty into receptacle, clean drip tray and any spillages, place back	Daily	
Pipes, heaters,	Damp clean with degreaser to remove minor spillages	Daily	Be aware of hot pipes and defective uninsulated areas
Cable racks and trenches	HP wash, vacuum clean wherever possible, and degrease	Monthly	
Pipe racks/trenches	HP & Vacuum clean wherever possible, alternatively dig out, and remove rubbish	Monthly	
Concrete trenches	HP & Vacuum clean wherever possible, alternatively dig out, and remove rubbish	Monthly	
Trench grating	Pick up all rubbish, rubble, discard spares and clean	Daily	
Structures, hangers and supports	Damp clean with degreaser	1 x weekly	Wear safety harnesses where required
Roofs, structures and roof gutters	Vacuum, dig out and pick up all rubbish, rubble discards and clean	1 x monthly	Wear safety harnesses

Plant/Equipment to be cleaned	Method	Frequency	Comments
Steel stairwells	Damp clean with degreaser and pick up all rubbish, rubble discards	2 x weekly	
Handrails	Damp clean	Daily	
Fuel oil & Diesel tank bund walls	Drain water and clean any minor spillages (Vacuum Truck) Report any large spillages	when required	
HP pump house – East & West (ground and elevated floor above)	Clean minor spillages, Sweep, dust HP wash, degrease floors and do housekeeping	Daily	
LP pump houses – East & West	Clean minor spillages, Sweep, dust HP wash, degrease floors and do housekeeping	Daily	
Used oil storage areas	Do housekeeping Oil drums to be stored at oil stores Report number of full and empty oil drums to the services manager	Weekly	

7.11 STORES

7.11.1 Plant areas and perimeters if any -:

- Stores located on the southern side of the station.
- Floors, walls, roof structures and gutters
- Water trenches/drains around the buildings
- Storage areas/yards
- **Minimum 2 general workers, 3 HP machine operators and 3 Vacuum truck operators.**

7.11.2 Expected nature of rubbish and dirt

- Normal dust
- Water
- Oil & diesel spills
- Normal dust settling on the equipment's. Minor oil spills may be expected.

7.11.3 Estimated industrial cleaning needs

Plant/Equipment to be cleaned	Method	Frequency	Comments
Stores	Sweep, scrub and polish floors	Daily	
	Dust and damp clean rails	Daily	
	Dust work benches and equipment's were permissible	Daily	
	Make sure all drains outside stores are flowing	Weekly	Unblock
	Sweep around entrances and exit doors	Daily	
Roof structures and gutters	Manual clean, Dig out, vacuum clean, water wash	1 x Monthly	Wear safety Harness where required
Water trenches/drains around the building	Remove dirt, Dig out/hp wash or vacuum	Monthly or as and when required	
Storage areas/yards Incl chemical store	Conduct housekeeping, sweep and dust	Monthly or as and when required	

7.12 ROADS AND REMAINING AREAS

7.12.1 Plant areas and perimeters if any -:

Included are all the roads starting from N2 entrance to Camden Power station including 4 way stop at the military entrance approaching Camden Power Station security, coal stock yard road, visitors parking outside the station, main security entrance both east and west, CMD parking, training Centre and all roads inside the station up to the coal stock yard including parking areas and walk ways (pedestrian's) including all skip bin areas.

Remaining areas - All production and auxiliary plant, equipment, buildings or structures within Camden power station perimeters which may be omitted in the previously described plant areas but have similar work activities included in this scope will be covered under this section.

NB: Omitted scope of work requiring additional resources will be dealt with according to NEC requirements.

- **Minimum 4 general workers, 1 Road sweeper operator.**

7.12.2 Expected nature of rubbish and dirt

The nature of the rubbish and dirt may vary from area to area and may be expected to be limited to settling of dust and litter. The area may be contaminated with oil and grease as result of spillages and leaks. Spillages may be any material that is handled within such plant and may, amongst others, include ash, coal, lubricating oil, grease or fuel oil (bunker 150). Report such spillages

7.12.3 Estimated industrial cleaning needs

Plant/Equipment to be cleaned	**Method**	**Frequency**	**Comments**
Roads and parking areas.	Sweep using road sweeper, Pick up all rubbish, rubble, discard and manually sweep parking areas and walkways	Weekly	
	Manually sweep all main buildings entrances	Daily	
	Inspect for blocked drains	Daily	Unblock
	Empty all bins along the way into designated skip bins according to waste management procedure.	Daily	
Skip Bin Areas	Do housekeeping and ensure waste is separated accordingly. Sweep and/or Water wash where possible		
Main Security Gate entrance East and west	Manually sweep and pick up all rubbish and discard	Daily	
	Empty all bins	Daily	
	Water wash both entrances, walkways and parking areas weekly on weekends using combination vacuum truck	Weekly	

Plant/Equipment to be cleaned	Method	Frequency	Comments
Remaining areas	Contractor will be expected to clean Areas that are not described under any of the above-mentioned areas, but still fall within Camden Power Station boundaries. Provided the work to be done still falls within contract scope otherwise the matter will be handled according to NEC prescribed processes	As and when required	

7.13 DIRTY WATER DRAINAGE SYSTEMS

7.13.1 Plant areas and perimeters if any -:

- Reclamation dam inlet channels
- Reclamation dam & AWR switch gear rooms
- Oil skimming plant (North and south) including splitter box
- All equipment's, pipe work, trenches, tanks, screens
- Effluent pump house
- All station drains excluding V drains and channels outside the stations
- **3 HP machine operators and 3 Vacuum truck operators.**

NB. Desludging of ponds and dams do not form part of this scope of work.

7.13.2 Expected nature of rubbish and dirt

Ash slurry, debris, oil spills, normal dust.

7.13.3 Estimated industrial cleaning needs

Plant/Equipment to be cleaned	Method	Frequency	Comments
Oil skimming plant	Sweep and damp clean using detergent/degreasing fluid, Do housekeeping	1 × weekly	Take care when cleaning moving/rotating plant
Gauges	Damp clean and remove oil and grease	1 x weekly	

Plant/Equipment to be cleaned	Method	Frequency	Comments
Drains	HP & Vacuum clean, pick up all rubbish, rubble, discard spares and clean NB. No oil and ash mixture must be disposed at the ash dams inform Services Manager of such	1 x weekly	
Dust bins	Empty into local rubbish container and clean	Daily	
Concrete floor	sweeping, degrease when needed	1 x weekly	
Grated floors	Degrease, Pick up all rubbish, rubble and discards	1 x weekly	
Cable racks and trenches	vacuum clean wherever possible, alternatively, dust and remove rubbish	Monthly	
Pipe trenches	HP wash, dig out, remove rubbish and degrease	Monthly	
Concrete trenches	Inspect for any ash build up	Weekly	
Handrails	Dust, degrease and/or damp clean	Weekly	
Oil sump, oil tank, skimmer and bunds	Wipe down, de-grease and report full oil tanks to Services Manager to be emptied by responsible department.	Weekly	
Effluent pump house x2 Silt Traps	Drain water when required Clean pump house floor Contaminated material may not be disposed at ash dam, report to the services manager for the relent department to dispose	As and when required	In cases where the ash is contaminated with oil, do not dispose but report to the matter to the services manager
Splitter Box	Pick up all rubbish, rubble, discard spares and clean screens	Daily	

Plant/Equipment to be cleaned	Method	Frequency	Comments
Tanks at oil skimming plant	Inspect level and report to the services manager for the relent department to dispose	Daily inspection	
Oil skimming plant (North & South)	Housekeeping and inspect & report any blockages	1 x weekly	
Reclamation dam inlet channels (North and South)	HP & Vacuum clean, dig out and remove rubble. Conduct housekeeping	Monthly	
Reclamation Dam Pump house	Conduct housekeeping Drain water as and when required Clean floors	Weekly	

7.14 STATION DRAINS

7.14.1 Plant areas and perimeters if any -:

All drains inside the station, excluding V- drains and all drains requiring heavy machinery to clean.

- **3 HP machine operators and 3 Vacuum truck operators.**

7.14.2 Expected nature of rubbish and dirt

- Ash and Mud
- Oil spillages

7.14.3 Estimated industrial cleaning needs

Plant/Equipment to be cleaned	Method	Frequency	Comments
Station drains (All) Drawings to be provided by the services manager	Unblock drains using, HP machine or water wash and vacuum clean	Monthly	In cases where the ash is contaminated with oil, do not dispose but report to the matter to the services manager

7.15 PIPELINE TRENCHES

7.15.1 Plant areas and perimeters if any -:

- Ash line trenches and catchments from east and west ash sumps up to ash dam.
- Ash lines 1,2,3,4,5,6
- **Minimum 10 general workers, 1 Bobcat Operator, 1 TLB Operator and Tipper truck operator.**
- **Equipment Bobcat, TLB and Tipper truck.**

7.15.2 Requirements

- **X10 General workers, Tipper Truck and Tipper Truck operator** will be dedicated to these areas daily, other resources will be added as and when required.
- Ash spillages to be cleaned immediately
- Trenches and catchment must be free of ash at all times

7.15.3 Expected nature of dirt

- Ash spillages

7.15.4 Estimated industrial cleaning needs

Plant/Equipment to be cleaned	Method	Frequency	Comments
Ash line trenches and catchments	Clean ash line trenches and catchments using, HP machine or water wash and vacuum clean or bobcat where necessary. Alternatively dig out and remove dirt. (Eskom will provide Skips bins) Contractor must have a dedicated team of 15 general workers to maintain these areas daily Report any spillages outside the trenches/catchments.	Monthly	In cases where the ash is contaminated with oil, do not dispose but report to the matter to the services manager

7.16 ASH PLANT

7.16.1 Plant areas and perimeters if any –

- All ash conveying system from unit 1 to 8 (east and west from ash sumps up to the ash dam) including all New Ash dam facilities, FFP, AWR pump house and all pipes, cable racks, pumps, crushers, trenches and all sumps and support structures.

7.16.2 Requirements

NB: This plant needs to be cleaned **24hrs**, due to the nature of its operation.

Shift work of 3 shift cycle with the following resources: -

X30 General Workers

X3 Bobcat Operators

X3 Supervisors

x1 Bobcat (Skid steer)

NB: each shift must have a SHE REP, First Aider, Fire & evacuation warden.

7.16.3 Expected nature of rubbish and dirt

Nature of rubbish and dirt to be cleaned in the ash plant is expected to be:

- Course and fine ash settling on the plant and equipment, amount is expected to be significant.
- Oil and grease spilling from machinery as a result of normal duties.
- Ash spillages will be significant, oil spills are expected to be minor.

7.16.4 Estimated industrial cleaning needs

Plant/Equipment to be cleaned	**Method**	**Frequency**	**Comments**
Equipment, Components & Instruments Valves & Gauges	Dust and damp clean using detergent/degreasing fluid, avoid spraying water over the motors.	daily	Take care when cleaning moving/rotating plant
Ash Pumps	Water wash or HP wash pump base and remove oil and grease. Avoid spraying water directly to the pump v belts and motor	1 x weekly	Take care when cleaning moving/rotating plant
Drains	Vacuum clean, pick up all rubbish, rubble, discard spares and clean	1 x weekly	
Dust bins	Empty into local rubbish container and clean	Daily	
Basement floor	Water wash and do housekeeping	Daily	**Use of fire water for floor washing is prohibited.**
Grated floors	Dust, water wash and pick up all rubbish, rubble and discards	Daily	
Sumps (main ash sumps) 4 Ash Sumps to be cleaned **NB: Sluice water must be used for sump cleaning**	clean sump using portable pump, hoses, jack hammer or hp machine exposing the base of the sump. when needed vacuum suck empty, remove debris, keep different substances separate and dispose of according to requirements associated and water wash sump	2x Monthly	Wear Proper PPE(Gumboots and raincoats).Employees entering the sump must have basic rigging & working in confined space training)

Plant/Equipment to be cleaned	Method	Frequency	Comments
Sump pump areas & trenches (East & West)	Clean sump, water wash using hoses, hp machine when required	Daily	**NB: Sluice water must be used for cleaning of sump pump area**
Ash Crusher Pits	HP wash/Water wash and unblock drain hole	Weekly or as and when required	**NB: Sluice water must be used for pit cleaning**
Cable racks and trenches	Dust and vacuum clean wherever possible and remove rubbish	Monthly	
Trench grating	Pick up all rubbish, rubble, discard spares and clean	Daily	Ensure gratings are properly placed and in good condition
Structures, hangers and supports	Dust and water wash	Daily	Wear safety harnesses where required
Steel stairwells	Dust, Sweep, Damp clean and pick up all rubbish, rubble discards	Daily	
Handrails	Dust and damp clean	Daily	
Boiler Sluice ways	Water wash and HP clean	Monthly or As & When required	**NB: Sluice water must be used for cleaning of sluiveways**
AWR pump house	Sweep, dust and pick up all rubbish, rubble and discards	Weekly	
Ash Box trenches	HP wash, dig out and discard rubble	Monthly or As & When required	**NB: Sluice water must be used for trench cleaning**

Plant/Equipment to be cleaned	**Method**	**Frequency**	**Comments**
New ash dam Pump House New ash dam Workshop	Dust all equipment and components Sweep and mop floors Clean and report any oil spillages Conduct housekeeping Dust all equipment and components Sweep and mop floors Clean and report any oil spillages Conduct housekeeping	Daily Daily	
FFP Plant			
Drains /trenches (sluice ways)	Hp cleaning and Manually remove big clinkers from the sluice ways avoid flushing to the sump this will block ash pumps	Monthly	**NB: Sluice water must be used for trench cleaning**
Trench grating	Pick up all rubbish, rubble, discard spares and clean	Daily	Ensure gratings are properly placed and in good condition
Pipes and gauges	Dust, water and damp clean	Continuously	Be aware of hot pipes and defective uninsulated areas
Basement floor	Water wash floors Remove ash build ups immediately after a spillage by using a bobcat	Daily As and when required	**NB: Sluice water must be used for cleaning of basement**
Grated floors	Dust, vacuum and pick up all rubbish, rubble and discards	Daily	
Cable racks and trenches	Sweep and vacuum clean wherever possible, alternatively sweep, dust and remove rubbish	Monthly	

Plant/Equipment to be cleaned	**Method**	**Frequency**	**Comments**
Pipe trenches	Hp clean, vacuum clean wherever possible, alternatively dig out, sweep, dust and remove rubbish	Monthly	
Concrete trenches around FFP area	Sweep and vacuum clean wherever possible, alternatively dig out, sweep, dust and remove rubbish	Monthly	
Fabric filter plant roof, structure and roof gutters (including drains)	Dust, vacuum, sweep, dig out and pick up all rubbish, rubble discards and clean	1 x monthly	Wear safety harnesses where required
Fabric filter plant house walls, beams, support and structures	Water wash	1 x weekly	
Steel stairwells	Dust, vacuum sweep and pick up all rubbish, rubble discards	1 x weekly	
Roof structures of all buildings in the FFP plant including gutters	Dust, vacuum clean and dig out, pick up all rubbish, rubble discards and clean (use cherry picker)	1 x monthly	Wear safety harness where required
FFP blower houses east and west	Do housekeeping, dust, sweep and mop area	1 x monthly	

7.17 COAL PLANT

7.17.1 Plant areas and perimeters if any -:

- Coal conveyor 18; E1; 4A; 5A&B; 6A&C; 7A&B; 8A&B; 9A&B; 10A&C; 11A&B; and 12A&B
- Conveyor 18; 6A and 10A coal sumps
- Weighbridge

7.17.2 Requirements

This plant needs to be cleaned **24hrs,** due to the nature of its operation

Shift work – 12 hr 3 shift cycle with the following resources: -

X30 General Workers

X3 Supervisors

NB: each shift must have a SHE REP, First Aider and Fire & Evacuation warden

7.17.3 Compulsory Safety requirements

7.17.3.1 Cleaning of coal plant should be done according to site specific safe work procedure, it is the contractor's responsibility to develop such work instruction with reference to this scope of work and procedure must be approved by the employer.

7.17.3.2 No employees are allowed to do any work or cleaning activities on a running conveyor belt. No work is allowed to commence until the work permit has been issued

7.17.3.3 Unauthorized entry into a bunker/staithe or any coal/ash storage space is prohibited.

7.17.3.4 No person shall ever partly or completely enter any chute or conveying system for cleaning unless he is in the possession of/or has signed onto a workers register for a PTW clearly indicating that the relevant portion of the plant has been isolated.

7.17.3.5 All coal plant workers must know how to operate the emergency trip wire in case of danger to the plant and/or personnel.

7.17.3.6 Owing to the inherent dangers associated with the operation of conveyors, it is essential that no person cross a belt, whether stationary or not, by any manner other than the use of stairways, walkways or ladders provided for such purpose.

7.17.3.7 Under no circumstances are any operators, cleaners or visitors to the coal plant allowed to put their hands on the tripper car rails or belt while it's running.

7.17.3.8 Shift supervisor to communicate with site supervisor on all uncontrolled spillages on the plant and report any coal smoldering to the Service Manager.

7.17.3.9 When working on elevated conveyors, ensure that areas underneath the locations where work is to be carried out are demarcated to prevent other persons not involved in the work being carried out, from gaining access below the work area.

7.17.3.10 Where the requirements of the above cannot reasonably be complied with, then warning signs must be strategically placed such that adequate warning will be given that overhead work is in progress.

7.17.4 Expected nature of rubbish and dirt

- Coal dust, coal spillages and water spills
- Coal spillages expected to be significant

7.17.5 Estimated industrial cleaning needs

Plant/Equipment to be cleaned	Method	Frequency	Comments
Conveyor belt and Idlers	Remove coal dust and coal spillage under the belt or idlers using a broom or scraper to sweep the spillage unto the walkway. **Conveyor belt must be off**	Once per shift or As and when required	Permit to work required they must also sign the workers register.
Spillages on Walkway	When it is a large spillage, the employee must use a shovel with a long wooden handle. When pushing the shovel into the spillage the amount of spillage on the shovel when picking it up must not exceed 50% of the capacity that the shovel can carry. Remove/scoop up dust and coal on the walkway and throw unto the conveyor belt	Once per shift or As and when required	Do not put hands on tripper car rails or conveyor belt while it's running.
Conveyor belt pulleys or take up tension	Use shovels to remove coal spillage from the opening at the bottom of the guard. Should cleaning require access into the pully guard, conveyor belt must be stopped.	Once per shift or As and when required	

Plant/Equipment to be cleaned	Method	Frequency	Comments
Coal sumps X 3 Conv 18, 6A and 10A tail ends	HP Clean, Vacuum empty all 3 coal sumps Inspect Weekly	Monthly or as and when required. (especially during rainy season)	
Weighbridge	Debris removal - Sweep, shovel, and remove coal dust, stones, mud, and all solid matter around weighbridge Use of HP to remove embedded coal fines and residues Clean the under deck and drainage channels ensure removal of coal sludge and accumulated debris Pressure wash decks to remove oil spills, coal dust and moisture buildup that can affect readings	3x per week	

7.18 WEEKEND TEAM

The contractor must have a weekend team that will do deep cleaning of all units (during weekends and units that are offload) and clean any other area that needs attention that could not be attended to during normal working days due to plant unavailability.

NB. Working hours during weekends 07:00 to 14:00 with a minimum of 39 employees

7.18.1 Plant areas and perimeters if any

- Main focus during weekends will be on from 12ml to Zero ml Unit 1 - 8 but not limited to these areas only
- Road sweeping – From N2 entrance to Camden, 4 ways stop at military base, coal stock yard, ash dam and Camden crossing.
- Deep cleaning – Unit 1 – 8 from 56ml to 0ml (units on Weekend Outage/Maintenance)
- External Boiler washing – from 52 ml to 0ml (Only during outages - GO)

  (Use external boiler washing work instruction to be provide by the services manager.)

7.18.2 Requirements

Manpower: - (minimum **39** employees.)

X30 General Workers (Including mobile cleaning equipment operators)

x3 HP Machine Operators

x3 Vacuum Truck Operators

x1 Vacuum Truck Driver

x1 Supervisors

x1 Safety Officer

Equipment:-

x1Vacuum Truck

x1HP Machine

x1Road sweeper

x2Sweeper and scrubber

7.18.3 Expected nature of rubbish and dirt

- Coal and Ash dust
- Oil spillages
- Water leaks
- Rubble

7.18.4 Estimated industrial cleaning needs

Plant/Equipment to be cleaned	Method	Frequency	Comments
12ml	Dust pipe work & all structures both boiler and turbine (including Generators)	Weekly	
	Sweep, Mop, Scrub & Polish both Boiler and Turbine floors	Weekly	
	Dust & sweep, Damp clean 9ml down to 0ml	Weekly	

Plant/Equipment to be cleaned	**Method**	**Frequency**	**Comments**
0ml • Floor	Water wash 0ml floor from Turbine, Boiler, FFP and ID fans including all entrances to boiler and turbine. Unblock all drains	Weekly	Fire water usage for floor washing is prohibited.
• Ash box platform and Pipe work	Water wash and do house keeping	Weekly	Use ash water system
• Seal oil station	Deep clean seal oil stations using degreaser, dig out any dirt or HP wash	Weekly	Do not spray water on equipment
• FFP trenches	Dig out and HP clean treches	Weekly	Replace gratings
Road Sweeping	Sweep road and parking areas from N2, to 4 way stop up to coal stock yard and empty all bins.	Weekly	
	Water wash using combination vacuum truck and scrub both security entrance	Weekly	
	Sweep or Water wash main building parking area (using combination truck)	Weekly	

Deep Cleaning of offload units to access all inaccessible areas and on load units where safe and accessible From 52ml to 0ml Units 1 – 8 or any other area	Dust, Vacuum, Water wash where permissible always confirm areas with the Services Manager and ensure instruments are covered.	As required, during Outages	
• Boiler Roof	Manually remove/vacuum settled on top of the boiler. Dust all pipe work and structures	As required, during Outages	Hook up at heights
• Air Heater roof	Manually remove/vacuum settled on top of the air heaters. Dust all pipe work and structures	As required, during Outages	
• Air Heater Trench	Dig out and vacuum clean mud on trench	As required, during Outages	
• 52ml to 0ml	Dust all pipe work and structures, discard all rubble and do housekeeping		
• E row structure	Dust/Vacuum clean duct	As required, during Outages	Hook up at heights
• Burner front from E to A row	Dust/Vacuum clean pipe work and boiler structures or blow dust on inaccessible areas. Empty drip trays (PF dust)	As required, during Outages	
• Feeder landing incl ducting	Dust/Vacuum clean pipe work, ducting and boiler structures	As required, during Outages	
• Sluiceway trenches FFP and Ashbox, using sluice water system.	Dig out and HP clean trenches	As required, during Outages	Replace gratings after cleaning

Plant/Equipment to be cleaned	**Method**	**Frequency**	**Comments**
• ID, FD and PA Fans suction screens	Ensure all debris and rubble is removed	As required, during Outages	Hook up at heights
External Boiler washing – from 52 ml to 0ml Communicate with Outage coordinators to plan for boiler wash.	**Get permission to use fire water before washing.** Cover all instrumentation before washing. Call C&I and EMD to verify all instrumentation. Make sure the lift is at 48-meter level and isolated. Make sure there's a person monitoring the water on the levels below the levels being washed to ensure water is not directed to other equipment's affecting the adjacent units. Wash from 52 ml going down to 0ml.	As and when required (Only during outages - GO)	Get plant in operation permit or LAR

8. AS AND WHEN REQUIRED

NB: No additional resources required, the following is just a guide.

Same resource in the contract will be utilised for the activities below.

8.1 Cleaning of cooling tower pond

X6 Cooling tower ponds must be cleaned **yearly** or as and when required including cooling tower screens using a bobcat and vacuum truck.

- Minimum of 10 General workers
- X1 Supervisor
- X1 RP (Responsible Supervisor – PSR Authorised)
- X1 Bobcat Operator
- X1 Vacuum truck driver
- X3 Vacuum Truck operators
- Yearly Legionella Test is compulsory for all employees that will be working in the Cooling Tower

8.2 Cleaning of CW Forebay

X2 CW forebay to be cleaned **yearly** or as and when required from cooling tower slide gate to CW pumps using a bobcat, HP machine and vacuum truck.

- Minimum of 10 General workers
- X1 Supervisor
- X1 RP (Responsible Supervisor – PSR Authorised)
- X1 Bobcat Operator
- X1 Vacuum truck driver
- X3 Vacuum Truck operators
- X3 HP machine operators
- Yearly Legionella Test is compulsory for all employees that will be working in the Cooling Tower

8.3 Unblocking of Ash pipelines / Any Pipeline

Unblock ash pipelines from inside the station up to the ash dam **as and when required**. Using HP machine. Unblocking of any pipeline other than ash line may be requested

- X1 HP Machine
- X3 HP machine operators
- X1 Supervisor

9. CONSUMABLES

NB: The following consumables is to be supplied by the Contractor. All equipment/machine are wet rate. (Quantities on the BOQ are only estimates)

9.1 Cleaning Supplies

The following are monthly supplies or as & when required.

- Degreaser – Electrical Cleaner (20lt)
- Floor stripper (25lt)
- Floor Polish (25lt)
- Ammonia/ Multipurpose cleaner (25lt)
- Pine gel (25lt)
- Gutter sweep Brooms/ hard bristle brooms
- Household Brooms
- Mops
- Rags (5kg)
- Feather Dusters
- Absorbent (10kg)
- PVC Gloves

9.2 Cleaning tools

The following are yearly supplies or as & when required.

- High Pressure Floor wash hoses (200m)
- Fire water hoses (30m)
- Wheelbarrows
- Shovels
- Picks
- Squeegees
- Mopping Trolley Buckets (20L)
- Portable Lights
- Portable Blowers
- Rigging tools

10. Acceptance

This document has been seen and accepted by:

Name	Designation
Lindiwe Makhubo	Occupational Health and Safety Manager
Thabiso Mpongo	Environmental Management Manager
Zanele Kock	Quality Assurance Manager

11. Revisions

Date	Rev.	Compiler	Reason for change
December 2025	05	ND Phakathi	Added coal plant & SHEQ Requirements
December 2024	04	ND Phakathi	Contract Modification to add ash plant
January 2021	03	ND Phakathi	New Contract
February 2019	02	ND Phakathi	New Contract
December 2018	01	ND Phakathi	New Contract
May 2016	00	I Mngomezulu	Original issue

12. Development Team

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

- Ops support Team
- Engineering Team

13. Acknowledgements

- N/A