

PART 3: SCOPE OF WORK

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ASH DUMP WATER DUST SUPPRESSION ON AS WHEN REQUIRED BASIS FOR A PERIOD OF 60 MONTHS

C3.1: EMPLOYER'S SERVICE INFORMATION

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1. Description of the service

1.1 Executive overview

The Supplier shall be responsible for all aspects of the project as outlined below, from supply and delivery to commissioning.

1.1. Supply and Delivery

The Supplier shall supply all necessary equipment in accordance with the specifications below. The equipment must be delivered to the site, Kendal Power Station Ash Dump.

- **1.1.1 HDPE pipe:**
 - Supply 110mm Nominal diameter HDPE pipe for connection from the cannons to the middle of the slope where water sprinklers will be connected.
 - Maximum Working pressure: 20 bar
 - The length of the pipe will depend in the distance from the cannon to the middle of the slope
 - The number of tap-off points for sprinkler connection will depend on the distance from the cannon to the slope and the size of the area to be suppressed per cannon.

- **1.1.2 Sprinklers:**
 - Supply a minimum of 35 industrial-grade trolley water sprinklers.
 - Sprinklers shall be impact-driven or gear-driven, suitable for high-flow applications.
 - Throw diameter: 50m.
 - Maximum working pressure: 20 bar
 - Material: Corrosion-resistant, heavy-duty construction (e.g., brass, stainless steel, or durable plastic).
 - Nozzles: A selection of interchangeable nozzles must be provided to allow for adjustments to flow rate and spray pattern

- **1.1.3 Flexible Hose:**
 - Supply a minimum of 35 flexible hoses, each with a length of 100 meters.
 - Hose diameter: 25mm nominal
 - Material: Heavy-duty, abrasion-resistant, and UV-stabilized material suitable for industrial and outdoor environments (e.g., PVC lay-flat or reinforced rubber).
 - Working Pressure: Minimum of 6 bar.
 - Fittings: Hoses shall be supplied with high-quality, corrosion-resistant fittings on both ends for quick connection to the water source and sprinklers.

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- **1.1.4 Stacker Side**

- 409m of 280mm NB HDPE pipes (sub-main). Assuming they come in 6m lengths, required will be 70 off (2 spares)
- 440m of 110mm NB HDPE pipes (take-off). Assuming they come in 6m lengths, will need 75 off (2 spares).
- 25 sprinkler sets (couplings, isolation valves, flexible hoses, stands and sprinklers).
- 2x reducers (reducing from 280 to 110mm) HDPE
- 2 elbows 280mm HDPE
- 2x tee piece 110mm HDPE
- **1500m of 110NB HDPE pipe with tap off points (t-piece and a stopper) every 100m to run along 00ETK24**

- **1.1.5 Spreader Side**

- 327m of 280mm NB HDPE pipe (sub-main). Assuming they come in 6m lengths, we will need 56 off (1 spare)
- 4x tee-piece and stoppers for each tee
- 2 stoppers at the end.
- All components for the spreader side are 280mm diameter.

- **1.1.4 Ancillary Equipment:**

- Supply all required connectors, adapters, gaskets, clamps, valves, fittings and seals to ensure a leak-proof and secure installation.
- Provide any required spanners or tools for the installation and operation of the hose fittings.

- **1.1.5 Supply and deliver for 5 years**

In addition to the above, the supply shall, for a period of 5 years, on an as and when required basis supply and deliver the items below:

- 1500m of 280ND HDPE pipe
- 3000m of 110NB HDPE pipe
- 50 sprinklers set (couplings, isolation valves, flexible hoses, stands and sprinklers)

1.2 Installation and Commissioning

The Supplier shall be responsible for the full installation and commissioning of the system at the Kendal ash dump location.

- **1.2.1 Site Preparation:** The Supplier shall coordinate with the Client to identify the specific locations for the water points and sprinkler deployment.

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- **1.2.2 Installation:**

- Connect the HDPE pipe to the existing water supply points (at the cannons).
- Have tap- off points with manual valves along the HDPE pipe for the connection of sprinklers. This will be connected according to the client's discretion.
- Install the supplied sprinklers at the end of each hose.
- Secure all connections to prevent leaks and ensure stability under pressure.

- **1.2.3 Commissioning and Testing:**

- Conduct a full system test to verify proper operation of all sprinklers and hoses.
- Check for any leaks at all connections and fittings.
- Ensure each sprinkler is delivering the correct flow rate and spray pattern as per specifications.
- The Supplier shall provide a brief demonstration and training to the Client's nominated personnel on the correct operation, connection, and disconnection of the system.

1.3 REQUIREMENTS

1.3.1 Deliverables

Upon completion of the work, the Supplier shall provide:

- A complete and fully functional water sprinkler system as per this scope.
- A hand-over document confirming the successful installation and commissioning.
- A basic user manual or data sheets for the supplied equipment.

1.3.2 Safety

The Supplier must adhere to all site-specific safety regulations and industry standards. All personnel must always wear appropriate Personal Protective Equipment (PPE) while on site.

- Equipment to be used will need to be inspected by Eskom Safety Department for the acceptance into Eskom premises.
- Plant to be utilized need to be capable of driving and navigate on unstable terrain (given the ash).
- Human resources will be subjected to vetting by Eskom Security Department and be in possession with access control.
- Contractor must make provision adequate PPE for personnel given the dust fall condition on an operational site.

1.3.3 Warranty

The Supplier shall provide a minimum 12-month warranty on all supplied equipment and the installation work, covering defects in materials and workmanship.

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1.4 Interpretation and terminology

The following abbreviations are used in this Service Information:

Abbreviation	Description
ADF	Ash Disposal Facility
PPE	Personal Protective Equipment
MSDS	Materials Safety Data Sheets
HDPE	High Density Polyethylene
UV	Ultraviolet
PVC	Polyvinyl Chloride

2 Management strategy and start up.

2.1 The *Contractor's* plan for the service

Will be added when info is received.

2.2 Management meetings

Regular meetings of a general nature may be convened and chaired by the *Service Manager* as follows:

Title and purpose	Approximate time & interval	Location	Attendance by:
Kick off meeting	1 week before the commencement of the Contract	Kendal Power Station	Engineer, SHEQ Officer, Contract Manager and Service provider
Quality and NCR/ Defect meeting	When the need arises	Kendal Power Station	Engineer, SHEQ Officer, Contract Manager and Service provider
Assessment and Low Service Damages meetings	When the need arises	Kendal Power Station	Engineer, SHEQ, Contract Manager and Service provider

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Meetings of a specialist nature may be convened as specified elsewhere in this Service Information or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the service. Records of these meetings shall be submitted to the *Service Manager* by the person convening the meeting within five days of the meeting.

All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register shall not be used for the purpose of confirming actions or instructions under the contract as these shall be done separately by the person identified in the *conditions of contract* to carry out such actions or instructions.

2.3 Contractor's management, supervision and key people

Will be added when information is received from the *Contractor*.

2.4 Provision of bonds and guarantees

Will be added when information is received from the *Contractor*.

2.5 Documentation control

All documents submitted by the *Contractor* shall be of good quality and shall be subject to the *Employer's* approval. The *Contractor* submits all documentation to the *Service Manager*. All communications are filed and kept on Site. These communication documents are to adhere to the NEC TSC3 communication requirements.

All required documents shall be available for review and acceptance during the chemical application and site QC inspection.

For contractual issues, standard NEC templates and forms are to be used by both parties or if unavailable, the *Employer's* templates and forms will be used e.g. Non-Conformance Reports, Pre-commissioning checks or Assessments certificates. Alternatively, the *Contractor* prepares appropriate documentation to meet the *Employer's* requirements.

The following documentation to be supplied:

- (1) Material specifications
- (2) SOW
- (3) QCP
- (4) Technical monthly report with findings

2.6 Invoicing and payment

Within one week of receiving a payment certificate from the *Service Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice showing the amount due for payment equal to that stated in the *Service Manager's* payment certificate.

The *Contractor* shall address the tax invoice to the *Employer* and include on each invoice the following information:

- Name and address of the *Contractor* and the *Service Manager*;
- The contract number and title;
- *Contractor's* VAT registration number;
- The *Employer's* VAT registration number 4740101508;
- Description of service provided for each item invoiced based on the Price List;

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- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
- All invoices must be submitted to invoiceseskomlocal@eskom.co.za after the service have passed the quality Control processes which include approved service entry.

2.7 Contract change management

Any item that affects the prices or has the potential to do so, is immediately communicated to the *Service Manager* via an early warning and/or followed by a claim for compensation event with a quotation.

After consideration, approval may be given by the *Service Manager* and the *Contractor* may implement the compensation event accordingly. All claims will not necessarily be approved as a compensation event nor do quotes have to be accepted unchanged since the *Service Manager* performs an evaluation and approves justifiable costs only.

2.8 Things provided at the end of the service period for the Employer's use

None

2.9 Management of work done by Task Order

When a task order is issued by the *Service Manager*, a *Contractor* will be required to submit a Task order programme indicating the time to conclude the service and also indicating the risks that might affect the completion of the specific task in time.

3. Health and safety, the environment and quality assurance**3.1 Health and safety risk management**

The *Contractor* shall comply with the Eskom health and safety requirements contained to be attached when the contract is in place.

3.2 Environmental constraints and management

The *Contractor* shall comply with the environmental criteria and constraints Environmental Policy in terms of ISO14001:2015

3.3 Quality assurance requirements

Scope of work document which forms part of the contract documents has all the information relating to quality requirements.

Some quality assurance requirements are listed below:

- a. The *Contractor* complies with the *Employer's* quality and technical requirements including those listed in the *Employer's* specification document QM58 (Quality Management Specification 240-105658000).

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- b. The *Contractor* submits a QMS as a returnable schedule and uses it for all phases of the Project. The QMS complies with the requirements of ISO 9001 standard. The *Contractor* provides evidence of a fully implemented QMS as and when requested by the *Employer*. The *Employer* may at his sole discretion carry out an audit on the Contractor, the *Contractor's* suppliers and Subcontractors.

3.3.1 Quality Management documents requirements

The *Contractor* submits the following document after contract award to the *Employer* for review and acceptance and prior to the commencement of work

The *Contractor* will supply the *Employer* with a QCP which will detail the *Contractor's* organisation, quality assurance and quality control procedures specific to this project. The QCP must be aligned to, and reference ISO 10005:2005 QMS, guidelines for quality plans and in compliance with the guideline in QM 58 (Quality Management Specification 240- 105658000). The QCP will make reference to the *Contractor's* QMS Procedures to be used in this Contract:

- a. The *Contractor's* QMS compliance with the requirements of ISO 9001
- b. *Contractor's* quality manual
- c. *Contractor's* quality procedures
- d. *Contractor's* quality forms and work instructions
- e. *Contractor's* quality system documents referenced in this Works Information

The *Contractor* supplies the *Employer* with a QCP or ITP for review and acceptance.

The *Contractor* provides CVs of the quality management employees who will be responsible for quality on site.

Quality Management employee's responsibilities include but are not limited to the following:

- a. Administration of QA/QC functions
- b. Verification of approval status of their or Subcontractor's QCP and procedures
- c. On-and -offsite inspections
- d. Co-ordination, inspection and verification of the Employer's intervention points
- e. Review of Contractor testing and inspection documents (procedures, test results)

The *Contractor* submits as a minimum the following documents, as required by the *Employer*, which requirement does not constitute a compensation event, during the execution of the Works:

- a. Updated QCP register
- b. Inspection notifications accompanied by their inspection report
- c. Non-conformance and Defects registers and reports
- d. Updated Site and off-site inspection schedules.
- e. Inspections completed/outstanding.
- f. Inspection and test reports

ASH DUMP WATER DUST SUPPRESSION ON AS WHEN REQUIRED BASIS FOR A PERIOD OF 60 MONTHS**3.3.2 Quality Responsibility**

- a. The *Contractor* is accountable for the quality of the output and liable for any failures.
- b. The *Contractor* is responsible for defining the level of intervention of QA/QC or inspections. These are in line with the Employers requirements.
- c. The interventions points include all witness, hold, verification and review points required by the Employer. The *Contractor's* failure to allow the intervention points will constitute a non-conformance.
- d. Preliminary trials and commissioning of the system shall be carried out by contractor's representatives, who shall remain in attendance until such time as the system is working to client's satisfactory.
- e. All testing and commissioning shall be executed in presence of both contractor and client representatives and shall be executed in accordance with the approved procedures.
- f. Contractor to supply all technical data with signed inspection test procedures and as built drawings of works.
- g. Function testing shall be done on site in the presence of all stakeholders and thereafter the commissioning schedule shall be signed on site where handover certificate shall be provided.
- h. No commissioning shall be executed prior and without proof of function testing.

3.3.3 Reliability and Availability

- a. The service provider should ensure availability of consumables required when needed

Inspections

- a. The *Contractor* is responsible for the inspection of all the Works that is performed and the Employer only verifies that the Works is conducted as per the Contract.
- b. The *Contractor* conducts all inspections in accordance with the accepted QCP / ITP.
- c. The *Contractor* drafts a QCP or ITP which shows each activity and submits to the Employer for acceptance.
- d. The *Contractor* provides suitably qualified personnel to conduct on-and-offsite inspections
- e. The *Contractor* ensures that all Works are inspected and approved before the Employer is invited for verification.

3.3.4 Non-Conformances and Defects

Where NCR's and Defect notifications are issued, the *Contractor* acknowledges receipt as per reply period and proposes corrective and preventive actions to the *Employer* as per the contract response period. The corrective and preventive actions will include the implementation and completion dates. Progress on all NCR's and Defect notifications issued to the *Contractor* must be reported to the *Employer* on weekly basis.

- a. The *Contractor's* keeps a register of all NCR's and Defect notifications issued

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- b. Deviations from the Contract are treated as a non-conformance.
- c. Records of NCRs and Defect notifications are kept and form part of the data book records.

During the contract execution phase, the *Contractor* will be monitored by the *Employer* for performance on quality related aspects. The monitoring will be in the form of audits and assessments.

3.3.5 Quality Reporting

The *Contractor* submits a monthly quality report, on the last working day of the month. The report includes but not limited to the following:

- a) A register of NCRs and defects
 - b) Updated QCP / ITP register
 - c) Planned and completed local and foreign inspection dates
 - d) Completed and outstanding Inspections
- The contractor must complete and provide Eskom with detailed datasheet for each component prior to delivery
 - All technical documents submitted shall be in accordance with project schedule whereby the submitted documents shall be professionally and sequentially packaged.
 - Final submitted documents shall be in form of soft(electronic) version, and hard copies in the following format: Manufacturer's standards document in Adobe acrobat PDF.
 - Text and graphics in Microsoft word.
 - The contractor shall submit two (2) sets of final hard copy prints and one (1) soft copy disk after addressing all punch list issues for final review before submitting them during the plant hand over.

4 Procurement**4.1 People****4.1.1 BBBEE and preferencing scheme**

Procurement to provide information.

4.2 Subcontracting**4.2.1 Preferred subcontractors**

Will be added when we receive information.

4.3 Plant and Materials**4.3.1 Specifications**

The Contractor complies with all standards, specifications and regulations as listed within this Works Information. The Works will be carried out in accordance with the latest edition of the specified standards or other standards and codes where applicable.

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Table 1: General National/international Standards

SANS and other applicable International Standards		
No	Document No	Description / Title
1	OHSA	Occupational Health and Safety Act South Africa No 85 and amendments

Process Control

Table 4: Employer Process Standards

Applicable Eskom Process Standards		
No	Document No	Description / Title
1	ISO 9001	Quality Management Systems
3	240-44974011	Routine work management
4	240-53114193	Occurrence and Incident Management Procedure
5	240-43327398	Engineering policy
6	32-1155	Project Life Cycle Model

4.3.2 Correction of deviations

The solution minimum period for the binding to last must be 6 months.

2.1.3 Contractor's procurement of Plant and Materials

The Contractor will supply all necessary tools and equipment for satisfactory completion of the project.

5 Working on the Affected Property

5.1 Employer's site entry and security control, permits, and site regulations.

Kendal Power station is a national key point site, *The Contractor* will be expected do Kendal safety induction training which will provide the contractor with all the applicable regulations when coming to collect or deliver the equipment at Kendal.

Site access permits and gate passes will be organised by the Service manager or his or her delegation.

5.2 People restrictions, hours of work, conduct and records.

The Kendal power station working hours are as follows:

Monday to Thursday -07:15 to 16:30

Friday – 07:15 to 12:15

For emergencies (Weekends and weekdays afterhours), *The Employer* will arrange special access for the Contractor.

5.3 Health and safety facilities on the Affected Property

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Kendal power station has a medical station on site and a standby paramedics service for emergencies.

5.4 Equipment provided by the *Employer*

During the chemical application, the *Employer* will assist with water for the water bousers

5.5 Control of noise, dust, water, and waste

Kendal Power station, Ash Dump can be very dusty at times. The *Contractor* can use a dusk mask to protect themselves form dust.

Contractor shall adhere to the Kendal waste management plan which will be shared with the *Contractor* during induction training.

6. List of drawings**6.1 Drawings issued by the *Employer***

Applicable Eskom Specifications

- Document No. 0.64/14507
- Description/Title: K.K.S Coding System for Conveyors and Machines
- P&ID 0.64/21674