	Scope of Work	Kriel Power Station
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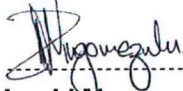

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1. Introduction

Kriel Power Station intends to enter into a contract with a suitably qualified, experienced and established contractor with the capacity to execute the scope of work as listed below for a period of five years. It is important to note that the contractor must have an auditable track record in the field of providing similar services in the industrial cleaning environment. This scope will entail details of areas and equipment that needs services.

2. Supporting Clauses

2.1 Scope

The scope covers ash plant at large up to the ash dams not limited to the roads where station cleaning is not attending to. This is applicable Kriel Power station.

The purpose of the document is to provide detailed understanding of cleaning ash plant areas that needs to be cleaned.

This document is intended to be the input to the NEC Part 3: Scope of Work

2.1.1 Purpose

This document provides the information of the areas that must be attended and how they should be attended. It combines good practice and provides a consistent approach for administrative control, achieving an appropriate level of planning detail, ensuring an acceptable level of execution of the plan.

2.1.2 Applicability

This document shall apply to the cleaning of ash plant to the ash dam on areas that are not covered by station cleaning at Kriel Power Station.

2.1.3 Effective date

This document shall be effective upon authorisation through signatures

2.2 Normative/Informative References

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.2.1 Normative

- [1] ISO 9001:2015 Quality Management Systems
- [2] Occupational Health and Safety Act (Osh Act; Act 85 of 93).

2.2.2 Informative

N/A

2.3 Definitions

DEFINITION	DESCRIPTION
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Work instruction	Instructions for performance of the work to be accomplished, the level of detail of which depends on the assigned planning level. When applicable, approved procedures can be referenced and can suffice as work instructions.
Work order	A document used to control work and testing activities.
Work package	A compilation of documents including the work order, work instructions, and any other supporting material (that is, drawings, vendor manuals, weld process sheets, operating experience, safety analysis, permits, and so on).

2.4 Abbreviations

ABBREVIATION	DESCRIPTION
PCM	Process Control Manual
OSHA	Occupational Safety Health Act
SHEQR	Safety, Health, Environmental, Quality and Risk
PPE	Personal Protective Equipment
PTW	Permit To Work
SOW	Scope Of Work

2.5 Roles and Responsibilities

2.5.1 Supervisor (R.P)

- All workers have appropriate P.P.E
- All workers are familiar with the risk assessment, safety precautions and hazards
- The work is carried out by authorised or competent person
- Supervisor shall ensure that all documents is accurately completed and signed before returning the documents like service instruction and information documentation to Work Management Department for capturing and filing.

2.5.2 System Engineer

As custodian of their system, they must ensure all actions required in terms of the reliability base and any other reliability matters are implemented on their systems.

2.5.3 Quality Controller

Must inspect the system after the maintainer has maintained, following the approved quality control plan.

2.5.4 Contractors

All contractors shall work within the parameter of the job description and scope of work. To keep all instructions/procedures on hand and supply Eskom power station with reference to be included in this document and supply record and history requirements

Must ensure that the work is performed to the highest quality standard, safety standards and regulations.

2.6 Process for Monitoring

- SOW Approval process
- Plant walks
- Daily Check sheet
- Pre-survey
- Post survey

2.7 Related/Supporting Documents

N/A

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3. Description of Services

This task entails the cleaning, sweeping and disposing of both coal and ash at Kriel Power Station. This will include cleaning of trenches and storm drain.

3.1 Task Description

Cleaning of ash along the six ash lines from the station (Steinmuller bridge) all the way to the ash dams, ash along overland conveyors (18A/B) from the station to ash dams, including the overland conveyor belt drive house, slurry pump house and AWR pump house sumps, ash on main silo complex ground floor and basement areas, assist in the removal of ash around the station to the ash dams, especially when the units ash on the floor, assist in the removal of the coal spillages around the station to coal stockyard or ash dams, filter drains outlets from debris, ash conveying plant and equipment in accordance with O&M manual, ash conveyor belt, roads from steinmuller bridge, solution and storm water control trenches around the ash dam facility at Kriel Power Station.

3.2 Purpose of Task

The purpose of this task is to keep Kriel Power Station clean and create a conducive environment for safety.

3.3 Task Scope

Kriel Power Station ash plant all the to the ash dam.

3.4 Applicability

This task applies to all Kriel Power Station dams.

3.5 Equipment type

- 2 TLB
- 2 Tipper Truck
- 1 Front end loader
- 1 Sweeper
- 1 Bobcat
- 1 HP pressure machine 2000Mpa

3.6 Working Hours

All plant 'cleaning activities must be for twelve hours except for the TLB and Tipper truck that must be 24-hours on the station side. Contractor should provide work force for shift (day and night) on the two 24-hours equipment. There will be no compensation events. Half the resources will remain for 12 hours the other half will do 8-hours. The resources will be rotating in these hours on weekly basis, when there half is doing 12-hours this week, another half will do 12-hours the following week. Weekends the resources will also rotate, half the resources will be working on site and they will do half day. The proposed hours are weekends : Saturdays & Sundays 7:00 – 14:00
: Week days 7:00 – 19:00

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Provision for standby allowance should be made for employees who will be available on daily basis after hours in case of spillages or emergencies on the instruction of the Services Manager. The overtime incurred thereof will be paid by the provisional sum provided in the price list.

No overtime claims shall be made by the contractor or paid by Eskom without prior approval of such overtime by Eskom.

3.7 Equipment number

- Eight equipment in total.

NB: TLB and the Tipper truck are required 24 hours on the station side. One TLB and Tipper truck on the Ash Dam side while the other TLB and Tipper truck are on the station side on the 12-hour cycle Monday to Monday.

HP pressure machine will be on an as and when required basis. All other equipment will be used on dayshift

General workers, Supervisors and other equipment drivers work 12-hours shift Monday to Friday and overtime on weekends and after hours.

Equipment must always be available for use for the duration of the contract. In case of breakdowns, the service manager shall be informed and a turnaround plan must be in place. Replacement or repairs must be within 8 hours. Any delay is a penalty.

3.8 Materials

Materials are divided into consumables and spare parts

3.8.1 Consumables

NB: The contractor must supply all cleaning equipment, chemicals and consumables, which must be listed. Except as otherwise expressly provided herein, the contractor shall supply all labour, supervision, tools, equipment and consumable materials, and each and every item of expense necessary for the performance of the work, which shall include but not limited to the scope defined in the specification of scope.

3.8.2 Spare parts

N/A

3.9 Hand tools

- Brooms and feather dusters
- Fire hydrant pipes
- Shovels
- Wheelbarrows. Etc.

3.10 Skills requirement

Job Family	Skill Type	Number
Driver	TLB Operator	4
Driver	Front end loader operator	1
Driver	Tipper Truck operator	4
Driver	Sweeper operator	1
Operator	HP Pressure pump operator	When required
Driver	Bobcat operator	1
General worker	Cleaning	20
General worker	Spotter for trucks	2

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Leadership	Supervisor	2
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3.11 Standard SHEQ requirements to all entering and performing work on Eskom holdings SOC (PTY) LTD premises safety

- The contractor shall conduct a safety inspection and hold a meeting with all employees once per month.
- The minutes of the meeting must be handed in to Eskom not later than the 4th last working day of the current month.
- The contractor is responsible to ensure the safety of all employees as far as practicable without risk to their health.
- The contractor must provide Eskom with a report of each employee's yearly medical screening not later than end February of every year.
- The contractor is responsible to report all safety deficiencies to Eskom immediately for action.

The contractor shall hold at least once a month a safety meeting and keep records thereof for perusal by the asset owner as and when required. The meeting will also include a work team discussion and a discussion regarding IBI. The employer will attend the meeting as and when required to ensure effective implementation of the program. Date list to be provided to the employer by the contractor.

- The contractor is required to attend the station's main safety meeting, which takes place monthly, and give feedback as required.
- The Safety and work team session meetings minutes, must be handed in to Eskom not later than the 1st working day of the next month.

The contractor must provide Eskom with a report of each employee's yearly medical screening not later than end March of the year.

- The contractor is responsible to report all safety deficiencies to Eskom immediately for action.

(a) Personal Protective Equipment (PPE)

PPE Group
Dust Mask
Ear plugs
Hard hats
Protective gloves
Protective overalls
Safety boots
Safety glasses
Gum boots
Rain coats
Reflectors

(b) Permit requirements

Belt/plant must be isolated in order for Permit to work. If cleaning is done online all safety measures must be put in place

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(c) Foreign Material Exclusion (FME)

Not applicable.

(d) Environmental requirements

Use relevant skips for disposal of any waste:

- White (6m3 open skip) Yellow (Wheelie bin) – General Compactable Waste (Domestic Waste)
- Blue (11m3 open skip) – Scrap Metal
- Brown (6m3 open skip) – Building Rubble (Bricks, Building gravel, Broken concrete, etc.)
- Red (6m3 closed skip with lid) – Hazardous Waste (Oily Rags, Empty paint tins, Empty spray cans etc.)
- Green (6m3 closed skip) – Scrap Metal (Ferrous metals only).

3.12 Contingency Considerations

N/A

3.13 Task Preparations

3.14 Detailed work instruction

- Contractor to submit a detailed method statement on cleaning all the areas on the scope for the employer to approve
- Contractor to request if isolations are required before works can commence, unless proposed methodology is to clean while the plant is alive.
- The contractor to perform strategic inspections in order to ensure plant is clean and safe posing no risk to personnel and plant.
- The contractor must remove all spillages of ash or coal anywhere in plant. If the ash or coal has touched the ground the contractor should rehabilitate the ground.
- If damage is done to any part of plant it must be repaired at the cost of the contractor or employer who has done the damage
- When removing ash or coal from the station any spills from the tipper trucks or TLB or any machinery of the contractor must be cleaned by the contractor.
- The cleaning process is continuous which means call-out will be made when necessary and/or during emergencies

3.15 Quality Requirements

- Contractor to develop a detail QCP in line with the approved Method statement

3.16 Post-result

- A pre and post cleaning report must be submitted daily.
- Inspections must be done continuously to ensure continuity of work
- Ensure all defects raised from inspections are put into SAP or flip.

3.17 General Feedback

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- Pre Cleaning inspection
- Post Cleaning inspection

3.18 Controlled Disclosure

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- Unanticipated leaks on interfacing infrastructure
- Interfacing infrastructure condition
- Obstacles to work performance
- Things that went well

3.19 References

- Plant Safety Regulations Procedure;
- Technical support Procedures;
- Equipment vendor technical manual (OEM Manual);
- ISO14001
- Quality 9001:2015
- OHSAS 18001

3.20 Price Data

Item No.	Description	Unit	Estimated Qty	Rate (Rands)	Amount (Rands)
100	PRELIMINARY & GENERAL				
101	Site Establishment	Sum	1		
102	Medicals (Annually)	Annually	5		
103	Transport	Month	60		
104	Health & safety /PPE (Consumable)	Month	60		
105	Operational Cost (Office, printing, Telephone)	Month	60		
106	Safety Officer	Month	60		
107	Supervisor	Month	60		
107	Site De-Establishment	Sum	1		
200	CLEANING SERVICES AS PER WORKS INFORMATION AREAS				
201	Cleaning of ash along the station six ash lines from the station (Steinmuller bridge) all the way to the ash dams. Underneath, around ash lines as well as the surrounding of	Monthly	60		

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	the ash lines including the hand rails and the ground.				
202	Ash along overland conveyors (18A/B) from the station to ash dams, underneath the belt, the structures, pipes, idlers and on the cable racks. Any equipment on the plant to be attended to as well.	Monthly	60		
203	including the overland conveyor belt drive house, slurry pump house and AWR pump house sumps and stir ways	Monthly	60		
204	ash on main silo complex ground floor and basement areas, affected soil/ground rehabilitated to its original form	Monthly	60		
205	assist in the removal of ash around the station to the ash dams, especially when the units ashed on the floor, including spills from the truck/vehicle	Monthly	60		
206	assist in the removal of the coal spillages around the station to coal stockyard or ash dams, including spills from the truck/vehicle	Monthly	60		
207	filter drains outlets from debris,	Monthly	60		
208	ash conveying plant and equipment in accordance with O&M manual	Monthly	60		
209	roads from steinmuller bridge,	Month	60		
210	solution and storm water control trenches around the ash dam facility	Month	60		

4. Acceptance

This document has been seen and accepted by:

Name	Designation
Solly Masogo	Coal and Ash Manager – Kriel Power Station
I Mngomezulu	Ops Support Manager – Kriel Power Station
T Sibanda	Operating Manager – Kriel Power station

5. Revisions

Date	Rev.	Compiler	Remarks
August 2021	0	BC Maseko	Establishment of Contract

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6. Development Team

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

- Bandile Maseko
- Piet Aphané

7. Acknowledgements

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