	Specification	Kusile Power Station
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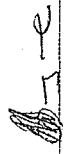

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**Kusile Power Station Wastewater Treatment Plant
SOW for Chemical Supply and Deliver for a period of
five years**

Unique Identifier: **KUS-20240725**
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1. Introduction

Kusile Power Station is operating a wastewater treatment plant to ensure compliance with the Zero Liquid Discharge licence. In order to achieve the optimum operation of the Plant, there are required chemicals and specifications identified for maximum performance of the plant. The quantity of chemicals is indicated under the scope of work and the duration of the contract is estimated to be for a period 5 year on “as and when required” basis.

2. Supporting Clauses

2.1 Scope

The user requirements specification for the chemicals involves among other things, the chemical requirements concerning impurity limitations on chemicals that will be used at Wastewater Treatment Plant. The chemicals that are on the national contract might be excluded as and when the national contracts are initiated.

2.1.1 Purpose

The purpose of this document is to outline the requirements and specifications of the chemicals needed for operation and optimization of Kusile Wastewater Treatment Plant.

2.1.2 Applicability

This document is applicable to all Kusile Chemical services Chemistry personnel, all relevant contractors and subcontractors.

2.1.3 Effective date

The document is effective from the authorisation date.

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 Quality Management Systems

2.2.2 Informative

- [2] User requirement specification and template, Doc no: PGZ265-109
- [3] Safety health and environment Specifications for Contractors - GVLIR 0007
- [4] Power Station Classification Guideline - GGG 1099 Rev 0
- [5] Construction, Safety, Health and Environment Management in

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- [6] Eskom - 32/136 Rev 0
- [7] Eskom Generation Plant Safety Regulations - GGR 0992 Rev 2
- [8] Eskom Operating Regulations for High Voltage Systems - ESKPVAEY6
- [9] Eskom Information Security Policy - 32-85 Rev 0
- [10] Eskom Vehicle and Driver Safety Management Procedure - 32-93 Rev 0
- [11] Integrated Business improvement – prevention and improvement
- [12] Standard - 6-366 Rev 0
- [13] Smoking policy - 32-36 Rev 0
- [14] Lifting Machine procedure - 32-255 Rev 0
- [15] Mandatory SHE requirements for the Eskom procurement and supply chain management process - 32-726 Rev 0
- [16] Application of KKS plant coding (for new builds) - NMP47-7 Rev 1
- [17] Routine Work Management manual - GGM1490 Rev 0

2.3 Definitions

2.3.1 Contractor: Service provider contracted for supplying specific service to Eskom, Kusile Power Station

2.3.2 Contractor's Employees: Employees employed by the contractor to provide services

2.3.3 Contractor's Specialist: Expert in profession for the Water treatment plant Systems from the OEM side.

2.3.4 Employer: Eskom, or Eskom Kusile Power Station

2.4 Abbreviations

Abbreviation	Explanation
BC	Brine Concentrator
Demin	Demineralisation
FGD	Flu gas Desulphurization
H&S	Health and Safety
LRT	Lime Reaction Tank
NCR	Non-Conformance Report
OEM	Original Equipment Manufacturer
OHSA	Occupational Health and Safety Act
PIS	Plant Information System
PT	Pre-Treatment

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Abbreviation	Explanation
BC	Brine Concentrator
SHE	Safety Health and Environment
SOW	Scope of Work
TSC	Term Service Contract
URS	User Requirement Specification
WWTP	Wastewater treatment Plant
ZLD	Zero Liquid Discharge

2.5 Roles and Responsibilities

a) Contractor

- Shall deliver all chemicals as per the employer's request, at a suitable storage area, bulk storage tank or semi bulk storage tank designated by the employer's representative.
- The contractor shall comply with Eskom policies and regulation, including confidentiality agreement.
- The Contractors' representative shall continuously inspect and observe the offloading operations and take appropriate corrective actions.

b) Contract Manager

- Compiles the user requirement specification (URS).
- Liaise with all relevant stakeholders for any input required.
- Provide technical assistance to Procurement Departments during the execution of this user requirement specification.
- Ensures that throughout the duration of the contract, the contractor conform and adhere to the safety, health and environment regulations as stipulated in this URS.

a) Procurement

- Perform all procurement processes outlined in this specification.
- Supply the Contract manager with Supplier information for sole source justifications, where applicable.
- Set up clarification meetings between Supplier and Employer.
- Ensure all necessary payments are affected timeously and keep record thereof.

2.6 Process for Monitoring

Regular reviews and audits shall be conducted to ensure compliance to the contents of this document.

2.7 Related/Supporting Documents

Not Applicable

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3. Scope of Work

3.1 General Requirements

Adherence to Eskom generic policies

- a) All Contractor employees shall comply with SHEQ policies and site regulations, including but not limited to use of cell phones in restricted areas, adherence to Eskom's lifesaving rules, no smoking policy, zero tolerance on alcohol usage, etc. These requirements will be detailed during the induction training process.
- b) The contractor shall comply with Eskom policies and regulation, including confidentiality agreement.
- c) The contractor shall comply with NEC contract signed.

Quality

- a) The Contractor provides a complete Quality Assurance plan in accordance with the requirements of ISO 9001 2015 to the Employer for approval. This plan must ensure an integrated quality service as part of the contract. Execution of all quality related activities, including inspection and test plans compilation and execution, stores material quality inspections and all quality-related record keeping is part of the Contractor's scope of work.
- b) The Contractor must provide a proof for the cleaning procedure or decontaminating of the tanker)

3.2 Delivery Requirements

- a) The contractor shall supply and deliver chemicals to the premises timely as per contract within one week (7 days) after the purchase order (PO) has been released and must make emergency deliveries within 3 days
- b) The Contractors' representative shall continuously inspect and observe the offloading operations and take appropriate corrective actions.
- c) Task Risk assessment shall be done prior to offloading of chemicals by both the contractor's and employer's representative
- d) The employer's representative reserves the right to refuse any and all deliveries made with equipment that is poorly maintained and/or defective
- e) Delivery of all chemicals shall be as per the employer's request, at a suitable storage area, bulk storage tank or semi bulk storage tank designated by the employer's representative.
- f) Normal deliveries should be done during office hour (07:00 to 15:00). Emergency delivery can be done after hours after consultation with the Contract Manager.

3.2.1 Delivery Locations

Delivery shall be made to: Kusile Power station Wastewater Treatment Plant.

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3.2.2 Sampling and Testing for Quality Control and Traceability Prior to Offloading

- a) For quality control and traceability, the supplier shall supply chemicals together with their 16-point Safety Data Sheet (SDS) and Certificate of Analysis (COA) corresponding to the specific batch number of a chemical.
- b) The COA shall contain the following information: Chemical name, Chemical formula, Batch number, date of analysis, analysis performed, and signature of responsible technician and supervisor.
- c) The Eskom employee shall accurately perform quality control of the product received before accepting the product and give the contractor's representative permission to offload
- d) If the chemical delivered do not meet the specifications Eskom shall return the product back to the supplier for exchange for a new batch.

3.2.3 Tanker contamination

- a) The tanks shall be clean and free of residue that may contaminate the Contractor's product or impede the offloading process. It is the Contractor's responsibility to verify the cleanliness of the transporting equipment before loading. All valves, pumps, and discharge hoses used for the delivery of chemicals shall be supplied by the Contractor and shall be clean and free from contaminating material. The Eskom's representative may reject a load if the equipment is not properly cleaned.
- b) The Contractor's representative shall furnish a leak-free connection device between the tanker and the Eskom's intake. The Contractor and the employer's representative shall observe the entire offloading operation at each delivery site and shall immediately report any spills caused during the offloading operations.
- c) The Contractor's representative shall take immediate and appropriate actions to clean up any spilled chemicals and if the spill is not cleaned up, the Purchaser will hire a certified hazardous material handling company to clean up the spill, and the cost of such service will be charged to the Contractor and deducted from the amount due to the Contractor.
- d) If the Purchaser's offloading equipment such as pipe, valves or level indication and alarms should fail and the spillage is not the fault of the Contractor or its subcontractor, the Contractor shall be relieved of clean-up of the spill.

3.2.4 Technical Support

The contractor shall assist and advice Eskom's representative on storage and handling of the chemical.

3.2.5 Records

- a) Kusile Power Station Quality Control Form for Chemicals and Consumables received Doc no: 240-103407330-1
- b) Signed invoices
- c) Signed NCR
- d) Signed minutes of the meeting

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3.2.6 Chemical list and Specifications

3.2.6.1 The chemicals should be pure grade with no additives as this might compromise the integrity of the system.

3.2.7 Kusile Chemical Services list of Chemicals required and chemical projections

NB: The chemicals should be pure grade with no additives as this might compromise the integrity of the system

Chemical	Storage	Density (kg/m³)	Quantity 5years (Kg)
Ferric Chloride (FeCl3 40%)	Tote (1000L)	1400	120 450
Soda Ash (Dense) 99.5 %	Silo (186m^3)	960	8 160 000
Polymer (100%)	Tote (1000L)	1100	15 000
Sulphuric Acid (98%)	Bulk Storage(15m^3)	1820	218 500
Calcium Sulphate	Bags (25 kg)	2320	379 500
Sodium Sulphate(anhydrous)	Bags (25 kg)	1400	4 162 740
Scale Inhibitor (100 %)	Tote (1000L)	1000	53 000
Antifoam (100 %)	Tote (1000L)	1000	98 300
Caustic (50%)	Bulk Storage(15m^3)	1530	1 108 150
Caustic (50%)	Tote (1000L)	1000	40 000

3.3 Safety

3.3.1 Health and safety regulations

- a) The contractor shall provide Eskom with SDS for each chemical received. The SDS shall contain product information and shall comply with OHS Act 85 of 1993 and Hazardous Chemical Substances Regulations Section 9A.
- b) The contractor shall comply with Globally Harmonised System (GHS) for classification and labelling of chemicals.
- c) All Contractors shall comply with the Kusile SHEQ specification, some of the key requirements of which are attached in Annexure B.

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- d) The contractor shall be Hazchem compliant or use Hazchem compliant transporter to transport chemicals throughout the contract period.
- e) Baseline and Task Risk Assessments must be conducted jointly by the Employer and Contractor. Baseline Risk assessment will be done once after awarding of the contract and for the whole Supply and delivery contract whereas the task risk assessment will be done before any offloading of chemicals
- f) The contractor shall comply with all the specification outlined on the SHE specification.

3.3.2 Medical centre

If incident occurs onsite, the Kusile Power Station medical centre will provide medical assistance to all injured or affected. Please note that the Contractor shall be responsible for their own Medical certificates of fitness exams and including its costs during the duration of the contract

3.3.3 Communication and correspondence

The Contractor shall communicate with the Contract manager and the buyer if there are any changes on the orders or product. The communication shall be professional and preferably via e-mail or alternatively by post.

The correspondence shall include the following:

- a) Kusile Power Station and address
- b) Employer's contact details
- c) Contract number and Contract description
- d) Correspondence subject matter
- e) Company's registration number
- f) Contact details
- g) Date
- h) Signatures of responsible people.

3.3.4 Common site services and conditions

3.3.4.1 Roads and vehicles

- a) All traffic is limited to using existing roads.
- b) All road signs and traffic laws / regulations on site will be adhered to.
- c) Damage caused to underground services, structures, etc., as a result of the Contractor not using the prescribed routes will be recovered from the Contractor.
- d) All Contractors shall comply with Eskom Vehicle and Driver Procedure 32 – 93 and

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Construction Site Vehicles requirements.

3.3.5 Security

3.3.5.1 Site access and departure

All vehicles and persons entering or leaving site will be subjected to Security checks and or search. This includes but is not limited to briefcases and toolboxes. Personal tools need to be listed and acknowledged by Security when brought on site. This list will be used for verification when the tools are removed from site.

3.4 Eskom Safety Principles:

- a) No operating condition, or urgency of service, can justify endangering the life of anyone or cause injury.
- b) Conduct business with respect and care for people and the environment and, ensure that adequate resources are available for SHE management.
- c) Entrench the belief that all injuries are preventable.
- d) All employees and Contractors are responsible for their own and that of their colleagues safety.
- e) The Contractor commits to employ only people who have been duly authorized in terms thereof and who have received sufficient training to ensure that they can comply therewith.
- f) No extension of time will be allowed as a result of any action taken by the Employer in terms of the above and the Contractor shall have no claim against the Employer as a result thereof. Furthermore, no amendments to the Act or Regulations or reasonable amendment to Eskom's Safety and Operating Procedures will entitle the Contractor to claim any additional costs incurred in complying the therewith from Eskom.

4. Acceptance

This document has been seen and accepted by:

Name	Designation
Bongumusa Bungane	Chemical services manager
Mpho Mokwena	Senior Supervisor Tech
Khanyi Manganyi	Senior Supervisor Tech
Bongani Ndala	Senior Supervisor Tech
Grace Olukune	Engineering Group Manager
Thabang Lejakane	System Engineer
Sithabile Ndlovu	Senior Chemist

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5. Revisions

Date	Rev.	Compiler	Remarks
October 2025	1	ME Ramabina	First issue

6. Development Team

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

Name	Designation
ME Ramabina	Senior Chemist

7. Acknowledgements

- a) Nkosinathi Tjiana – Senior Technician Chemistry

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Appendix A – Quality Control form for Chemicals and Consumables Received

Kusile Power Station Quality Control Form for Chemicals and Consumables received Doc no: 240-103407330-1

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Appendix B – Health and Safety Regulations

The Contractor and his subcontractors shall at all times comply with safety regulations imposed by any Act of Parliament, ordinance or any regulation or by-law of any local or statutory authority. Specifically, the Contractor shall comply with:

The Occupational Health and Safety Act, 1993, and all Regulations made there under

All Eskom Safety and Operating Procedures including:

- i. Eskom Life Saving Rules 32-421
- ii. Driver Safety 32-93
- iii. Vehicle Safety 32-345
- iv. Incident Management 32-95
- v. Alcohol Policy GGP 1209
- vi. Smoke Policy 32-36

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