

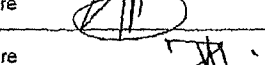


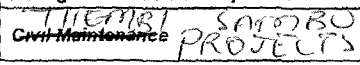

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		Document Identifier	14593	Rev	4
		Effective Date	October 2019		
		Review Date	October 2022		

PLANT AREA: Matla Power Station Outside plant			
TITLE: Geotechnical Investigation and slab design			
REF. MEA- 06703	Reference Rev No: 0	MULTIDISCIPLINARY: No	Plant Level. 3
COMPILED BY	Name: Setati Jack Moyaha System Engineer	Signature 	Date 20/10/2022
APPROVED	Name: Gavin Phelelo Acting Line Manager	Signature 	Date 20/10/2022
APPROVED	Name: Lindokuhle Ngobese Group Manager	Signature 	Date 20/10/2022
REVIEWED	Name: Jabulani Mtsweni Quality Department	Signature 	Date 25/10/2022
REVIEWED	Name: Refilwe Mokobodi Acting Environmental Department.	Signature 	Date 26/10/2022
RECEIVED		Signature 	Date 27/10/2022


NB: Do not tamper with the template.

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**GENERAL**

- Data books, reviews, reports and diagrams/drawings shall be submitted to Engineering after the completion of the work Engineering to forward the data books to Quality Department (Document Control)
- All QCP's to be submitted to Engineering and Quality for approval prior to outage/project or maintenance work commencement

	SCOPE OF WORK DESCRIPTION / ACTIVITY	PROCEDURE, SPECIFICATION, ENG. REQUIREMENTS / DOCUMENTATION	HOLD POINTS, WITNESS, REPORTS	RESPONSIBLE PARTY
1 1	Safety	<ul style="list-style-type: none"> <li>• All work is to be done in accordance with Matla plant procedures and safety regulations (GGR 0992)</li> <li>• Matla power station induction must be done before any work commences</li> <li>• Permit to work must be in place before any work commences</li> <li>• Worker's register must be completed and daily risk assessment conducted before any work commences</li> </ul>	Eskom to witness	Contractor
1 2	Environmental Management	<ul style="list-style-type: none"> <li>• All activities listed in the National Environmental Act 107 of 1998, EIA Regulation 982,983,984 &amp; 985(2014), must have <b>AUTHORISATION</b> before commencement of work</li> <li>• The contractor shall comply with all applicable legal and other requirements</li> <li>• The polluter pays principle will be applied</li> <li>• The contractor manager shall ensure compliance with Eskom Matla Environmental procedures to ensure the prevention of pollution (refer OMOP 4090 and 4402)</li> <li>• The last payment will be processed based on the status of the last housekeeping check sheet (Annexure C OMOP 4402) of designated area</li> <li>• EMS file based on ISO14001 will be required</li> </ul>	Eskom to witness	Contractor

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13	Quality Management	<ul style="list-style-type: none"> <li>The contractor/executioner of work will be responsible for drawing up all QCP documentation and this must be approved by engineering and authorised by the Quality Department before commencing with the work</li> <li>Contractors/executioner to adhere to QM 58 and OMOP4497 requirements</li> <li>Number of NCR issued can affect your next tendering process</li> <li>The QCP shall be signed progressively by the Engineer/Supervisor, Eskom QC Inspector, Contractor QC Inspector and/or AIA</li> <li>No procuring of outage items without the approval of scopes by quality</li> <li>All outage scopes creep and scopes addition should be approved by quality</li> <li>No contractor should be in the possession of scopes for execution without the scopes approved by quality</li> <li>The contractor is subjected to quality auditing at any point in time during execution of scope</li> </ul>	Hold point	Contractor
14	Inputs from other departments			
15	Commissioning reference			

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**DETAILED SCOPE**


2	SCOPE OF WORK DESCRIPTION / ACTIVITY	PROCEDURE, SPECIFICATION, ENG. REQUIREMENTS / DOCUMENTATION	HOLD POINTS, WITNESS, REPORTS	RESPONSIBLE PARTY
<p>The scope of work gives the requirements for Geotechnical investigation and the foundation design of the Reverse Osmosis (RO) plant. The contractor shall <b>Design</b> and <b>Construct</b> the foundation and reinforced concrete slab from the geotechnical investigation of the in-situ materials</p>				
2.1	<b>Geotechnical Investigation:</b> <ul style="list-style-type: none"> <li>• Prior any work can commence – the contractor must scan for underground services to ensure that there are no electric/C&amp;I cables / water lines etc. Submit the report to the Engineer for permit to go ahead with the test works</li> <li>• Conduct the soil profile investigation and report the ground water table level</li> <li>• Conduct a dynamic probe super heavy (DPSH) testing on the in-situ materials and report the results if they are suitable for the foundation of bearing capacity of 250 KPa</li> </ul>	<b>Specification:</b> <ul style="list-style-type: none"> <li>• Excavate 1.5m deep for soil profiling.</li> <li>• DPSH test every 5m on the location seen in Figure 1 below.</li> </ul>	Witness/report	Contractor

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2.2	<b>Foundation design and construction:</b> <ul style="list-style-type: none"> <li>Design and construct a slab foundation based on the geotechnical investigation results</li> <li>The slab should be able to support a load bearing capacity of 250 KPa where RO plant is going to be placed/constructed.</li> </ul>	<b>Specification:</b> <ul style="list-style-type: none"> <li>SANS 10100-1</li> </ul>	report	Contractor
2.3	<b>Slab design and construction:</b> <ul style="list-style-type: none"> <li>Design and construct a reinforced concrete slab to withstand 250 KPa where RO plant is going to be placed/constructed</li> <li>Slab design should include drainage system with the V-drain that connects to the coal staithe drainage which is approximately 90m away</li> </ul>	<b>Specification:</b> <ul style="list-style-type: none"> <li>SANS 10100-1</li> </ul>	Report	Contractor
2.4	<b>Housekeeping:</b>  Clear all unused, rubble and unwanted material offsite		Witness /Verify	Contractor

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25	<ul style="list-style-type: none"> <li>The quantities given shall be used for tendering purposes only. The successful contractor will be required to visit the site and verify all dimensions and locations, and notify the Employer or project manager of any changes to the estimated quantities before any work is done, prior to or on return of tender documents.</li> <li>The contractor takes full responsibility to verify all quantities, Measurements and bill of quantities are to be used as a guideline.</li> </ul>		Witness/Verify	Contractor
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BOM

Item	Description	Unit	Quantity	Rate
1	Soil profile (Depth)	m	1.5	
2	DPSH (Points)	num	5	
3	Foundation design	m <sup>2</sup>	40×30 = 1200	
4	Concrete slab design	m <sup>2</sup>	40×30 = 1200	
5	Foundation Construction	m <sup>2</sup>	40×30 = 1200	
6	Concrete Slab Construction	m <sup>2</sup>	40×30 = 1200	
7	Underground services	m <sup>2</sup>	40×30 = 1200	
8	Concrete V-Drain	m	90	

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SCOPE COMPILATION REFERENCES				
SOURCE & Ref No.	Yes	No	N/A	Comments
Previous outage service reports			x	
Return to service data packages			x	
Maintenance Strategy with Rev number			x	
SAP defects (attach list as appendix)			x	
GHRMS (STEP) reports (Generation Heat Rate Management System)			x	
Online Condition Monitoring			x	
Pre-outage performance test results			x	
Post outage performance test results			x	
GPSS/ Plant Performance data on UCLF incurred			x	
OMS / IIRMS recommendations (Audits Reports)			x	
Risk controls (IRM system)			x	
Previous audits and reviews (e.g. ERAP)			x	
Engineering Change Requests (Projects)			x	
LOPP strategy reports			x	
URS			x	
Philosophy (Outage)			x	
Condition Monitoring Report			x	
VA/PHD Viewer trends			x	

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Corrective Actions			x	
CARAB reports			x	
Statutory Requirements			x	
Grid code requirements			x	
Waivers and Exemptions			x	
Calibration requirements			x	
Previous Outage SOW variations			x	
Post Mortems Actions from previous outages			x	
Pre-Outage plant walks			x	
Risk based inspection (RBI) report			x	
Simulation, TOIs, OON, SI			x	

### COMMENTS

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Figure 1 Plan Area for RO plant

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