Eskom	Strategy	Technology

Title:	**Duvha Power Station for Tender Technical Evaluation Strategy for the replacement of North Bulk Sulphuric Acid Tank**	Unique Identifier:	**382-171333**
		Alternative Reference Number:	**N/A**
		Area of Applicability:	**Engineering**
		Documentation Type:	**Strategy**
		Revision:	**1**
		Total Pages:	**33**
		Next Review Date:	**As required**
		Disclosure Classification:	**CONTROLLED DISCLOSURE**

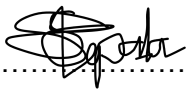
Compiled by

Jean-Pierre de Villiers

System Engineer
CW Systems

Date: 18/11/2024

Functional Responsibility



p.p

Nelly Hlople

Auxiliary Engineering Manager

Date: 19/11/2024

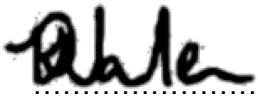
Authorised by

Maila Mamoleka

Engineering Manager

Date: 2024-11-20

Supported by:



Justin Varden

Chief Engineer Chemical

Date: 2024-12-03

CONTENTS

Page

TABLES

1. INTRODUCTION

Sulphuric acid dosing in cooling water (CW) systems is used to reduce the alkalinity of the CW. The system is an alternative and back up treatment to lime and soda ash treatment plants.. Adequate m-alkalinity control is required to ensure that carbonate based scale does not precipitate on various surfaces within the CW system.

Scale formed in the CW system affects the efficiency of the main turbine condensers, cooling towers, turbine auxiliary -, boiler auxiliary and generator auxiliary coolers. This scale has caused units to run with poor main turbine condenser backpressure (vacuum) such as Duvha unit 4. In addition, scale build up has decreased the efficiency of lube oil coolers such as those of the boiler electric feed pumps resulting in unit trips at Duvha power station. The lack of treatment of the CW system will continue to cause scaling on heat exchange equipment which reduces the heat transfer effectiveness and results in a continued increase in partial load losses (PLL).

The sulphuric acid bulk storage tank on the North cooling water plant was installed and commissioned in 1979 and it is currently out of service due to critical material corrosion as indicated in Figure 1 below. The tank was design according to the BS1515 part 1- 1965 which covers the corrosion and erosion protection for the acid tank, as well as the mechanical design. Due to aging of the tank the corrosion protection deteriorated resulting in the severe degradation of the tank hence there is a need to procure a new tank.

Figure 1: North Sulphuric Acid storage tank

The tank and plant are equipped with an offloading area where sulphuric acid is transferred to the bulk storage tank by means of isolation valves. From the tank plug valves are used to regulate the flow from the tank to the reciprocating pumps. The tank is equipped with two manhole access covers, an overflow or vent point, drain point as well as the inlet and outlet flanges. In addition, the tank makes provision for earthing lugs to avoid the build-up of static electricity. The tank discharge is fed to reciprocating pumps that discharges into the Northern recarbonation launder through the use of a stainless-steel pipeline.

The tank deteriorated over the years that resulted in numerous acid spillages to the bund area. The degradation of the tank affected the reinforced concrete bund around the storage tank. This bund is designed to contain spillages due to acid leakages from the tank and pipework and prevent any soil or ground contamination. The bund drainage system consists of a catch pit that connects to a manhole

outside of the bund with a drainage pipe underneath the concrete floor slab (from offloading area to the sludge launder). There are two manholes within the drainage system, one located outside of the bund area the other located downstream towards the discharge point at the sludge launder. The corrosion protection system of the bund has been compromised over the years, namely the bund walls and mostly the floor slab. The corrosion is also evident on the catch pit, manholes and the sludge launder. There is also corrosion evident on the offloading area concrete floor slab as well as the drainage system which also require remedial works.Supporting Clauses

1.1 SCOPE

This document contains all the multi-disciplinary design team's technical requirements that will be evaluated, the scoring matrix, the evaluation team members along with their responsibilities and also describes the acceptable and unacceptable risks, qualifications and/or conditions.

The technical evaluation requirements consist of the following criteria:

- Mandatory Evaluation Criteria
- Qualitative Evaluation Criteria
- Acceptable / Unacceptable Qualifications

1.1.1 Purpose

The purpose of this tender technical evaluation strategy (TES) is to define the Mandatory Evaluation Criteria, Qualitative Evaluation Criteria and Technical Evaluation Team (TET) member responsibilities for the tender technical evaluation. The TES serves as a basis for the tender technical evaluation process.

1.1.2 Applicability

This document shall apply to the Duvha Power Station.

1.2 NORMATIVE/INFORMATIVE REFERENCES

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

1.2.1 Normative

[1] 240-168966153: Generation Technical Tender Evaluation Procedure

[2] ISO 9001 Quality Management Systems

1.2.2 382-171332 Scope of work for Replacement of the North bulk sulphuric acid tank at Duvha Power StationInformative

[3] 240-53113685: Generation Design Review Procedure

[4] 240-53114026: Project Engineering Change Management Procedure

1.3 DEFINITIONS

Definition	Description
Employer	Refers to Eskom Holdings State Owned Company.

Definition	Description
Eskom Plant Engineering	Refers to the Eskom Engineering team who will perform the reviews and provide technical assistance for the work performed by the appointed Contractor.
Specification	The document/s forming part of the contract in which the methods of executing the various items of work to be done is described, as well as the nature and quality of the materials to be supplied and it includes technical schedules and drawings attached thereto as well as all samples and patterns.
The Client	The end user will be Eskom who will be represented by Duvha Power Station throughout the duration of the Project.

1.3.1 Disclosure Classification

Controlled disclosure: controlled disclosure to external parties (either enforced by law, or discretionary).

1.4 ABBREVIATIONS

Abbreviation	Description
CW	Cooling Water
ECSA	Engineering Council of South Africa
PLL	Partial Load Losses
TES	Technical Evaluation Strategy
TET	Technical Evaluation Team
WTP	Water Treatment Plant

1.5 ROLES AND RESPONSIBILITIES

[5] 240-168966153: Generation Technical Tender Evaluation Procedure

1.6 PROCESS FOR MONITORING

The contents of this document will form part of the procurement and contracting strategy and will hence be monitored through that process.

1.7 RELATED/SUPPORTING DOCUMENTS

N/A

2. TENDER TECHNICAL EVALUATION STRATEGY

A two stage TES is set out.

Stage 1: Mandatory Technical Evaluation Criteria (gatekeepers) are ‘must meet’ criteria. These criteria are not weighted or points scored but, are assessed on a Yes/No basis to ascertain whether or not the criteria are met. An assessment of ‘No’ against any mandatory criterion will disqualify the tenderer and the tenderer will not be evaluated against Qualitative Criteria.

Stage 2: Qualitative Technical Evaluation Criteria are weighted evaluation criteria used to identify the highest technically ranked tenderer. The Qualitative Evaluation Criteria are weighted to reflect the relevant importance of each criterion. The minimum weighted final score (threshold) required for a tender to be considered from a technical perspective is 70%.

In order to be eligible for evaluation, the tenderer shall meet all the mandatory requirements.

The evaluation of tenders will be based on the tenderer's ability to meet the requirements specified in the Duvha Cooling Water Treatment Plant Upgrade Technical Specification. A weighted score card approach will be used to evaluate the tenders against the Employer's requirements. The following scoring method will be used in general. It will be specified where other scoring methods is used.

Table 1: Scoring Method

SCORE	PERCENTAGE	DEFINITION
5	100	**COMPLIANT** • Meet technical requirement(s)/AND; • No foreseen technical risk(s) in meeting technical requirements.
4	80	**COMPLIANT WITH ASSOCIATED QUALIFICATIONS** Meet technical requirement(s) with; • Acceptable technical risk(s) AND/OR; • Acceptable exceptions AND/OR; • Acceptable conditions.
2	40	**NON-COMPLIANT** • Does not meet technical requirement(s) AND/OR; • Unacceptable technical risk(s) AND/OR; • Unacceptable exceptions AND/OR; • Unacceptable conditions.
0	0	**TOTALLY DEFICIENT OR NON-RESPONSIVE**
Note 1: The scoring table does not allow for scoring of 1 and 3. **Note 2**: Foreseen acceptable and unacceptable risk(s), exceptions and conditions shall be unambiguously defined in the relevant Tender Technical Evaluation Strategy.		

The evaluation scores will be weighted as follows according to disciplines:

Table 2: Evaluation Scores

Technical (100%)	
6.1 General	15%
6.2 Mechanical	40%
6.3 Control & Instrumentation	15%
6.4 Civil	30%
TOTAL (100%)	
Overall minimum threshold for qualification (70%)	

2.1 TECHNICAL EVALUATION THRESHOLD

The minimum weighted final score (threshold) required for a tender to be considered compliant from a technical perspective is 70%.

2.2 TET MEMBERS

The full time core technical evaluation team that will be reviewing the technical returnable will consist of the following team members (in-line with 240-168966153: Generation Technical Tender Evaluation Procedure):

Table 3: Core TET Members

TET number	TET Member Name	Designation
1	Dheneshree Lalla	Corporate Specialist: Chemistry
2	Jean-Pierre de Villiers	System Engineer: CW Systems
3	Vusi Chirwa	System Engineer: Civil Structures
4	Thilivhali Muthakhi	System Engineer: Water Retaining Structures
5	Lethukuthula Ndwandwe	System Engineer: WTP C&I Systems
6	Thami Khumalo	System Engineer: Ash systems
7	Justin Varden	Chief Engineer: Chemical Engineering

2.3 MANDATORY TECHNICAL EVALUATION CRITERIA

Table 4: Mandatory Technical Evaluation Criteria

	KPA-Area of Evaluation	Weight (%)	KPI-Criteria evaluation indicator	Minimum Criteria Evaluation Requirements	Source	(%)		
							YES	NO
1	Mandatory Criteria		The lead Mechanical design engineer responsible for the design of the tank is required to be professionally recognised/registered as either a Professional Engineer or Professional Technologist with ECSA.	All requirements met since this is a mandatory criteria	Copy of current ECSA certificate indicating active professional status of the lead design Mechanical Engineer.	N/A		
2	Mandatory Criteria		The Tenderer shall provide proof oof the Tenderer's valid ISO 3834 part 2 or 3 certification.	All requirements met since this is a mandatory criteria.	Valid ISO 3834 Certificate	N/A		
3	Mandatory criteria		The Tenderer shall have experience in the design of pressure vessels in accordance with the PD5500 code that will be backed by a completrion certificate or a verifiable testimonial letter.	All requirements met since this is a mandatory criteria.	The completrion certificate or testimonial document shall provide the following information: • Name of company/s where similar project/s was/were executed • Project Description (incl,plant capacity, implemented technology) • Construction period • Contract value • Contact person • Indication that the scope was done in accordance with PD5500 code.	N/A		

2.4 QUALITATIVE CRITERIA EVALUATION

During the tender evaluations the following table shall be used by the TET members to score each criterion on a scale of 0 to 5 as per Table 5.

Table 5: Qualitative Evaluation Criteria

SCORE	PERCENTAGE	DEFINITION
5	100	**COMPLIANT** • Meet technical requirement(s)/AND; • No foreseen technical risk(s) in meeting technical requirements.
4	80	**COMPLIANT WITH ASSOCIATED QUALIFICATIONS** Meet technical requirement(s) with; • Acceptable technical risk(s) AND/OR; • Acceptable exceptions AND/OR; • Acceptable conditions.
2	40	**NON-COMPLIANT** • Does not meet technical requirement(s) AND/OR; • Unacceptable technical risk(s) AND/OR; • Unacceptable exceptions AND/OR; • Unacceptable conditions.
0	0	**TOTALLY DEFICIENT OR NON-RESPONSIVE**
Note 1: The scoring table does not allow for scoring of 1 and 3. **Note 2**: Foreseen acceptable and unacceptable risk(s), exceptions and conditions shall be unambiguously defined in the relevant Tender Technical Evaluation Strategy.		

Table 5 indicated the qualitative technical evaluation criteria that shall be used by the technical tender evaluation team.

2.5 GENERAL EVALUATION CRITERIA (15%)

No	Description	Weighting	Sub-weighting	Tender Returnable(s)	Scoring Criteria
3.5	General Evaluation Criteria	15%			
3.5.1	Project Execution Plan	5%	33%	Provide typical project methodology document detailing how the Tenderer proposes to execute the Works, including: 1. De-commissioning, 2. Dismantling, 3. Transport, 4. Design, 5. Manufacture, 6. Delivery, 7. Erection, 8. Commissioning and 9. Handover. 10. Safe disposal of old tank	5=100% Project Methodology provides all requested information 4=80% Project Methodology provides more than 50% but less than 100% of the requested information 2=40% Project Methodology provides more than 0% but less than 50% of the requested information. 0=% No project Methodology provided.
3.5.2	Company Organogram	5%	33%	List of key personnel of the main Tenderer assigned to the project. The Organogram should include key personel that include: the Management team, Project Manager, professional engineer approving designs, welding personnel, site personnel for construction monitoring, and the Project Planner as minimum. The Tenderer shall also demonstrate how tenderer's Sub-Contractor and suppliers shall interface with the project management team.	5=100% Signed orgonogram provided with all minimum key personel shown and all Sub-Tenderer interfaces are shown. 4=80% Unsigned orgonogram provided with all minimum key personel shown and all Sub-Tenderer interfaces are shown. 2=40% Unsigned orgonogram provided with not all (less than 60% of personel provided) minimum key personel shown and not all Sub-Tenderer interfaces (less than 60% of interfaces shown) that are shown. 0=% No orgonogram provided

3.5.3	Old tank Sulphuric Acid neutralization process	5%	33%	Provide a description on how the Tenderer plans to neutralize any remnants of sulphuric acid that is in the old tank.	100% (5) - Fully Compliant 1.) Comprehensive Process Description: The Tenderer provides a detailed, step-by-step procedure for neutralizing any remnants of sulfuric acid in the tank. 2.) Safety Measures: Full description of safety measures, including the use of personal protective equipment (PPE), safety data sheets (SDS), spill containment plans, and emergency response protocols. 3.) Neutralizing Agent and Calculations: Detailed calculations for the correct concentration of neutralizing agents and assumptions on the amount of acid that might possibly remain on the tank based on the volume and concentration of sulfuric acid present. 4.) Monitoring and Verification: Clear method for monitoring the neutralization process, such as pH testing, to verify complete neutralization (pH 7). 5.) Waste Disposal: A detailed plan for the safe handling, collection, and disposal of

					neutralized waste, following environmental and regulatory standards. 6.) Rinse and Inspection: Clear steps for post-neutralization rinsing and inspection, ensuring the tank is safe for dismantling. 80% (4) - Compliant with Minor Issues 1.) Detailed Process: The Tenderer provides a fairly detailed neutralization process but may omit minor aspects, such as full safety procedures or verification steps. 2.) Neutralizing Agent: Provides the appropriate neutralizing agent but with less explanation or detail on the concentration or calculations. 3.) Monitoring: Includes monitoring methods, but the description may lack minor details or contingency plans for issues like exothermic reactions or spillages. 4.) Waste Handling: The waste disposal plan is included but may lack details on specific handling protocols or the disposal site.

					40% (2) - Partially Compliant 1) Basic Description: The neutralization process is described, but there are significant gaps in the methodology, such as incomplete or missing steps, or unclear references to how safety will be ensured. 2) Lacks Detail on Safety: The safety measures are mentioned but not elaborated on. Key elements, such as spill containment or PPE, may be missing. 3) Neutralizing Agent Mentioned: The neutralizing agent is mentioned but without specific details on concentrations or quantities, leading to uncertainty about the effectiveness of the process. 4) No Clear Monitoring: There is little or no mention of monitoring or verification of the neutralization process. 5) Waste Disposal Missing: The disposal of neutralized waste is only partially covered or not compliant with regulatory requirements. 0% (0) - Non-Compliant

					No submissionion or limited submision was made

2.6 MECHANICAL EVALUATION CRITERIA (30%)

No	Description	Weighting	Sub-weighting	Tender Returnable(s)	Scoring Criteria
3.6	**Mechanical Evaluation Criteria:**	**40%**			
3.6.1	Minimum Qualification: Welders and welding operators shall be qualified in accordance with the requirements of the latest applicable construction code (ASME VIII Div.1) and at least (5) years' experience in welding.	10%	25%	Provide CV with contactable references with copy of the welders qualification.	5 = 100% = COMPLIANT • Comprehensive CV indicating experience on projects. • Welder is in the current employment of the Tenderer or sub-Tenderer. • Welder has the minimum of (5) years work experience. 4 = 80% = COMPLIANT WITH ASSOCIATED QUALIFICATIONS • Comprehensive CV indicating experience on projects. • Welder is in the current employment of the Tenderer or sub-contractor. • Welder has the minimum of (5) years work experience. 2 = 40% = NON-COMPLIANT • Less than 40% of the equipment sizeing is provided. • Less than 40% of the pipeline sizes and iterfaces have been provided between the major equipment. 0 = 0% = TOTALLY DEFICIENT OR NON-RESPONSIVE

3.6.2	The tenderer must submit a Welding Procedure Specifications (WPS), Procedure Qualification Records (PQR), and Welder Qualification Tests (WQT) for similar works done on pressure vessels.	10%	25%	A similiar project whith a Welding Procedure Specifications (WPS), Procedure Qualification Records (PQR), and Welder Qualification Tests (WQT) that are all related to the same projects.	100% (Excellent - 5 points) Complete and Highly Relevant Documentation: • The Tenderer submits complete, detailed, and relevant WPS, PQR, and WQT for work previously done on similar pressure vessels (e.g., sulfuric acid tanks or other highly corrosive environments). • WPS provides full information on welding techniques, materials, positions, preheat/post-weld heat treatment, and welding parameters for pressure vessels, and meets or exceeds applicable standards (EN 15614). • PQR includes comprehensive testing results (tensile, bend, hardness tests, etc.) that clearly show the procedure is qualified for pressure vessel applications, particularly in corrosive environments. • WQT demonstrates that the welders are qualified for the same types of welds, materials, and positions as required for the project. Certification is up to date and valid. • The documents are fully compliant with relevant international codes and standards (ASME, ISO, EN). • All documents are certified and traceable to specific projects, ensuring they were applied in similar

					pressure vessel projects. 2. 80% (Good - 4 points) Complete but Slightly Less Relevant Documentation: • The Tenderer submits complete WPS, PQR, and WQT for similar projects, but the pressure vessel work is slightly different in terms of size, material, or conditions compared to the current project (e.g., different chemical environment or lower pressure rating). • WPS is well-documented but may be slightly less detailed or specific to the current project (e.g., different material grades or welding parameters). • PQR shows that the procedure is qualified for pressure vessels, but testing might not include all the required tests or may lack specific details on testing for corrosive environments. • WQT shows the welders are qualified, but the qualification tests may cover fewer welding positions or a slightly different material. • The documentation is mostly compliant with relevant international standards but may have minor deviations or lack some certifications. 3. 40% (Partially Compliant - 2 points) Incomplete or General Documentation:

					• The Tenderer submits WPS, PQR, and WQT, but the documents are incomplete or not specific to similar pressure vessel projects. • WPS may lack detail in key areas, such as welding positions, preheat/post-weld heat treatment, or specific welding parameters for pressure vessels. • PQR may lack important tests or show that the procedure has only been qualified for general steel fabrication rather than pressure vessels in corrosive environments. • WQT may not cover the specific material grades, welding positions, or conditions required for the current project. Welders may not be qualified for critical positions or materials relevant to the work. • The documentation may lack compliance with key standards or may not be certified for pressure vessels. 4. 0% (Non-Compliant - 0 points) No Relevant Documentation: • The Tenderer fails to submit WPS, PQR, and WQT, or the submitted documents are irrelevant to pressure vessel work (e.g., only covering structural steel or low-pressure, non-critical welding).

					• WPS is missing or not applicable to pressure vessels or corrosive environments. • PQR is either not provided or does not include necessary testing for pressure vessels (e.g., tensile, bend tests) and is not specific to similar projects. • WQT is missing, invalid, or shows that welders are not qualified for pressure vessel welding in any relevant materials or conditions. • The documentation does not comply with any relevant standards (ASME, ISO, EN) and cannot be traced back to similar projects.
3.6.3	A methodology is to be provided that speaks on how the Sulphuric acid tank is to be dismantelled.	10%	25%	Breakdown methodology	100% (Excellent - 5 points) Comprehensive, Detailed, and Safe Methodology: • The methodology provides a step-by-step process for dismantling the sulfuric acid tank. • Outlines equipment requirements (e.g., cranes, cutting tools, neutralization agents) and how they will be used for each phase of the dismantling process. • Disposal plan for the dismantled components is clear and comprehensive, ensuring safe transport and disposal of hazardous materials. • Includes a plan for handling potential complications, such as acid spills, structural instability, or the discovery of unexpected damage during dismantling.

					2. 80% (Good - 4 points) Adequate but Lacking Some Details: • The methodology provides a solid process for dismantling the tank but lacks some finer details, such as specific equipment or handling procedures. • Includes a safety protocol but may omit minor details, such as specific PPE for different stages or a detailed emergency response plan. • Disposal plan is present but less detailed regarding the transport and handling of dismantled materials. 3. 40% (Partially Compliant - 2 points) Basic Methodology with Significant Gaps: • The methodology provides a basic description of how the tank will be dismantled but lacks critical detail. • Safety procedures are mentioned, but there is a lack of specificity on how acid neutralization will be handled, PPE requirements, or spill containment. • Limited details on equipment to be used and how it will be applied to dismantling stages. • Environmental concerns such as spill control or acid disposal are only partially addressed or not compliant with regulations. • The methodology lacks contingency planning for potential complications (e.g., spills, structural failure during dismantling). • Disposal plan is present but lacks detail and does not cover transport or

					handling of hazardous materials. 4. 0% (Non-Compliant - 0 points) No Clear or Safe Methodology: • The Tenderer provides little to no useful information on how the tank will be dismantled. • No safety procedures are provided, or safety protocols are inadequate for handling sulfuric acid or hazardous materials. • No mention of environmental considerations, spill containment, or neutralization of acid residue. • The methodology is non-compliant with relevant safety and environmental regulations. • No disposal plan is provided, or the plan is vague and non-compliant with handling and disposal standards for hazardous materials.
3.6.4	Resources allocation & capacity (Engineering)	10%	25%	Provide CV of personnel as specified below: Minimum 5 years' experience which includes the technical expertise indicated for all. Mechanical Engineering: Professional ECSA registered Mechanical Engineer/Technologist and experience in pressure vessel design and in particular PD5500.	5= 100% Lead Mechanical design engineer CV's provided meet the minimum of 5 years experience, have the desired technical experience with the PD5500 design code and have provided their qualifications. 4=80% Lead Mechanical design engineer CV's provided have less than 5 years experience, have the desired technical experience with the PD5500 design code and have provided their qualifications 2= 40% Lead Mechanical design engineer CV's provided have less than 5 years experience, do not have the desired technical experience with the PD5500 design code but has completed projects in

					either one of the following codes: 1) ASME Boiler and Pressure Vessel Code (BPVC) – Section VIII 2) EN 13445 3) AD 2000 0=0% No CV is provided for the Lead Mechanical design engineer.

2.7 CONTROL AND INSTRUMENTATION EVALUATION CRITERIA (15%)

No	Description	Weighting	Sub-weighting	Tender Returnable(s)	Scoring Criteria
3.7	**Control and Instrumentation Evaluation Criteria**	**15%**			
3.7.1	Level Transmitter Selection and Local Display Compatibility	5%	33.33%	Documentation of the selected hydrostatic level transmitter, including compatibility with 98% sulfuric acid and details of the local display unit.	5 (100%) - Fully Compliant: The tenderer provides full documentation showing that the hydrostatic level transmitter is fully compatible with the local display unit and sulfuric acid (e.g., materials like Hastelloy C, PTFE, or Tantalum). The transmitter and display communicate seamlessly, with the display able to show the level in real-time, configured for 98% sulfuric acid. 4 (80%) - Compliant with Minor Issues: The transmitter is compatible with sulfuric acid and the display unit, but minor details are lacking, such as missing calibration procedures or incomplete technical documentation for the local display. 2 (40%) - Partially Compliant: The transmitter is compatible with sulfuric acid, but the local display integration lacks clarity, or the materials of the transmitter are not fully suitable for continuous exposure to sulfuric acid.

					0 =(0%) - Non-Compliant: No documentation is provided, or the proposed transmitter and display are incompatible with sulfuric acid or each other.
3.7.2	Installation and Calibration of the Local Display	5%	33.33%	Methodology for installation and calibration of the hydrostatic level transmitter and local display unit, including wiring, calibration, and setup instructions.	5 (100%) - Fully Compliant: The tenderer provides a detailed installation and calibration plan, including clear steps for mounting, wiring, and calibrating the local display. The plan accounts for environmental conditions (corrosive atmosphere), proper pressure-to-level conversion, and provides a method to ensure the display shows accurate level readings in real time. 4 (80%) - Compliant with Minor Gaps: The installation and calibration plan is comprehensive but may lack minor details, such as environmental considerations for the local display or a clear calibration procedure. 2 (40%) - Partially Compliant: The tenderer provides basic installation details, but key information is missing on the integration of the local display or calibration of the system for accurate level readings.

					0 (0%) - Non-Compliant: No installation or calibration plan is provided, or the proposed solution does not account for environmental or calibration challenges.
3.7.5	Experience and References in Similar Installations	5%	33.33%	References for similar projects, particularly for the installation of hydrostatic level transmitters with local displays in highly corrosive environments.	5 (100%) - Fully Compliant: The tenderer provides at least 3 relevant references for similar installations, demonstrating experience with hydrostatic level transmitters and local displays in environments with sulfuric acid or similar chemicals. 4 (80%) - Compliant: The tenderer provides 2-3 relevant references but with slightly different applications. 2 (40%) - Partially Compliant: The tenderer provides 1-2 references, but the projects are less aligned with the current project's requirements. 0 (0%) - Non-Compliant: No relevant references are provided.

2.8 CIVIL EVALUATION CRITERIA (30%)

No	Description	Weighting	Sub-weighting	Tender Returnable(s)	Scoring Criteria
3.8	**Civil criteria**			**Source**	
3.8.1	**COMPLETED SIMILAR PROJECTS** This covers the Tenderer or sub-contractor's experience. The company must have completed at-least 3 projects within the past 10 years to ensure competency. The previous completed project must be of the following • One project with a scope for concrete works, • One project with a scope for corrosion protection/lining of concrete structures, • One project with a scope for steelworks. A completion certificates or reference letter must be submitted which reflects • Client name, • Project description, (details scope of work if description not clear) • Project cost _ • Project start & end date • Project location	10%	33.33%	Copies of completion certificates/letters/testimonials	5 = 3 or more verifiable similar scope completed 4 = 2 verifiable similar scope completed. 2 = 1 verifiable similar scope completed. 0 = No verifiable similar scope completed

	• Name, designation and contact number of reference person				
3.8.2	**TECHNICAL PERSONNEL (SITE AGENT/ENGINEER)** This covers the experience of the proposed technical representative for this project with a minimum qualification of a national diploma in civil engineering, at least 3 years' experience in civil engineering field	10%	33.33%	CV of proposed technical personell (site agent or engineer).	5 = CVs and qualifications submitted with more than 3 years of experience. 4 = CVs and qualifications submitted with 2 or more than 2, but less than 3 years of experience. 2 = CVs and qualifications submitted with 1 or more than 2, but less than 2 years of experience. 0 = CVs and qualifications submitted with less than 1 or No attached CVs and qualification.

3.8.3	CIVIL CONSTRUCTION METHOD STATEMENT The methodology needs to describe how the Civil scope will be executed in a safe manner that will cause no harm to the	110%	33.33%	Copy of civil construction method statement	5 = Work Method Statement submitted with an execution plan. Detailed method statement that covers 100% of the key points of the scope of work

	environment and people. The method statement must explain how the following civil activities will be executed and this should include labour and plant to be used. Construction method statement demonstrating understanding of the scope. The method statement should cover the following areas which are stipulated in the scope of work: • Earth works • Concrete works inclusive all testing as per scope of wok • Structural steel refurbishment works • Application of acid lining material on the concrete structures ○ Substrate Inspection. ○ Detailed Primary and Secondary Containment Installation Plan. ○ Environmental Considerations. ○ Inspection and Testing.				4 = Work Method Statement submitted, however only 80% of the key points covered. 2 = Work Method Statement submitted, however only 40% of the key points covered. 0 = Work Method Statement submitted does not cover any of the key points or no submission

3. TET MEMBER RESPONSIBILITIES

Table 3: TET Member Responsibilities

Mandatory Criteria Number	TET 1	TET 2	TET 3	TET 4	TET 5	TET 6	TET 7
(1)		X				X	
(2)		X				X	
(3)	X	X				X	X
Qualitative Criteria Number	**TET 1**	**TET 2**	**TET 3**	**TET 4**	**TET 5**	**TET 6**	
3.5.1	X	X	X	X		X	X
3.5.2	X	X	X	X	X	X	X
3.5.3	X						X
3.6	X					X	
3.7					X		
3.8			X	X			

3.1 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

3.1.1 Risks

Table 4: Acceptable Technical Risks

Risk	Description
1.	Alternative solutions with the same or better performance

Table 5: Unacceptable Technical Risks

Risk	Description
1.	Exclusions of scope specified in the employers requirements
2.	Unclear staff organogram. I.e. the staffing plan is weak not showing clarity in allocation of tasks and responsibilities.
3.	Exclusion of a project specific schedule.

3.1.2 Exceptions / Conditions

Table 6: Acceptable Technical Exceptions / Conditions

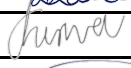
Risk	Description
1.	Accept deviation with technical qualification.

Table 7: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	Deviation without technical qualification not accepted.

4. AUTHORISATION

This document has been seen and accepted by:

Name & Surname	Designation	Signature
Dheneshree Lalla	Corporate Specialist: Chemistry	
Vusi Chirwa	System Engineer: Civil Structures	
Thilivhali Muthakhi	System Engineer: Civil Structures	
Lethukuthula Ndwandwe	System Engineer: WTP C&I Systems	
Thami Khumalo	System Engineer: Ash systems	
Justin Varden	Chief Engineer: Chemical Engineering	

5. REVISIONS

Date	Rev.	Compiler	Remarks
18/11/2024	1	J de Villiers	First Draft

6. DEVELOPMENT TEAM

The following members were involved with the development of this document:

- Jean-Pierre de Villiers
- Justin Varden
- Vusi Chirwa
- Lethukuthula Ndwandwe

7. ACKNOWLEDGEMENT

Not applicable