

**CONTRACT FOR  
SUPPLY, INSTALL, TEST, TRAIN AND COMMISSION  
OF MEDICAL EQUIPMENT**

**BETWEEN**

**MUHIMBILI NATIONAL HOSPITAL**

**AND**

**PACIFIC DIAGNOSTICS LIMITED**

## Form of Agreement

THIS AGREEMENT is made the 11 day of 01, 2022 Between MUHIMBILI NATIONAL HOSPITAL, a corporation incorporated under the Laws of Tanzania and having its principal place of business at Mindu Street, Plot No. 1048/2, Upanga; P.O Box 65000, DAR ES SALAAM (hereinafter called "the Employer"), and PACIFIC DIAGNOSTICS LIMITED, a corporation incorporated under the laws of Tanzania and having its principal place of business at Plot 46- 48, Mikocheni Industrial Area, Opposite Coca-cola Kwanza Factory Dar es Salaam, Tanzania., P.O Box 34056, Dar es Salaam (hereinafter called "the Contractor").

WHEREAS the Employer desires to engage the Contractor to Supply, Install Test, Train and Commission Medical Equipments for MNH Tender No. PA/009/2021-22/HQ/G/06 LOT 4 ("the Facilities") and the Contractor have agreed to such engagement upon and subject to the terms and conditions hereinafter appearing.

NOW IT IS HEREBY AGREED as follows:

**Article 1.  
Contract  
Documents**

1.1 Contract Documents

The following documents shall constitute the Contract between the Employer and the Contractor, and each shall be read and construed as an integral part of the Contract:

- (a) This form of Agreement
- (b) Special Conditions of Contract
- (c) General Conditions of Contract
- (d) Letter of Acceptance
- (e) Technical Specifications
- (f) Form of Tender and Price Schedules submitted by the Contractor
- (g) Negotiation Minutes
- (h) Power of Attorney

1.2 Order of Precedence

In the event of any ambiguity or conflict between the Contract Documents listed above, the order of precedence shall be the order in which the Contract Documents are listed in Article 1.1 (Contract Documents) above.

1.3 Definitions

Capitalized words and phrases used herein shall have the same meanings as are ascribed to them in the General Conditions of Contract.

**Article 2. Contract  
Price and  
Terms of  
Payment**

2.1 Contract Price

The Employer hereby agrees to pay to the Contractor the Contract Price in consideration of the performance by the Contractor of its obligations hereunder. The Contract Price shall be the aggregate of: Tshs 6,923,790,976.00 (Tanzanian

Shillings Six Billion Nine Hundred Twenty Three Million Seven Hundred Ninety Thousand Nine Hundred Seventy Six Only) VAT Exclusive as per virtue of Item 14 of Part B of the Fifth Schedule to the East African Community Customs Management Act, 2004 and Item 7 of Part I of the exemption Schedule to the VAT Act, 2014) as specified in Price Schedule No. 5 (Grand Summary) or such other sums as may be determined in accordance with the terms and conditions of the Contract.

2.2 Terms of Payment

The terms and procedures of payment according to which the Employer will reimburse the Contractor are given in the corresponding Appendix (Terms and Procedures of Payment) hereto.

The Employer shall instruct its bank to issue an irrevocable confirmed documentary credit made available to the Contractor in a bank in the country of the Contractor.

In the event that the amount payable under Schedule No. 1 is adjusted in accordance with GCC 11.2 or with any of the other terms of the Contract, the Employer shall arrange for the documentary credit to be amended accordingly.

**Article 3. Effective Date for Determining Time for Completion**

3.1 Effective Date

The Time of Completion of the Facilities shall be determined from the date when all of the following conditions have been fulfilled:

- (a) This Contract Agreement has been duly executed for and on behalf of the Employer and the Contractor;
- (b) The Contractor has submitted to the Employer the performance security and the advance payment guarantee;
- (c) The Employer has paid the Contractor the advance payment
- (d) The Contractor has been advised that the documentary credit referred to in Article 2.2 above has been issued in its favor.

Each party shall use its best efforts to fulfil the above conditions for which it is responsible as soon as practicable.

- 3.2 If the conditions listed under 3.1 are not fulfilled within two (2) months from the date of this Contract notification because of reasons not attributable to the Contractor, the parties shall discuss and agree on an equitable adjustment to the Contract Price and the Time for Completion and/or other relevant conditions of the Contract.

**Article 4. Appendixes**

- 4.1 The Appendixes listed in the attached List of Appendixes shall be deemed to form an integral part of this Contract

4.2 Reference in the Contract to any Appendix shall mean the Appendixes attached hereto, and the Contract shall be read and construed accordingly.

IN WITNESS WHEREOF the Employer and the Contractor have caused this Agreement to be duly executed by their duly authorized representatives the day and year first above written.

For and on behalf of **MUHIMBILI NATIONAL HOSPITAL**

Name..... Prof L.M. Lusany.....

Designation..... GO.....

Signature..... L.M. Lusany.....

[Authorized Representative]

Witness..... Veronica C. Hellar.....

Qualification..... Head of Legal Affairs Unit.....

Signature & Stamp..... V. Hellar.....

Date..... 10/01/2022.....

**EXECUTIVE DIRECTOR  
MUHIMBILI NATIONAL HOSPITAL  
P. O. Box 65000  
DAR-ES-SALAAM**

**LEGAL UNIT  
MUHIMBILI NATIONAL HOSPITAL  
P. O. Box 65000  
DAR ES SALAAM**

For and on behalf of **PACIFIC DIAGNOSTICS LIMITED**

Name..... PRASHANT GOKARN.....

Designation..... DIRECTOR.....

Signature..... P. Gokarn.....

[Authorized Representative]

Witness..... NELICE BAGIRA.....

Qualification..... HR MANAGER.....

Signature & Stamp..... N. Bagira.....

Date..... 11<sup>th</sup> January 2022.....



**SPECIAL CONDITIONS OF CONTRACT**

## Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC. The corresponding clause number of the GCC is indicated in parentheses.

SCC Clause Number	GCC Clause Number	Amendments of, and Supplements to, Clauses in the GCC
<b>Definitions (GCC 1)</b>		
1.	1.1	<p>The Employer is: Muhimbili National Hospital</p> <p>The Appointing Authority of the Adjudicator is: Tanzania Institute Of Arbitrators.</p> <p>Country of Origin: all countries and territories as indicated in the section of the Tendering Documents, Eligibility for the Provision of Goods, Works and Services.</p> <p>Contractor's Representative is Naftal Philip</p> <p>Time for Completion: Within Three Months (15<sup>th</sup> January, 2022 to 15<sup>th</sup> April, 2022).</p> <p>Time for Completion for all Facilities: Within Three Months (15<sup>th</sup> January, 2022 to 15<sup>th</sup> April, 2022).</p>
2	3.1 (a)	<p>Performance Security shall be in the form of <b><i>Unconditional Bank Guarantee or surety bond.</i></b></p> <p>The amount of Performance Security shall be <i>ten (10) percent of the contract price.</i></p>
<b>Notices (GCC Clause 4)</b>		
3	4.1	<p>Employer's address for notice purposes: Executive Director Muhimbili National Hospital, P.O Box 65000 Dar es Salaam.</p> <p>Contractor's address for notice purposes: Managing Director Pacific Diagnostics Limited, P.O Box 34056, Dar Es Salaam, Tanzania</p>
<b>Governing Law (GCC 5)</b>		
4	5.1	GCC 5.1 – The Contract shall be interpreted in accordance with the Laws of Tanzania.

		The language of the contract should be English.
<b>Settlement of Disputes (GCC 6)</b>		
5	7.1	Adjudicator's hourly fee: <i>shall be in accordance with the rules of the TANZANIA INSTITUTE OF ARBITRATORS.</i>
6	8.1	Appointing Authority of a new or replacement Adjudicator: <i>TANZANIA INSTITUTE OF ARBITRATORS.</i> Place of Arbitration is <i>Dar es Salaam.</i>
7	6.1	The Appointing Authority of the Adjudicator is: Tanzania Institute of Arbitrators.
8	6.3	If either Party is dissatisfied with the Adjudicator's decision may, within 7 days refer the dispute for arbitration.
9	6.4	Rules of procedure for arbitration proceedings: Any dispute, controversy or claim arising out of or relating to this Contract, or breach, termination or invalidity thereof, shall be settled by arbitration in accordance with the Arbitration procedure published by the Tanzania Institute of Arbitrators.
<b>Scope of Facilities [Spare Parts] (GCC Clause 7)</b>		
10	7.3	The Contractor agrees to supply spare parts for a period of (Five) 5 years after commissioning.
<b>Time for Commencement and Completion (GCC 8)</b>		
11	8.1	The Contractor shall commence work on the Facilities on 15 <sup>th</sup> January, 2022.
12	8.2	The Completion of the Facilities shall be attained Within Three Months (15 <sup>th</sup> January, 2022 to 15 <sup>th</sup> April, 2022).
<b>Contract Price (GCC Clause 11)</b>		
13	11.2	The Contract Price shall be adjusted N/A
<b>Securities (GCC 13)</b>		
14	13.3.1	The amount of performance security, as a percentage of the Contract Price for the Facility Completion shall be: <i>ten percent (10%) of contract price.</i>
15	13.3.1	The performance security shall be in the form of the <i>Unconditional Bank Guarantee or surety bond</i> attached hereto in the section on Sample Forms and Procedures.
16	13.3.5	The performance security shall be reduced to ten percent (10%) of the value of the component covered by the extended warranty to cover the Contractor's extended warranty in accordance with the provision in the SCC, pursuant to GCC 27.10.
<b>Work Programme (GCC 18)</b>		
17	18.2	The form of the programme of performance of the Contract shall be: <i>in the form of the critical path method (CPM).</i>
<b>Commissioning and Operational Acceptance (GCC 25)</b>		

18	25.2.2	The Guarantee Test of the Facilities shall be successfully completed within 1 (One) week from the date of Completion.
<b>Completion Time Guarantee (GCC Clause 26)</b>		
19	26.2	Applicable rate for liquidated damages: 0.1 percent per day. Maximum deduction for liquidated damages: is equal to the Performance Security quoted.
20	26.3	Applicable for the bonus for early Completion: No bonus will be given for earlier Completion of the Facilities or part thereof.
<b>Completion – Guarantee Test – Acceptance (GCC 24.3 and 25.2)</b>		
21	24.3 and 25.2	<p>20.1 In the event that the Contractor is unable to proceed with the Pre-commissioning of the Facilities pursuant to GCC 24.3, or with the Guarantee Test pursuant to GCC 25.2, for reasons attributable to the Employer either on account of non-availability of other facilities under the responsibilities of other contractor(s), or for reasons beyond the Employer's control, the provisions leading to "deemed" completion of activities such as Completion, pursuant to GCC 24.6, and Operational Acceptance, pursuant to GCC 25.3.4, and Contractor's obligations regarding Defect Liability Period, pursuant to GCC 27.2, Functional Guarantee, pursuant to GCC 28, and Care of Facilities, pursuant to GCC 32, and GCC 41.1, Suspension, shall not apply. In this case, the following provisions shall apply.</p> <p>20.2 When the Contractor is notified by the Project Manager that he will be unable to proceed with the activities and obligations pursuant to above GCC 13.1, the Contractor shall be entitled to the following:</p> <p>(a) the Time of Completion shall be extended for the period of suspension without imposition of liquidated damages pursuant to GCC 26.2;</p> <p>(b) payments due to the Contractor in accordance with the provision specified in the corresponding Appendix (Terms and Procedures of Payment) to the Contract Agreement, which would not have been payable in normal circumstances due to non-completion of the subject activities, shall be released to the Contractor against submission of a security in the form of a bank guarantee of equivalent amount acceptable to the Employer, and which shall become null and void when the Contractor will have complied with its obligations regarding those payments, subject to the provision of GCC 13.3 below;</p>



		<p>(c) the expenses towards the above security and extension of other securities under the contract, of which validity needs to be extended, shall be reimbursed to the Contractor by the Employer;</p> <p>(d) the additional charges towards the care of the Facilities pursuant to GCC 32.1 shall be reimbursed to the Contractor by the Employer for the period between the notification mentioned above and the notification mentioned in GCC 13.4 below. The provision of GCC 33.2 shall apply to the Facilities during the same period.</p> <p>20.3 In the event that the period of suspension under above GCC 13.1 actually exceeds one hundred eighty (180) days, the Employer and Contractor shall mutually agree to any additional compensation payable to the Contractor.</p> <p>20.4 When the Contractor is notified by the Project Manager that the plant is ready for Pre-commissioning, the Contractor shall proceed without delay in performing all the specified activities and obligations under the contract.</p>
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**GENERAL CONDITIONS OF CONTRACT**

## A. Contract and Interpretation

1.	Definitions	1.1	<p>The following words and expressions shall have the meanings hereby assigned to them:</p> <p>"Contract" means the Agreement entered into between the Employer and the Contractor, together with the Contract Documents referred to therein; they shall constitute the Contract, and the term "the Contract" shall in all such documents be construed accordingly.</p> <p>"Contract Documents" means the documents listed in Article 1.1 (Contract Documents) of the Form of Agreement (including any amendments thereto).</p> <p>"GCC" means the General Conditions of Contract hereof.</p> <p>"SCC" means the Special Conditions of Contract.</p> <p>"Day" means calendar day.</p> <p>"Month" means calendar month.</p> <p>"Employer" means the person named as such in the SCC and includes the legal successors or permitted assigns of the Employer.</p> <p>"Project Manager" means the person appointed by the Employer in the manner provided in GCC 17.1 (Project Manager) hereof and named as such in the SCC to perform the duties delegated by the Employer.</p> <p>"Contractor" means the person(s) whose tender to perform the Contract has been accepted by the Employer and is named as such in the Agreement, and includes the legal successors or permitted assigns of the Contractor.</p> <p>"Contractor's Representative" means any person nominated by the Contractor and named as such in the SCC and approved by the Employer in the manner provided in GCC 17.2 (Contractor's Representative and Construction Manager) hereof to perform the duties delegated by the Contractor.</p> <p>"Subcontractor," including vendors, means any</p>
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person to whom execution of any part of the Facilities, including preparation of any design or supply of any Goods, is sub-contracted directly or indirectly by the Contractor, and includes its legal successors or permitted assigns.

"Adjudicator" means the person or persons appointed by the Appointing Authority named in the SCC to make a decision on or to settle any dispute or differences between the Employer and the Contractor referred to him or her by the parties pursuant to GCC 6.1 (Adjudicator) hereof.

"Contract Price" means the sum specified in Article 2.1 (Contract Price) of the Agreement, subject to such additions and adjustments thereto or deductions there from, as may be made pursuant to the Contract.

"Facilities" means the Goods to be supplied and installed, as well as all the Installation Services to be carried out by the Contractor under the Contract.

"Force Majeure" shall mean any event beyond the reasonable control of the Employer or of the Contractor, as the case may be, and which is unavoidable notwithstanding the reasonable care of the party affected.

"Goods" means permanent plant, equipment, machinery, apparatus, articles and things of all kinds to be provided and incorporated in the Facilities by the Contractor under the Contract (including the spare parts to be supplied by the Contractor under GCC 7.3 hereof), but does not include Contractor's Equipment.

"Installation Services" means all those services ancillary to the supply of the Goods for the Facilities, to be provided by the Contractor under the Contract; e.g., transportation and provision of marine or other similar insurance, inspection, expediting, site preparation works (including the provision and use of Contractor's Equipment and the supply of all construction materials required), installation, testing, pre-commissioning, commissioning, operations, maintenance, the provision of operations and maintenance manuals, training, etc.

"Contractor's Equipment" means all plant, facilities,

			<p>equipment, machinery, tools, apparatus, appliances or things of every kind required in or for installation, completion and maintenance of Facilities that are to be provided by the Contractor, but does not include Goods, or other things intended to form or forming part of the Facilities.</p> <p>“Country of Origin” means the countries and territories eligible under the PPA 2004 and its corresponding Regulations as further elaborated in the SCC.</p> <p>“Site” means the land and other places upon which the Facilities are to be installed, and such other land or places as may be specified in the Contract as forming part of the Site.</p> <p>“Effective Date” means the date of fulfilment of all conditions stated in Article 3 (Effective Date for Determining Time for Completion) of the Form of Agreement, for the purpose of determining the Time for Completion.</p> <p>“Time for Completion” means the time within which Completion of the Facilities as a whole (or of a part of the Facilities where a separate Time for Completion of such part has been prescribed) is to be attained in accordance with the specifications in the SCC and the relevant provisions of the Contract.</p> <p>“Completion” means that the Facilities (or a specific part thereof where specific parts are specified in the SCC) have been completed operationally and structurally and put in a tight and clean condition, and that all work in respect of Pre-commissioning of the Facilities or such specific part thereof has been completed; in other words, that the Facilities or specific part thereof are ready for Commissioning as provided in GCC 24 (Completion) hereof.</p> <p>“Pre-commissioning” means the testing, checking and other requirements specified in the Technical Specifications that are to be carried out by the Contractor in preparation for Commissioning as provided in GCC 24 (Completion) hereof.</p> <p>“Commissioning” means operation of the Facilities or any part thereof by the Contractor following Completion, which operation is to be carried out by the Contractor as provided in GCC 25.1</p>
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			<p>(Commissioning) hereof, for the purpose of carrying out Guarantee Test(s).</p> <p>“Guarantee Test(s)” means the test(s) specified in the Technical Specifications to be carried out to ascertain whether the Facilities or a specified part thereof is able to attain the Functional Guarantees specified in the Technical Specifications in accordance with the provisions of GCC 25.2 (Guarantee Test) hereof.</p> <p>“Operational Acceptance” means the acceptance by the Employer of the Facilities (or any part of the Facilities where the Contract provides for acceptance of the Facilities in parts), which certifies the Contractor’s fulfilment of the Contract in respect of Functional Guarantees of the Facilities (or the relevant part thereof) in accordance with the provisions of GCC 28 (Functional Guarantees) hereof and shall include deemed acceptance in accordance with GCC 25 (Commissioning and Operational Acceptance) hereof.</p> <p>“Defect Liability Period” means the period of validity of the warranties given by the Contractor commencing at Completion of the Facilities or a part thereof, during which the Contractor is responsible for defects with respect to the Facilities (or the relevant part thereof) as provided in GCC 27 (Defect Liability) hereof.</p>
<b>2.</b>	<b>Interpretation</b>	2.1	In interpreting these Conditions of Contract headings and marginal notes are used for convenience only and shall not affect their interpretations unless specifically stated; references to singular include the plural and vice versa; and masculine include the feminine. Words have their ordinary meaning under the language of the Contract unless specifically defined.
		2.2	If any of the Contract Documents, correspondence or communications are prepared in any language other than the governing language under GCC 2.1 above, the English translation of such documents, correspondence or communications shall prevail in matters of interpretation.
		2.3	<p>The documents forming the Contract shall be interpreted in the following order of priority:</p> <ol style="list-style-type: none"> <li>(1) Form of Agreement,</li> <li>(2) Special Conditions of Contract,</li> </ol>

			<p>(3) General Conditions of Contract,</p> <p>(4) Letter of Acceptance,</p> <p>(5) Certificate of Contract Commencement</p> <p>(6) Specifications,</p> <p>(7) Contractor's Tender, and</p> <p>(8) Power of attorney</p>
		2.4	<p><u>Persons</u> Words importing persons or parties shall include firms, corporations and government entities.</p>
		2.5	<p><u>Incoterms</u> Unless inconsistent with any provision of the Contract, the meaning of any trade term and the rights and obligations of parties there under shall be as prescribed by <i>Incoterms</i>.</p> <p><i>Incoterms</i> means international rules for interpreting trade terms published by the International Chamber of Commerce (latest edition), 38 Cours Albert 1<sup>er</sup>, 75008 Paris, France.</p>
		2.6	<p><u>Entire Agreement</u> Subject to GCC 16.4 hereof, the Contract constitutes the entire agreement between the Employer and Contractor with respect to the subject matter of Contract and supersedes all communications, negotiations and agreements (whether written or oral) of parties with respect thereto made prior to the date of Contract.</p>
		2.7	<p><u>Amendment</u> No amendment or other variation of the Contract shall be effective unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party hereto.</p>
		2.8	<p><u>Independent Contractor</u> The Contractor shall be an independent contractor performing the Contract. The Contract does not create any agency, partnership, joint venture or other joint relationship between the parties hereto.</p> <p>Subject to the provisions of the Contract, the Contractor shall be solely responsible for the manner in which the</p>

			Contract is performed. All employees, representatives or Subcontractors engaged by the Contractor in connection with the performance of the Contract shall be under the complete control of the Contractor and shall not be deemed to be employees of the Employer, and nothing contained in the Contract or in any subcontract awarded by the Contractor shall be construed to create any contractual relationship between any such employees, representatives or Subcontractors and the Employer.
		2.9	<u>Joint Venture or Consortium</u> If the Contractor is a joint venture or consortium of two or more persons, all such firms shall be jointly and severally bound to the Employer for the fulfilment of the provisions of the Contract and shall designate one of such persons to act as a leader with authority to bind the joint venture or consortium. The composition or the constitution of the joint venture or consortium shall not be altered without the prior consent of the Employer.
		2.10	<u>Non-Waiver</u> 2.10.1 Subject to GCC 2.10.2 below, no relaxation, forbearance, delay or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect or restrict the rights of that party under the Contract, nor shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.  2.10.2 Any waiver of a party's rights, powers or remedies under the Contract must be in writing, must be dated and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.
		2.11	<u>Severability</u> If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.
		2.12	<u>Country of Origin</u> "Origin" means the place where the materials, equipment and other supplies for the Facilities are mined, grown, produced or manufactured, and from which the services



			are provided.
3.	<b>Conditions Precedent</b>	3.1	<p>Having signed the Contract, it shall come into effect on the date on which the following conditions have been satisfied:-</p> <p>a) Submission of performance Security in the form specified in the SCC;</p> <p>b) Furnishing of Advance Payment Unconditional Guarantee.</p>
		3.2	If the Condition precedent stipulated on GCC 3.1 is not met by the date specified in the SCC this contract shall not come into effect;
		3.3	If the Employer is satisfied that each of the conditions precedent in this contract has been satisfied (except to the extent waved by him, but subject to such conditions as he shall impose in respect of such waiver) he shall promptly issue to the contractor a certificate of Contract commencement, which shall confirm the start date.
4.	<b>Notices</b>	4.1	<p>Unless otherwise stated in the Contract, all notices to be given under the Contract shall be in writing, and shall be sent by personal delivery, airmail post, special courier, cable, telegraph, telex, facsimile or Electronic Data Interchange (EDI) to the address of the relevant party set out in the SCC, with the following provisions:</p> <p>4.1.1 Any notice sent by cable, telegraph, telex, facsimile or EDI shall be confirmed within two (2) days after dispatch by notice sent by airmail post or special courier, except as otherwise specified in the Contract.</p> <p>4.1.2 Any notice sent by airmail post or special courier shall be deemed (in the absence of evidence of earlier receipt) to have been delivered ten (10) days after dispatch. In proving the fact of dispatch, it shall be sufficient to show that the envelope containing such notice was properly addressed, stamped and conveyed to the postal authorities or courier service for transmission by airmail or special courier.</p> <p>4.1.3 Any notice delivered personally or sent by cable, telegraph, telex, facsimile or EDI shall be deemed to have been delivered on date of its dispatch.</p>

			4.1.4 Either party may change its postal, cable, telex, facsimile or EDI address or addressee for receipt of such notices by ten (10) days' notice to the other party in writing.
		4.2	Notices shall be deemed to include any approvals, consents, instructions, orders and certificates to be given under the Contract.
5.	<b>Language and Law</b>	5.1	The language of the Contract and the law governing the Contract are stated in the SCC.
6.	<b>Disputes Resolution</b>	6.1	In the event of any dispute arising out of this contract, either party shall issue a notice of dispute to settle the dispute amicably. The parties hereto shall, within twenty eight (28) days from the notice date, use their best efforts to settle the dispute amicably through mutual consultations and negotiation. Any unsolved dispute may be referred by either party to an adjudicator nominated by the appointing Authority specified in SCC.
		6.2	After the dispute has been referred to the adjudicator, within 30 days, or within such other period as may be proposed by the Parties, the Adjudicator shall give its decision. The rendered decision shall be binding to the Parties.
		6.3	If either Party is dissatisfied with the Adjudicator's decision may, within days specified in the SCC refer the dispute for arbitration. If either party within the period mentioned in the SCC has not referred the matter for arbitration the decision shall become final and binding to the Parties.
		6.4	The arbitration shall be conducted in accordance with the arbitration procedure published by the Institution named and in the place shown in the SCC
		6.5	The rate of the Adjudicator's fee and administrative costs of adjudication shall be borne equally by the Parties. The rates and costs shall be in accordance with the rules of the Appointing Authority. In conducting adjudication to its finality each party shall bear its incurred costs and expenses.
		6.6	Should the Adjudicator resign or die, or should the Employer and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator will be appointed by the Appointing Authority

		6.7	In the event of disagreement between the Parties to the dispute under Clause 28.1 or 28.2 above, the Adjudicator shall be appointed by the Appointing Authority stated in the SCC.

### B. Subject Matter of Contract

7.	Scope of Facilities	7.1	Unless otherwise expressly limited in the Technical Specifications, the Contractor's obligations cover the provision of all Goods and the performance of all Installation Services required for the design, the manufacture (including procurement, quality assurance, construction, installation, associated civil works, Pre-commissioning and delivery) of the Goods and the installation, completion and commissioning of the Facilities in accordance with the plans, procedures, specifications, drawings, codes and any other documents as specified in the Technical Specifications. Such specifications include, but are not limited to, the provision of supervision and engineering services; the supply of labour, materials, equipment, spare parts (as specified in GCC 7.3 below) and accessories; Contractor's Equipment; construction utilities and supplies; temporary materials, structures and facilities; transportation (including, without limitation, unloading and hauling to, from and at the Site); and storage, except for those supplies, works and services that will be provided or performed by the Employer, as set forth in the corresponding Appendix (Scope of Works and Supply by the Employer) to the Agreement.
		7.2	The Contractor shall, unless specifically excluded in the Contract, perform all such work and/or supply all such items and materials not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining Completion of the Facilities as if such work and/or items and materials were expressly mentioned in the Contract.
		7.3	In addition to the supply of Mandatory Spare Parts included in the Contract, the Contractor agrees to supply spare parts required for the operation and maintenance of the Facilities for the period specified in the SCC. However, the identity, specifications and quantities of such spare parts and the terms and conditions relating to the supply thereof are to be agreed between the Employer and the Contractor, and the price of such spare parts shall be that given in Price Schedule No. 6, which shall be

			added to the Contract Price. The price of such spare parts shall include the purchase price therefore and other costs and expenses (including the Contractor's fees) relating to the supply of spare parts.
8	<b>Time for Commencement and Completion</b>	8.1	The Contractor shall commence work on the Facilities within the period specified in the SCC and without prejudice to GCC 26.2 hereof, the Contractor shall thereafter proceed with the Facilities in accordance with the time schedule specified in the corresponding Appendix (Time Schedule) to the Agreement.
		8.2	The Contractor shall attain Completion of the Facilities (or of a part where a separate time for Completion of such part is specified in the Contract) within the time stated in the SCC or within such extended time to which the Contractor shall be entitled under GCC 40 hereof.
9	<b>Contractor's Responsibilities</b>	9.1	The Contractor shall design, manufacture (including associated purchases and/or subcontracting), install and complete the Facilities with due care and diligence in accordance with the Contract.
		9.2	The Contractor confirms that it has entered into this Contract on the basis of a proper examination of the data relating to the Facilities (including any data as to boring tests) provided by the Employer, and on the basis of information that the Contractor could have obtained from a visual inspection of the Site (if access thereto was available) and of other data readily available to it relating to the Facilities as of the date twenty-eight (28) days prior to tender submission. The Contractor acknowledges that any failure to acquaint itself with all such data and information shall not relieve its responsibility for properly estimating the difficulty or cost of successfully performing the Facilities.
		9.3	The Contractor shall acquire in its name all permits, approvals and/or licenses from all local, state or national government authorities or public service undertakings in the United Republic of Tanzania where the Site is located that are necessary for the performance of the Contract, including, without limitation, visas for the Contractor's and Subcontractor's personnel and entry permits for all imported Contractor's Equipment. The Contractor shall acquire all other permits, approvals and/or licenses that are not the responsibility of the Employer under GCC 10.3 hereof and that are necessary for the performance of the Contract.
		9.4	The Contractor shall comply with all laws in force in the United Republic of Tanzania and local bylaws where the Facilities are installed and where the Installation Services are carried out. The laws will include all local, state,

			national or other laws that affect the performance of the Contract and bind upon the Contractor. The Contractor shall indemnify and hold harmless the Employer from and against any and all liabilities, damages, claims, fines, penalties and expenses of whatever nature arising or resulting from the violation of such laws by the Contractor or its personnel, including the Subcontractors and their personnel, but without prejudice to GCC 10.1 hereof.
		9.5	Any Plant, Material and Services that will be incorporated in or be required for the Facilities and other supplies shall have their origin as specified under GCC 1 (Country of Origin).
		9.6	The Contractor shall permit the PE to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the PE, if so required by the PE
10	<b>Employer's Responsibilities</b>	10.1	The Employer shall ensure the accuracy of all information and/or data to be supplied by the Employer as described in the corresponding Appendix (Scope of Works and Supply by the Employer) to the Contract, except when otherwise expressly stated in the Contract.
		10.2	The Employer shall be responsible for acquiring and providing legal and physical possession of the Site and access thereto, and for providing possession of and access to all other areas reasonably required for the proper execution of the Contract, including all requisite rights of way, as specified in the corresponding Appendix (Scope of Works and Supply by the Employer) to the Agreement. The Employer shall give full possession of and accord all rights of access thereto on or before the date(s) specified in that Appendix.
		10.3	The Employer shall acquire and pay for all permits, approvals and/or licenses from all local, state or national government authorities or public service undertakings in the United Republic of Tanzania. Such authorities or undertakings require the Employer to obtain them in the Employer's name, are necessary for the execution of the Contract (they include those required for the performance by both the Contractor and the Employer of their respective obligations under the Contract), and are specified in the corresponding Appendix (Scope of Works and Supply by the Employer) to the Agreement.
		10.4	If requested by the Contractor, the Employer shall use its best endeavours to assist the Contractor in obtaining in a timely and expeditious manner all permits, approvals and/or licenses necessary for the execution of the Contract from all local, state or national government authorities or

			public service undertakings that such authorities or undertakings require the Contractor or Subcontractors or the personnel of the Contractor or Subcontractors, as the case may be, to obtain.
		10.5	Unless otherwise specified in the Contract or agreed upon by the Employer and the Contractor, the Employer shall provide sufficient, properly qualified operating and maintenance personnel; shall supply and make available all raw materials, utilities, lubricants, chemicals, catalysts, other materials and facilities; and shall perform all work and services of whatsoever nature, including those required by the Contractor to properly carry out Pre-commissioning, Commissioning and Guarantee Tests, all in accordance with the provisions of the corresponding Appendix (Scope of Works and Supply by the Employer) to the Agreement at or before the time specified in the programme furnished by the Contractor under GCC 18.2 hereof and in the manner thereupon specified or as otherwise agreed upon by the Employer and the Contractor.
		10.6	The Employer shall be responsible for the continued operation of the Facilities after Completion, in accordance with GCC 24.8, and shall be responsible for facilitating the Guarantee Test(s) for the Facilities, in accordance with GCC 25.2.
		10.7	All costs and expenses involved in the performance of the obligations under this GCC 10 shall be the responsibility of the Employer, save those to be incurred by the Contractor with respect to the performance of Guarantee Tests, in accordance with GCC 25.2.

### C. Payment

<b>11</b>	<b>Contract Price</b>	11.1	The Contract Price shall be as specified in Article 2 (Contract Price and Terms of Payment) of the Form of Agreement.
		11.2	Unless indicated otherwise in the SCC, the Contract Price shall be a firm lump sum not subject to any alteration, except in the event of a Change in the Facilities or as otherwise provided in the Contract.
		11.3	Subject to GCCs 9.2, 10.1 and 35 hereof, the Contractor shall be deemed to have satisfied itself as to the correctness and sufficiency of the Contract Price, which shall, except as otherwise provided for in the Contract,

			cover all its obligations under the Contract.
12	<b>Terms of Payment</b>	12.1	The Contract Price shall be paid as specified in the corresponding Appendix (Terms and Procedures of Payment) to the Agreement. The procedures to be followed in making application for and processing payments shall be those outlined in the same Appendix.
		12.2	No payment made by the Employer herein shall be deemed to constitute acceptance by the Employer of the Facilities or any part(s) thereof.
		12.3	In the event that the Employer fails to make any payment by its respective due date or within the period set forth in the Contract, the Employer shall pay to the Contractor interest on the amount of such delayed payment at the rate(s) shown in the corresponding Appendix (Terms and Procedures of Payment) to the Agreement for the period of delay until payment has been made in full, whether before or after judgment or arbitrage award.
		12.4	The currency or currencies in which payments are made to the Contractor under this Contract shall be specified in the corresponding Appendix (Terms and Procedures of Payment) to the Agreement, subject to the general principle that payments will be made in the currency or currencies in which the Contract Price has been stated in the Contractor's Tendering.
		12.5	All payments shall be made in the currency or currencies specified in the corresponding Appendix (Terms and Procedures of Payment) to the Agreement, pursuant to GCC 12.4.
13	<b>Securities</b>	13.1	<u>Issuance of Securities</u> The Contractor shall provide the securities specified below in favor of the Employer at the times, and in the amount, manner and form specified below.
		13.2	<u>Advance Payment Security</u> 13.2.1 The Contractor shall, within fourteen (14) working days of the notification of contract award, provide a security in an amount equal to the advance payment calculated in accordance with the corresponding Appendix (Terms and Procedures of Payment) to the Agreement, and in the same currency or currencies.  13.2.2 The security shall be in the form provided in the tendering documents or in another form acceptable to the Employer. The amount of the security shall be reduced in proportion to the value of the Facilities executed by and paid to the Contractor from time to time, and shall automatically become null and void when the full amount of the advance

		<p>payment has been recovered by the Employer. The security shall be returned to the Contractor immediately after its expiration.</p>
	<p>13.3</p>	<p><u>Performance Security</u></p> <p>13.3.1 The Performance Security shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a bank or surety acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable as specified in the TDS and SCC <b>and in accordance with the conditions of contract.</b></p> <p>13.3.2 The Performance Security shall be valid until a date 28 days from the date of issue of the Certificate of Completion in the case of a Bank Guarantee, and until one year from the date of issue of the Completion Certificate in the case of a Performance Bond.</p> <p>13.3.3 Where circumstances necessitate the amendment of the contract after signature, and such amendment is effected, the Employer shall require the Contractor to provide additional Performance Security to cover any cumulative increase of more than ten percent of the Initial Contract Price.</p> <p>13.3.4 The security shall be denominated in the currency or currencies of the Contract, or in a freely convertible currency acceptable to the Employer, and shall be in one of the forms of bank guarantees provided in the tendering documents, as stipulated by the Employer in the SCC, or in another form acceptable to the Employer.</p> <p>13.3.5 The security shall automatically be reduced by half on the date of the Operational Acceptance and shall become null and void, eighteen (18) months after Completion of the Facilities or twelve (12) months after Operational Acceptance of the Facilities, whichever occurs first; provided, however, that if the Defects Liability Period has been extended on any part of the Facilities pursuant to GCC 27.8 hereof, the Contractor shall issue an additional security in an amount proportionate to the Contract Price of that part. The security shall be returned to the Contractor immediately after its expiration, provided, however, that if the Contractor, pursuant to GCC 27.10, is liable for an extended warranty obligation, the performance security shall be extended for the period and up to</p>



			the amount specified in the SCC.
14	Taxes and Duties	14.1	Except as otherwise specifically provided in the Contract, the Contractor shall bear and pay all taxes, duties, levies and charges assessed on the Contractor, its Subcontractors or their employees by all municipal, state or national government authorities in connection with the Facilities in and outside of the United Republic of Tanzania where the Site is located.
		14.2	Notwithstanding GCC 14.1 above, the Employer shall bear and promptly pay all customs and import duties as well as other local taxes like, e.g., a value added tax (VAT), imposed by the law of the United Republic of Tanzania on the Goods specified in Price Schedule No. 1 and that are to be incorporated into the Facilities.
		14.3	If any tax exemptions, reductions, allowances or privileges may be available to the Contractor in the United Republic of Tanzania, the Employer shall use its best endeavors to enable the Contractor to benefit from any such tax savings to the maximum allowable extent.
		14.4	For the purpose of the Contract, it is agreed that the Contract Price specified in Article 2 (Contract Price and Terms of Payment) of the Form of Agreement is based on the taxes, duties, levies and charges prevailing at the date twenty-eight (28) days prior to the date of tender submission in the United Republic of Tanzania (hereinafter called "Tax" in this GCC 14.4). If any rates of Tax are increased or decreased, a new Tax is introduced, an existing Tax is abolished, or any change in interpretation or application of any Tax occurs in the course of the performance of Contract, which was or will be assessed on the Contractor, Subcontractors or their employees in connection with performance of the Contract, an equitable adjustment of the Contract Price shall be made to fully take into account any such change by addition to the Contract Price or deduction there from, as the case may be, in accordance with GCC 36 hereof.

#### D. Intellectual Property

15	Patent and Copyright	15.1	The Supplier shall indemnify the PE against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof in the United Republic of Tanzania.
		15.2	The copyright in all drawings, documents and other materials containing data and information furnished to the Employer by the Contractor herein shall remain vested in the Contractor or, if they are furnished to the

			Employer directly or through the Contractor by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.
16	<b>Confidential Information</b>	16.1	The Employer and the Contractor shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following termination of the Contract. Notwithstanding the above, the Contractor may furnish to its Subcontractor(s) such documents, data and other information it receives from the Employer to the extent required for the Subcontractor(s) to perform its work under the Contract, in which event the Contractor shall obtain from such Subcontractor(s) an undertaking of confidentiality similar to that imposed on the Contractor under this GCC 16.
		16.2	The Employer shall not use such documents, data and other information received from the Contractor for any purpose other than the operation and maintenance of the Facilities. Similarly, the Contractor shall not use such documents, data and other information received from the Employer for any purpose other than the design, procurement of Goods, construction or such other work and services as are required for the performance of the Contract.
		16.3	The obligation of a party under GCCs 16.1 and 16.2 above, however, shall not apply to that information which <ul style="list-style-type: none"> <li>(a) now or hereafter enters the public domain through no fault of that party</li> <li>(b) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party hereto</li> <li>(c) Otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.</li> </ul>
		16.4	The above provisions of this GCC 16 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Facilities or any part thereof.
		16.5	The provisions of this GCC 16 shall survive termination, for whatever reason, of the Contract.

## E. Execution of the Facilities

17	Representatives	17.1	<p><u>Project Manager</u></p> <p>If the Project Manager is not named in the Contract, then within Seven (7) working days of the Effective Date, the Employer shall appoint and notify the Contractor in writing of the name of the Project Manager. The Employer may from time to time appoint some other person as the Project Manager in place of the person previously so appointed, and shall give a notice of the name of such other person to the Contractor without delay. No such appointment shall be made at such a time or in such a manner as to impede the progress of work on the Facilities. Such appointment shall only take effect upon receipt of such notice by the Contractor. The Project Manager shall represent and act for the Employer at all times during the currency of the Contract. All notices, instructions, orders, certificates, approvals and all other communications under the Contract shall be given by the Project Manager, except as herein otherwise provided.</p> <p>All notices, instructions, information and other communications given by the Contractor to the Employer under the Contract shall be given to the Project Manager, except as herein otherwise provided.</p>
		17.2	<p><u>Contractor's Representative &amp; Project Manager</u></p> <p>17.2.1 If the Contractor's Representative is not named in the Contract, then within Seven (7) working days of the Effective Date, the Contractor shall appoint the Contractor's Representative and shall request the Employer in writing to approve the person so appointed. If the Employer makes no objection to the appointment within Seven (7) working days, the Contractor's Representative shall be deemed to have been approved. If the Employer objects to the appointment within Seven (7) working days giving the reason thereof, then the Contractor shall appoint a replacement within Seven (7) working days of such objection, and the foregoing provisions of this GCC 17.2.1 shall apply thereto.</p> <p>17.2.2 The Contractor's Representative shall represent</p>

and act for the Contractor at all times during the currency of the Contract and shall give to the Project Manager all the Contractor's notices, instructions, information and all other communications under the Contract.

All notices, instructions, information and all other communications given by the Employer or the Project Manager to the Contractor under the Contract shall be given to the Contractor's Representative or, in its absence, its deputy, except as herein otherwise provided.

The Contractor shall not revoke the appointment of the Contractor's Representative without the Employer's prior written consent, which shall not be unreasonably withheld. If the Employer consents thereto, the Contractor shall appoint some other person as the Contractor's Representative, pursuant to the procedure set out in GCC 17.2.1.

17.2.3 The Contractor's Representative may, subject to the approval of the Employer (which shall not be unreasonably withheld), at any time delegate to any person any of the powers, functions and authorities vested in him or her. Any such delegation may be revoked at any time. Any such delegation or revocation shall be subject to a prior notice signed by the Contractor's Representative, and shall specify the powers, functions and authorities thereby delegated or revoked. No such delegation or revocation shall take effect unless and until a copy thereof has been delivered to the Employer and the Project Manager.

Any act or exercise by any person of powers, functions and authorities so delegated to him or her in accordance with this GCC 17.2.3 shall be deemed to be an act or exercise by the Contractor's Representative.

17.2.4 From the commencement of installation of the Facilities at the Site until Completion, the Contractor's Representative shall appoint a suitable person as the construction manager (hereinafter referred to as "the Construction Manager"). The Construction Manager shall supervise all work done at the Site by the Contractor and shall be present at the Site throughout normal working hours except when

			<p>on leave, sick or absent for reasons connected with the proper performance of the Contract. Whenever the Construction Manager is absent from the Site, a suitable person shall be appointed to act as his or her deputy.</p> <p>17.2.5 The Employer may by notice to the Contractor object to any representative or person employed by the Contractor in the execution of the Contract who, in the reasonable opinion of the Employer, may behave inappropriately, may be incompetent or negligent, or may commit a serious breach of the Site regulations provided under GCC 22.3. The Employer shall provide evidence of the same, whereupon the Contractor shall remove such person from the Facilities.</p> <p>17.2.6 If any representative or person employed by the Contractor is removed in accordance with GCC 17.2.5, the Contractor shall, where required, promptly appoint a replacement.</p>
18	Work Programme	18.1	<p><u>Contractor's Organization</u></p> <p>The Contractor shall supply to the Employer and the Project Manager a chart showing the proposed organization to be established by the Contractor for carrying out work on the Facilities. The chart shall include the identities of the key personnel together with the curricula vitae of such key personnel to be employed within twenty-one (21) days of the Effective Date. The Contractor shall promptly inform the Employer and the Project Manager in writing of any revision or alteration of such an organization chart.</p>
		18.2	<p><u>Programme of Performance</u></p> <p>Within twenty-eight (28) days after the date of signing the Agreement, the Contractor shall prepare and submit to the Project Manager a detailed programme of performance of the Contract, made in the form specified in the SCC and showing the sequence in which it proposes to design, manufacture, transport, assemble, install and pre-commission the Facilities, as well as the date by which the Contractor reasonably requires that the Employer shall have fulfilled its obligations under the Contract so as to enable the Contractor to execute the Contract in accordance with the programme and to achieve Completion, Commissioning and Acceptance of the Facilities in accordance with the Contract. The programme so submitted by the Contractor shall accord with the Time Schedule included in the corresponding</p>

			Appendix (Time Schedule) to the Agreement and any other dates and periods specified in the Contract. The Contractor shall update and revise the programme as and when appropriate or when required by the Project Manager, but without modification in the Times for Completion given in the SCC and any extension granted in accordance with GCC 40, and shall submit all such revisions to the Project Manager.
		18.3	<p><u>Progress Report</u></p> <p>The Contractor shall monitor progress of all the activities specified in the programme referred to in GCC 18.2 above, and supply a progress report to the Project Manager every month.</p> <p>The progress report shall be in a form acceptable to the Project Manager and shall indicate: (a) percentage completion achieved compared with the planned percentage completion for each activity; and (b) where any activity is behind the programme, giving comments and likely consequences and stating the corrective action being taken.</p>
		18.4	<p><u>Progress of Performance</u></p> <p>If at any time the Contractor's actual progress falls behind the programme referred to in GCC 18.2, or it becomes apparent that it will so fall behind, the Contractor shall, at the request of the Employer or the Project Manager, prepare and submit to the Project Manager a revised programme, taking into account the prevailing circumstances, and shall notify the Project Manager of the steps being taken to expedite progress so as to attain Completion of the Facilities within the Time for Completion under GCC 8.2, any extension thereof entitled under GCC 40.1, or any extended period as may otherwise be agreed upon between the Employer and the Contractor.</p>
		18.5	<p><u>Work Procedures</u></p> <p>The Contract shall be executed in accordance with the Contract Documents and the procedures given in the section on Sample Forms and Procedures of the Contract Documents.</p> <p>The Contractor may execute the Contract in accordance with its own standard project execution plans and procedures to the extent that they do not conflict with the provisions contained in the Contract.</p>
19.	<b>Subcontracting</b>	19.1	The corresponding Appendix (List of Approved Subcontractors) to the Agreement specifies major items of supply or services and a list of approved

			Subcontractors against each item, including vendors. Insofar as no Subcontractors are listed against any such item, the Contractor shall prepare a list of Subcontractors for such item for inclusion in such list. The Contractor may from time to time propose any addition to or deletion from any such list. The Contractor shall submit any such list or any modification thereto to the Employer for its approval in sufficient time so as not to impede the progress of work on the Facilities. Such approval by the Employer for any of the Subcontractors shall not relieve the Contractor from any of its obligations, duties or responsibilities under the Contract.
		19.2	The Contractor shall select and employ its Subcontractors for such major items from those listed in the lists referred to in GCC 19.1.
		19.3	For items or parts of the Facilities not specified in the corresponding Appendix (List of Approved Subcontractors) to the Agreement, the Contractor may employ such Subcontractors as it may select, at its discretion.
20	<b>Design and Engineering</b>	20.1	<p><u>Specifications and Drawings</u></p> <p>20.1.1 The Contractor shall execute the basic and detailed design and the engineering work in compliance with the provisions of the Contract, or where not so specified, in accordance with good engineering practice.</p> <p>The Contractor shall be responsible for any discrepancies, errors or omissions in the specifications, drawings and other technical documents that it has prepared, whether such specifications, drawings and other documents have been approved by the Project Manager or not, provided that such discrepancies, errors or omissions are not because of inaccurate information furnished in writing to the Contractor by or on behalf of the Employer.</p> <p>20.1.2 The Contractor shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designated by or on behalf of the Employer, by giving a notice of such disclaimer to the Project Manager.</p>
		20.2	<p><u>Codes and Standards</u></p> <p>Wherever references are made in the Contract to codes</p>

			and standards in accordance with which the Contract shall be executed, the edition or the revised version of such codes and standards current at the date twenty-eight (28) days prior to date of tender submission shall apply unless otherwise specified. During Contract execution, any changes in such codes and standards shall be applied after approval by the Employer and shall be treated in accordance with GCC 39.
		20.3	<p><u>Approval/Review of Technical Documents by Project Manager</u></p> <p>20.3.1 The Contractor shall prepare (or cause its Subcontractors to prepare) and furnish to the Project Manager the documents listed in the corresponding Appendix (List of Documents for Approval or Review) to the Agreement for its approval or review as specified and in accordance with the requirements of GCC 18.2 (Programme of Performance).</p> <p>Any part of the Facilities covered by or related to the documents to be approved by the Project Manager shall be executed only after the Project Manager's approval thereof.</p> <p>GCCs 20.3.2 through 20.3.7 shall apply to those documents requiring the Project Manager's approval, but not to those furnished to the Project Manager for its review only.</p> <p>20.3.2 Within fourteen (14) days after receipt by the Project Manager of any document requiring the Project Manager's approval in accordance with GCC 20.3.1, the Project Manager shall either return one copy thereof to the Contractor with its approval endorsed thereon or shall notify the Contractor in writing of its disapproval thereof and the reasons therefore and the modifications that the Project Manager proposes.</p> <p>If the Project Manager fails to take such action within the said fourteen (14) working days, then the said document shall be deemed to have been approved by the Project Manager.</p> <p>20.3.3 The Project Manager shall not disapprove any document, except on the grounds that the document does not comply with some specified provision of the Contract or that it is contrary to good engineering practice.</p>



		<p>20.3.4 If the Project Manager disapproves the document, the Contractor shall modify the document and resubmit it for the Project Manager's approval in accordance with GCC 20.3.2. If the Project Manager approves the document subject to modification(s), the Contractor shall make the required modification(s), whereupon the document shall be deemed to have been approved.</p> <p>20.3.5 If any dispute or difference occurs between the Employer and the Contractor in connection with or arising out of the disapproval by the Project Manager of any document and/or any modification(s) thereto that cannot be settled between the parties within a reasonable period, then such dispute or difference may be referred to an Adjudicator for determination in accordance with GCC 6.1 hereof. If such dispute or difference is referred to an Adjudicator, the Project Manager shall give instructions as to whether and if so, how, performance of the Contract is to proceed. The Contractor shall proceed with the Contract in accordance with the Project Manager's instructions, provided that if the Adjudicator upholds the Contractor's view on the dispute and if the Employer has not given notice under GCC 6.1.2 hereof, then the Contractor shall be reimbursed by the Employer for any additional costs incurred by reason of such instructions and shall be relieved of such responsibility or liability in connection with the dispute and the execution of the instructions as the Adjudicator shall decide, and the Time for Completion shall be extended accordingly.</p> <p>20.3.6 The Project Manager's approval, with or without modification of the document furnished by the Contractor, shall not relieve the Contractor of any responsibility or liability imposed upon it by any provisions of the Contract except to the extent that any subsequent failure results from modifications required by the Project Manager.</p> <p>20.3.7 The Contractor shall not depart from any approved document unless the Contractor has first submitted to the Project Manager an amended document and obtained the Project Manager's approval thereof, pursuant to the provisions of this GCC 20.3.</p> <p>If the Project Manager requests any change in any</p>
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			already approved document and/or in any document based thereon, the provisions of GCC 39 shall apply to such request.
21	Procurement	21.1	<p><u>Goods</u></p> <p>Subject to GCC 14.2, the Contractor shall manufacture or procure and transport all the Goods in an expeditious and orderly manner to the Site.</p>
		21.2	<p><u>Employer-Supplied Plant, Equipment, and Materials</u></p> <p>If the corresponding Appendix (Scope of Works and Supply by the Employer) to the Agreement provides that the Employer shall furnish any specific items of machinery, equipment or materials to the Contractor, the following provisions shall apply:</p> <p>21.2.1 The Employer shall, at its own risk and expense, transport each item to the place on or near the Site as agreed upon by the parties and make such item available to the Contractor at the time specified in the programme furnished by the Contractor, pursuant to GCC 18.2, unless otherwise mutually agreed.</p> <p>21.2.2 Upon receipt of such item, the Contractor shall inspect the same visually and notify the Project Manager of any detected shortage, defect or default. The Employer shall immediately remedy any shortage, defect or default, or the Contractor shall, if practicable and possible, at the request of the Employer, remedy such shortage, defect or default at the Employer's cost and expense. After inspection, such item shall fall under the care, custody and control of the Contractor. The provision of this GCC 21.2.2 shall apply to any item supplied to remedy any such shortage or default or to substitute for any defective item, or shall apply to defective items that have been repaired.</p> <p>21.2.3 The foregoing responsibilities of the Contractor and its obligations of care, custody and control shall not relieve the Employer of liability for any undetected shortage, defect or default, nor place the Contractor under any liability for any such shortage, defect or default whether under GCC 27 or under any other provision of Contract.</p>
		21.3	<p><u>Transportation</u></p> <p>21.3.1 The Contractor shall at its own risk and expense transport all the Goods and the Contractor's Equipment to the Site by the mode of transport</p>

			<p>that the Contractor judges most suitable under all the circumstances.</p> <p>21.3.2 Unless otherwise provided in the Contract, the Contractor shall be entitled to select any safe mode of transport operated by any person to carry the Goods and the Contractor's Equipment.</p> <p>21.3.3 Upon dispatch of each shipment of the Goods and the Contractor's Equipment, the Contractor shall notify the Employer by telex, cable, facsimile or Electronic Data Interchange (EDI) of the description of the Goods and of the Contractor's Equipment, the point and means of dispatch, and the estimated time and point of arrival in the United Republic of Tanzania, if applicable, and at the Site. The Contractor shall furnish the Employer with relevant shipping documents to be agreed upon between the parties.</p> <p>21.3.4 The Contractor shall be responsible for obtaining, if necessary, approvals from the authorities for transportation of the Goods and the Contractor's Equipment to the Site. The Employer shall use its best endeavours in a timely and expeditious manner to assist the Contractor in obtaining such approvals, if requested by the Contractor. The Contractor shall indemnify and hold harmless the Employer from and against any claim for damage to roads, bridges or any other traffic facilities that may be caused by the transport of the Goods and the Contractor's Equipment to the Site.</p>
		21.4	<p><u>Customs Clearance</u></p> <p>The Contractor shall, at its own expense, handle all imported Goods and Contractor's Equipment at the point(s) of import and shall handle any formalities for customs clearance, subject to the Employer's obligations under GCC 14.2, provided that if applicable laws or regulations require any application or act to be made by or in the name of the Employer, the Employer shall take all necessary steps to comply with such laws or regulations. In the event of delays in customs clearance that are not the fault of the Contractor, the Contractor shall be entitled to an extension in the Time for Completion, pursuant to GCC 40.</p>

22	Installation	22.1	<p><u>Setting Out/Supervision/Labour</u></p> <p>22.1.1 <i>Bench Mark:</i> The Contractor shall be responsible for the true and proper setting-out of the Facilities in relation to bench marks, reference marks and lines provided to it in writing by or on behalf of the Employer.</p> <p>If, at any time during the progress of installation of the Facilities, any error shall appear in the position, level or alignment of the Facilities, the Contractor shall forthwith notify the Project Manager of such error and, at its own expense, immediately rectify such error to the reasonable satisfaction of the Project Manager. If such error is based on incorrect data provided in writing by or on behalf of the Employer, the expense of rectifying the same shall be borne by the Employer.</p> <p>22.1.2 <i>Contractor's Supervision:</i> The Contractor shall give or provide all necessary superintendence during the installation of the Facilities, and the Construction Manager or its deputy shall be constantly on the Site to provide full-time superintendence of the installation. The Contractor shall provide and employ only technical personnel who are skilled and experienced in their respective callings and supervisory staff who are competent to adequately supervise the work at hand.</p> <p>22.1.3 <i>Labour:</i></p> <p>(a) The Contractor shall provide and employ on the Site in the installation of the Facilities such skilled, semi-skilled and unskilled labour as is necessary for the proper and timely execution of the Contract. The Contractor is encouraged to use local labour that has the necessary skills.</p> <p>(b) Unless otherwise provided in the Contract, the Contractor shall be responsible for the recruitment, transportation, accommodation and catering of all labour, local or expatriate, required for the execution of the Contract and for all payments in connection therewith.</p> <p>(c) The Contractor shall be responsible for</p>
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			<p>obtaining all necessary permit(s) and/or visa(s) from the appropriate authorities for the entry of all labour and personnel to be employed on the Site into the United Republic of Tanzania and in the exact region where the Site is located.</p> <p>(d) The Contractor shall at its own expense provide the means of repatriation to all of its and its Subcontractor's personnel employed on the Contract at the Site to their various home countries. It shall also provide suitable temporary maintenance of all such persons from the cessation of their employment on the Contract to the date programmed for their departure. In the event that the Contractor defaults in providing such means of transportation and temporary maintenance, the Employer may provide the same to such personnel and recover the cost of doing so from the Contractor.</p> <p>(e) The Contractor shall at all times during the progress of the Contract use its best endeavours to prevent any unlawful, riotous or disorderly conduct or behaviour by or amongst its employees and the labour of its Subcontractors.</p> <p>(f) The Contractor shall, in all dealings with its labour and the labour of its Subcontractors currently employed on or connected with the Contract, pay due regard to all recognized festivals, official holidays, religious or other customs and all local laws and regulations pertaining to the employment of labour.</p>
		22.2	<p><u>Contractor's Equipment</u></p> <p>22.2.1 All Contractors' Equipment brought by the Contractor onto the Site shall be deemed to be intended to be used exclusively for the execution of the Contract. The Contractor shall not remove the same from the Site without the Project Manager's consent that such Contractor's Equipment is no longer required for the execution of the Contract.</p> <p>22.2.2 Unless otherwise specified in the Contract, upon completion of the Facilities, the Contractor shall</p>

			<p>remove from the Site all Equipment brought by the Contractor onto the Site and any surplus materials remaining thereon.</p> <p>22.2.3 The Employer will, if requested, use its best endeavours to assist the Contractor in obtaining any local, state or national government permission required by the Contractor for the export of the Contractor's Equipment imported by the Contractor for use in the execution of the Contract that is no longer required for the execution of the Contract.</p>
		22.3	<p><u>Site Regulations and Safety</u></p> <p>The Employer and the Contractor shall establish Site regulations setting out the rules to be observed in the execution of the Contract at the Site and shall comply therewith. The Contractor shall prepare and submit to the Employer, with a copy to the Project Manager, proposed Site regulations for the Employer's approval, which approval shall not be unreasonably withheld.</p> <p>Such Site regulations shall include, but shall not be limited to, rules in respect of security, safety of the Facilities, gate control, sanitation, medical care, and fire prevention.</p>
		22.4	<p><u>Opportunities for Other Contractors</u></p> <p>22.4.1 The Contractor shall, upon written request from the Employer or the Project Manager, give all reasonable opportunities for carrying out the work to any other contractors employed by the Employer on or near the Site.</p> <p>22.4.2 If the Contractor, upon written request from the Employer or the Project Manager, makes available to other contractors any roads or ways the maintenance for which the Contractor is responsible, permits the use by such other contractors of the Contractor's Equipment, or provides any other service of whatsoever nature for such other contractors, the Employer shall fully compensate the Contractor for any loss or damage caused or occasioned by such other contractors in respect of any such use or service, and shall pay to the Contractor reasonable remuneration for the use of such equipment or the provision of such services.</p> <p>22.4.3 The Contractor shall also so arrange to perform</p>

			<p>its work as to minimize, to the extent possible, interference with the work of other contractors. The Project Manager shall determine the resolution of any difference or conflict that may arise between the Contractor and other contractors and the workers of the Employer in regard to their work.</p> <p>22.4.4 The Contractor shall notify the Project Manager promptly of any defects in the other contractors' work that come to its notice, and that could affect the Contractor's work. The Project Manager shall determine the corrective measures, if any, required to rectify the situation after inspection of the Facilities. Decisions made by the Project Manager shall be binding on the Contractor.</p>
		22.5	<p><u>Emergency Work</u></p> <p>If, by reason of an emergency arising in connection with and during the execution of the Contract, any protective or remedial work is necessary as a matter of urgency to prevent damage to the Facilities, the Contractor shall immediately carry out such work.</p> <p>If the Contractor is unable or unwilling to do such work immediately, the Employer may do or cause such work to be done as the Employer may determine is necessary in order to prevent damage to the Facilities. In such event the Employer shall, as soon as practicable after the occurrence of any such emergency, notify the Contractor in writing of such emergency, the work done and the reasons therefore. If the work done or caused to be done by the Employer is work that the Contractor was liable to do at its own expense under the Contract, the reasonable costs incurred by the Employer in connection therewith shall be paid by the Contractor to the Employer. Otherwise, the cost of such remedial work shall be borne by the Employer.</p>
		22.6	<p><u>Site Clearance</u></p> <p>22.6.1 <i>Site Clearance in Course of Performance:</i> In the course of carrying out the Contract, the Contractor shall keep the Site reasonably free from all unnecessary obstruction, store or remove any surplus materials, clear away any wreckage, rubbish or temporary works from the Site, and remove any Contractor's Equipment no longer required for execution of the Contract.</p>

			<p>22.6.2 <i>Clearance of Site after Completion:</i> After Completion of all parts of the Facilities, the Contractor shall clear away and remove all wreckage, rubbish and debris of any kind from the Site, and shall leave the Site and Facilities clean and safe.</p>
		22.7	<p><u>Watching and Lighting</u> The Contractor shall provide and maintain at its own expense all lighting, fencing, and watching when and where necessary for the proper execution and the protection of the Facilities, or for the safety of the owners and occupiers of adjacent property and for the safety of the public.</p>
		22.8	<p><u>Work at Night and on Holidays</u> 22.8.1 Unless otherwise provided in the Contract, no work shall be carried out during the night and on public holidays of the United Republic of Tanzania without prior written consent of the Employer, except where work is necessary or required to ensure safety of the Facilities or for the protection of life, or to prevent loss or damage to property, when the Contractor shall immediately advise the Project Manager, provided that provisions of this GCC 22.8.1 shall not apply to any work which is customarily carried out by rotary or double-shifts.</p> <p>22.8.2 Notwithstanding GCCs 22.8.1 or 22.1.3, if and when the Contractor considers it necessary to carry out work at night or on public holidays so as to meet the Time for Completion and requests the Employer's consent thereto, the Employer shall not unreasonably withhold such consent.</p>
23	<b>Test and Inspection</b>	23.1	<p>The Contractor shall at its own expense carry out at the place of manufacture and/or on the Site all such tests and/or inspections of the Goods and any part of the Facilities as are specified in the Contract.</p>
		23.2	<p>The Employer and the Project Manager or their designated representatives shall be entitled to attend the aforesaid test and/or inspection, provided that the Employer shall bear all costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.</p>



		23.3	Whenever the Contractor is ready to carry out any such test and/or inspection, the Contractor shall give a reasonable advance notice of such test and/or inspection and of the place and time thereof to the Project Manager. The Contractor shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Employer and the Project Manager (or their designated representatives) to attend the test and/or inspection.
		23.4	<p>The Contractor shall provide the Project Manager with a certified report of the results of any such test and/or inspection.</p> <p>If the Employer or Project Manager (or their designated representatives) fails to attend the test and/or inspection, or if it is agreed between the parties that such persons shall not do so, then the Contractor may proceed with the test and/or inspection in the absence of such persons, and may provide the Project Manager with a certified report of the results thereof.</p>
		23.5	The Project Manager may require the Contractor to carry out any test and/or inspection not required by the Contract, provided that the Contractor's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of work on the Facilities and/or the Contractor's performance of its other obligations under the Contract, due allowance will be made in respect of the Time for Completion and the other obligations so affected
		23.6	If any Goods or any part of the Facilities fails to pass any test and/or inspection, the Contractor shall either rectify or replace such Goods or part of the Facilities and shall repeat the test and/or inspection upon giving a notice under GCC 23.3.
		23.7	If any dispute or difference of opinion shall arise between the parties in connection with or arising out of the test and/or inspection of the Goods or part of the Facilities that cannot be settled between the parties within a reasonable period of time, it may be referred to an Adjudicator for determination in accordance with

			GCC 6.1.
		23.8	The Contractor shall afford the Employer and the Project Manager, at the Employer's expense, access at any reasonable time to any place where the Goods are being manufactured or the Facilities are being installed, in order to inspect the progress and the manner of manufacture or installation, provided that the Project Manager shall give the Contractor a reasonable prior notice.
		23.9	The Contractor agrees that neither the execution of a test and/or inspection of Goods or any part of the Facilities, nor the attendance by the Employer or the Project Manager, nor the issue of any test certificate pursuant to GCC 23.4, shall release the Contractor from any other responsibilities under the Contract.
		23.10	No part of the Facilities or foundations shall be covered up on the Site without the Contractor carrying out any test and/or inspection required under the Contract. The Contractor shall give a reasonable notice to the Project Manager whenever any such ready or about to be ready for test and/or inspection; such test and/or inspection and notice thereof shall be subject to the requirements of the Contract.
		23.11	<p>The Contractor shall uncover any part of the Facilities or foundations, or shall make openings in or through the same as the Project Manager may from time to time require at the Site, and shall reinstate and make good such part or parts.</p> <p>If any parts of the Facilities or foundations have been covered up at the Site after compliance with the requirement of GCC 23.10 and are found to be executed in accordance with the Contract, the expenses of uncovering, making openings in or through, reinstating, and making good the same shall be borne by the Employer, and the Time for Completion shall be reasonably adjusted to the extent that the Contractor has thereby been delayed or impeded in the performance of any of its obligations under the Contract.</p>
<b>24</b>	<b>Completion of the Facilities</b>	24.1	As soon as the Facilities or any part thereof has, in the opinion of the Contractor, been completed operationally and structurally and put in a tight and clean condition as specified in the Technical

			Specifications, excluding minor items not materially affecting the operation or safety of the Facilities, the Contractor shall so notify the Employer in writing.
		24.2	<p>Within seven (7) working days after receipt of the notice from the Contractor under GCC 24.1, the Employer shall supply the operating and maintenance personnel specified in the corresponding Appendix (Scope of Works and Supply by the Employer) to the Agreement for Pre-commissioning of the Facilities or any part thereof.</p> <p>Pursuant to the corresponding Appendix (Scope of Works and Supply by the Employer) to the Agreement, the Employer shall also provide, within the said seven (7) day period, the raw materials, utilities, lubricants, chemicals, catalysts, facilities, services and other matters required for Pre-commissioning of the Facilities or any part thereof.</p>
		24.3	As soon as reasonably practicable after the operating and maintenance personnel have been supplied by the Employer and the raw materials, utilities, lubricants, chemicals, catalysts, facilities, services and other matters have been provided by the Employer in accordance with GCC 24.2, the Contractor shall commence Pre-commissioning of the Facilities or the relevant part thereof in preparation for Commissioning.
		24.4	As soon as all works in respect of Pre-commissioning are completed and, in the opinion of the Contractor, the Facilities or any part thereof is ready for Commissioning, the Contractor shall so notify the Project Manager in writing.
		24.5	<p>The Project Manager shall, within fourteen (14) days after receipt of the Contractor's notice under GCC 24.4, either issue a Completion Certificate in the form specified in the Sample Forms and Procedures section in the tendering documents, stating that the Facilities or that part thereof have reached Completion as of the date of the Contractor's notice under GCC 24.4, or notify the Contractor in writing of any defects and/or deficiencies.</p> <p>If the Project Manager notifies the Contractor of any defects and/or deficiencies, the Contractor shall then correct such defects and/or deficiencies, and shall repeat the procedure described in GCC 24.4.</p>

			<p>If the Project Manager is satisfied that the Facilities or that part thereof have reached Completion, the Project Manager shall, within seven (7) days after receipt of the Contractor's repeated notice, issue a Completion Certificate stating that the Facilities or that part thereof have reached Completion as of the date of the Contractor's repeated notice.</p> <p>If the Project Manager is not so satisfied, then it shall notify the Contractor in writing of any defects and/or deficiencies within seven (7) days after receipt of the Contractor's repeated notice, and the above procedure shall be repeated.</p>
		24.6	<p>If the Project Manager fails to issue the Completion Certificate and fails to inform the Contractor of any defects and/or deficiencies within fourteen (14) days after receipt of the Contractor's notice under GCC 24.4 or within seven (7) days after receipt of the Contractor's repeated notice under GCC 24.5, or if the Employer makes use of the Facilities or part thereof, then the Facilities or that part thereof shall be deemed to have reached Completion as of the date of the Contractor's notice or repeated notice, or as of the Employer's use of the Facilities, as the case may be.</p>
		24.7	<p>As soon as possible after Completion, the Contractor shall complete all outstanding minor items so that the Facilities are fully in accordance with the requirements of the Contract, failing which the Employer will undertake such completion and deduct the costs thereof from any monies owing to the Contractor.</p>
		24.8	<p>Upon Completion, the Employer shall be responsible for the care and custody of the Facilities or the relevant part thereof, together with the risk of loss or damage thereto, and shall thereafter take over the Facilities or the relevant part thereof.</p>
25	<b>Commissioning and Operational Acceptance</b>	25.1	<p><u>Commissioning</u>  25.1.1 Commissioning of the Facilities or any part thereof shall be commenced by the Contractor immediately after issue of the Completion Certificate by the Project Manager, pursuant to GCC 24.5, or immediately after issue of the deemed Completion, under GCC 24.6.</p>

			<p>25.1.2 The Employer shall supply the operating and maintenance personnel and all raw materials, utilities, lubricants, chemicals, catalysts, facilities, services and other matters required for Commissioning.</p>
		25.2	<p><u>Guarantee Test</u></p> <p>25.2.1 The Guarantee Test (and repeats thereof) shall be conducted by the Contractor during Commissioning of the Facilities or the relevant part thereof to ascertain whether the Facilities or the relevant part can attain the Functional Guarantees specified in the Technical Specifications. The Contractor's and Project Manager's advisory personnel shall attend the Guarantee Test, and shall advise and assist the Employer. The Employer shall promptly provide the Contractor with such information as the Contractor may reasonably require in relation to the conduct and results of the Guarantee Test (and any repeats thereof).</p> <p>25.2.2 If for reasons not attributable to the Contractor, the Guarantee Test of the Facilities or the relevant part thereof cannot be successfully completed within the period from the date of Completion specified in the SCC or any other period agreed upon by the Employer and the Contractor, the Contractor shall be deemed to have fulfilled its obligations with respect to the Functional Guarantees, and GCCs 28.2 and 28.3 shall not apply.</p>
		25.3	<p><u>Operational Acceptance</u></p> <p>25.3.1 Subject to GCC 25.4 below, Operational Acceptance shall occur in respect of the Facilities or any part thereof when</p> <ul style="list-style-type: none"> <li>(a) the Guarantee Test has been successfully completed and the Functional Guarantees are met; or</li> <li>(b) the Guarantee Test has not been successfully completed or has not been carried out for reasons not attributable to the Contractor within the period from the date of Completion specified in the SCC or any other agreed upon period as specified in GCC 25.2.2 above; or</li> </ul>

		<p>(c) the Contractor has paid the liquidated damages specified in GCC 28.3 hereof; and</p> <p>(d) any minor items mentioned in GCC 24.7 hereof relevant to the Facilities or that part thereof have been completed.</p> <p>25.3.2 At any time after any of the events set out in GCC 25.3.1 have occurred, the Contractor may give a notice to the Project Manager requesting the issue of an Operational Acceptance Certificate in the form provided in the Tendering Documents or in another form acceptable to the Employer in respect of the Facilities or the part thereof specified in such notice as of the date of such notice.</p> <p>25.3.3 The Project Manager shall, after consultation with the Employer, and within seven (7) days after receipt of the Contractor's notice, issue an Operational Acceptance Certificate.</p> <p>If within seven (7) days after receipt of the Contractor's notice, the Project Manager fails to issue the Operational Acceptance Certificate or fails to inform the Contractor in writing of the justifiable reasons why the Project Manager has not issued the Operational Acceptance Certificate, the Facilities or the relevant part thereof shall be deemed to have been accepted as of the date of the Contractor's said notice.</p>
	<p>25.4</p>	<p><u>Partial Acceptance</u></p> <p>25.4.1 If the Contract specifies that Completion and Commissioning shall be carried out in respect of parts of the Facilities, the provisions relating to Completion and Commissioning including the Guarantee Test shall apply to each such part of the Facilities individually, and the Operational Acceptance Certificate shall be issued accordingly for each such part of the Facilities.</p> <p>25.4.2 If a part of the Facilities comprises facilities such as buildings, for which no Commissioning or Guarantee Test is required, then the Project Manager shall issue the Operational Acceptance Certificate for such facility when it attains Completion, provided that the Contractor shall thereafter complete any outstanding minor items that are listed in the Operational Acceptance Certificate.</p>

## F. Guarantees and Liabilities

26	<b>Completion Time Guarantee</b>	26.1	<p>The Contractor guarantees that it shall attain Completion of the Facilities (or a part for which a separate time for completion is specified in the SCC) within the Time for Completion specified in the SCC pursuant to GCC 8.2, or within such extended time to which the Contractor shall be entitled under GCC 40 hereof.</p>
		26.2	<p>If the Contractor fails to attain Completion of the Facilities or any part thereof within the Time for Completion or any extension thereof under GCC 40, the Contractor shall pay to the Employer liquidated damages in the amount specified in the SCC as a percentage rate of the Contract Price, or the relevant part thereof. The aggregate amount of such liquidated damages shall in no event exceed the amount specified as "Maximum" in the SCC. Once the "Maximum" is reached, the Employer may consider termination of the Contract, pursuant to GCC 42.2.2.</p> <p>Such payment shall completely satisfy the Contractor's obligation to attain Completion of the Facilities or the relevant part thereof within the Time for Completion or any extension thereof under GCC 40. The Contractor shall have no further liability whatsoever to the Employer in respect thereof.</p> <p>However, the payment of liquidated damages shall not in any way relieve the Contractor from any of its obligations to complete the Facilities or from any other obligations and liabilities of the Contractor under the Contract.</p> <p>Save for liquidated damages payable under this GCC 26.2, the failure by the Contractor to attain any milestone or other act, matter or thing by any date specified in the corresponding Appendix (Time Schedule) to the Agreement and/or other programme of work prepared pursuant to GCC 18.2 shall not render the Contractor liable for any loss or damage thereby suffered by the Employer.</p>
		26.3	<p>If the Contractor attains Completion of the Facilities or any part thereof before the Time for Completion or any extension thereof under GCC 40, the Employer shall pay to the Contractor a bonus in the amount specified in the SCC. The aggregate amount of such bonus shall in no event exceed the amount specified as "Maximum" in the SCC.</p>
27	<b>Defect Liability</b>	27.1	<p>The Contractor warrants that the Facilities or any part</p>

			thereof shall be free from defects in the design, engineering, materials and workmanship of the Goods supplied and of the work executed.
		27.2	<p>The Defect Liability Period shall be eighteen (18) months from the date of Completion of the Facilities (or any part thereof) or twelve (12) months from the date of Operational Acceptance of the Facilities (or any part thereof), whichever first occurs, unless specified otherwise in the SCC.</p> <p>If during the Defect Liability Period any defect should be found in the design, engineering, materials and workmanship of the Goods supplied or of the work executed by the Contractor, the Contractor shall promptly, in consultation and agreement with the Employer regarding appropriate remedying of the defects, and at its cost, repair, replace or otherwise make good (as the Contractor shall, at its discretion, determine) such defect as well as any damage to the Facilities caused by such defect. The Contractor shall not be responsible for the repair, replacement or making good of any defect or of any damage to the Facilities arising out of or resulting from any of the following causes:</p> <ul style="list-style-type: none"> <li>(a) improper operation or maintenance of the Facilities by the Employer</li> <li>(b) operation of the Facilities outside specifications provided in the Contract</li> <li>(c) normal wear and tear.</li> </ul>
		27.3	<p>The Contractor's obligations under this GCC 27 shall not apply to</p> <ul style="list-style-type: none"> <li>(a) any materials that are supplied by the Employer under GCC 21.2, are normally consumed in operation, or have a normal life shorter than the Defect Liability Period stated herein</li> <li>(b) any designs, specifications or other data designed, supplied or specified by or on behalf of the Employer or any matters for which the Contractor has disclaimed responsibility herein</li> <li>(c) any other materials supplied or any other work executed by or on behalf of the Employer, except for the work executed by the Employer under GCC 27.7.</li> </ul>
		27.4	<p>The Employer shall give the Contractor a notice stating the nature of any such defect together with all available evidence thereof, promptly following the discovery thereof. The Employer shall afford all reasonable</p>



			opportunity for the Contractor to inspect any such defect.
		27.5	<p>The Employer shall afford the Contractor all necessary access to the Facilities and the Site to enable the Contractor to perform its obligations under this GCC 27.</p> <p>The Contractor may, with the consent of the Employer, remove from the Site any Goods or any part of the Facilities that are defective if the nature of the defect, and/or any damage to the Facilities caused by the defect, is such that repairs cannot be expeditiously carried out at the Site.</p>
		27.6	<p>If the repair, replacement or making good is of such a character that it may affect the efficiency of the Facilities or any part thereof, the Employer may give to the Contractor a notice requiring that tests of the defective part of the Facilities shall be made by the Contractor immediately upon completion of such remedial work, whereupon the Contractor shall carry out such tests.</p> <p>If such part fails the tests, the Contractor shall carry out further repair, replacement or making good (as the case may be) until that part of the Facilities passes such tests. The tests shall be agreed upon by the Employer and the Contractor.</p>
		27.7	<p>If the Contractor fails to commence the work necessary to remedy such defect or any damage to the Facilities caused by such defect within a reasonable time (which shall in no event be considered to be less than fifteen (15) days), the Employer may, following notice to the Contractor, proceed to do such work, and the reasonable costs incurred by the Employer in connection therewith shall be paid to the Employer by the Contractor or may be deducted by the Employer from any monies due the Contractor or claimed under the Performance Security.</p>
		27.8	<p>If the Facilities or any part thereof cannot be used by reason of such defect and/or making good of such defect, the Defect Liability Period of the Facilities or such part, as the case may be, shall be extended by a period equal to the period during which the Facilities or such part cannot be used by the Employer because of any of the aforesaid reasons.</p>
		27.9	<p>Except as provided in GCCs 27 and 33, the Contractor shall be under no liability whatsoever and howsoever arising, and whether under the Contract or at law, in respect of defects in the Facilities or any part thereof, the Goods, design or engineering or work executed that</p>

			appear after Completion of the Facilities or any part thereof, except where such defects are the result of the gross negligence, fraud, criminal or wilful action of the Contractor.
		27.1 0	In addition, the Contractor shall also provide an extended warranty for any such component of the Facilities and during the period of time as may be specified in the SCC. Such obligation shall be in addition to the defect liability specified under GCC 27.2.
28	<b>Functional Guarantees</b>	28.1	The Contractor guarantees that during the Guarantee Test, the Facilities and all parts thereof shall attain the Functional Guarantees specified in the corresponding Appendix (Functional Guarantees) to the Agreement, subject to and upon the conditions therein specified.
		28.2	If, for reasons attributable to the Contractor, the minimum level of the Functional Guarantees specified in the corresponding Appendix (Functional Guarantees) to the Agreement are not met either in whole or in part, the Contractor shall at its cost and expense make such changes, modifications and/or additions to the Plant or any part thereof as may be necessary to meet at least the minimum level of such Guarantees. The Contractor shall notify the Employer upon completion of the necessary changes, modifications and/or additions, and shall request the Employer to repeat the Guarantee Test until the minimum level of the Guarantees has been met. If the Contractor eventually fails to meet the minimum level of Functional Guarantees, the Employer may consider termination of the Contract, pursuant to GCC 42.2.2.
		28.3	If, for reasons attributable to the Contractor, the Functional Guarantees specified in the corresponding Appendix (Functional Guarantees) to the Agreement are not attained either in whole or in part, but the minimum level of the Functional Guarantees specified in the said Appendix to the Agreement is met, the Contractor shall, at the Contractor's option, either <ul style="list-style-type: none"> <li>(a) make such changes, modifications and/or additions to the Facilities or any part thereof that are necessary to attain the Functional Guarantees at its cost and expense, and shall request the Employer to repeat the Guarantee Test or</li> <li>(b) pay liquidated damages to the Employer in respect of the failure to meet the Functional Guarantees in accordance with the provisions in the corresponding</li> </ul>

			Appendix (Functional Guarantees) to the Agreement.
		28.4	The payment of liquidated damages under GCC 28.3, up to the limitation of liability specified in the SCC, shall completely satisfy the Contractor's guarantees under GCC 28.3, and the Contractor shall have no further liability whatsoever to the Employer in respect thereof. Upon the payment of such liquidated damages by the Contractor, the Project Manager shall issue the Operational Acceptance Certificate for the Facilities or any part thereof in respect of which the liquidated damages have been so paid.
29	<b>Patent Indemnity</b>	29.1	<p>The Contractor shall, subject to the Employer's compliance with GCC 29.2, indemnify and hold harmless the Employer and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of whatsoever nature, including attorney's fees and expenses, which the Employer may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright or other intellectual property right registered or otherwise existing at the date of the Contract by reason of: (a) the installation of the Facilities by the Contractor or the use of the Facilities in the United Republic of Tanzania; and (b) the sale of the products produced by the Facilities in United Republic of Tanzania.</p> <p>Such indemnity shall not cover any use of the Facilities or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, any infringement resulting from the use of the Facilities or any part thereof, or any products produced thereby in association or combination with any other equipment, plant or materials not supplied by the Contractor, pursuant to the Agreement.</p>
		29.2	<p>If any proceedings are brought or any claim is made against the Employer arising out of the matters referred to in GCC 29.1, the Employer shall promptly give the Contractor a notice thereof, and the Contractor may at its own expense and in the Employer's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.</p> <p>If the Contractor fails to notify the Employer within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Employer shall be free to conduct the same on its own behalf. Unless the Contractor has so failed to notify</p>

			<p>the Employer within the twenty-eight (28) day period, the Employer shall make no admission that may be prejudicial to the defense of any such proceedings or claim.</p> <p>The Employer shall, at the Contractor's request, afford all available assistance to the Contractor in conducting such proceedings or claim, and shall be reimbursed by the Contractor for all reasonable expenses incurred in so doing.</p>
		29.3	<p>The Employer shall indemnify and hold harmless the Contractor and its employees, officers and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of whatsoever nature, including attorney's fees and expenses, which the Contractor may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Employer.</p>
30	<b>Limitation of Liability</b>	30.1	<p>Except in cases of criminal negligence or wilful misconduct,</p> <p>(a) the Contractor shall not be liable to the Employer, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Contractor to pay liquidated damages to the Employer and</p> <p>(b) the aggregate liability of the Contractor to the Employer, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the Contractor to indemnify the Employer with respect to patent infringement.</p>

### G. Risk Distribution

31	<b>Transfer of Ownership</b>	31.1	Ownership of the Goods (including spare parts) to be imported into the United Republic of Tanzania shall be transferred to the Employer upon loading on to the mode of transport to be used to convey the Goods from the country of origin.
		31.2	Ownership of the Goods (including spare parts) procured in the United Republic of Tanzania where the Site is located shall be transferred to the Employer when the Goods are brought on to the Site.
		31.3	Ownership of the Contractor's Equipment used by the Contractor and its Subcontractors in connection with the Contract shall remain with the Contractor or its Subcontractors.
		31.4	Ownership of any Goods in excess of the requirements for the Facilities shall revert to the Contractor upon Completion of the Facilities or at such earlier time when the Employer and the Contractor agree that the Goods in question are no longer required for the Facilities.
		31.5	Notwithstanding the transfer of ownership of the Goods, the responsibility for care and custody thereof together with the risk of loss or damage thereto shall remain with the Contractor pursuant to GCC 32 (Care of Facilities) hereof until Completion of the Facilities or the part thereof in which such Goods are incorporated.
32	<b>Care of Facilities</b>	32.1	The Contractor shall be responsible for the care and custody of the Facilities or any part thereof until the date of Completion of the Facilities pursuant to GCC 24 or, where the Contract provides for Completion of the Facilities in parts, until the date of Completion of the relevant part, and shall make good at its own cost any loss or damage that may occur to the Facilities or the relevant part thereof from any cause whatsoever during such period. The Contractor shall also be responsible for any loss or damage to the Facilities caused by the Contractor or its Subcontractors in the course of any work carried out, pursuant to GCC 27. Notwithstanding the foregoing, the Contractor shall not be liable for any loss or damage to the Facilities or that part thereof caused by reason of any of the matters specified or referred to in paragraphs (a), (b) and (c) of GCCs 32.2 and 38.1.

	32.2	<p>If any loss or damage occurs to the Facilities or any part thereof or to the Contractor's temporary facilities by reason of</p> <p>(a) (insofar as they relate to the United Republic of Tanzania, where the Site is located) nuclear reaction, nuclear radiation, radioactive contamination, pressure wave caused by aircraft or other aerial objects, or any other occurrences that an experienced contractor could not reasonably foresee, or if reasonably foreseeable could not reasonably make provision for or insure against, insofar as such risks are not normally insurable on the insurance market and are mentioned in the general exclusions of the policy of insurance, including War Risks and Political Risks, taken out under GCC 34 hereof</p> <p>(b) any use or occupation by the Employer or any third party (other than a Subcontractor) authorized by the Employer of any part of the Facilities</p> <p>(c) any use of or reliance upon any design, data or specification provided or designated by or on behalf of the Employer, or any such matter for which the Contractor has disclaimed responsibility herein,</p> <p>the Employer shall pay to the Contractor all sums payable in respect of the Facilities executed, notwithstanding that the same be lost, destroyed or damaged, and will pay to the Contractor the replacement value of all temporary facilities and all parts thereof lost, destroyed or damaged. If the Employer requests the Contractor in writing to make good any loss or damage to the Facilities thereby occasioned, the Contractor shall make good the same at the cost of the Employer in accordance with GCC 39. If the Employer does not request the Contractor in writing to make good any loss or damage to the Facilities thereby occasioned, the Employer shall either request a change in accordance with GCC 39, excluding the performance of that part of the Facilities thereby lost, destroyed or damaged, or, where the loss or damage affects a substantial part of the Facilities, the Employer shall terminate the Contract pursuant to GCC 42.1 hereof.</p>
	32.3	<p>The Contractor shall be liable for any loss of or damage to any Contractor's Equipment, or any other property of the Contractor used or intended to be used for purposes of the Facilities, except (i) as mentioned in GCC 32.2 (with respect to the Contractor's temporary facilities), and (ii) where such loss or damage arises by reason of</p>

			any of the matters specified in GCCs 32.2 (b) and (c) and 38.1.
		32.4	With respect to any loss or damage caused to the Facilities or any part thereof or to the Contractor's Equipment by reason of any of the matters specified in GCC 38.1, the provisions of GCC 38.3 shall apply.
33	<b>Loss of or Damage to Property; Accident or Injury to Workers; Indemnification</b>	33.1	Subject to GCC 33.3, the Contractor shall indemnify and hold harmless the Employer and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of whatsoever nature, including attorney's fees and expenses, in respect of the death or injury of any person or loss of or damage to any property (other than the Facilities whether accepted or not), arising in connection with the supply and installation of the Facilities and by reason of the negligence of the Contractor or its Subcontractors, or their employees, officers or agents, except any injury, death or property damage caused by the negligence of the Employer, its contractors, employees, officers or agents.
		33.2	<p>If any proceedings are brought or any claim is made against the Employer that might subject the Contractor to liability under GCC 33.1, the Employer shall promptly give the Contractor a notice thereof and the Contractor may at its own expense and in the Employer's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.</p> <p>If the Contractor fails to notify the Employer within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Employer shall be free to conduct the same on its own behalf. Unless the Contractor has so failed to notify the Employer within the twenty-eight (28) day period, the Employer shall make no admission that may be prejudicial to the defense of any such proceedings or claim.</p> <p>The Employer shall, at the Contractor's request, afford all available assistance to the Contractor in conducting such proceedings or claim, and shall be reimbursed by the Contractor for all reasonable expenses incurred in so doing.</p>
		33.3	The Employer shall indemnify and hold harmless the Contractor and its employees, officers and Subcontractors from any liability for loss of or damage to property of the Employer, other than the Facilities not

			yet taken over, that is caused by fire, explosion or any other perils, in excess of the amount recoverable from insurances procured under GCC 34, provided that such fire, explosion or other perils were not caused by any act or failure of the Contractor.
		33.4	The party entitled to the benefit of an indemnity under this GCC 33 shall take all reasonable measures to mitigate any loss or damage which has occurred. If the party fails to take such measures, the other party's liabilities shall be correspondingly reduced.
34.	<b>Insurance</b>	34.1	<p>To the extent specified in the corresponding Appendix (Insurance Requirements) to the Agreement, the Contractor shall at its expense take out and maintain in effect, or cause to be taken out and maintained in effect, during the performance of the Contract, the insurances set forth below in the sums and with the deductibles and other conditions specified in the said Appendix. The identity of the insurers and the form of the policies shall be subject to the approval of the Employer, who should not unreasonably withhold such approval.</p> <p>(a) <u>Cargo Insurance During Transport</u></p> <p>Covering loss or damage occurring while in transit from the Contractor's or Subcontractor's works or stores until arrival at the Site, to the Goods (including spare parts therefore) and to the Contractor's Equipment.</p> <p>(b) <u>Installation All Risks Insurance</u></p> <p>Covering physical loss or damage to the Facilities at the Site, occurring prior to Completion of the Facilities, with an extended maintenance coverage for the Contractor's liability in respect of any loss or damage occurring during the Defect Liability Period while the Contractor is on the Site for the purpose of performing its obligations during the Defect Liability Period.</p> <p>(c) <u>Third Party Liability Insurance</u></p> <p>Covering bodily injury or death suffered by third parties (including the Employer's personnel) and loss of or damage to property occurring in connection with the supply and installation of the Facilities.</p>



			<p>(d) <u>Automobile Liability Insurance</u></p> <p>Covering use of all vehicles used by the Contractor or its Subcontractors (whether or not owned by them) in connection with the execution of the Contract.</p> <p>(e) <u>Workers' Compensation</u></p> <p>In accordance with the statutory requirements applicable in United Republic of Tanzania.</p> <p>(f) <u>Employer's Liability</u></p> <p>In accordance with the statutory requirements applicable in United Republic of Tanzania.</p> <p>(g) <u>Other Insurances</u></p> <p>Such other insurances as may be specifically agreed upon by the parties hereto as listed in the said the corresponding Appendix.</p>
		34.2	<p>The Employer shall be named as co-insured under all insurance policies taken out by the Contractor pursuant to GCC 34.1, except for the Third Party Liability, Workers' Compensation and Employer's Liability Insurances, and the Contractor's Subcontractors shall be named as co-insured's under all insurance policies taken out by the Contractor pursuant to GCC 34.1 except for the Cargo Insurance During Transport, Workers' Compensation and Employer's Liability Insurances. All insurers' rights of subrogation against such co-insured's for losses or claims arising out of the performance of the Contract shall be waived under such policies.</p>
		34.3	<p>The Contractor shall, in accordance with the provisions of the corresponding Appendix (Insurance Requirements) to the Agreement, deliver to the Employer certificates of insurance (or copies of the insurance policies) as evidence that the required policies are in full force and effect. The certificates shall provide that no less than twenty-one (21) days' notice shall be given to the Employer by insurers prior to cancellation or material modification of a policy.</p>
		34.4	<p>The Contractor shall ensure that, where applicable, its Subcontractor(s) shall take out and maintain in effect adequate insurance policies for their personnel and vehicles and for work executed by them under the Contract, unless such Subcontractors are covered by the policies taken out by the Contractor.</p>

		34.5	<p>The Employer shall at its expense take out and maintain in effect during the performance of the Contract those insurances specified in the corresponding Appendix (Insurance Requirements) to the Agreement, in the sums and with the deductibles and other conditions specified in the said Appendix. The Contractor and the Contractor's Subcontractors shall be named as co-insured's under all such policies. All insurers' rights of subrogation against such co-insured's for losses or claims arising out of the performance of the Contract shall be waived under such policies. The Employer shall deliver to the Contractor satisfactory evidence that the required insurances are in full force and effect. The policies shall provide that not less than twenty-one (21) days' notice shall be given to the Contractor by all insurers prior to any cancellation or material modification of the policies. If so requested by the Contractor, the Employer shall provide copies of the policies taken out by the Employer under this GCC 34.5.</p>
		34.6	<p>If the Contractor fails to take out and/or maintain in effect the insurances referred to in GCC 34.1, the Employer may take out and maintain in effect any such insurances and may from time to time deduct from any amount due the Contractor under the Contract any premium that the Employer shall have paid to the insurer, or may otherwise recover such amount as a debt due from the Contractor. If the Employer fails to take out and/or maintain in effect the insurances referred to in GCC 34.5, the Contractor may take out and maintain in effect any such insurances and may from time to time deduct from any amount due the Employer under the Contract any premium that the Contractor shall have paid to the insurer, or may otherwise recover such amount as a debt due from the Employer. If the Contractor fails to or is unable to take out and maintain in effect any such insurances, the Contractor shall nevertheless have no liability or responsibility towards the Employer, and the Contractor shall have full recourse against the Employer for any and all liabilities of the Employer herein.</p>
		34.7	<p>Unless otherwise provided in the Contract, the Contractor shall prepare and conduct all and any claims made under the policies effected by it pursuant to this GCC 34, and all monies payable by any insurers shall be paid to the Contractor. The Employer shall give to the Contractor all such reasonable assistance as may be required by the Contractor. With respect to insurance claims in which the Employer's interest is involved, the Contractor shall not give any release or make any</p>

			<p>compromise with the insurer without the prior written consent of the Employer. With respect to insurance claims in which the Contractor's interest is involved, the Employer shall not give any release or make any compromise with the insurer without the prior written consent of the Contractor.</p>
35.	<b>Unforeseen Conditions</b>	35.1	<p>If, during the execution of the Contract, the Contractor shall encounter on the Site any physical conditions (other than climatic conditions) or artificial obstructions that could not have been reasonably foreseen prior to the date of the Agreement by an experienced contractor on the basis of reasonable examination of the data relating to the Facilities (including any data as to boring tests) provided by the Employer, and on the basis of information that it could have obtained from a visual inspection of the Site (if access thereto was available) or other data readily available to it relating to the Facilities, and if the Contractor determines that it will in consequence of such conditions or obstructions incur additional cost and expense or require additional time to perform its obligations under the Contract that would not have been required if such physical conditions or artificial obstructions had not been encountered, the Contractor shall promptly, and before performing additional work or using additional Goods or Contractor's Equipment, notify the Project Manager in writing of</p> <ul style="list-style-type: none"> <li>(a) the physical conditions or artificial obstructions on the Site that could not have been reasonably foreseen</li> <li>(b) the additional work and/or Goods and/or Contractor's Equipment required, including the steps which the Contractor will or proposes to take to overcome such conditions or obstructions</li> <li>(c) the extent of the anticipated delay</li> <li>(d) the additional cost and expense that the Contractor is likely to incur.</li> </ul> <p>On receiving any notice from the Contractor under this GCC 35.1, the Project Manager shall promptly consult with the Employer and Contractor and decide upon the actions to be taken to overcome the physical conditions or artificial obstructions encountered. Following such consultations, the Project Manager shall instruct the Contractor, with a copy to the Employer, of the actions to be taken.</p>
		35.2	Any reasonable additional cost and expense incurred by

			the Contractor in following the instructions from the Project Manager to overcome such physical conditions or artificial obstructions referred to in GCC 35.1 shall be paid by the Employer to the Contractor as an addition to the Contract Price.
		35.3	If the Contractor is delayed or impeded in the performance of the Contract because of any such physical conditions or artificial obstructions referred to in GCC 35.1, the Time for Completion shall be extended in accordance with GCC 40.
36.	<b>Change in Laws and Regulations</b>	36.1	If, after the date twenty-eight (28) days prior to the date of Tender submission, in the United Republic of Tanzania, any law, regulation, ordinance, order or by-law having the force of law is enacted, promulgated, abrogated or changed (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the costs and expenses of the Contractor and/or the Time for Completion, the Contract Price shall be correspondingly increased or decreased, and/or the Time for Completion shall be reasonably adjusted to the extent that the Contractor has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced costs shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with the SCC.
37.	<b>Force Majeure</b>	37.1	Force majeure shall include, without limitation, the following: <ul style="list-style-type: none"> <li>(a) war, hostilities or warlike operations (whether a state of war be declared or not), invasion, act of foreign enemy and civil war</li> <li>(b) rebellion, revolution, insurrection, mutiny, usurpation of civil or military government, conspiracy, riot, civil commotion and terrorist acts</li> <li>(c) confiscation, nationalization, mobilization, commandeering or requisition by or under the order of any government or de jure or de facto authority or ruler or any other act or failure to act of any local state or national government authority</li> <li>(d) strike, sabotage, lockout, embargo, import restriction, port congestion, lack of usual means of public transportation and communication, industrial dispute, shipwreck, shortage or restriction of power</li> </ul>

		<p>supply, epidemics, quarantine and plague</p> <p>(e) earthquake, landslide, volcanic activity, fire, flood or inundation, tidal wave, typhoon or cyclone, hurricane, storm, lightning, or other inclement weather condition, nuclear and pressure waves or other natural or physical disaster</p> <p>(f) Shortage of labour, materials or utilities where caused by circumstances that are themselves Force Majeure.</p>
	37.2	<p>If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within fourteen (14) days after the occurrence of such event.</p>
	37.3	<p>The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered or delayed. The Time for Completion shall be extended in accordance with GCC 40.</p>
	37.4	<p>The party or parties affected by the event of Force Majeure shall use reasonable efforts to mitigate the effect thereof upon its or their performance of the Contract and to fulfil its or their obligations under the Contract, but without prejudice to either party's right to terminate the Contract under GCCs 37.6 and 38.5.</p>
	37.5	<p>No delay or non-performance by either party hereto caused by the occurrence of any event of Force Majeure shall</p> <p>(a) constitute a default or breach of the Contract</p> <p>(b) (subject to GCCs 32.2, 38.3 and 38.4) give rise to any claim for damages or additional cost or expense occasioned thereby</p> <p>if and to the extent that such delay or non-performance is caused by the occurrence of an event of Force Majeure.</p>
	37.6	<p>If the performance of the Contract is substantially prevented, hindered or delayed for a single period of more than sixty (60) days or an aggregate period of more than one hundred and twenty (120) days on account of one or more events of Force Majeure during the currency of the Contract, the parties will attempt to</p>

			develop a mutually satisfactory solution, failing which either party may terminate the Contract by giving a notice to the other, but without prejudice to either party's right to terminate the Contract under GCC 38.5.
		37.7	In the event of termination pursuant to GCC 37.6, the rights and obligations of the Employer and the Contractor shall be as specified in GCCs 42.1.2 and 42.1.3.
		37.8	Notwithstanding GCC 37.5, Force Majeure shall not apply to any obligation of the Employer to make payments to the Contractor herein.
38.	<b>War Risks</b>	38.1	"War Risks" shall mean any event specified in paragraphs (a) and (b) of GCC 37.1 and any explosion or impact of any mine, bomb, shell, grenade or other projectile, missile, munitions or explosive of war, occurring or existing in or near the United Republic of Tanzania where the Site is located.
		38.2	Notwithstanding anything contained in the Contract, the Contractor shall have no liability whatsoever for or with respect to  (a) destruction of or damage to Facilities, Goods, or any part thereof  (b) destruction of or damage to property of the Employer or any third party  (c) injury or loss of life  if such destruction, damage, injury or loss of life is caused by any War Risks, and the Employer shall indemnify and hold the Contractor harmless from and against any and all claims, liabilities, actions, lawsuits, damages, costs, charges or expenses arising in consequence of or in connection with the same.
		38.3	If the Facilities or any Goods or Contractor's Equipment or any other property of the Contractor used or intended to be used for the purposes of the Facilities shall sustain destruction or damage by reason of any War Risks, the Employer shall pay the Contractor for  (a) any part of the Facilities or the Goods so destroyed or damaged (to the extent not already paid for by the Employer)  (b) replacing or making good any Contractor's Equipment or other property of the Contractor so destroyed or damaged

			<p>(c) replacing or making good any such destruction or damage to the Facilities or the Goods or any part thereof so far as may be required by the Employer, and as may be necessary for completion of the Facilities.</p> <p>If the Employer does not require the Contractor to replace or make good any such destruction or damage to the Facilities, the Employer shall either request a change in accordance with GCC 39, excluding the performance of that part of the Facilities thereby destroyed or damaged or, where the loss, destruction or damage affects a substantial part of the Facilities, shall terminate the Contract, pursuant to GCC 42.1.</p>
		38.4	<p>Notwithstanding anything contained in the Contract, the Employer shall pay the Contractor for any increased costs or incidentals to the execution of the Contract that are in any way attributable to, consequent on, resulting from, or in any way connected with any War Risks, provided that the Contractor shall as soon as practicable notify the Employer in writing of any such increased cost.</p>
		38.5	<p>If during the performance of the Contract any War Risks shall occur that financially or otherwise materially affect the execution of the Contract by the Contractor, the Contractor shall use its reasonable efforts to execute the Contract with due and proper consideration given to the safety of its and its Subcontractors' personnel engaged in the work on the Facilities, provided, however, that if the execution of the work on the Facilities becomes impossible or is substantially prevented for a single period of more than sixty (60) days or an aggregate period of more than one hundred and twenty (120) days on account of any War Risks, the parties will attempt to develop a mutually satisfactory solution, failing which either party may terminate the Contract by giving a notice to the other.</p>
		38.6	<p>In the event of termination pursuant to GCCs 38.3 or 38.5, the rights and obligations of the Employer and the Contractor shall be specified in GCCs 42.1.2 and 42.1.3.</p>

#### H. Change in Contract Elements

39.	Change in the Facilities	39.1	<p><u>Introducing a Change</u></p>
			<p>39.1.1 Subject to GCCs 39.2.5 and 39.2.7, the Employer shall have the right to propose, and subsequently require, that the Project Manager order the Contractor from time to time during the</p>

		<p>performance of the Contract to make any change, modification, addition or deletion to, in or from the Facilities (hereinafter called "Change"), provided that such Change falls within the general scope of the Facilities and does not constitute unrelated work and that it is technically practicable, taking into account both the state of advancement of the Facilities and the technical compatibility of the Change envisaged with the nature of the Facilities as specified in the Contract.</p> <p>39.1.2 The Contractor may from time to time during its performance of the Contract propose to the Employer (with a copy to the Project Manager) any Change that the Contractor considers necessary or desirable to improve the quality, efficiency or safety of the Facilities. The Employer may at its discretion approve or reject any Change proposed by the Contractor, provided that the Employer shall approve any Change proposed by the Contractor to ensure the safety of the Facilities.</p> <p>39.1.3 Notwithstanding GCCs 39.1.1 and 39.1.2, no change made necessary because of any default of the Contractor in the performance of its obligations under the Contract shall be deemed to be a Change, and such change shall not result in any adjustment of the Contract Price or the Time for Completion.</p> <p>39.1.4 The procedure on how to proceed with and execute Changes is specified in GCCs 39.2 and 39.3, and further details and sample forms are provided in the Sample Forms and Procedures section in the Tendering Documents.</p>
	39.2	<p><u>Changes Originating from Employer</u></p> <p>39.2.1 If the Employer proposes a Change pursuant to GCC 39.1.1, it shall send to the Contractor a "Request for Change Proposal," requiring the Contractor to prepare and furnish to the Project Manager as soon as reasonably practicable a "Change Proposal," which shall include the following:</p> <p>(a) brief description of the Change</p>



		<ul style="list-style-type: none"> <li>(b) effect on the Time for Completion</li> <li>(c) estimated cost of the Change</li> <li>(d) effect on Functional Guarantees (if any)</li> <li>(e) effect on any other provisions of the Contract.</li> </ul> <p>39.2.2 Prior to preparing and submitting the "Change Proposal," the Contractor shall submit to the Project Manager an "Estimate for Change Proposal," which shall be an estimate of the cost of preparing and submitting the Change Proposal.</p> <p>Upon receipt of the Contractor's Estimate for Change Proposal, the Employer shall do one of the following:</p> <ul style="list-style-type: none"> <li>(a) accept the Contractor's estimate with instructions to the Contractor to proceed with the preparation of the Change Proposal</li> <li>(b) advise the Contractor of any part of its Estimate for Change Proposal that is unacceptable and request the Contractor to review its estimate</li> <li>(c) advise the Contractor that the Employer does not intend to proceed with the Change.</li> </ul> <p>39.2.3 Upon receipt of the Employer's instruction to proceed under GCC 39.2.2 (a), the Contractor shall, with proper expedition, proceed with the preparation of the Change Proposal, in accordance with GCC 39.2.1.</p> <p>39.2.4 The pricing of any Change shall, as far as practicable, be calculated in accordance with the rates and prices included in the Contract. If such rates and prices are inequitable, the parties thereto shall agree on specific rates for the valuation of the Change.</p> <p>39.2.5 If before or during the preparation of the Change Proposal it becomes apparent that the aggregate effect of compliance therewith and with all other Change Orders that have already become binding upon the Contractor under this GCC 39 would be to increase or decrease the Contract Price as originally set forth in Article 2 (Contract Price) of the Agreement by more than fifteen percent (15%), the Contractor may give a written notice of objection thereto prior to furnishing the Change Proposal as aforesaid. If the Employer</p>
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accepts the Contractor's objection, the Employer shall withdraw the proposed Change and shall notify the Contractor in writing thereof.

The Contractor's failure to so object shall neither affect its right to object to any subsequent requested Changes or Change Orders herein, nor affect its right to take into account, when making such subsequent objection, the percentage increase or decrease in the Contract Price that any Change not objected to by the Contractor represents.

39.2.6 Upon receipt of the Change Proposal, the Employer and the Contractor shall mutually agree upon all matters therein contained. Within fourteen (14) days after such agreement, the Employer shall, if it intends to proceed with the Change, issue the Contractor with a Change Order.

If the Employer is unable to reach a decision within fourteen (14) days, it shall notify the Contractor with details of when the Contractor can expect a decision.

If the Employer decides not to proceed with the Change for whatever reason, it shall, within the said period of fourteen (14) days, notify the Contractor accordingly. Under such circumstances, the Contractor shall be entitled to reimbursement of all costs reasonably incurred by it in the preparation of the Change Proposal, provided that these do not exceed the amount given by the Contractor in its Estimate for Change Proposal submitted in accordance with GCC 39.2.2.

39.2.7 If the Employer and the Contractor cannot reach agreement on the price for the Change, an equitable adjustment to the Time for Completion, or any other matters identified in the Change Proposal, the Employer may nevertheless instruct the Contractor to proceed with the Change by issue of a "Pending Agreement Change Order."

Upon receipt of a Pending Agreement Change Order, the Contractor shall immediately proceed with effecting the Changes covered by such Order. The parties shall thereafter attempt to reach agreement on the outstanding issues under the Change Proposal.

If the parties cannot reach agreement within sixty (60) days from the date of issue of the Pending Agreement Change Order, then the matter may be referred to the

			Adjudicator in accordance with the provisions of GCC 6.1.
		39.3	<p><u>Changes Originating from Contractor</u></p> <p>39.3.1 If the Contractor proposes a Change pursuant to GCC 39.1.2, the Contractor shall submit to the Project Manager a written "Application for Change Proposal," giving reasons for the proposed Change and including the information specified in GCC 39.2.1.</p> <p>Upon receipt of the Application for Change Proposal, the parties shall follow the procedures outlined in GCCs 39.2.6 and 39.2.7. However, should the Employer choose not to proceed, the Contractor shall not be entitled to recover the costs of preparing the Application for Change Proposal.</p>
40.	<b>Extension of Time for Completion</b>	40.1	<p>The Time(s) for Completion specified in the SCC shall be extended if the Contractor is delayed or impeded in the performance of any of its obligations under the Contract by reason of any of the following:</p> <ul style="list-style-type: none"> <li>(a) any Change in the Facilities as provided in GCC 39</li> <li>(b) any occurrence of Force Majeure as provided in GCC 37, unforeseen conditions as provided in GCC 35, or other occurrence of any of the matters specified or referred to in paragraphs (a), (b) and (c) of GCC 32.2</li> <li>(c) any suspension order given by the Employer under GCC 41 hereof or reduction in the rate of progress pursuant to GCC 41.2 or</li> <li>(d) any changes in laws and regulations as provided in GCC 36 or</li> <li>(e) any default or breach of the Contract by the Employer, specifically including failure to supply the items listed in the corresponding Appendix (Scope of Works and Supply by the Employer) to the Agreement, or any activity, act or omission of any other contractors employed by the Employer or</li> <li>(f) any other matter specifically mentioned in the Contract by such period as shall be fair and reasonable in all the circumstances and as shall fairly reflect the delay or impediment sustained by the Contractor.</li> </ul>
		40.2	Except where otherwise specifically provided in the

			<p>Contract, the Contractor shall submit to the Project Manager a notice of a claim for an extension of the Time for Completion, together with particulars of the event or circumstance justifying such extension as soon as reasonably practicable after the commencement of such event or circumstance. As soon as reasonably practicable after receipt of such notice and supporting particulars of the claim, the Employer and the Contractor shall agree upon the period of such extension. In the event that the Contractor does not accept the Employer's estimate of a fair and reasonable time extension, the Contractor shall be entitled to refer the matter to an Adjudicator, pursuant to GCC 6.1.</p>
		40.3	<p>The Contractor shall at all times use its reasonable efforts to minimize any delay in the performance of its obligations under the Contract.</p>
<b>41. Suspension</b>		41.1	<p>The Employer may request the Project Manager, by notice to the Contractor, to order the Contractor to suspend performance of any or all of its obligations under the Contract. Such notice shall specify the obligation of which performance is to be suspended, the effective date of the suspension and the reasons thereof. The Contractor shall thereupon suspend performance of such obligation (except those obligations necessary for the care or preservation of the Facilities) until ordered in writing to resume such performance by the Project Manager.</p> <p>If, by virtue of a suspension order given by the Project Manager, other than by reason of the Contractor's default or breach of the Contract, the Contractor's performance of any of its obligations is suspended for an aggregate period of more than ninety (90) days, then at any time thereafter and provided that at that time such performance is still suspended, the Contractor may give a notice to the Project Manager requiring that the Employer shall, within twenty-eight (28) days of receipt of the notice, order the resumption of such performance or request and subsequently order a change in accordance with GCC 39, excluding the performance of the suspended obligations from the Contract.</p> <p>If the Employer fails to do so within such period, the Contractor may, by a further notice to the Project Manager, elect to treat the suspension, where it affects a part only of the Facilities, as a deletion of such part in accordance with GCC 39 or, where it affects the whole of the Facilities, as termination of the Contract under GCC 42.1.</p>

		<p>41.2 If:</p> <p>(a) the Employer has failed to pay the Contractor any sum due under the Contract within the specified period, has failed to approve any invoice or supporting documents without just cause pursuant to the corresponding Appendix (Terms and Procedures of Payment) to the Agreement, or commits a substantial breach of the Contract, the Contractor may give a notice to the Employer that requires payment of such sum, with interest thereon as stipulated in GCC 12.3, requires approval of such invoice or supporting documents, or specifies the breach and requires the Employer to remedy the same, as the case may be. If the Employer fails to pay such sum together with such interest, fails to approve such invoice or supporting documents or give its reasons for withholding such approval, or fails to remedy the breach or take steps to remedy the breach within fourteen (14) days after receipt of the Contractor's notice or</p> <p>(b) the Contractor is unable to carry out any of its obligations under the Contract for any reason attributable to the Employer, including but not limited to the Employer's failure to provide possession of or access to the Site or other areas in accordance with GCC 10.2, or failure to obtain any governmental permit necessary for the execution and/or completion of the Facilities,</p> <p>Then the Contractor may by fourteen (14) days' notice to the Employer suspend performance of all or any of its obligations under the Contract, or reduce the rate of progress.</p>
		<p>41.3 If the Contractor's performance of its obligations is suspended or the rate of progress is reduced pursuant to this GCC 41, then the Time for Completion shall be extended in accordance with GCC 40.1, and any and all additional costs or expenses incurred by the Contractor as a result of such suspension or reduction shall be paid by the Employer to the Contractor in addition to the Contract Price, except in the case of suspension order or reduction in the rate of progress by reason of the Contractor's default or breach of the Contract.</p>
		<p>41.4 During the period of suspension, the Contractor shall not remove from the Site any Goods, any part of the Facilities or any Contractor's Equipment, without the</p>

			prior written consent of the Employer.
42.	Termination	42.1	<p><u>Termination for Employer's Convenience</u></p> <p>42.1.1 The Employer may at any time terminate the Contract for any reason by giving the Contractor a notice of termination that refers to this GCC 42.1.</p> <p>42.1.2 Upon receipt of the notice of termination under GCC 42.1.1, the Contractor shall either immediately or upon the date specified in the notice of termination</p> <ul style="list-style-type: none"> <li>(a) cease all further work, except for such work as the Employer may specify in the notice of termination for the sole purpose of protecting that part of the Facilities already executed, or any work required to leave the Site in a clean and safe condition</li> <li>(b) terminate all subcontracts, except those to be assigned to the Employer pursuant to paragraph (d) (ii) below</li> <li>(c) remove all Contractor's Equipment from the Site, repatriate the Contractor's and its Subcontractors' personnel from the Site, remove from the Site any wreckage, rubbish and debris of any kind, and leave the whole of the Site in a clean and safe condition</li> <li>(d) In addition, the Contractor, subject to the payment specified in GCC 42.1.3, shall <ul style="list-style-type: none"> <li>(i) deliver to the Employer the parts of the Facilities executed by the Contractor up to the date of termination</li> <li>(ii) to the extent legally possible, assign to the Employer all right, title and benefit of the Contractor to the Facilities and to the Goods as of the date of termination, and, as may be required by the Employer, in any subcontracts concluded between the Contractor and its Subcontractors</li> <li>(iii) deliver to the Employer all non-proprietary drawings, specifications and other documents prepared by the Contractor or its Subcontractors as at the date of termination in connection</li> </ul> </li> </ul>

		<p style="text-align: center;">with the Facilities.</p> <p>42.1.3 In the event of termination of the Contract under GCC 42.1.1, the Employer shall pay to the Contractor the following amounts:</p> <ul style="list-style-type: none"> <li>(a) the Contract Price, properly attributable to the parts of the Facilities executed by the Contractor as of the date of termination</li> <li>(b) the costs reasonably incurred by the Contractor in the removal of the Contractor's Equipment from the Site and in the repatriation of the Contractor's and its Subcontractors' personnel</li> <li>(c) any amounts to be paid by the Contractor to its Subcontractors in connection with the termination of any subcontracts, including any cancellation charges</li> <li>(d) costs incurred by the Contractor in protecting the Facilities and leaving the Site in a clean and safe condition pursuant to paragraph (a) of GCC 42.1.2</li> <li>(e) the cost of satisfying all other obligations, commitments and claims that the Contractor may in good faith have undertaken with third parties in connection with the Contract and that are not covered by paragraphs (a) through (d) above.</li> </ul>
		<p>42.2 <u>Termination for Contractor's Default</u></p> <p>42.2.1 The Employer, without prejudice to any other rights or remedies it may possess, may terminate the Contract forthwith in the following circumstances by giving a notice of termination and its reasons thereof to the Contractor, referring to this GCC 42.2:</p> <ul style="list-style-type: none"> <li>(a) if the Contractor becomes bankrupt or insolvent, has a receiving order issued against it, compounds with its creditors, or, if the Contractor is a corporation, a resolution is passed or order is made for its winding up (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), a receiver is appointed over any part of its undertaking or assets, or if the Contractor takes or suffers any other analogous action in consequence of debt</li> </ul>

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|  |  |  | <p>(b) if the Contractor assigns or transfers the Contract or any right or interest therein in violation of the provision of GCC 43.</p> <p>(c) if the Contractor, in the judgment of the Employer has engaged in corrupt, coercive, collusive, obstructive or fraudulent practices in competing for or in executing the Contract.</p> |
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For the purpose of this paragraph:

- i. "corrupt practice means the offering, giving receiving or soliciting of anything of value to influence the action of a public officer in the procurement process or contract execution;
- ii. "coercive practice" means impairing or harming, or threatening to impair or harm directly or indirectly, any party or the property of the party for the purpose of influencing improperly the action or that party in connection with public procurement or in furtherance of corrupt practice or fraudulent practice;
- iii. "collusive practices" means impairing or harming, or threatening to impair or harm directly or indirectly, any part or the property of the Party for the purpose of influencing improperly the action or a part or in connection with public procurement or government contracting or in furtherance of a corrupt practice or a Fraudulent Practice
- iv. "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Government or a public body and includes collusive practices among tenderers, prior to or after submission designed to establish tender prices at artificial non-competitive levels and to deprive the Government of the benefits of free and open competition;
- v. "obstructive practice" means acts intended to materially impede access to required information in exercising a duty under



this Act;

42.2.2 If the Contractor

- (a) has abandoned or repudiated the Contract
- (b) has without valid reason failed to commence work on the Facilities promptly or has suspended (other than pursuant to GCC 41.2) the progress of Contract performance for more than twenty-eight (28) days after receiving a written instruction from the Employer to proceed
- (c) persistently fails to execute the Contract in accordance with the Contract or persistently neglects to carry out its obligations under the Contract without just cause
- (d) refuses or is unable to provide sufficient materials, services or labour to execute and complete the Facilities in the manner specified in the programme furnished under GCC 18.2 at rates of progress that give reasonable assurance to the Employer that the Contractor can attain Completion of the Facilities by the Time for Completion as extended, then the Employer may, without prejudice to any other rights it may possess under the Contract, give a notice to the Contractor stating the nature of the default and requiring the Contractor to remedy the same. If the Contractor fails to remedy or to take steps to remedy the same within fourteen (14) days of its receipt of such notice, then the Employer may terminate the Contract forthwith by giving a notice of termination to the Contractor that refers to this GCC 42.2.

42.2.3 Upon receipt of the notice of termination under GCCs 42.2.1 or 42.2.2, the Contractor shall, either immediately or upon such date as is specified in the notice of termination,

- (a) cease all further work, except for such work as the Employer may specify in the notice of termination for the sole purpose of protecting that part of the Facilities already executed, or any work required to leave the Site in a clean and safe condition
- (b) terminate all subcontracts, except those to be

		<p>assigned to the Employer pursuant to paragraph (d) below</p> <ul style="list-style-type: none"><li>(c) deliver to the Employer the parts of the Facilities executed by the Contractor up to the date of termination</li><li>(d) to the extent legally possible, assign to the Employer all right, title and benefit of the Contractor to the Facilities and to the Goods as of the date of termination, and, as may be required by the Employer, in any subcontracts concluded between the Contractor and its Subcontractors</li><li>(e) Deliver to the Employer all drawings, specifications and other documents prepared by the Contractor or its Subcontractors as of the date of termination in connection with the Facilities.</li></ul> <p>42.2.4 The Employer may enter upon the Site, expel the Contractor, and complete the Facilities itself or by employing any third party. The Employer may, to the exclusion of any right of the Contractor over the same, take over and use with the payment of a fair rental rate to the Contractor, with all the maintenance costs to the account of the Employer and with an indemnification by the Employer for all liability including damage or injury to persons arising out of the Employer's use of such equipment, any Contractor's Equipment owned by the Contractor and on the Site in connection with the Facilities for such reasonable period as the Employer considers expedient for the supply and installation of the Facilities.</p> <p>Upon completion of the Facilities or at such earlier date as the Employer thinks appropriate, the Employer shall give notice to the Contractor that such Contractor's Equipment will be returned to the Contractor at or near the Site and shall return such Contractor's Equipment to the Contractor in accordance with such notice. The Contractor shall thereafter without delay and at its cost remove or arrange removal of the same from the Site.</p> <p>42.2.5 Subject to GCC 42.2.6, the Contractor shall be entitled to be paid the Contract Price attributable to the Facilities executed as of the date of</p>
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		<p>termination, the value of any unused or partially used Goods on the Site, and the costs, if any, incurred in protecting the Facilities and in leaving the Site in a clean and safe condition pursuant to paragraph (a) of GCC 42.2.3. Any sums due the Employer from the Contractor accruing prior to the date of termination shall be deducted from the amount to be paid to the Contractor under this Contract.</p> <p>42.2.6 If the Employer completes the Facilities, the cost of completing the Facilities by the Employer shall be determined.</p> <p>If the sum that the Contractor is entitled to be paid, pursuant to GCC 42.2.5, plus the reasonable costs incurred by the Employer in completing the Facilities, exceeds the Contract Price, the Contractor shall be liable for such excess.</p> <p>If such excess is greater than the sums due the Contractor under GCC 42.2.5, the Contractor shall pay the balance to the Employer, and if such excess is less than the sums due the Contractor under GCC 42.2.5, the Employer shall pay the balance to the Contractor.</p> <p>The Employer and the Contractor shall agree, in writing, on the computation described above and the manner in which any sums shall be paid.</p>
	42.3	<p><u>Termination by Contractor</u></p> <p>42.3.1 If</p> <p>(a) the Employer has failed to pay the Contractor any sum due under the Contract within the specified period, has failed to approve any invoice or supporting documents without just cause pursuant to the corresponding Appendix (Terms and Procedures of Payment) of the Agreement, or commits a substantial breach of the Contract, the Contractor may give a notice to the Employer that requires payment of such sum, with interest thereon as stipulated in GCC 12.3, requires approval of such invoice or supporting documents, or specifies the breach and requires the Employer to remedy the same, as the case may be. If the Employer fails to pay such sum together with such interest, fails to approve such invoice or supporting documents or give its reasons for</p>

		<p>withholding such approval, fails to remedy the breach or take steps to remedy the breach within fourteen (14) days after receipt of the Contractor's notice, or</p> <p>(b) the Contractor is unable to carry out any of its obligations under the Contract for any reason attributable to the Employer, including but not limited to the Employer's failure to provide possession of or access to the Site or other areas or failure to obtain any governmental permit necessary for the execution and/or completion of the Facilities,</p> <p>then the Contractor may give a notice to the Employer thereof, and if the Employer has failed to pay the outstanding sum, to approve the invoice or supporting documents, to give its reasons for withholding such approval, or to remedy the breach within twenty-eight (28) days of such notice, or if the Contractor is still unable to carry out any of its obligations under the Contract for any reason attributable to the Employer within twenty-eight (28) days of the said notice, the Contractor may by a further notice to the Employer referring to this GCC 42.3.1, forthwith terminate the Contract.</p> <p>42.3.2 The Contractor may terminate the Contract forthwith by giving a notice to the Employer to that effect, referring to this GCC 42.3.2, if the Employer becomes bankrupt or insolvent, has a receiving order issued against it, compounds with its creditors, or, being a corporation, if a resolution is passed or order is made for its winding up (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), a receiver is appointed over any part of its undertaking or assets, or if the Employer takes or suffers any other analogous action in consequence of debt.</p> <p>42.3.3 If the Contract is terminated under GCCs 42.3.1 or 42.3.2, then the Contractor shall immediately</p> <p>(a) cease all further work, except for such work as may be necessary for the purpose of protecting that part of the Facilities already executed, or any work required to leave the Site in a clean and safe condition</p>
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		<ul style="list-style-type: none"> <li>(b) terminate all subcontracts, except those to be assigned to the Employer pursuant to paragraph (d) (ii)</li> <li>(c) Remove all Contractor's Equipment from the Site and repatriate the Contractor's and its Subcontractors' personnel from the Site.</li> <li>(d) In addition, the Contractor, subject to the payment specified in GCC 42.3.4, shall <ul style="list-style-type: none"> <li>(i) deliver to the Employer the parts of the Facilities executed by the Contractor up to the date of termination</li> <li>(ii) to the extent legally possible, assign to the Employer all right, title and benefit of the Contractor to the Facilities and to the Goods as of the date of termination, and, as may be required by the Employer, in any subcontracts concluded between the Contractor and its Subcontractors</li> <li>(iii) Deliver to the Employer all drawings, specifications and other documents prepared by the Contractor or its Subcontractors as of the date of termination in connection with the Facilities.</li> </ul> </li> </ul> <p>42.3.4 If the Contract is terminated under GCCs 42.3.1 or 42.3.2, the Employer shall pay to the Contractor all payments specified in GCC 42.1.3 and reasonable compensation for all loss, except for loss of profit, or damage sustained by the Contractor arising out of, in connection with or in consequence of such termination.</p> <p>42.3.5 Termination by the Contractor pursuant to this GCC 42.3 is without prejudice to any other rights or remedies of the Contractor that may be exercised in lieu of or in addition to rights conferred by GCC 42.3.</p>
	42.4	<p>In this GCC 42, the expression "Facilities executed" shall include all work executed, Installation Services provided, and all Goods acquired (or subject to a legally binding obligation to purchase) by the Contractor and used or intended to be used for the purpose of the Facilities, up to and including the date of termination.</p>
	42.5	<p>In this GCC 42, in calculating any monies due from the Employer to the Contractor, account shall be taken of any</p>

			sum previously paid by the Employer to the Contractor under the Contract, including any advance payment paid pursuant to the corresponding Appendix (Terms and Procedures of Payment) to the Agreement.
43.	<b>Assignment</b>	43.1	Neither the Employer nor the Contractor shall, without the express prior written consent of the other party (which consent shall not be unreasonably withheld), assign to any third party the Contract or any part thereof, or any right, benefit, obligation or interest therein or thereunder, except that the Contractor shall be entitled to assign either absolutely or by way of charge any monies due and payable to it or that may become due and payable to it under the Contract.

**LETTER OF ACCEPTANCE**



THE UNITED REPUBLIC OF TANZANIA  
 MINISTRY OF HEALTH  
**MUHIMBILI NATIONAL HOSPITAL**



In reply please quote:

Ref.No. MNH/CSO/TENDER/VOL III/640/2021

Date: 29/11/2021

MANAGING DIRECTOR  
 PACIFIC DIAGNOSTICS LIMITED,  
 P.O Box 34056,  
 DAR ES SALAAM,  
 TANZANIA

**RE: LETTER OF ACCEPTANCE**

Reference is made to the above subject.

This is to notify you that your Tender dated 12<sup>th</sup> November, 2021 for execution of the Tender No PA/009/2021-22/HQ/G/06 LOT 4 for Supply, Install, Test, Train and Commission Medical Equipment's (MRI 1.5 Tesla, CT Scan 64 Slices, USS Machine, Portable Digital X -ray Machine and Angio Suite) for MNH for the Contract Price of the equivalent of Tshs 6,923,790,976.00 (Tanzanian Shillings Six Billion Nine Hundred Twenty Three Million Seven Hundred Ninety Thousand Nine Hundred Seventy Six Only) VAT Exclusive as per virtue of Item 14 of Part B of the Fifth Schedule to the East African Community Customs Management Act, 2004 and Item 7 of Part I of the exemption Schedule to the VAT Act, 2014, as corrected and modified in accordance with the ITT is hereby accepted by us.

We hereby confirm Tanzania Institute of Arbitrators, the Appointing Authority, who will appoint the Adjudicator in case of any arisen disputes in accordance with ITT 45.1.

You are hereby informed that after you have read and return the attached draft Contract, the parties to the contract shall sign the vetted contract within fourteen (14) working days.

You are hereby informed to proceed with the execution of the said Contract for the Supply and Installation in accordance with the terms and conditions of the signed Contract.

Authorized Signature: \_\_\_\_\_

Name and Title of Signatory: Prof L.M. Mushi - (D)

Name of Agency: MNH

Attachment: Contract

Copy: Appointing Authority, PPRA, TAU, CAG & Attorney General.

**Note: You are required to submit the Performance Security before Commencement of the contract.**



**TECHNICAL SPECIFICATIONS AND COMPLIANCE  
TO SPECIFICATIONS**

# MUHIMBILI NATIONAL HOSPITAL ICUs TECHNICAL SPECIFICATIONS

## GENERAL SPECIFICATIONS FOR THE ICUs EQUIPMENT:

### STANDARD AND SAFETY

1. Risk Classification: As per ISO 14971:2007- Application of risk management to medical devices.
2. International standards: ISO 13485 - Represents the requirements for a comprehensive quality management system for the design and manufacture of medical devices.
3. Regulatory Approval / Certification: TAEC, TBS and/or TMDA as applicable.

### ACCESSORIES, SPARES AND CONSUMABLES

1. Starter pack for consumables necessary for equipment to operate successfully (and are not listed on the technical specification) should be included.
2. Price of consumables and how often to be required/replaced should be clearly stated

### DOCUMENTATION

1. ISO 14971:2007 Certification
2. ISO 13485 Certification
3. Regulatory Approval / Certification: TAEC, TBS and/or TMDA as applicable.
4. User/Operator manual in English to be supplied.
5. Technical/Maintenance manual with technical diagrams in English to be supplied.
6. Comprehensive industrial warrant with at least one year should be submitted.
7. Performance test and electrical safety certificate.
8. Lifespan of the machine should be clearly stated.
9. A safe disposal handling procedures for the parts and the whole equipment should be included.
10. Provide a factory recommended preventive maintenance (PM) schedule and a detailed checklist including PM activities, tools and spares (PM kit) for routine and periodical service checkups.

### INSTALLATION, TESTING, TRAINING, COMMISSIONING, MAINTENANCE AND AFTER SALES SERVICE

1. Perform installation, testing and commissioning of the equipment.
2. Comprehensive training of end users on safety, operations and basic first line maintenance for adequate period and immediately after installation of the unit.
3. Certified comprehensive training of hospital service engineers/technicians (for adequate period and immediately after installation of the unit) on:
  - a) Safety, installation and operation of the equipment
  - b) Troubleshooting and repair of the equipment
  - c) Service and maintenance with emphasis on how to do equipment performance check and calibration
  - d) Safe disposal of parts and system

### WARRANTY AND SUPPORT

1. Verify that the system or unit offered will have at least **one (1) year** comprehensive industrial warranty, including service, all spare parts and labor, starting on the date of successful completion of the acceptance testing of the unit.
2. Guaranteeing availability of technical support and all spare parts for lifetime period after successful commissioning of the equipment.
3. All breakdown calls for corrective maintenance to be attended at any day within 6 hours (for local vendors) and a week for international vendors.

**MUHIMBILI NATIONAL HOSPITAL RADIOLOGY REQUIREMENTS**

S/No	Item Description	Qty	Technical Specification	User Recommendation
1	USS Machine	1	<p><b>INTENDED USE</b>                      This ultrasound machine should be a state of the art, high end Colour Doppler System with full digital technology for the applications of whole body to include full cardiac and peripheral vascular applications, small parts and intracavitary applications.</p> <p><b>STANDARD AND SAFETY</b></p> <ol style="list-style-type: none"> <li>1. The equipment should TMDA certified.</li> <li>2. Manufacturer should be Conformité Européenne (CE) or USFDA or BSI or ISO certified for quality standards.</li> <li>3. Should be approved by the National Authority of the product's country of origin.</li> <li>4. Electrical and mechanical safety conforms to approved standards such as ISO 13485 or IEC 60601-2-37 ed1: Medical Electrical Equipment - Part 2-37: Particular Requirements for the Safety of Ultrasonic Medical Diagnostic and Monitoring Equipment.</li> </ol> <p><b>TECHNICAL SPECIFICATION</b></p> <ol style="list-style-type: none"> <li>1. 256 gray shades for sharp contrast resolutions.</li> <li>2. Harmonic Imaging- System should have Harmonics on all the probes.</li> <li>3. Should have capability to perform shear wave and strain elastography examinations.</li> <li>4. Should have software to perform automated ovarian follicle count (3D)</li> <li>5. Trapezoidal Image on B / Colour.</li> <li>6. Automated Gain control for additional level of flexibility to image quality control.</li> <li>7. Real time high frequency 2D for higher resolution.</li> <li>8. Advanced 3D imaging package with multiplanar views and surface and volume rendering tools.</li> <li>9. Frame rate should be 1000 FPS or more.</li> <li>10. High-definition acoustic zoom for enlarging sections of 2D and Colour flow images with more acoustic information for greater clarity and detail while maintaining an optimal frame rate.</li> </ol>	Equipment Manufacturer: Siemens

		<p>11. Modes –4D, 3D, 2D, M-Mode, Steerable PW/CW Doppler, Colour Doppler, and High Definition Colour flow with Colour power angio imaging and full Colour Doppler echocardiography system. 2D Duplex, and Colour Doppler, colour Power Angio, Directional power angio and colour panoramic.</p> <p>12. Monitor should be 15" or more, high-resolution Colour Monitor. Tilt and Swivel monitor should be able to view in all angles and all light conditions.</p> <p>13. Colour Flow Imaging for</p> <ul style="list-style-type: none"> <li>• Increased lateral and spatial resolution.</li> <li>• Detection of even subtle areas of turbulence, displaying a more physiological blood flow appearance without loss of frame rate.</li> <li>• Colour flow with capability of automatically picking up colour flow as a function of focal depth.</li> </ul> <p>14. Tissue Colourization (B-Colour) for improved contrast resolution.</p> <p>15. Application software for adult and Peripheral Vascular (All application packages should be built into the system).</p> <p>16. Cine loop memory- more than 1000 frames.</p> <ul style="list-style-type: none"> <li>• High Frame rate review for better clarity of playback images study in slow motion.</li> <li>• Quad loop with memory for pre and post image comparison of any procedure.</li> <li>• Memory- 256 frames or more in quad loop. M Mode and Doppler Scroll Memory-40 seconds or more.</li> <li>• Frame grabber facility for post analysis.</li> </ul> <p>17. ECG facility.</p> <p>18. User defined system and application presets for multi-user department.</p> <p>19. Minimum 500 GB hard drive for image storage and retrieval.</p> <p>20. Three or more active transducer ports.</p>	
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		<p>21. Facility for high definition digital acquisition, review and editing of complete patient studies.</p> <p>22. Anatomical M mode, M-Mode.</p> <p><b>POWER REQUIREMENTS</b></p> <p>The system should conform to 220 - 240V AC, 50/60 Hz electric power, preferably british standard power plug connection and online UPS of suitable rating with voltage regulation and spike protection for at least 30 minutes back up.</p> <p><b>OPERATIONAL REQUIREMENT</b></p> <ul style="list-style-type: none"> <li>• Latest generation Electronic Phased array Doppler system. System should be DICOM ready and capable of being interfaced with HIS/RIS/PACS. DICOM compatible and DICOM enabled.</li> <li>• Should be field upgradable to next generation system on site. All new software should be upgraded free of cost for at least 3 years.</li> <li>• Frequency compounding or better technology for better resolution and penetration.</li> </ul> <p><b>ENVIRONMENTAL FACTORS</b></p> <ul style="list-style-type: none"> <li>• The unit shall be capable of operating continuously in ambient temperature of 30°C and relative humidity of 80%.</li> <li>• Pre Requisites should be clearly spelt out in terms of room requirements.</li> </ul> <p><b>ACCESSORIES, SPARES AND CONSUMABLES</b></p> <ol style="list-style-type: none"> <li>1. Colour Doppler System with all application packages for serial studies with High frame rate review. Harmonic imaging capability in all modes. Digital Storage and Retrieval</li> <li>2. Phased Array Transducers with frequency range of 2-4 MHz or more for adult and pediatric cardiac applications.</li> <li>3. 2-5 MHz or more Convex Array Transducer.</li> <li>4. 5-10 MHz or more Linear Array Transducer.</li> <li>5. Endocavity transducer (for transvaginal and transrectal examination)</li> <li>6. Paediatric microconvex array transducer</li> <li>7. Thermal printer of latest model for direct printing of images from the system.</li> </ol>	
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		<p>8. Printing paper – at least 5 rolls.</p> <p>9. DVD/CD Recorder with DICOM media transfer.</p> <p>10. Mobile cart</p> <p>11. At least 1 litre of ultrasound gel.</p> <p>12. Starter pack for consumables necessary for equipment to operate successfully (and are not listed above or on the technical specification) should be included.</p> <p>13. Price of consumables should be clearly stated.</p> <p><b>DOCUMENTATION</b></p> <p>1. User/Operator manual in English to be supplied.</p> <p>2. Technical/Maintenance manual with technical diagrams in English to be supplied.</p> <p>3. Comprehensive industrial warrant with at least two years should be submitted.</p> <p>4. Performance test and electrical safety certificate.</p> <p>5. TMDA certificate.</p> <p>6. USFDA/CE/BSI/ ISO certificate</p> <p>7. Certificate from National Authority of the product's country of origin.</p> <p>8. A safe disposal handling procedures for the parts and the whole equipment should be included.</p> <p>9. Provide a factory recommended preventive maintenance (PM) schedule and a detailed checklist including PM activities, tools and spares (PM kit) for routine, daily, weekly, monthly, quarterly, semiannually and annually service routine checkups.</p> <p><b>INSTALLATION, TESTING, TRAINING, COMMISSIONING, MAINTENANCE AND AFTER SALES SERVICE</b></p> <p>1. Perform installation, testing and commissioning of the equipment.</p> <p>2. Factory and/or onsite comprehensive training of end users on safety, operations and basic first line maintenance for adequate period and immediately after installation of the unit.</p> <p>3. Factory and/or onsite comprehensive training of hospital service engineers/technicians on safety, installations, operations, troubleshooting</p>	
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			<p>and repair, service and maintenance, safe disposal of parts and system for adequate period and immediately after installation of the unit.</p> <p><b>WARRANTY AND SUPPORT</b></p> <ol style="list-style-type: none"> <li>1. Verify that the system offered will have <b>two (2) years</b> comprehensive industrial warranty, including service, all spare parts and labor, starting on the date of successful completion of the acceptance testing of the unit.</li> <li>2. Guarantee lifespan of the equipment to be not less than 10 years from the date of commissioning.</li> <li>3. Guaranteeing availability of technical support and all spare parts for lifetime period after successful commissioning of the equipment.</li> <li>4. All breakdown calls for corrective maintenance to be attended at any day within 4 hours (for local vendors) and 5 days for international vendors.</li> <li>5. Downtime of the machine should be less than 2 days for problems which do not involve spare part and 10 working days for problems which do involve spare part after that vendor should incur all loss that the hospital gets.</li> </ol>	
2	<b>Portable Digital X-ray Machine</b>	1	<p><b>STANDARD AND SAFETY</b></p> <ol style="list-style-type: none"> <li>1. Risk Classification: As per ISO 14971:2007- Application of risk management to medical devices.</li> <li>2. International standards: ISO 13485 - Represents the requirements for a comprehensive quality management system for the design and manufacture of medical devices.</li> <li>3. Regulatory Approval / Certification: TAEC, TBS and/or TMDA as applicable.</li> </ol> <p><b>TECHNICAL SPECIFICATION</b></p> <ol style="list-style-type: none"> <li>1. Mobile radiographic unit must be battery operated and motorized.</li> <li>2. Unit must be capable of imaging all current portable exams on a DR panel. Unit must also be capable of operation as a conventional mobile unit in case the DR panel becomes inoperable.</li> <li>3. Unit must have capability of sending images through existing network port</li> </ol>	<p>Equipment Manufacturer: Siemens</p>

		<p>and have wireless transfer of images through Hospital wireless network.</p> <ol style="list-style-type: none"> <li>4. Maximum power: 15 kW or more</li> <li>5. Maximum tube current: 300 mA or more</li> <li>6. High frequency generator.</li> <li>7. The anode should have high heat capacity.</li> <li>8. Should have focal spot sizes of 0.6mm and 1.2mm or less.</li> <li>9. Should have a collimator having halogen/bright light source with auto shut provision for the light.</li> <li>10. Should have over load protection.</li> <li>11. Tube column rotation: minimum <math>\pm 180^\circ</math></li> <li>12. The detectors should be flat panel detectors of latest technology.</li> <li>13. The size of the detectors should be at least 35 cm x 43 cm.</li> <li>14. Preview time after exposure 7 sec or less.</li> <li>15. Image processing time should not be more than 9 sec.</li> </ol> <p><b>POWER REQUIREMENTS</b> The system should conform to 220 - 240V AC, 50/60 Hz electric power, preferably british standard power plug connection.</p> <p><b>ACCESSORIES, SPARES AND CONSUMABLES</b></p> <ol style="list-style-type: none"> <li>1. Starter pack for consumables necessary for equipment to operate successfully (and are not listed on the technical specification) should be included.</li> <li>2. Price of consumables and how often to be required/replaced should be clearly stated</li> </ol> <p><b>DOCUMENTATION</b></p> <ol style="list-style-type: none"> <li>1. ISO 14971:2007 Certification</li> <li>2. ISO 13485 Certification</li> <li>3. Regulatory Approval / Certification: TAEC, TBS and/or TMDA as applicable.</li> <li>4. User/Operator manual in English to be supplied.</li> <li>5. Technical/Maintenance manual with technical diagrams in English to be supplied.</li> <li>6. Comprehensive industrial warranty with at least two years should be submitted.</li> <li>7. Performance test and electrical safety certificate.</li> </ol>	
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		<p>8. Lifespan of the machine should be clearly stated.</p> <p>9. A safe disposal handling procedures for the parts and the whole equipment should be included.</p> <p>10. Provide a factory recommended preventive maintenance (PM) schedule and a detailed checklist including PM activities, tools and spares (PM kit) for routine and periodical service checkups.</p> <p><b>INSTALLATION, TESTING, TRAINING, COMMISSIONING, MAINTENANCE AND AFTER SALES SERVICE</b></p> <p>1. Perform installation, testing and commissioning of the equipment.</p> <p>2. Factory and/or onsite comprehensive training of end users on safety, operations and basic first line maintenance for adequate period and immediately after installation of the unit.</p> <p>3. Factory and/or onsite comprehensive training of hospital service engineers/technicians (for adequate period and immediately after installation of the unit) on:</p> <ul style="list-style-type: none"> <li>a) Safety, installation and operation of the equipment</li> <li>b) Troubleshooting and repair of the equipment</li> <li>c) Service and maintenance with emphasis on how to do equipment performance check and calibration</li> <li>d) Safe disposal of parts and system</li> </ul> <p><b>WARRANTY AND SUPPORT</b></p> <p>1. Verify that the system offered will have at least <b>two (2) years</b> comprehensive industrial warranty, including service, all spare parts and labor, starting on the date of successful completion of the acceptance testing of the unit.</p> <p>2. Guaranteeing availability of technical support and all spare parts for lifetime period after successful commissioning of the equipment.</p> <p>3. Availability of technical service personnel locally in Tanzania. Enclose CV, training certificates and work permit for foreign personnel based in Tanzania.</p> <p>4. All breakdown calls for corrective maintenance to be attended at any day</p>	
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			within 6 hours (for local vendors) and a week for international vendors.	
3	Dedicated Interventional Radiology Suite	1	<p><b>PART I INTENDED USE FOR DEDICATED IR SUITE</b></p> <p>Machine able to perform in procedures such as</p> <ol style="list-style-type: none"> <li>i. Angiographic studies: peripheral and central</li> <li>ii. Therapeutic studies: line placements, stents, embolization</li> <li>iii. Vascular interventional procedures</li> <li>iv. Pain management interventional procedures</li> <li>v. Abdominal interventional procedures</li> <li>vi. Thoracic interventional procedures</li> <li>vii. Pulmonary interventions etc</li> </ol> <p><b>STANDARD AND SAFETY</b></p> <ol style="list-style-type: none"> <li>i. Manufacturer should be Conformité Européenne (CE) or USFDA or BSI or ISO certified for quality standards.</li> <li>ii. Should be approved by the National Authority of the product's country of origin.</li> <li>iii. Electrical and mechanical safety conforms to approved standards.</li> </ol> <p><b>TECHNICAL SPECIFICATION</b></p> <p><b>1. X-RAY TUBE, DETECTOR AND GENERATOR</b></p> <ol style="list-style-type: none"> <li>i. Minimum tube voltage should be 120 kVp or more.</li> <li>ii. Should have a rotating anode.</li> <li>iii. Minimum anode heat capacity should be 3 MHU.</li> <li>iv. Should have efficient power management, maximum x-ray tube current and heat management.</li> <li>v. Should have a flat detector with large field of view i.e. it covers the abdomen at single view or whole chest at single view for and adult patient.</li> <li>vi. Machine should be flexible and able to move horizontally, vertically and around the swivel axes for better production of images from any angle.</li> <li>vii. Should be integrated with collision detection.</li> </ol> <p><b>2. TABLE</b></p>	Equipment Manufacturer: Siemens

			<ul style="list-style-type: none"> <li>i. Radiolucent carbon fiber tabletop.</li> <li>ii. Precise table movements.</li> <li>iii. Floating top table (multi- directional positioning).</li> <li>iv. Weight capacity (at least 250 kg).</li> <li>v. Radiation protection shields for the table.</li> </ul> <p><b>3. VIEWING STATION</b></p> <ul style="list-style-type: none"> <li>i. A large monitor ceiling mounted in the room 55inches</li> <li>ii. Computers, generator, and other electronics located outside procedure room</li> </ul> <p><b>4. IMAGE PROCESSING AND IMAGE STORAGE</b></p> <ul style="list-style-type: none"> <li>i. It should have image annotation facility; measuring of distances and angles, entering of demographic data of patients, support of DICOM functions and enabled.</li> <li>ii. Image processing must be a fully digital continuous chain for image acquisition, processing, storage, archiving and documentation. The system should allow configuration and linking up with the HIS (Hospital Information System).</li> <li>iii. Able to produce 3D images.</li> <li>iv. Ability to have roadmap, digital radiography, fluoroscopy, pulsed fluoroscopy and digital subtraction (DSA).</li> <li>v. Ability to have programs that will allow documentation and archiving.</li> <li>vi. Connectivity <ul style="list-style-type: none"> <li>a. Video</li> <li>b. Digital video out</li> <li>c. USB storage</li> <li>d. Advanced DICOM/IHE package</li> <li>e. Allow internet connectivity to hospital management and information system (HMIS) and PACS</li> </ul> </li> <li>vii. The software packages: The software of mentioned procedures must be installed and non-renewable and also allows updates.</li> </ul> <p><b>5. POWER REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>i. The system should conform to 220 - 240V AC, 50/60 Hz electric power, preferably British standard power</li> </ul>	
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			<p>plug connection.</p> <p>ii. Dedicated power protection device and power backup should be provided along with the unit.</p> <p><b>6. ACCESSORIES, SPARES AND CONSUMABLES</b></p> <p>i. Starter pack for consumables necessary for equipment to operate successfully (and are not listed on the technical specification) should be included.</p> <p>ii. Well, monitored AC/cooling system must be installed</p> <p>iii. Stand-by generator</p> <p>iv. General anesthetic machine with all equipments and capabilities</p> <p>v. Protective shields</p> <p>vi. Monitors</p> <p>vii. Price of consumables and how often to be required/replaced should be clearly stated</p> <p>viii. A surgical light</p> <p>ix. Two mounted shields</p> <p>x. Wedge (compensation) filters for less dense anatomy</p> <p>xi. A set of sterile drapes for the x-ray tube assembly, detector</p> <p>xii. Protecting gears of 3.5 Pb:</p> <ul style="list-style-type: none"> <li>• 8 Light-weight lead aprons</li> <li>• 8 Gonad shield</li> <li>• 8 Thyroid shield</li> <li>• 5 Goggles</li> </ul> <p><b>7. DOCUMENTATION</b></p> <p>i. User/Operator manual in English to be supplied.</p> <p>ii. Technical/Maintenance manual with technical diagrams in English to be supplied.</p> <p>iii. Comprehensive industrial warrant with at least two years should be submitted.</p> <p>iv. Performance test and electrical safety certificate.</p> <p>v. USFDA/CE/BSI/ ISO certificate</p> <p>vi. Certificate from National Authority of the product's country of origin.</p> <p>vii. Lifespan of the machine should be clearly stated.</p> <p>viii. A safe disposal handling procedures for the parts and the whole equipment should be included.</p> <p>ix. Provide a factory recommended</p>	
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preventive maintenance (PM) schedule and a detailed checklist including PM activities, tools and spares (PM kit) for routine, daily, weekly, monthly, quarterly, semiannually and annually service routine checkups.

**8. INSTALLATION, TESTING, TRAINING, COMMISSIONING, MAINTENANCE AND AFTER SALES SERVICE**

- i. Perform installation, testing and commissioning of the equipment.
- ii. Factory and/or onsite comprehensive training of end users on safety, operations and basic first line maintenance for adequate period and immediately after installation of the unit.
- iii. Factory and/or onsite comprehensive training of hospital service engineers/technicians (for adequate period and immediately after installation of the unit) on:
  - a) Safety, installation, and operation of the equipment
  - b) Troubleshooting and repair of the equipment
  - c) Service and maintenance with emphasis on how to do equipment performance check and calibration
  - d) Safe disposal of parts and system

**9. WARRANTY AND SUPPORT**

- i. Verify that the system offered will have **two (2) years** comprehensive industrial warranty, including service, all spare parts and labor, starting on the date of successful completion of the acceptance testing of the unit.
- ii. Guaranteeing availability of technical support and all spare parts for lifetime period after successful commissioning of the equipment.
- iii. Availability of technical service personnel locally in Tanzania. Enclose CV, training certificates and work permit for foreign personnel.
- iv. All breakdown calls for corrective maintenance to be attended at any day within 6 hours (for local

			vendors) and a week for international vendors.	
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**DEDICATED INTERVENTIONAL RADIOLOGY SUITE (PART II): DETAILED SPECIFICATION OF THE CATH LAB MACHINE**

<b>SPECIFICATION</b>	<b>REQUIRED</b>
<b>PRODUCT NAME</b>	
FDA cleared,year	CURRENT VERSION
CE Mark,year	CURRENT VERSION
Type	Single-plane ceiling mounted
Specific uses	Interventional Radiology procedures
Key differentiating feature	Flexible celing-mounted system designed for whole body interventional radiology procedures. System includes the CARE+CLEAR package supporting the ALARA principle with features aimed at minimizing radiation dose
What does company offer to help integrate your imaging system into a hybrid operating room (OR)	
<b>IMAGING FEATURES</b>	
Radiation lowering/dose control features	
Radiation dose monitoring features (for staff and/or patients)	Visualization of distribution of local cumulated dose all along the exam and current projection of the beam. Integrated dose monitoring as users can monitor and display air kerma, integrated air kerma over the exam and total dose area product received by patient during procedure
Rotational angiography features	Standard rotational dynavision for 2-D display and 3-D rotational dynavision for vol and planar high/low contrast imag
Time from acq to 3-D display	Less than 5sec (Technical advice)
Advanced visualization features on rotational angio	YES
Fusion imaging options	YES
Procedural navigation aids	YES
Stent enhancement features	YES
Peripheral bolus chase	YES
Unique imaging features	YES
Acquisition zoom	YES
Tableside control for features	YES (WITH side touchable)
Other imaging software options	Fluoro, DSA, DSA roadmap, instant mapping, cine, InnovaBreeze runoff, InnovaChase, Innova Sub 3-D and CT, StentViz, stenosis and vent analysis, 3-D roadmapping etc
Display sterilized for OR	Medical grade, cleanable,
Minimum room size needed	
Software packages available (EP, TAVR navigation, etc)	Gen Body,vascular work
<b>CONNECTIVITY</b>	

EP mapping system interface	YES
IVUS/OCT interfaces	YES
FFR interfaces	YES
Echo interfaces (TEE, ICE)	YES
Image/cine export formats	DICOM
Ability to share images with other vendor reporting/PACS	YES
Other enhancements for interoperability	NS
<b>PATIENT TABLE</b>	
Motion	4-way float, raise/lower, pivot. Longitudinal and lateral tilt are available
Length x width, cm (inches)	Min Choice of 228 x 45; 228 x 52 and 263 x 52
Vertical range, cm (inches)	77.5 - 110 cm (30.5 - 43.3 in)
Lateral range, cm (inches)	17.5 cm (6.9 in)
Longitudinal, cm (inches)	125 cm (49.2 in)
Tilt	+/- 15 deg
Maximum patient weight, KG	250
X-ray density	Less than 1.4 mm Al at 100 kV
Swivel	+/- 120 deg with 5 deg increments
Table-mounted controls	YES satellite controls, tableside controls
Use for surgery, hybrid OR	NS
Other features	Tables with longitudinal and lateral tilt capability are available options
<b>GANTRY</b>	
Transverse motion of 3-axis gantry	YES
Depth, inch	
Rotation range, degrees	200-240 deg
RAO projection, degrees	Ceiling mounted support from 0 - 120 deg
LAO projection, degrees	Ceiling mounted support from 0 - 120 deg
Cranial-to-caudal angulation, degrees	+55 deg/-45 deg cran/caud
SID range, inch	35.4 - 47.2 in (ceiling)
Support	Ceiling-mounted
Park capability	Customizable parking locations and back-out distances for different rooms giving enough space (manual and automatic)
Collision detection	<b>Intelligent collision protection</b> /Touch-free capacitive sensing
Collimation	Yes, without radiation using last image hold
<b>X-RAY TUBE</b>	
Power rating, kW Wp at 100 kVp	80-100
Housing heat storage capacity, HU	4.9-5.1MHU
Anode capacity, MHU	3-3.7 MHU
<b>DIGITAL DETECTOR</b>	
Type (aSi, aSe)	CsI with crystalline silicon image sensor
Dimensions, cm x cm	30X40
Spatial resolution, lp/mm	2.7-3.25

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**MUHIMBILI NATIONAL HOSPITAL EMD EQUIPMENT REQUIREMENT  
GENERAL SPECIFICATIONS FOR THE EMD EQUIPMENT:**

**STANDARD AND SAFETY**

1. Risk Classification: As per ISO 14971:2007- Application of risk management to medical devices.
2. International standards: ISO 13485 - Represents the requirements for a comprehensive quality management system for the design and manufacture of medical devices.
3. Regulatory Approval / Certification: TAEC, TBS and/or TMDA as applicable.

**ACCESSORIES, SPARES AND CONSUMABLES**

1. Starter pack for consumables necessary for equipment to operate successfully (and are not listed on the technical specification) should be included.
2. Price of consumables and how often to be required/replaced should be clearly stated

**DOCUMENTATION**

1. ISO 14971:2007 Certification
2. ISO 13485 Certification
3. Regulatory Approval / Certification: TAEC, TBS and/or TMDA as applicable.
4. User/Operator manual in English to be supplied.
5. Technical/Maintenance manual with technical diagrams in English to be supplied.
6. Comprehensive industrial warrant with at least one year should be submitted.
7. Performance test and electrical safety certificate.
8. Lifespan of the machine should be clearly stated.
9. A safe disposal handling procedures for the parts and the whole equipment should be included.
10. Provide a factory recommended preventive maintenance (PM) schedule and a detailed checklist including PM activities, tools and spares (PM kit) for routine and periodical service checkups.

**INSTALLATION, TESTING, TRAINING, COMMISSIONING, MAINTENANCE AND  
AFTER SALES SERVICE**



1. Perform installation, testing and commissioning of the equipment.
2. Comprehensive training of end users on safety, operations and basic first line maintenance for adequate period and immediately after installation of the unit.
3. Certified comprehensive training of hospital service engineers/technicians (for adequate period and immediately after installation of the unit) on:
  - a) Safety, installation and operation of the equipment
  - b) Troubleshooting and repair of the equipment
  - c) Service and maintenance with emphasis on how to do equipment performance check and calibration
  - d) Safe disposal of parts and system

**WARRANTY AND SUPPORT**

1. Verify that the medical equipment or device offered will have at least **one (1) year** comprehensive industrial warranty, including service, all spare parts and labor, starting on the date of successful completion of the acceptance testing of the unit.
2. Guaranteeing availability of technical support and all spare parts for lifetime period after successful commissioning of the equipment.
3. All breakdown calls for corrective maintenance to be attended at any day within 6 hours (for local vendors) and a week for international vendors.

## CT SCAN 128 SLICES SPECIFICATIONS

2 years warranty, three years comprehensive Maintenance and spare parts inclusive.

### **Level of use: Zonal hospitals and above**

The system shall be of latest technology allowing full and continuous rotation, multi-slice scanning (**128 slices acquisition per rotation**) with true isotropic volume acquisition and sub-millimetre resolution of at least 0.4mm for body, cardiac and vascular application. Pitch to be specified used for each application to achieve the resolution. True future upgradability to higher slices per rotation and future applications should be possible. The speed should be adequate to *all body, neurological and cardiovascular examinations.*

### **Technical Specifications or Requirements:**

#### **A. CT EXAMINATIONS:**

1. Contrast Media Bolus Tracking
2. CT Angiography
3. CT Pulmonary Angiography
4. CT real time fluoroscopy
5. Advances 3D analysis
6. Dynamic cerebral perfusion mapping
7. Head and Neck CT
8. Cardiothoracic CT
9. Abdominal CT
10. Pelvic CT
11. Skeletal CT
12. Interventional CT
13. Virtual colonoscopy CT
14. Dental CT

#### **B. DETECTOR:**

1. Should be 64 solid state detector system and above generating 128 or more slices per 360 degrees rotation.
2. **CT scanner system should be upgradeable on site.**
3. Sub millimetre slice thickness should be available for axial and helical modes

4. The detectors shall be large area detector with Z axis coverage of 38 mm or more.
5. The detectors shall have multiple rows with each row having at least over 670 elements. The type of detector should be specified.
6. Detector system should not require frequent calibrations.
7. Specify the number of rows and the total number of detector cells.

**C. GANTRY:**

1. Aperture : 70 cm or more
2. Control Panel: on either side
3. Entire range of rotation times for full 360 degree should be specified. Minimum rotation time should be 0.6 seconds or less for whole body application.
4. Should have positioning laser lights.
5. Maximum scan FOV should be at least 50 cm.
6. Tilt-Remote  $\geq \pm 30$  deg.
7. Should have CT fluoroscopy with separate monitor in the gantry room for CT guided biopsy.

**D. X-RAY GENERATOR:**

1. High Frequency type
2. Power output 75KW or more to support continuous and sustained operation.

**E. X-RAY TUBE:**

1. Tube current : 30 to 600mA or more
2. Real Time mA modulation for dose regulation.
3. Tube Voltage: 80 to 140 KV
4. Anode Heat Storage Capacity should be 6 MHU or more
5. Should have anode Temp Monitoring System.
6. Heat Dissipation:  $\geq 1000$  KHU or more
7. Specify Focal Spot size and number according to IEC recommendation.
8. The tube should have dynamic focal spots.
9. The X-ray cooling unit should be inbuilt in the gantry.
10. Warranty of tube: Comprehensive warranty for all parts including x-ray tubes for at least 2 years irrespective of number of scans.

#### **F. PATIENT TABLE:**

1. Minimum Load capacity of at least 200Kg  $\pm$ 10% with 1 mm positioning accuracy.
2. Table speed: Horizontal up to 100mm or more/sec.
3. Vertical Table travel: 50mm/sec or more
4. Minimum table top height should be 55cm or less from the ground level for easy transportation of trauma patient.
5. Longitudinal Scan Range: at least 150cm or more
6. Manual movement of the table should be possible in case of power failure.
7. Reproducing positional accuracy should be mentioned.
8. Remote Up/Down and forward /backward should be standard.
9. Facility of positioning aid for horizontal isocentric positioning of the patient.
10. Should have Carbon Fibre Table Top.

#### **G. SPIRAL CT:**

1. Scan Time: Minimum scan time 0.6 sec or less for full 360 deg rotation.
2. Min slice thickness should be 0.625 mm or less
3. Max slice thickness: 10 mm or more
4. Slice increment.-specify scan and selectable slice thickness
5. Pitch Factor (volume pitch): variable between 0.5 sec to 1.5 sec or more and should be user selectable. Specify all possible pitch selections.
6. Single Continuous scan time should be at least 120 sec.
7. Should optimize radiation dose and resolution for each selection.
8. Bolus Triggered Spiral acquisition should be possible.
9. Facility of multi-spiral, bi-directional spirals and back to back spirals.
10. Facility for monitor contrast enhancement and automatically commenced scanning.

#### **H. TOPOGRAM:**

1. Length and width: Specify range
2. Scan Time: Specify range
3. Views: Frontal & lateral views.
4. Should be able to interrupt acquisitions manually once the desired anatomy is obtained.

### **I. DATA ACQUISITION SYSTEM:**

1. Detector should be capable of acquiring 64 slices per 360 deg of rotation.
2. Number of rows with their thickness, number of element in each row
3. Inbuilt mechanism for adapting the tube current during each scan this should enable radiation dosage reduction where body part thickness is less.
4. Detector system should not require frequent calibration.
5. Should have inbuilt paediatric protocols based on patient weight.

### **J. IMAGE RECONSTRUCTION:**

1. Real Time reconstruction speed: 15 images per sec or more at 512x512 matrix.
2. Display Matrix: 1024x1024 or more
3. Reconstructed slice thickness:  $\leq 1\text{mm}$  to 10mm.
4. Should have selectable Scan Field and reconstructed field.

### **K. OPERATOR CONSOLE:**

1. Monitor Resolution: 1280x1240
2. Pixel Size < 0.3 mm.
3. Two Flat screens medical grade LCD Type of at least 24" with fast image refresh rate should be fast and preferably instantaneous and flicker free.
4. Should be non interlaced and progressive display type & sturdy.
5. Should perform Registration, scheduling, protocol selection , volume rendering, Volume measurements, Multiplanar Reconstruction, and standard evaluation application and all available post processing functions without the help of the satellite workstation as well as film exposure.
6. Should have 3GHz or latest processor with at least 16GB RAM.
7. Raw Data storage with at least 1TB Hard disc having a minimum of 1,500,000 images storing capacity in 512x512 format.
8. Additional external hard disk of minimum 2TB should be provided.
9. System should be menu driven operation. Applications like image reconstruction, filming, curve MPR, CT Angiography; VRT, auto bone removal, CT brain perfusion, CT bronchoscopy, Bolus tracking should be available.
10. Lung nodule evaluation software to be provided in workstation, and not in operator console.
11. System should be offered with complete Cardiac Acquisition and post processing packages.

#### **L. CONSOLE COMMON FEATURE:**

1. The workstation should be interconnected for two-way transfer of images and reports.
2. Spatial alignment and visualization of two different data sets of one patient generated on different modalities or with different acquisition time.
3. Cine display should be available, both interactive and automatic.
4. Window width and centre should be freely selectable.
5. Patient online Registration, pre registration facility and transfer of information from HIS/RIS via DICOM should be possible.
6. Should have dedicated pediatric protocol for low dose imaging.
7. Should be offered with complete cardiac acquisition and post processing package.

#### **M. WORKSTATIONS: (Total two (1 at operator console room & 1 at Radiologist room))**

1. Should have Flat screen Medical Diagnostic monitor (minimum 1Mega pixels coloured) of **at least 24"** with fast image refresh rate should be fast and preferably instantaneous and flicker free with Hard Disk of 1TB or more, capable of simultaneous viewing of all post processing functions and filming independently without the help of main console. Data transfer between the operator console & the satellite workstation should be instantaneous.
2. Should have 3GHz or latest processor with 16GB RAM.
3. Should have lung nodule evaluation software as standard.
4. CT Angio – post processing software should include VRT, MIP, 3D SSD, Image fusion.
5. The advance vessel analysis, auto bone removal, small volume quantification, CT Colonography with polyp measurement and auto registration of prone and supine views. CT reporting should be possible independently of workstation.
6. Digital Subtraction Angiography should be available for Neuro Angiography
7. System should be offered with complete & latest Cardiac Post Processing packages on workstation.
8. Advanced Neuro package to be offered.
  - a. Hemoperfusion CT: Evaluation of dynamic CT data of Brain. Different Diagnosis of Acute ischemic stroke. Assessment of dynamic cerebral perfusion, CBV, CBF, TTP and tissue at risk classification.

- b. Tumour evaluation: Automated evaluation of Blood Brain Barrier disruptions in Brain Tumour.
  - c. Neuro perfusion weighted map (NWM): Visualization of colour coded CTA source images for 3D display of acute stroke.
  - d. Neuro DSA CT should provide Visualization of intracranial vascular structures based on digital bone removal.
9. The system should be user friendly with all functions menu driven. It should be modern user interface and 50 DVD blank (medical grade) should be provided.
10. All workstations should be full loaded with licensed post processing software capability.

**N. IMAGE EVALUATION TOOLS:**

- 1. Parallel evaluation of multiple ROI in circle, irregular and polygonal forms.
- 2. Statistical Evaluation for area/ volume, S.D, Mean/Max and Histograms.
- 3. Profile cuts: horizontal, vertical and oblique views.
- 4. Distance & angle measurement, freely selectable positioning of co-ordinate system, grid and image annotation.
- 5. Dynamic evaluation of contrast enhancement in organs and tissues, calculation of time-density, curves, peak enhancement images and time-to-peak images.

**O. IMAGE QUALITY PARAMETER:**

- 1. It should be specified at the lowest scan time available at the system.
- 2. High Contrast Spatial Resolution should be 17 LP/cm or higher (Mention slice thickness, scan time phantom, mA, scan field, dose and MTF) up to 10% full FOV.
- 3. Low contrast detect ability should be 5mm at difference using 20cm CATPHAN (please mention phantom, scan time, mA, filter for image reconstruction, scan field, dose, slice thickness).
- 4. High Contrast Resolution and Low Contrast Resolution for spiral must be same as that for axial.

**P. DOSE REDUCTION TECHNIQUE:**

- 1. Should be available.
- 2. Pre-patient collimation to reduce unnecessary dose to patient.

3. Specify the Dose reduction software.

#### **Q. POST PROCESSING TOOLS:**

1. 2-D, including image zoom and pan, image manipulations, including averaging, reversal of grey-scale values, and mirroring; image filter functions, including advanced smoothing algorithm and advanced bone correction.
2. Real-time multi-planar reconstruction (MPR) of secondary views, with viewing perspectives in all planes including curved & orthogonal MPR.
3. **Standard 3D applications:** CT angiography, MIP, MinIP, SSD, VRT, and other advanced **3D applications** and colour coding for different tissues.
4. Post Processing Software: Perfusion CT, Image Fusion, Image reconstruction, filming, Curve MPR, CT Angiography, Auto bone removal, CT brain perfusion, CT bronchoscopy, Bolus tracking, Vessel segmentation, Virtual Endoscopy software to be provided in all workstations.
5. 3D images for CT guided biopsy, 3D virtual endoscopy, colonoscopy, bronchoscopy should be possible.
6. DSA and advanced neurological imaging packages should be provided.
7. Spatial alignment and visualisation of two different data sets of one patient generated on different modalities or with different acquisition times.
8. Perfusion CT for study of brain. Liver, kidney, pancreas etc.
9. Volume measurements.
10. Fusion of morphological data obtained on CT, MR or DSA.

#### **R. PATIENT COMMUNICATION SYSTEM:**

An integrated intercom and Automated Patient Instruction System (API) should be provided.

#### **S. CONNECTIVITY AND ARCHIVAL**

1. DICOM connectivity (specify version) should be compatible and optimised for networking with other imaging systems.
2. DICOM converters for linking the camera with other imaging systems of the department should be provided, *if* required separately.



3. It should have sufficient memory to store images from the CT as well as other systems connected to it.
4. Filming parallel to other activities, including independent scanning, documentation and post-processing and configurable image text.
5. Archiving: Multi - burner DVD/CD writer should be provided for archival. Specify minimum number of uncompressed and compressed images that it can store per disc.
6. Option of viewing these discs on any PC without DICOM viewer should be available.

#### **T. UPGRADABILITY:**

1. Software upgrades that enhance existing applications must be provided by the vendor indefinitely at **no cost to the purchaser**. These no charge upgrades shall include any circuit boards or parts if software is added to enhance existing capabilities.
2. System should have capability to being upgraded as new technology emerges for at least 10 years
3. Additional or new software must have the capability of being downloaded by remote computer access. Software must include a free trial period before purchase.

#### **U. POWER SUPPLY:**

1. Power input to be 3 Phase /220-240VAC, 50Hz, as appropriate fitted with for required items.
4. Suitable servo controller stabilizer provided with resettable over current breaker shall be fitted for protection.
5. Online UPS of suitable rating of 60 minutes backup shall be supplied for the complete system including computers.

#### **V. ACCESSORIES, SPARES AND CONSUMABLES:**

1. Standard Patient positioning acc and restraining devices : 2 sets
3. Good quality light weight vinyl Lead Eye Goggles, Thyroid Shields, Aprons and of .5mm lead equivalent : 3 units each
4. Lead Glass 150x100cmx 2mm lead : 1 unit
5. Patient transport trolley : 2 units
7. Instrument trolley: 2 units.
8. Non Invasive Monitor of 12" screen with TFT colour display with the following accessories:

- Should be USFDA & CE (Notified body)
- ECG /Resp: 5 lead ECG cable with clip – 2 sets per monitor and 10 lead ECG cable with clip 1 set per monitor.
- NIBP: Adult cuff -2 units per monitor and two sizes of Pediatric Cuffs –one per monitor. (Complete sets)
- SpO2: Adult SpO2 sensor with cable – two units per monitor and Pediatric SpO2 Sensors – one unit per monitor.
- Temperature: Central temperature Probe – two per monitor and Skin temperature probe – one unit per monitor

9. Defibrillator Monitor/ Inbuilt Recorder Biphasic with auto and manual mode up to 360 Joule :

- Should be USFDA & CE (Notified body). It should be mains and battery operated.
- Should deliver at least 25 shocks with fully charged battery with the following accessories:
- Adult and paediatric paddle : 1 each
- Disposable pads : 10 units.
- ECG Cable- 5 lead : 1 units.
- ECG Electrodes : 100 units.

**10. Dual head Pressure Injector with the following:**

- Should be CE (Notified body) approved.
- Flow rate 0.1-10 ml/sec, Volume - 1 ml to syringe capacity, programmable pressure limit of 325 psi with 200 ml disposable sterile syringes. Syringe heater range 35 deg C+/- 5 deg C.
- Should be provided with head mounting device and integral IV pole.
- 1000 units syringes with tubings to be provide with the machine.
- Unit will be provided with display monitor to provide Pressure Monitor graph, Flow Profile, Stop Watch Feature, Scan Display, multiphase capability and protocol locking capabilities.

**11. Other items to be supplied:**

- Resuscitation accessories including Silicone resuscitation bag, Intubation set with laryngoscope (Adult & Pediatric) should be supplied.

- Insufflation pump sets for CT colonography with facility for delivery of heated CO<sup>2</sup> gas and automatic regulation of flow rate and pressure with high degree of precision. Accessories like tubing (10 units) & CO<sup>2</sup> cylinders (5 units) to be provided.
- Fire extinguisher, smoke detector with alarm system to be provided (Suitable quantity for 500 Sq. ft area).
- Supplier should perform anti termite & anti rodent measures during installation and maintenance.
- Post processing room chairs : 5 units
- Executive Chairs for reporting: 2 units
- Executive Tables for reporting : 2 units
- Patient waiting chairs : 8 units in 2 rows ( 4 Chairs in one row)
- One laptop and one laser printer with scanning & copy facility should be provided with latest specification for reporting & tele-radiology.

***NB. The make & model of all the additional equipment should be specified in the compliance statement for the technical evaluation, assessment & record.***

***W. SITE:***

1. A complete site preparation plan will be required to be submitted along with its financial components in separate cover. The vendor will be eligible to inspect the proposed site after obtaining permission. Care must be taken to address placement of the equipment, sitting, viewing and reporting area, patient preparation space, storage area etc.
2. Requirements of power and air conditioning must be clearly specified in a separate section of the offer. The temperature of the gantry room to be maintained at 20°C.

***X. WARRANTY & CMC:***

- 2 years warranty, three years comprehensive Maintenance and spare parts inclusive. **CT system (X-ray TUBE and all accessories) including all turn key items (Patient Monitor, Defibrillator, Laser Imaging Camera, Digital film printer, Pressure Injector, UPS, Air Conditioner).**
- ***Cost of CMC (Comprehensive Maintenance Contract) must be quoted in the price bid for the next 5 years after the expiration of the warranty period (i.e.: 6th, 7th, 8th, 9th, 10<sup>th</sup>).***

Lifetime support; spare parts, consumables should be available throughout the lifetime period of the machine.

Uptake time should be a minimum of 90%.

Proof of locally available technical support personnel, including CVs and work permit for foreign personnel.

Availability of technical personnel within the country should be stated; this should include CVs, work permits for foreign personnel.

Software should be flexible and provide the room for upgrade to add new parameters to be measured by the Machine and report format.

#### **Y. MANDATORY REQUIREMENTS:**

• **Vendor shall have to process the documents and get all the necessary clearances of the unit from all regulatory authorities such as TAEC, TMDA and TBS.**

#### **Z. TRAINING & DOCUMENTATION:**

- At least 2 weeks on site training by application specialist for two radiologists, two radiographers.
- Comprehensive service training for BME at Manufacturer's site.
- Safety aspects of Radiation dosage leakage should be spelt out.
- User manual in English incorporating the newer applications.
- Service manual in English
- Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist.
- The job description of the hospital technician and company service engineer should be clearly spelt out.
- Adequate books and journals within the warranty period

#### **SYSTEM INTEGRATION**

- DICOM
- CT image storage SCU/SCP
- Enhanced CT storage SCU/SCP
- ECG waveform SCP/SCU
- Modality worklist SCU
- Query/retrieve SCU and SCP
- Storage commitment SCU
- Modality performed procedure step SCU
- IHE profiles supported
- Cloud -based storage option
- PACS with server at least 30T

## **MRI 1.5 TESLA SPECIFICATIONS**

2 year warranty with semi-annual Planned preventive maintenance (PPM) and three years comprehensive Maintenance and spare parts inclusive.

The machine should be New, of modern technology with a minimum of 1.5T magnet and should be provided with respective coils for scanning-brain, head, neck, spine, shoulder, Body/torso, rectum, Knee, Wrist, Cardiac imaging, Breast.

60cm or more Open Bore design.

Weight should not exceed 4.2 tons.

It should be able to perform contrasted and non-contrasted angiography, spectroscopy, plaque imaging and colour analysis, motion compensating radial techniques, brain volume imaging, diffusion tensor imaging, diffusion(C+DTI) tensor tractography (DTT) , MRCP, respiratory triggering detector, and MRI software protocol of sickle cell.

USB port for data transfer. At last gradient amplitude of 30mT/m, slew rate 125T/m/s. Apart from that the Machine's work station be of latest technology and DICOM 3-D image export compatible. Should have zero boil off technology for saving helium.

The examination table minimum patient load should be 200 kg at least two emergency buttons should be provided, one in the console room and the other in the magnet room.

- Preparation of initial installation requirements to meet equipment specific needs.  
Five years comprehensive Maintenance inclusive.

### **Coils:**

MRI should be provided with but not limited to respective 8 channels or better coils for scanning-brain, head, neck, spine, shoulder, Body/torso, rectum, Knee, Wrist, Cardiac imaging, Breast, temporomandibular joint, cervical spine, thoracic spine, lumbar spine, chest, heart, abdomen, pelvis, hip, elbow, prostate, colon, cervix, MR Angiography.

### **RF system:**

RF output capacity above 16 Kw (100% duty cycle)

Sampling frequency at 80 MHz

Digital sampling as close as possible to the coil

Reception bandwidth approx. 3MHz

8 RF reception channels

The following imaging techniques should be included: Spin Echo (SE), Inversion Recovery (IR), Gradient Echo (GRE), Turbo Spin Echo, Fast Spin Echo (TSE, FSE), Echo Planar imaging (EPI).

### **Gradient coil:**

Gradient output approx. 0.7 MVA

Minimal field of view below 10 mm

Maximum amplitude above 30mT/m

Maximum amplitude slew rate above 120 T/m/s

b-value: 10,000 or better

Linearity below 1.5% with maximum FOV

TE time: (2D/3D FFE, 256 matrix) below 0.6 ms

TE time (1000 b-value, 128 matrix) below 70 ms

TR time (2D/3D FFE, 256 matrix) below 1.5 ms

Acquisition matrix of 1.024 or better

Slice thickness 2D: 0.5 mm or better

Slice thickness 3D: 0.05 mm or better

It should have a license on 3D neuro perfusion , license on cardiac in 3 aspects: 1.

Functional, 2. Morphology and 3. Viability

MRI workstation for post processing

Possibilities for upgrades

**Patient table:**

Motorized table in vertical and Z direction

Table vertical height is from 550 mm up to scanner height

Maximum patient weight : 250 kg or better

MRI examination table should be movable up and down to accommodate both stretcher or non ambulant.

**Other items: MRI Compatible accessories**

Including Faraday Cage with all the necessary accessories and installation

Patient trolley is included

MRI compatible mobile patient monitor – 1 piece

MRI compatible stretcher – 1 piece

MRI wheel chairs – 1 piece

MRI compatible injector pump - 1 piece

MRI compatible oxygen cylinder 1 piece

MRI weighting scale – 1 piece

MRI compatible ECG electrodes – 1 piece

MRI Two ways communication system – 1 piece

MRI entertainment system with headphones

MRI compatible airway laryngoscopes (for adult and Paediatrics) – 2 pieces

MRI compatible patient beds – 2 pieces

MRI compatible fire extinguisher

Total metal detector – 1 piece

**Electrical systems:**

Including Universal Power Supply with 15 minutes backup capacity and voltage regulation of approx. +/- 25% from the normal voltage level for the workstation and monitors.

Including Universal Power Supply with backup capacity for the patient bed, so to make it possible to retract the patient table from the gantry in case of a power failure.

Including voltage regulator with range of approx. +/- 25% from the normal voltage level and 20% from the three -phased voltage level. Unit is connected to all electrical devices.

**Training, Installation and Utilization**

**Requirements for commissioning:** Manufacturer/supplier should perform installation, safety and operation checks before handover. Acceptance tests to be

specified and local clinical and technical staff to verify proper and full functioning of device.

**Training of user/s:** Application specialist shall provide training for users in operation and basic maintenance for all radiologists and all radiographers and refresher training on site every year for 5 years.

Comprehensive service training for 1 BME at Manufacturer's site.

### **Warranty and Maintenance**

**2 year warranty, three years comprehensive Maintenance and spare parts inclusive.** Lifetime support; spare parts, consumables should be available throughout the lifetime period of the machine.

Uptake time should be a minimum of 90%.

Proof of locally available technical support personnel, including CVs and work permit for foreign personnel.

Availability of technical personnel within the country should be stated; this should include CVs, work permits for foreign personnel.

Software should be flexible and provide the room for upgrade to add new parameters to be measured by the Machine and report format.

#### **WORKSTATIONS: (Total two (1 at operator console room & 1 at Radiologist room))**

1. Should have Flat screen Medical Diagnostic monitor (minimum 1Mega pixels coloured) of **at least 24"** with fast image refresh rate should be fast and preferably instantaneous and flicker free with Hard Disk of 1TB or more, capable of simultaneous viewing of all post processing functions and filming independently without the help of main console. Data transfer between the operator console & the satellite workstation should be instantaneous.

2. Should have 3GHz or latest processor with 16GB RAM.

3. Should have lung nodule evaluation software as standard.

4. MRI Angio – post processing software should include VRT, MIP, 3D SSD, Image fusion.

5. The advance vessel analysis, auto bone removal, small volume quantification, MRI Colonography with polyp measurement and auto registration of prone and supine views. MRI reporting should be possible independently of workstation.

6. Digital Subtraction Angiography should be available for Neuro Angiography

7. System should be offered with complete & latest Cardiac Post Processing packages on workstation.

8. Advanced Neuro package to be offered.

a. Hemoperfusion MRI: Evaluation of dynamic MRI data of Brain. Different Diagnosis of Acute ischemic stroke. Assessment of dynamic cerebral perfusion, CBV, CBF, TTP and tissue at risk classification.

- b. Tumour evaluation: Automated evaluation of Blood Brain Barrier disruptions in Brain Tumour.
  - c. Neuro perfusion weighted map (NWM): Visualization of colour coded source images for 3D display of acute stroke.
  - d. Neuro DSA MRI should provide Visualization of intracranial vascular structures based on digital bone removal.
9. The system should be user friendly with all functions menu driven. It should be modern user interface and 50 DVD blank (medical grade) should be provided.
10. All workstations should be full loaded with licensed post processing software capability.

**Documentation:** Operating and service manuals (in English) including lists of important spares and accessories - with their part numbers and list of equipment and procedures required for calibration and routine maintenance should be provided. Documentation must also show recommended procedures for disposal and any probable hazards to the environment and/or community.

**Life span:** Life span of the machine should be not less than 10 Years.

**Risk Classification:** As per ISO 14971:2007- Application of risk management to medical devices.

**Regulatory Approval / Certification:** TAEC, TBS and TMDA

#### **SYSTEM INTEGRATION**

- DICOM
- MRI image storage SCU/SCP
- Enhanced MRI storage SCU/SCP
- ECG waveform SCP/SCU
- Modality worklist SCU
- Query/retrieve SCU and SCP
- Storage commitment SCU
- Modality performed procedure step SCU
- IHE profiles supported
- Cloud -based storage option
- PACS with server



**COMPLIANCE STATEMENT  
ITEM NO, 2: 64 SLICE CT SCANNER**



**COMPLIANCE STATEMENT  
64 SLICE CT SCANNER**

S/N	Equipment Description	SIEMENS OFFERED SPECIFICATIONS	COMPLY / NOT COMPLY
	<b>64 Slice CT-Scan.</b> Should include Five years comprehensive Maintenance inclusive under Turnkey Service Contract while involving Tanzania Government Engineers from installation, training and Continuous Service with the aim of transferring knowledge to Users and Hospital Engineers.	<b>SIEMENS SOMATOM GO.TOP, 128 SLICE CT SCANNER WITH 64 ROW DETECTOR AS PER YOUR TENDER REQUIREMENT.</b>  Engineer Training Costs are indicated separately. Details of Courses are attached for information.	COMPLY
	<b>CT Gantry:</b> Aperture: 70 cms or more FOV: 50 cms or more	Gantry Aperture: 70cm. <b>SOMATOM GO.TOP DATASHEET page. 7</b>	COMPLY
	3-D laser lights for positioning. Gantry Physical tilt: +/- 30°.	Three laser light markers Coronal, sagittal, transversal laser light showing the isocenter position of the scan plane. 3D Laser lights Gantry Physical Tilt +/- 30° <b>SOMATOM GO.TOP DATASHEET Page 7.</b>	COMPLY
	Rotation time for 360° should be 0.33 sec or less.	Rotation time for 360° is 0.33 sec <b>SOMATOM GO.TOP DATASHEET Page 12, 23.</b> (0.33 sec Option is Included.)	COMPLY
	<b>X-Ray Generator:</b> High Frequency type.	Microprocessor controlled High Frequency type	COMPLY
	Power output: 75 kW or higher	Generator Power 75 kW. <b>SOMATOM GO.TOP DATASHEET Page 8.</b>	COMPLY

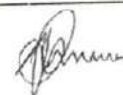
**COMPLIANCE STATEMENT  
ITEM NO. 2: 64 SLICE CT SCANNER**

	mA Range: 20-600 mA (With incremental steps of 10 mA) KV Range: 70-140kV in 10kV steps.	mA Range: 13-625 mA (With incremental steps of 10 mA) KV Range: 70-140kV in 10kV steps. <b>SOMATOM GO.TOP DATASHEET Page 8</b> (Standard Specification)	COMPLY
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**COMPLIANCE STATEMENT  
ITEM NO. 2: 64 SLICE CT SCANNER**

<b>X-Ray Tube:</b>		
Tube Voltage: 70-140 kV or more	Tube Voltage: 70-140 kV in 10kV Steps <b>SOMATOM GO.TOP DATASHEET page 8</b>	COMPLY
Anode Heat Storage Capacity of at least 7.0 MHU or higher. There should be Low dose filters in the collimator selectable for scanning ultra low dose Lung, Sinus and Orthopedic applications.	Tube anode heat storage capacity • 7.0 MHU There are low Dose Tin Filters built into the Collimator for scanning with Ultra Low Dose, in Lung, Sinus and Orthopedic applications. <b>SOMATOM GO.TOP DATASHEET Page 4, 5, 8, 12, 26, 27</b>	COMPLY
<b>Patient communication system:</b>		
An integrated intercom and Automated Patient Instruction System (API) should be provided. It should be possible to record multiple instructions in Kiswahili and English. There should be pre-recorded messages, but it should be possible to customize various instructions.	An integrated intercom and Automated Patient Instruction System (API) is provided. • Freely recordable for any language recording, including Kiswahili and English. • 7 API text pairs for respective languages available • Presets (Pre-recorded messages) in 41 languages available • New gentle voice for better patient comfort and increased audibility.  Freely Customisable. Our Applications Specialist will customise the API during the Initial Training Visit.  <b>SOMATOM GO.TOP DATASHEET Page 12</b>	COMPLY
<b>Patient Table:</b>		
Load carrying capacity at least of 220 Kg with positional accuracy of 1 mm or less	Table Option 227KG will be Supplied. Positional Accuracy 1mm <b>SOMATOM GO.TOP DATASHEET Page 9.</b>	COMPLY
Metal free scannable range of 150 cm or more	Metal free scannable range of 160 cm <b>SOMATOM GO.TOP DATASHEET Page 9</b>	COMPLY
Floating table top with foot pedal/hand control for positioning.	Horizontal Table top Movement with Hand Hed Remote Control for easy Positioning <b>SOMATOM GO.TOP DATASHEET Page 3.</b>	COMPLY
<b>Spiral Acquisition:</b>		
Scan Time should be 0.33 sec or less for full 360 degree rotation.	Scan time for 360° Rotation is 0.33 sec. <b>SOMATOM GO.TOP DATASHEET Page 12, 23.</b> 0.33 sec Option is included	COMPLY



**COMPLIANCE STATEMENT  
ITEM NO. 2: 64 SLICE CT SCANNER**

Minimum slice thickness should be 0.6 mm or less.	Minimum Slice Thickness is 0.6mm. <b>SOMATOM GO.TOP DATASHEET Page 11.</b>	COMPLY
Pitch Factor (volume pitch): freely selectable in auto mode and also manually variable between 0.5 to 1.5. Specify all possible pitch selections.	Standard Pitch factor • 0.15 – 1.5 Freely selectable and manually Variable. <b>SOMATOM GO.TOP DATASHEET Page 12.</b> 0.15, 0.2, 0.25 ... 1.5 is possible	COMPLY
Bolus Triggered or bolus chase spiral acquisition should be available.	CARE Bolus for Bolus Triggered or Bolus Chase Applications is Supplied as Standard. <b>SOMATOM GO.TOP DATASHEET Page 6, 21</b>	COMPLY
Real time x-ray dose reduction which combines both Z axis and angular tube current modulation to adjust the dose to the size and shape of individual.	Real time x-ray dose reduction which combines both Z axis and angular tube current modulation to adjust the dose to the size and shape of individual. CARE Dose4D together with CARE Child and Care kV ensure a Real time X-ray Dose reduction in rotational and Z axis directions with current Modulation to adjust the Dose to the Size, Shape and Anatomy of the Patient.	COMPLY
<b>Image Resolution:</b>		
High contrast resolution should be at least 15lp/cm for axial and spiral scan at 2% MTF with full FOV.	High-contrast Resolution for Full FOV • 2% MTF 15.1 lp/cm (± 10%) • 10% MTF 14.6 lp/cm (± 10%) • 50% MTF 12.0 lp/cm (± 10%) <b>SOMATOM GO.TOP DATASHEET Page 33</b>	COMPLY
Low contrast resolution – 5mm or less at 3.0 HU using 32 cm CATPHAN phantom on 10 mm slice thickness at a dose of 11mGy or less.	Low Contrast Resolution parameters. Object size: 5 mm Contrast difference : 3 HU CTDIvol (32 cm) 10.75 mGy Technique 1.0 s, 10 mm, 120 kV <b>SOMATOM GO.TOP DATASHEET Page 33.</b>	COMPLY
Data Acquisition System: Detector- Capable of acquiring at least 64/128 slices per 360 degree of rotation.	Siemens Proprietary STELLAR detector System 64 Acquired Slices per 360° rotation 128 Reconstructed Slices Per 360° Rotation. <b>SOMATOM GO.TOP DATASHEET Page 9</b>	COMPLY
At least 64 rows of independent detectors are required.	64 ROW DETECTOR <b>SOMATOM GO.TOP DATASHEET Page 9</b>	COMPLY



**COMPLIANCE STATEMENT  
ITEM NO. 2: 64 SLICE CT SCANNER**

Solid state or rare earth detectors of latest technology free from repeated calibration.	UFC (Ultra Fast Ceramics) Solid State Ceramic Stellar detector keeps electronic noise low, increases dose efficiency, and improves spatial resolution. Does not need repeated Calibration. <b>SOMATOM GO.TOP DATASHEET Page 9.</b>	COMPLY
<b>Image Reconstruction:</b>		
High speed real time reconstruction with display matrix of 1024x1024 or more.	High Speed Real Time Image Reconstruction with a Display Matrix of 512 in Spiral Mode	DEVIATION
Reconstructed slice thickness should be sub-millimeter to 10mm freely selectable.	Reconstructed Slice Thickness is 0.6 to 10 mm and is freely selectable. Changes may be made in the acquisition protocols or secondary reconstructions.  <b>SOMATOM GO.TOP DATASHEET Page 11.</b>	COMPLY
<b>Operator Console:</b>		
High resolution medical grade LCD color monitors of 23" or more. Should perform Registration, scheduling, protocol selection, Volume rendering, volume measurements, Multi-planar Reconstruction, and standard evaluation application and all available post processing functions without the help of the satellite workstation.	High Resolution LCD Medical Grade Color Monitor of size 23" is supplied. The Monitor is capable of display of Registration, Scheduling, Protocol Selection and modification, Volume Rendering, Volume Measurements, Multi-Planar Reconstruction and Standard Evaluation Application as well as Post Processing Functions. No separate workstation is necessary as all these functions are possible on the Main Console. <b>SOMATOM GO.TOP DATASHEET Page 3, 11.</b>	COMPLY
Raw Data storage with at least 700 GB Solid State Hard disc (SSD) having image storing capacity of 600,000 or more in 512x512 format.	Hard Disk 720GB SSD which can store 600,000 images in 512 x 512 matrix. <b>SOMATOM GO.TOP DATASHEET Page 11</b>	COMPLY
Auto-voice capability with custom designed key board and mouse. Archiving options: CD-R, DVD, should be available.	Newly Designed Control Console with very small footprint, with Custom Keyboard and mouse. CD/DVD burner available at Console.	COMPLY



COMPLIANCE STATEMENT  
ECHOCARDIOGRAPHY MACHINE



COMPLIANCE STATEMENT  
ECHOCARDIOGRAPHY MACHINE

S/N	EQUIPMENT DESCRIPTION	SIEMENS OFFERED SPECIFICATIONS	COMPLY / NOT COMPLY
	<b><u>ECHOCARDIOGRAPHY MACHINE SPECIFICATIONS</u></b>		
	<ul style="list-style-type: none"> <li>Should be a stand alone system integrated on a light weight mobile cart.</li> </ul>	Siemens Acuson NX3 Elite is a Versatile Echocardiography system, stand alone, on a light weight mobile cart. It has locable castors and a robust handle to move the machine around between rooms and also to be wheeled into Emergency rooms and	COMPLY
	<ul style="list-style-type: none"> <li>The system should be a color Doppler Echocardiography all digital beam former system to study the anatomical abnormalities and blood flow in the heart and associated vessels.</li> </ul>	The NX3 Elite is a Color Doppler Ultrasound system with a digital architecture, all digital beam former, and exceptionally sensitive to study blood flow studies in the heart and associated vessels to study any anatomic abnormalities.	COMPLY
	<ul style="list-style-type: none"> <li>Should be a latest generation Electronic Phased array Color Doppler system with minimum 512 Electronic independent channels.</li> </ul>	512 Electronic channels, independent of each other and has the capability of an electronic Phased array doppler system.	COMPLY

COMPLIANCE STATEMENT  
ECHOCARDIOGRAPHY MACHINE

• Should have 256 gray shades for sharp contrast resolutions.	256 shades of gray is standard feature.	COMPLY
• Should have 2D, M-mode, Anatomical M-mode, Color M-mode, PW and CW doppler, Steerable CW doppler.	The system has 2D, M-mode, Anatomical M-mode, Color M-mode, PW and CW doppler, Steerable CW doppler.	COMPLY
• The system should have a very high dynamic range of at least 200dB to pick up subtle echoes.	High dynamic Range of 200 dB.	COMPLY
• Should have three active ports.	Yes. 4 active transducer ports	COMPLY
• Should have 2-4 Mhz broadband phased array sector probe for adult cardiac imaging.	P4-2 Transducer included.	COMPLY
• Should have 3-8 Mhz broadband phased array sector probe for paediatric and neonatal cardiac imaging.	P8-4 Transducer included	COMPLY
• Should have 3-12 Mhz broadband Linear Array probe for vascular imaging with probe attachment for biopsy needle guidance (re-usable metallic). Five years comprehensive Maintenance inclusive.	VF12-4 Transducer included with a Needle guide kit. The system is inclusive of 5 years warranty equivalent to the Comprehensive Maintenance required by	COMPLY
Should have multi frequency convex array probe 3-10 MHz for paediatric imaging with probe attachment for biopsy needle guidance (re-usable	C8-5 Transducer included suitable for Pediatric Abdomen scanning. A Needle guide is not available for the transducer	
• Pencil probe (optional)	CW2 (is offered as option)	COMPLY
• Should have advanced tissue Harmonic	THI IS a standard feature.	COMPLY
• Should have color flow imaging.	Color Flow Imaging is standard	COMPLY
• Should have color Tissue Doppler Imaging.	Color Tissue Doppler Imaging is standard	COMPLY
• Should have gain control in Axial Plane.	Gain control in Axial Plane is available	COMPLY
• Should have triple imaging possibility on the system.	Triplex Mode is standard	COMPLY
• Should have PW/CW Doppler facility in all imaging phased array sector probes.	PW/CW Doppler is standard on all transducer	COMPLY



COMPLIANCE STATEMENT  
ECHOCARDIOGRAPHY MACHINE

• Should have 15" or more high resolution LCD monitor with tilt and swivel facility and should be able to view in all angles and all light conditions.	Yes. Flat Panel High resolution Display (LED), 21.5-inch widescreen	COMPLY
• Should have greater than 5000 images in the system hard disk drive	Yes. 300,000 images with compression	COMPLY
• Should have in built CD/DVD writer.	Yes. Built-in	COMPLY
• Should have patient reporting page with embedded images.	Yes, Reporting Format included, with image embedding, in 1, 2, 4, 6, 8 images etc possible	COMPLY
• Should have full functional measurement facility and calculation should be possible.	Full measurement facility in whole body Imaging is included.	COMPLY
• Should be supplied with thermal printer and 6 packs of thermal paper and the unit should have option to connect external printer.	Yes, Included.	COMPLY
• Unit should function with 200-240Vac, 50/60 Hz input power supply.	Yes, System is a single phase system and functions on 220V, 50Hz, inout power	COMPLY
• Unit should be supplied with suitable UPS with a minimum 30 minutes back-up time.	1kVA UPS with 30 min back up is included	COMPLY

*[Handwritten Signature]*





COMPLIANCE STATEMENT  
Digital X-ray Specifications



**COMPLIANCE STATEMENT  
DIGITAL X-RAY SPECIFICATIONS**

S/N	Equipment Description	SIEMENS OFFERED SPECIFICATIONS	COMPLY / NOT COMPLY
	Digital X-ray Specifications for Regional hospitals and above This Machine should be able to examine a minimum of 300 patients per day. Should have a high frequency generator of 50-150KW, Automatic exposure device, Anatomical programming radiography, overloading protection feature, digital display of KV and mAs. X-Ray tube should be Floor stand mounted. Patient dose display Axis should rotate 360 degree Floor fixed. Five years comprehensive Maintenance inclusive. High speed rotating anode and exposure should be 50 – 150KV and 0-Heat strength capacity of the anode at least 150,000HU. The digital detector (Two fixed Detectors) should be flat panel of latest The digital workstation should have high speed processors, preview time of 5s or less.	Siemens Multix Impact, Digital X-ray machine the Multix Impact is a Heavy Duty X-ray system and can easily perform over 300 X-ray examinations each day The High Frequency Generator has a kV range of 40kV to 150kV, has AEC for automatic exposures on Table Bucky and Chest stand Bucky. It has Organ programs for Anatomical Programming, inherent overload protection and a digital display of kV The X-ray tube is mounted on a Floor stand Has display of Patient Dose. The Floor Stand has the following movement. ± 180°, detents 0°, ± 90°, + 180° INCLUDED. In case Detector is damaged, the shock sensor will determine if the the detector was dropped. In such a case, the detector is not covered under warranty replacement 40 kV to 150 kV, 65 kW x-ray generator. Anode heat storage capacity 350,000 HU Two Digital Detectors of latest technology. High Speed Processors with image display within 5 sec	COMPLY COMPLY COMPLY COMPLY COMPLY COMPLY COMPLY COMPLY COMPLY COMPLY

COMPLIANCE STATEMENT  
Digital X-ray Specifications

<p>The workstation should provide basic functions for image processing and be compatible to other HIS.</p>	<p>Completely compatible with HIS systems based on HL7 protocols. Provides basic functions for image processing like window levels, zoom. Yes, these parameters are displayed.</p>	<p>COMPLY  COMPLY</p>
<p>Displayed Parameters: The console monitor should display patient ID, Exposure factors, warning sign and other important parameters.</p>		
<p>Components: Patient table:</p>		
<p>Mounted on heavy duty four castors with brakes to allow Longitudinal and lateral movement and better patient Floating table with up and down movement Table Size from 1800x800mm to 2200x800mm Patient weight: at least 150Kg Bucky wall stand:</p>	<p>This is a fixed x-ray system. A floating table provides longitudinal and lateral movement Elevating table: 51.5 cm to 90.0 cm; total lift 38.5 cm (tabletop) Table top dimension 2330 x 800mm 300kg</p>	<p>COMPLY  COMPLY  COMPLY</p>
<p>Height :1900mm Center Height Stroke Range from 400mm to 1600mm Source to image detector should include the range of 90cm to 125cm</p>	<p>Wall Stand Height 2300m. Center Height stroke 330 cm to 1800 SID 90 to 150cm</p>	<p>COMPLY  COMPLY</p>
<p>Detectors: Fixed Flat Panel Detectors Active Image Size at least 17inch x 17inch or 43cm x 43cm Pixel Size at least 140 micron Dimension : 460 x 460 x 15mm</p>	<p>Detectors: Flat Panel detectors . Wall Stand Detector 430x 430. 139micron. Bucky table detector 430x430. 139 micron.</p>	<p>COMPLY</p>
<p>Dust cover for control unit to be Protection against insect and rodent ingress to be incorporated.</p>	<p>Yes. Yes, Will be incorporated</p>	<p>COMPLY COMPLY</p>
<p>Electrical Requirements: Should meet Tanzania Electrical Standards (Voltage of between 220-240V with the standard frequency of 50Hz) with type G adaptor System.</p>	<p>As per Tanzania Electrical Standards. Voltage 400V, 3 Phase. This power is required because the Tube current specifications and power of the X-ray generator has been specified as 600ma, up to 150kV Yes, These are supplied</p>	<p>COMPLY</p>
<p>Accessories: Protective gear (lead apron minimum of 2 small, 2 medium and 2 large), Goggles (Minimum 1 small, 1 medium and 1 large). Gonad shield (minimum 2 small, 2 medium, 2 large), neck collar shield (minimum of 1small, 1 medium, 1 large), Gloves (Minimum 2 small, 2 medium and 2 Radiation hazards warning signs to be supplied with the machine.</p>	<p>Yes, Supplied</p>	<p>COMPLY</p>
<p>It should come with the Power Backup System with capacity of power storage for not less than 15 Minutes.</p>	<p>Yes, 80kVA UPS included.</p>	<p>COMPLY</p>



COMPLIANCE STATEMENT  
Digital X-ray Specifications

<p>3 extended workstations: medical diagnostic monitor (minimum 1Mega pixels black and white) and back up storage 3 TO 4T CD/DVD / flash re-writable burn</p>	<p>Mini PACS system with 3 workstations, with built in Medical Diagnostic monitor.</p>	<p>COMPLY</p>
<p>Radiation protective gears: X-ray should come with; (i) two (2) pairs of lead aprons with back protection 0.35/0.25mmPb, (ii) two (2) pairs of Thyroid Shield Model Classic 0.35mmPb (iii) two (2) pairs of Patient Apron with belt 0.50mmPb Leadlite DICOM compatibility Minimum PACS system with server</p>	<p>Yes, Supplied</p>	<p>COMPLY</p>
<p>Training, Installation and Utilization Requirements for commissioning: Manufacturer/supplier should perform installation, safety and operation checks before handover. Acceptance tests to be specified and local clinical and technical staff to verify proper and full functioning of device.</p>	<p>Yes, Supplied</p>	<p>COMPLY</p>
<p>Training of user/s: Application specialist shall provide training of users in operation and basic maintenance for two weeks. Training for BME at least 2 weeks from Warranty and Maintenance</p>	<p>YES will be done</p>	<p>COMPLY</p>
<p>Five years comprehensive maintenance should include service, spare parts and labour starting from the day of the acceptance testing of the machine.</p>	<p>Yes will be done. X-ray training is sufficient for 3 days! BME training is as per Manufacturer Training course, but is not expected to be over one week</p>	<p>COMPLY</p>
<p>Lifetime support; spare parts, consumables should be available throughout the lifetime period of the machine.</p>	<p>INCLUDED. In case Detector is damaged, the shock sensor will determine if the the detector was dropped. In such a case, the detector is not covered under warranty replacement. Yes, Lifetime support</p>	<p>COMPLY</p>
<p>Uptake time should be a minimum of 90%. Proof of locally available technical support personnel, including CVs and work permit for foreign Availability of technical personnel within the country should be stated; this should include CVs, work permits for foreign personnel.</p>	<p>90% Uptime is offered. Engineer Training certificates are attached. We do not have any Foreign personnel in Biomedical LOCAL ENGINEERS ARE AVAILABLE</p>	<p>COMPLY</p>
<p>Software should be flexible and provide the room for upgrade to add new parameters to be measured by the Machine and report format.</p>	<p>YES</p>	<p>COMPLY</p>



COMPLIANCE STATEMENT  
Digital X-ray Specifications

Documentation: Operating and service manuals (In English) including lists of important spares and accessories - with their part numbers and list of equipment and procedures required for calibration and routine maintenance should be provided. Documentation must also show recommended procedures for disposal and any probable hazards to the environment	YES, PROVIDED	COMPLY
Life span: Life span of the machine should be not less than 10 Years.	YES, 10 YEARS	COMPLY
Risk Classification: As per ISO 14971:2007- Application of risk management to medical devices.	YES. AVAILABLE	COMPLY
Regulatory Approval / Certification: TAEC, TBS and TMDA		
Mobilization tools - table belts - Foam pads - Sand bags	YES, INCLUDED	COMPLY



*[Handwritten signature]*

COMPLIANCE STATEMENT  
ITEM 4: MRI SCANNER



COMPLIANCE STATEMENT  
ITEM NO. 4: MRI SCANNER

S/N	Equipment Description	SIEMENS OFFERED SPECIFICATIONS	COMPLY / NOT COMPLY
	Should include Five years comprehensive Maintenance inclusive under Turnkey Service Contract while involving Tanzania Government Engineers from installation, training and Continuous Service with the aim of transferring knowledge to Users and Hospital Engineers.	SIEMENS MAGNETOM ALTEA, 1.5T MRI SCANNER WITH 70 CM BORE AS PER YOUR TENDER REQUIREMENT.  Engineer Training Costs are indicated separately. Details of Courses are attached for information.	COMPLY
	The machine should be New, of modern technology with a minimum of 1.5T magnet and should be provided with respective coils for scanning-brain, head, neck, spine, shoulder, Body/torso, Knee, Wrist, Cardiac imaging, Breast.	Offered SIEMENS Healthineers' Magnetom ALTEA 1.5 Tesla Super conducting MRI system with latest generation BioMatrix Technology including Tim 4G + DoT platform. Suitable for Whole Body Imaging. Head Coil used for Brain, Head Neck Coil used for Neck. Spine, Head and Neck coils used for Spine. Flex Coil Large used for Shoulder, Knee. Flex Coil Small used for Wrist. Biomatrix Body Coil Used for Body/Torso and Cardiac Imaging.	COMPLY
	70 cm or more Open Bore design.	70 cm Open bore design	COMPLY
	Weight should not exceed 4.2 tons.	Magnet weight 2700 Kgs (2.7 Tons)	COMPLY

COMPLIANCE STATEMENT  
ITEM 4: MRI SCANNER

It should be able to perform non contrast angiography, spectroscopy, plaque imaging and colour analysis, motion compensating radial techniques, brain volume imaging	Yes, Magnetom ALTEA can perform non contrast angiography, spectroscopy, plaque imaging and color analysis, motion compensating radial techniques, brain volume imaging	COMPLY
USB port for data transfer	Yes, available on Main Console Computer	COMPLY
At last gradient amplitude of 30mT/m, slew rate 125T/m/s.	Vector Gradient Performance is: Maximum effective amplitude <b>57 mT/m</b> Maximum effective slew rate <b>216 T/m/s</b> Gradient Performance for each axis is: Maximum amplitude 33 mT/m Maximum slew rate 125 T/m/s	COMPLY
Apart from that the Machine's work station be of latest technology and DICOM Compatible.	Magnetom Altea includes acquisition workplace that is the Latest released Version of Hardware and Software, also capable of post processing and DICOM	COMPLY
Should have zero boil off technology for saving helium.	Yes, includes Zero Helium Boil Off Technology. Siemens invented the Zero Boil-off technology almost	COMPLY
The examination table minimum patient load should be 200 kg at least two emergency buttons should be provided, one in the console room and the other in the magnet room.	Yes, Magnetom ALTEA patient table load capacity is 250 Kgs. An Emergency Run Down Unit (ERDU) Switch is provided in the Magnet Room and installed 2m above the floor as per International regulations. Another ERDU Switch is provided in the Console room. The use of these switches is at the Discretion of the Users and they are to be operated under live saving conditions only.	COMPLY
• Preparation of initial installation requirements to meet equipment specific needs.	Yes, includes RF Cage, UPS system for the whole system	COMPLY

*[Handwritten Signature]*



**FORM OF TENDER AND PRICE SCHEDULES SUBMITTED BY  
THE CONTRACTOR**

**Form of Tender**

Date: 12<sup>th</sup> November 2021

IFB N<sup>o</sup>: PA/009/2021-22/HQ/G/06 LOT 4

**SUPPLY, INSTALL, TEST, TRAIN AND COMMISSION OF MEDICAL EQUIPMENTS**

To:  
TENDER BOARD SECRETARY,  
MUHIMBILI NATIONAL HOSPITAL  
P.O.BOX 65000  
KALENGA STREET UPANGA  
DAR ES SALAAM

Ladies and/or Gentlemen,

Having examined the Tendering documents, including Addendum Nos. NONE, the receipt of which is hereby acknowledged, we, the undersigned, offer to design, manufacture, test, deliver, install, pre-commission and commission the Facilities under the above-named Contract in full conformity with the said Tendering documents for the sum of: **United States Dollars, Nine Million, One hundred and ninety seven thousand, Two hundred and Fourteen dollars and Eighty Six cents, USD 9,197,214.86** or such other sums as may be determined in accordance with the terms and conditions of the Contract. The above amounts are in accordance with the Price Schedules attached herewith and are made part of this Tender.

We undertake, if our Tender is accepted, to commence the supply and installation of Facilities and to achieve Completion within the respective times stated in the Tendering documents.

If our Tender is accepted, we undertake to provide an advance payment security and a performance security in the form, in the amounts, and within the times specified in the Tendering documents.

We declare that our tendering price did not involve agreements with other tenderers for the purpose of tender suppression.



## PACIFIC DIAGNOSTICS LTD

We are not participating, as tenderers, in more than one Tender in this tendering process other than alternative tenders in accordance with the tendering documents.

We hereby confirm Tanzania Institute Of Arbitrators, to be the Appointing Authority, to appoint the adjudicator in case of any arisen disputes in accordance with ITT 45.1

We agree to abide by this Tender, for a period of 120 days from the date fixed for submission of Tenders as stipulated in the Tendering documents, and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period.

We declare that, as tenderer(s) we do not have conflict of interest with reference to ITT clause 3.7

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Tender, and to contract execution if we are awarded the contract, are listed below

Name and address of agent	Amount and Currency	Purpose of Commission or gratuity
NONE	NONE	NONE
(if none, state "none").		

Until a formal contract is prepared and signed between us, this Tender, together with your written acceptance thereof and your notification of award, shall constitute a binding contract between us.

We understand that you are not bound to accept the lowest or any Tender you may receive.

# PACIFIC DIAGNOSTICS LTD

Dated this 12<sup>th</sup> day of November, 2021.



[signature]



In the capacity of CHIEF OPERATING OFFICER

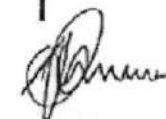
[position]

Duly authorized to sign this Tender for and on behalf of PACIFIC DIAGNOSTICS LIMITED.

[name of Tenderer]

**B. MUHIMBILI NATIONAL HOSPITAL REQUIREMENTS**  
**Schedules of Rates and Prices**  
**Schedule No. 1. Goods, and Mandatory Spare Parts Supplied from Abroad**

Item	Description	Model	Qty -1	Unit Price, US DOLLARS	Total Price (1) x (2) US DOLLARS
				DDP -2	
1	Mechanical Ventilator Machine for Adult and Paediatric	Draeger Savina 300	12	52,297.82	627,573.87
	ALTERNATE. Mechanical Ventilator Machine for Adult and Paediatric	Getinge Servo AIR	12	40,991.04	
2	Mechanical Ventilator Machine for Neonates	DRAEGER BABYLOG VN600	3	55,112.83	165,338.50
	ALTERNATE. Mechanical Ventilator Machine for Neonates	Getinge Servo I,	3	44,493.41	
3	Portable Mechanical Ventilator	Draeger Savina 300	4	53,847.36	215,389.44
	ALTERNATE. Portable Mechanical Ventilator	Getinge Servo Air	4	40,991.04	
4	Cardiac Monitor (Normal)	Draeger	15	13,279.03	199,185.43
5	Cardiac Monitor (Invasive)	Draeger	8	16,041.03	128,328.21
6	Portable Monitor	Draeger	7	8,557.50	59,902.47
7	Neonatal Monitor	Draeger	1	10,038.07	10,038.07
8	Fixed Patient Monitors	Draeger	9	16,668.37	150,015.35
9	Transducer for invasive monitors (consumable) double or single	Draeger	300		-
10	MRI 1.5 Tesla	Siemens Magnetom Altea	1		-



Item	Description	Model	Qty -1	Unit Price, US DOLLARS		Total Price (1) x (2) US DOLLARS
				DDP -2		
	MRI Machine. Siemens Magnetom Altea, 1.5Tesla with 70 cm wide bore. With 5 years warranty included. Additionally may be required (Not specified in your Requirements	Siemens Healthcare GmbH, Germany	1		1,356,653.04	1,356,653.04
	Uninterruptible Power Supply (UPS) Size 80kVA - Online UPS with 10 minutes Back up.	Eaton. India	1		24,000.00	24,000.00
	Contrast Media Pressure Injector for MRI system, (with 200 nos Syringes and Patient lines as starter kit).	Medtron AG, Germany	1		27,000.00	27,000.00
11	CT Scan 64 Slices 64 Slice CT Scan machine as specified in your requirements. Somatom GO.TOP 128 Slice CT System with 5 years warranty included.	Siemens Somatom GO.TOP Manufacturer: SIEMENS HEALTHCARE GmbH, Germany	1		782,477.49	782,477.49
	Lead Glass Size 150 x 100, Pb content 2mm	Schott, Germany	1		3,800.00	3,800.00
	Uninterruptible Power Supply (UPS) Size 120kVA - Online UPS with 10 minutes Back up.	Eaton, India			27,000.00	-
	Cardiac Acquisition Software	Siemens Healthcare GmbH, Germany	1		30,000.00	30,000.00
	Contrast Media Pressure Injector, Dual Head, (with 200 nos Syringes and Patient lines as starter kit).	MEDTRON AG, Germany	1		20,000.00	20,000.00
	CT real time fluoroscopy	Siemens Healthcare GmbH	1		60,000.00	60,000.00
	Advances 3D analysis	Siemens Healthcare GmbH	1		10,000.00	10,000.00

Item	Description	Model	Qty -1	Unit Price, US DOLLARS	Total Price (1) x (2) US DOLLARS
				DDP -2	
	Dynamic cerebral perfusion mapping	Siemens Healthcare Gmbh	1	6,000.00	6,000.00
	Dental CT	Siemens Healthcare Gmbh	1	5,000.00	5,000.00
	Two Flat screens medical grade LCD Type of at least 24" with fast image refresh rate should be fast and preferably instantaneous and flicker free.	Siemens Healthcare Gmbh	1	8,000.00	8,000.00
	Additional external hard disk of minimum 2TB should be provided.	SAMSUNG/SANDISK	1	150.00	150.00
	Lung nodule evaluation software to be provided in workstation, and not in operator console.	Siemens Healthcare Gmbh	1	10,000.00	10,000.00
	WORKSTATIONS: (Total four- two at operator console room & two at Radiologist room)	Siemens Healthcare Gmbh	1	50,000.00	50,000.00
	Suitable servo controller stabilizer provided with resettable over current breaker shall be fitted for protection.		1	13,000.00	13,000.00
	Good quality light weight vinyl Lead Eye Goggles, Thyroid Shields, Aprons and of .5mm lead equivalent : 3 units each	RADIXRAY Turkey or Kiran India	1	2,500.00	2,500.00
	Patient transport trolley : 2 units		1	3,200.00	3,200.00
	Instrument trolley: 2 units.		1	1,600.00	1,600.00
	Non Invasive Monitor of 12" screen with TFT colour display with the following accessories:	GE MEDICAL SYSTEMS	1	7,000.00	7,000.00
	Defibrillator Monitor/ Inbuilt Recorder Biphasic with auto and manual mode up to 360 Joule :	ZOLL Defbrillator	1	7,000.00	7,000.00
	• 1000 units syringes with tubings to be provide with the machine.	MEDTRON AG	1	11,000.00	11,000.00

Item	Description	Model	Qty -1	Unit Price, US DOLLARS		Total Price (1) x (2) US DOLLARS
				DDP -2		
	• Resuscitation accessories including Silicone resuscitation bag, Intubation set with laryngoscope (Adult & Pediatric) should be supplied.		1		750.00	750.00
	• Insufflation pump sets for CT colonography with facility for delivery of heated CO2 gas and automatic regulation of flow rate and pressure with high degree of precision. Accessories like tubing (10 units) & CO2 cylinders (5 units) to be provided.		1		8,500.00	8,500.00
	• Fire extinguisher, smoke detector with alarm system to be provided (Suitable quantity for 500 Sq. ft area).		1		1,000.00	1,000.00
	• Supplier should perform anti termite & anti rodent measures during installation and maintenance.		1		700.00	700.00
	• Post processing room chairs : 5 units		1	\$	1,000.00	1,000.00
	• Executive Chairs for reporting: 2 units		1	\$	1,000.00	1,000.00
	• Executive Tables for reporting : 2 units		1		1,000.00	1,000.00
	• Patient waiting chairs : 8 units in 2 rows ( 4 Chairs in one row)		1		1,000.00	1,000.00
	• One laptop and one laser printer with scanning & copy facility should be provided with latest specification for reporting & tele-radiology.	HP or DELL make Laptop. Laser Printer HP Color Laser	1		2,000.00	2,000.00
	• Executive Tables for reporting : 2 units		1		3,600.00	3,600.00
	Biomedical Engineer Training for CT Scanner Maintenance.					-

Item	Description	Model	Qty -1	Unit Price, US DOLLARS	Total Price (1) x (2) US DOLLARS
				DDP -2	
	Basic Course for First Line Maintenance, Siemens CONCENTRAIN for Hospital Biomedical Engineers. This training shall be carried out by a Siemens Trainer and will be done in Tanzania. The course is a 5 day course. The fees indicated are for each Engineer		1	15,000.00	15,000.00
12	USS Machine	Siemens Acuson NX3 with Convex, Linear and Endo-V transducers, with 5 years warranty	1	45,000.00	45,000.00
13	Portable Digital X-ray Machine	Siemens Elara Max, with 5 years warranty	1	172,000.00	172,000.00
14	Dedicated Angio Suite (Artis zee ceiling monoplane)	Siemens Artis zee, with 5 years warranty	1	1,078,000.00	1,078,000.00
TOTAL (to Schedule No. 5. Grand Summary)					5,324,701.85


Name of Tenderer:  
PACIFIC DIAGNOSTICS LIMITED

Signature of Tenderer




## NEGOTIATION MINUTES



## RECORD OF NEGOTIATIONS

**Name of the Procuring Entity:** MUHIMBILI NATIONAL HOSPITAL

**Tender ID No.:** PA/009/2021-22/HQ/G/06 LOT 4

**Subject of Procurement:** SUPPLY, INSTALL, TEST, TRAIN AND COMMISSION OF MEDICAL EQUIPMENT


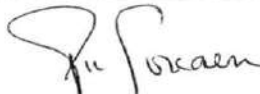
**Method of Procurement:** SINGLE SOURCE

PART 1: RECORD OF NEGOTIATIONS	
ISSUE	AGREEMENT (WITH FULL DETAILS)
<b>CT SCAN MACHINE</b>	
To reduce the price of CT SCAN 64 slices to match the given budget	<p><b>MNH:</b></p> <ol style="list-style-type: none"> <li>1. Negotiated price is 802,951.39 USD with 5 years warrant from quoted price of 1,066,277.49 USD</li> <li>2. Negotiated price is 742,115.55 USD with 3 years warrant from quoted price of 1,066,277.49 USD</li> <li>3. Supplier has offered a discount of 2.5% on the machine price (1,066,277.49 USD)</li> </ol> <p><b>RRH (Tumbi &amp; Amana):</b></p> <ol style="list-style-type: none"> <li>1. Negotiated price is 958,915.55 USD each with 5 years warrant from quoted price of 1,066,277.49 USD plus additional supplies like cardiac software, dental CT, CT fluoroscopy</li> </ol>
<b>ULTRASOUND MACHINES</b>	
To reduce the price of portable ultrasound machine to match the given budget	<p><b>Amana and Temeke:</b></p> <p>Negotiated price of is 19,497.40 USD from quoted price of 34,500.00 USD (Amana) and 34,500.00 USD (Temeke)</p>
To reduce the price of ultrasound machine to match the given budget	<p><b>MNH:</b></p> <p>Negotiated price is 40,000.00 USD from quoted price of 45,000.00 USD</p>
<b>MRI MACHINE</b>	
To reduce the price of MRI 1.5 Tesla to match the given budget	<p>Negotiated price reduced to Tshs. 2,600,000,000/= after reducing the bore size from 70 to 60 and discount by supplier</p>



<b>PORTABLE DIGITAL X-RAY MACHINE</b>	
To reduce the price of portable Digital X-ray machine to match the given budget	Negotiated price is 155,444.44 USD after vendor's discount and reduction of warrant period to 3 years from quoted price of 172,000 USD with 5years warrant
<b>ANGIO SUITE MACHINE</b>	
To reduce the price of dedicated Angio suite to match the given budget	<ol style="list-style-type: none"> <li>1. With Standard table, standard monitors, (1+1) years of warrant, No generator however supplier will provide <sup>connection</sup> compressor to the available generator to allow completion of ongoing MRI scan and completion of Angio suite procedure then resume MRI scans</li> <li>2. Negotiated price is to 878,249.56 USD from quoted price of 1,078,000.00 USD</li> </ol>

We hereby certify that the above is a true and accurate record of the negotiations:

For the Procuring Entity	For the Tenderer/Consultant
Signature: 	Signature: 
Name: GERALD JEREMIAS	Name: PRASHANT GOKARN
Position: CHAIRMAN	Position: DIRECTOR, PACIFIC DIAGNOSTICS LTD
Date: 01.12.2021	Date: 1.12.2021



## RECORD OF NEGOTIATIONS


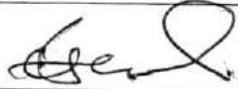

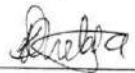
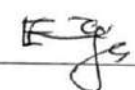
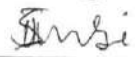

Name of the Procuring Entity: MUHIMBILI NATIONAL HOSPITAL




Tender ID No.: PA/009/2021-22/HQ/G/06 LOT 4

Subject of Procurement: SUPPLY, INSTALL, TEST, TRAIN AND COMMISSION OF MEDICAL EQUIPMENT

Method of Procurement: SINGLE SOURCE

## PART 2: RECORD OF ATTENDANCE AT NEGOTIATIONS

SN	Name	Position	Name of Tenderer /Firm/Organization	Signature
1	PRASHANT GOKARN	DIRECTOR	PACIFIC DIAGNOSTICS LTD.	
2	GERALD JEREMIAH	CHAIRMAN	MNH	
3	EMMANUEL D. MIENGA	MEMBER	MNH	
4	DR HELENA MACHRYA	MEMBER	TRRH	
5	Dr Eva Shang'ya	Member	TRRH	
6	DR IKUPA MWA SUMBWI	MEMBER	TRRH	
7	DR GRACE MELLIX	-11-	TRRH	

8	DEGRATAS CHAGULA	MEMBER	TUMBI RPH	
9	Dr. Lyizibert S. Mrosso	member	TUMBI RPH	L. Mrosso
10	EWANA NWHUMALI	MEMBER	MRRH	Abshumali
11	MASID K. MSEMWA	MEMBER	MNIT	
12	Medard Maluya	Member	MNTA	
13				
14				
15				
15				
17				
18				
19				

<b>B. MUHIMBILI NATIONAL HOSPITAL REQUIREMENTS</b>								
<b>S/No</b>	<b>Item Description</b>	<b>Qty</b>	<b>ESTIMATED UNIT PRICE</b>	<b>ESTIMATED TOTAL PRICE</b>	<b>BID PRICE</b>	<b>TOTAL BID PRICE</b>	<b>NEGOTIATED PRICE</b>	<b>TOTAL NEGOTIATED PRICE</b>
<b>10</b>	MRI 1.5 Tesla	1	2,600,000,000	2,600,000,000.00	3,243,232,604.16	3,243,232,604.16	2,600,000,000	2,600,000,000
<b>11</b>	CT Scan 64 Slices	1	1,600,000,000	1,600,000,000.00	2,456,703,336.96	2,456,703,336.96	1,850,000,000	1,850,000,000
<b>12</b>	USS Machine	1	93,000,000	93,000,000.00	103,680,000.00	103,680,000.00	92,160,000	92,160,000
<b>13</b>	Portable Digital X-ray Machine	1	320,000,000	320,000,000.00	396,288,000.00	396,288,000.00	358,143,990	358,143,990
<b>14</b>	Dedicated Angio Suite (Artis zee ceiling monoplane)	1	2,027,000,000	2,027,000,000.00	2,483,712,000.00	2,483,712,000.00	2,023,486,986	2,023,486,986
				<b>6,640,000,000.00</b>		<b>8,683,615,941.12</b>		<b>6,923,790,976</b>

**POWER OF ATTORNEY**

**STANDARD POWER OF ATTORNEY**

TO ALL IT MAY CONCERN

THAT BY THIS POWER OF ATTORNEY given on the 11<sup>th</sup> November 2021,  
WE the undersigned PACIFIC DIAGNOSTICS LIMITED of Plot 46-48, Mikocheni Industrial Area,  
Coca-Cola road, P.O. Box 34056, Dar es Salaam, Tanzania , by virtue of authority conferred to us  
by the Board Resolution No of 2019, do hereby ordain nominate and appoint NAFTAL PHILLIP  
of P.O. Box 34056, Dar es Salaam, Tanzania to be our true lawful Attorney and Agent, with full  
power and authority, for us and in our names, and for our accounts and benefits, to do any, or all  
of the following acts, in the execution of tender No. PA/009/2021-22/ HQ/G/06 LOT 4 that is to say;

To act for the company and do any other thing or things incidental for PA/009/2021-22/  
HQ/G/06 LOT 4 of SUPPLY, INSTALL, TEST, TRAIN AND COMMISSION OF  
MEDICAL EQUIPMEMNTS for the MUHIMBILI NATIONAL HOSPITAL;

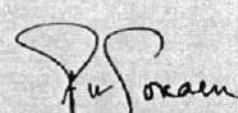
AND provided always that this Power of Attorney shall not revoke or in any manner affect any  
future power of attorney given to any other person or persons for such other power or powers  
shall remain and be of the same force and affect as if this deed has not been executed.

AND we hereby undertake to ratify everything, which our Attorney or any substitute or  
substitutes or agent or agents appointed by him under this power on his behalf herein before  
contained shall do or purport to do in virtue of this Power of Attorney.


SEALED with the common seal of the said PACIFIC DIAGNOSTICS LIMITED and delivered in  
the presence of us this 11<sup>th</sup> of November 2021

IN WITNESS whereof we have signed this deed on this 11<sup>th</sup> of November 2021 at Dar es Salaam  
for and on behalf of PACIFIC DIAGNOSTICS LIMITED

SEALED and DELIVERED by the  
Common Seal of PACIFIC DIAGNOSTICS LIMITED  
This 11<sup>th</sup> November 2021

}   
.....  
DONOR

BEFORE ME:

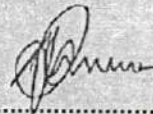
  
.....  
COMMISSIONER FOR OATHS **HELLEN A. MRBMA**  
**ADVOCATE**  
**P. O. Box 7318**  
**DAR-ES-SALAAM**



ACKNOWLEDGEMENT


I NAFTAL PHILLIP doth hereby acknowledge and accept to be Attorney of the said PACIFIC DIAGNOSTICS LIMITED under the terms and conditions contained in this POWER OF ATTORNEY and I promise to perform and discharge my duties as the lawfully appointed Attorney faithfully and honestly.

SIGNED AND DELIVERED by the said  
NAFTAL PHILLIP, Who is known to me personally  
This 11<sup>th</sup> November 2021



.....  
DONEE

BEFORE ME

 **HELLEN A. MREMA**  
.....  
COMMISSIONER FOR OATHS **ADVOCATE**  
**P. O. Box 7318.**  
**DAR-ES-SALAAM**



## Appendix 1: Terms and Procedures of Payment

The following Terms and Procedures of Payment are given as a guideline suitable for Supply and Installation Contracts. In the event that the Employer wishes to introduce different terms of payment to the following, it shall first obtain the written approval of the Bank for the terms it intends to use. If additional Price Schedules are introduced, suitable terms of payment in respect of such additional schedules must be added.

In accordance with the provisions of GCC Clause 12 (Terms of Payment), the Employer shall pay the Contractor in the following manner and at the following times, on the basis of the Price Breakdown given in the section on Price Schedules. Payments will be made in the currencies quoted by the Tenderer unless otherwise agreed between the parties. Applications for payment in respect of part deliveries may be made by the Contractor as work proceeds.

### TERMS OF PAYMENT

#### Schedule No. 1. Goods Supplied from Abroad

In respect of goods supplied from abroad, the following payments shall be made:

Ten percent (10%) of the total CIF or CIP amount as an advance payment against receipt of invoice and an irrevocable advance payment security for the equivalent amount made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of the goods shipped FOB or delivered to the site, as evidenced by shipping and delivery documents.

Eighty percent (80%) of the total or pro rata FOB or FCA amount upon *Incoterm* "FOB" or "FCA," within forty-five (45) days after receipt of invoice and shipping documents. In the event that shipping is delayed upon the written instruction of the Employer for more than twenty-eight (28) days beyond the date shown in the Programme of Performance provided in accordance with GCC sub-Clause 18.2, the Contractor may make application for this part of the payment against warehouse receipts, provided always that the goods are ready for shipment on the date shown in the said Programme.

Eighty percent (80%) of the total or pro rata CIF or CIP amount upon *Incoterm* "CIF or "CIP," upon delivery to Site within forty-five (45) days after receipt of invoice, less eighty percent (80%) of the FOB amount already paid or authorized for payment.

Five percent (5%) of the total or pro rata CIF or CIP amount upon issue of the Completion Certificate, within forty-five (45) days after receipt of invoice.

Five percent (5%) of the total or pro rata CIF or CIP amount upon issue of the Operational Acceptance Certificate, within forty-five (45) days after receipt of invoice.

#### Schedule No. 2. Goods Supplied from within the United Republic of Tanzania

In respect of goods supplied from within the, United Republic of Tanzania the following payments shall be made:

Ten percent (10%) of the total EXW amount as an advance payment against receipt of invoice, and an irrevocable advance payment security for the equivalent amount made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of the goods delivered to the site, as evidenced by shipping and delivery documents.

Eighty percent (80%) of the total or pro rata EXW amount upon *Incoterm* "Ex-Works," upon delivery to the site within forty-five (45) days after receipt of invoice.

Five percent (5%) of the total or pro rata EXW amount upon issue of the Completion Certificate, within forty-five (45) days after receipt of invoice.

Five percent (5%) of the total or pro rata EXW amount upon issue of the Operational Acceptance Certificate, within forty-five (45) days after receipt of invoice.

#### Schedule No. 3. Local Transportation

In respect of local transportation for both the foreign currency (where applicable) and the local currency portions, the following payments shall be made:

Ten percent (10%) of the total local transportation amount as an advance payment against receipt of invoice, and an irrevocable advance payment security for the equivalent amount made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of the Goods delivered to the site, as evidenced by shipping and delivery documents.

Ninety percent (90%) of the total or pro rata local transportation amount upon delivery to the site within forty-five (45) days after receipt of invoice.

#### Schedule No. 4. Installation Services

In respect of installation services for both the foreign and local currency portions, the following payments shall be made:

Ten percent (10%) of the total installation services amount as an advance payment against receipt of invoice, and an irrevocable advance payment security for the equivalent amount made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of work performed by the Contractor as evidenced by the invoices for installation services.

Eighty percent (80%) of the measured value of work performed by the Contractor, as identified in the said Programme of Performance, during the preceding month, as evidenced by the Employer's authorization of the Contractor's application, will be made monthly within forty-five (45) days after receipt of invoice.

Five percent (5%) of the total or pro rata value of installation services performed by the Contractor as evidenced by the Employer's authorization of the Contractor's monthly applications, upon issue of the Completion Certificate, within forty-five (45) days after receipt of invoice.

Five percent (5%) of the total or pro rata value of installation services performed by the Contractor as evidenced by the Employer's authorization of the Contractor's monthly applications, upon issue of the Operational Acceptance Certificate, within forty-five (45) days after receipt of invoice.

In the event that the Employer fails to make any payment on its respective due date, the Employer shall pay to the Contractor interest (On the rate of the Bank of Tanzania on the date of signing of the contract) on the amount of such delayed payment at the rate of 0.0001% per month for period of delay until payment has been made in full.

#### PAYMENT PROCEDURES

The procedures to be followed in applying for certification and making payments shall be as follows:

*Appropriate procedures, normally through letters of credit, are to be inserted (including forms and certificates annexed as appropriate) by the Employer in the Tendering documents.*