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Ministry of Health

Roshanee Building

Male’ City

SCOPE OF WORK.

***Name of the Project: Supply and installation of RO DESALINATION PLANT – 20TPD at L.Gan Regional Hospital***

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| --- | --- | --- | --- | --- |
| **#** | **Description** | **Qty** | **Rate** | **Total** |
| 1 | Supply, Complete Installation and commissioning of RO Desalination Plan 20TPD (Production Capacity: 20 cbm/day) as per technical Specification. | 01 Item |  |  |
| 2 | Supply, Complete Installation and commissioning of Filter Feed Pump as per technical Specification. | 01 Item |  |  |
| 3 | Supply, Complete Installation and commissioning of Bisulphite Dosing as per technical Specification. | 01 Item |  |  |
| 4 | Supply, Complete Installation and commissioning of Media Filter as per technical Specification. | 01 Item |  |  |
| 5 | Supply, Complete Installation and commissioning of Cartridge Filter as per technical Specification. | 01 Item |  |  |
| 6 | Supply, Complete Installation and commissioning of High Pressure Pump as per technical Specification. | 01 Item |  |  |
| 7 | Supply, Complete Installation and commissioning of Pressure Vessels as per technical Specification. | 01 Item |  |  |
| 8 | Supply, Complete Installation and commissioning of Reverse Osmosis Elements as per technical Specification. | 01 Item |  |  |
| 9 | Supply, Complete Installation and commissioning of Cleaning Tank as per technical Specification. | 01 Item |  |  |
| 10 | Supply, Complete Installation and commissioning of Pressure Gauges (Local Indication) as per technical Specification. | 01 Item |  |  |
| 11 | Supply, Complete Installation and commissioning of Flow Meters (Local Indication) as per technical Specification. | 02 Nos. |  |  |
| 12 | Supply, Complete Installation and commissioning of Conductivity Meter (Digital - Panel Mounted) as per technical Specification. | 01 Nos. |  |  |
| 13 | Supply, Complete Installation and commissioning of Control Panel as per technical Specification. | 01 Nos. |  |  |
| 14 | Supply, Complete Installation and commissioning of UPVC Piping / Fittings as per technical Specification. | 01 Item |  |  |
| 15 | Supply, Complete Installation and commissioning of Stainless Steel Piping / Fittings as per technical Specification. | 01 Item |  |  |
| 16 | Supply, Complete Installation and commissioning of Skid as per technical Specification. | 01 Item |  |  |
| 17 | Supply, Complete Installation and commissioning of Bore Hole 6" dia per technical Specification. Including 1 Davy pump PM450 (or equivalent), 1 Sand Filter. The depth should be up to 30 to 40 meters & 1 tank (HDPE) of 1500 liters, Environment impact assessment reports required for drilling and installation and EPA approval required for whole project. Rates includes to prepare Environmental impact assessment. | 01 Item |  |  |
| 18 | **Fresh Water Distribution System** |  |  |  |
| 18.1 | Supply, Complete Installation and commissioning of Davey Fresh Water Pump XF 192 with control board or equivalent per technical Specification. | 01 Nos. |  |  |
| 18.2 | Supply, Complete Installation and commissioning of Davey Booster Pump X90 or equivalent as per technical Specification. | 01 Nos. |  |  |
| 18.3 | Supply and Complete Installation (foundation base as per drawing) of storage tanks (5000 liters), Sintex or Equivalent at hospital premises. | 04 Items |  |  |
| 18.4 | Supply and Complete Installation (foundation base as per drawing) of storage tanks (5000 liters), Sintex or Equivalent at hospital accomodation premises. | 04 Items |  |  |
| 18.5 | Supply and complete Installation of settlement tanks (2500 Liters), Sintex or equivalent | 01 Item |  |  |
| 18.6 | Supply and complete Installation of fresh water tanks (2500 Liters), Sintex or equivalent | 01 item |  |  |
| 20.0 | **Electrical Installations.** |  |  |  |
| 20.1 | Main connection from Hospital’s Electrical system to Plant. Rates Shall Include for cabling and conduits, Plus complete connection to Hospital’s Electrical System. The Cabling length from existing electrical D-Board to Plant House shall be checked by the bidder before bidding. | 01 Item. |  |  |
| 21.0 | **Reject Out fall Pipe (Brine Water Discharge pipe).** |  |  |  |
| 21.1 | Design and Complete Installation of Outfall Pipe as per EPA Regulation, Rates shall include supply of materials excavation of trench, laying of pipe and backfilling of trench from RO Plant to lagoon. Pipes and fittings shall be of UPVC and should be leak tested approved by consultant before backfilling. The outfall pipe shall be laid to the location designated in the EIA report and approval from EPA,  Brine water discharge line should be gravity flow if possible. | 01 Item |  |  |
| 22.0 | **Intake Line.** |  |  |  |
| 22.1 | Design and Complete Installation of Intake pipeline, Rates shall include supply of materials excavation of trench, laying of pipe and backfilling of trench from Bore hole to Plant. Pipes and fittings shall be of UPVC and should be leak tested approved by consultant before backfilling. The piping length shall be from the borehole location (as per the EIA report) to Plant House. ( This shall be considered by the bidder before bidding) | 01 Item |  |  |
| 23.0 | **Product transfer Line.** |  |  |  |
| 23.1 | Design and Complete Installation of Product line transfer pipeline, Rates shall include supply of materials excavation of trench, laying of pipe and backfilling of trench from Plant to Storage tanks. Pipes and fittings shall be of UPVC and should be leak tested approved by consultant before backfilling. The piping length shall be check by the contractor before bidding. The Plant House location is marked in the site plan attached to this document. | 01 Item |  |  |
|  | A separate distribution line shall be laid to Hospital Accommodation block. Design and complete installation of water distribution pipe line (From product Storage) to the accommodation block storage tanks. Bidder shall check the piping length and site condition before bidding. | 01 Item |  |  |
|  | **Total** |  |  |  |

***Note: Contractor should include GST and other relevant charges. When Proposing the Duration Contractor shall consider the days to get EIA approval for bore hole from EPA.***

***When bidding, the bidder shall fill this BOQ or the bidder can include a separate quotation which should include maximum details as per BOQ/technical specification.***

***Warranty period of RO plant and Bore Hole and other materials should be minimum 1 year.***

***After installation of RO plant and Bore Hole shall be maintained/troubleshoot by the installer for period of 1 year. Also a Hospital staff should be trained to maintained/troubleshoot the RO plant and Bore Hole within this 1 year.***