

## **SCOPE OF WORK**

The scope of work for the Tenderer shall include planning, soil testing & survey, design, engineering, detailed calculations, detailed drawings, supply of all materials, equipments, auxiliaries, fabrication, construction, erection, painting, supervision, testing, trial-run, O&M training & commissioning including all civil, structural, mechanical, electrical, piping, instrumentation, utility works of 5.0 MLD Capacity Water Treatment Plant for Supply of Drinking Water to National Institute of Technology, Rourkela on '**Turnkey Basis**' in conformity with the technical specifications & other details as enumerated further.

The scope of work shall also include repair of existing two Hilltop RCC Reservoirs, survey of the area, soil investigation, site clearing, site levelling, temporary approach roads, temporary power supply & lighting.

### **1.0 Location:**

<b>Site</b>	<b>:</b>	<b>National Institute of Technology</b>
<b>Town</b>	<b>:</b>	<b>Rourkela</b>
<b>District</b>	<b>:</b>	<b>Sundergarh</b>
<b>State</b>	<b>:</b>	<b>Odisha</b>
<b>Connected to</b>	<b>:</b>	<b>National Highway 23</b>
<b>Railway Station</b>	<b>:</b>	<b>Rourkela, S.E. Rly</b>

### **2.0 Drinking Water Treatment Plant of 5.0 MLD capacity with following Units, facilities & ancillary structures at NIT, Rourkela –**

- a) Cascade Aerator
- b) Flash Mixer Unit
- c) Flow Measuring Flume / Device
- d) Primary Clarifier – @ 5.0 MLD
- e) Clariflocculators – @ 5.0 MLD
- f) Filter House with Constant Rate Rapid Gravity Filter Beds of 5.0 MLD, with Backwash Pump Sets & Sump, Centrifugal Air Blowers etc.
  
- g) Overhead Backwash Water Storage Tank
- h) Drinking Water Reservoir (Underground) – 1 unit @ 50 KL
- i) Testing Laboratory with Lab. Instruments
- j) Control Room
- k) Toilet facility
- l) Chemical House with Storage & Chemical Solution Preparation Tanks for Alum, PAC, Lime & Bleaching Powder alongwith Electrical Agitators & Dosing Devices, Metering Pumps, Piping & Valves etc.
- m) Chlorine House with Chlorinator & Chlorine Dosing Facility
- n) Required Sump, Channels, Underground Drainage, Break-pits, Man-holes
- o) Required Inter-connection of Raw Water Header at Cascade Aerator & Clear Water Header at Clear Water Reservoirs, Piping, Valves, Sluice Gates and Chemical Dosing Piping etc.
- p) Internal Roads, Walkways & Pavements

- q) Sludge & Waste Water Disposal facility
- r) Sludge Drying Pond.
- s) Miscellaneous items like Stairs-case, Ladders, Hand Railings & Safety Chains, Flow Sheet Board, Sign Boards, Fire Extinguishers etc.
- t) All electrics, OH Electric Monorail & Hoists, MCC Panels, DOL Starters, MCBs, MOCBs, DBs, Indication Lamps, Voltage & Ampere Meters, Power Cables & Control Cables, Conduits, Lamps & Illumination, Exhaust Fans & Ceiling Fans, Earthing & Earthing Pits etc.

**3.0 Time of Completion: 12 Months**