TERMS OF REFERENCE

INSTITUTIONAL CONTRACT

Section:	WASH Section		
Title:	Upgrade works to improve the efficiency of treatment of the Omniprocessor	Duty station:	Beirut, Lebanon
Reporting to:	WASH section	Contract type:	
Duration:	3 months (indicative)		

<table>
<tr><th>Section</th><th>Content</th></tr>
<tr><td>Background</td><td>UNICEF WASH Program has scaled up its response to the Syria crisis and provides support and services to both refugees and host Lebanese communities, and the Ministry of Energy and Water and its regional Water Establishments' bearing the most significant burden resulting from the impact of the Syrian Crisis on the water and sanitation sector in Lebanon.

UNICEF WaSH section, The MoEW and the BWE have identified the need to support IAAT Waste Water Treatment Plant (WWTP) by reducing the volume of sludge reaching the WWTP and currently disturbing the conventional treatment processes of this large plant.

UNICEF WASH section has selected to install an Omniprocessor proposed by Tidetechnocrates to pilot and demonstrate the possible treatment of the wastewater and sceptic sludges coming from the ISs into treated wastewater safe for discharge into the Environment and bio-safe solids. However, the system is currently not providing the treatment efficiency expected. In addition, the current effluent characteristics are not compliant with the limit of discharge stated by Decision 8/1 from the MoE (the year 2001).</td></tr>
<tr><td>Purpose and Objective</td><td>The table below details the different existing equipment that has been tested
<table>
<tr><th>Existing equipment</th><th>Specifications</th></tr>
<tr><td>Septage screening unit</td><td>8mm & 16mm inclined bar screen, Carbon steel with galvanized coating.</td></tr>
<tr><td>Sludge pump</td><td>A submersible pump, max flow rate-10,000 LPH up to 4% solids, float sensor with auto cut off. Single phase 1.3 KW.</td></tr>
<tr><td>Holding Tank</td><td>Underground concrete tank, 40 m3 storage volume.</td></tr>
<tr><td>Flocculent Dosing system</td><td>Continuous duty dosing system, up to 200 LPH. Three phase 1.1 KW.</td></tr>
<tr><td>Dewatering unit</td><td>Screw press with a capacity of 2000 LPH
50 to 70kgDS/hr, Screw-1 Nos, Screw speed: 3- 5rpm
Three phase 1.8 KW.</td></tr>
<tr><td>Sludge dryer</td><td>Low temperature sludge dryer, Moisture removal rate: 50kg/h.
Three phase 20 KW.</td></tr>
<tr><td>Liquid treatment (MBBR)</td><td>Blowers: Power-1.1kW, 3ph, Capacity-25cum/hr, pressure0.4Kg/cm2, Aeration: Sparger pipe with 3mm holes.</td></tr>
</table></td></tr>
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	Media: Surface area-580sqm/cum, Sp.gr-1.01g/cm2 MOC-Thermosetting resin, Aeration zone and liquid settling zone, Retention time 1.5 days. Three phase 1.1 KW. Design load: - COD: 500 mg/L - BOD: 250 mg/L - TSS: 400 mg/L - pH: 6.5 – 8.5
Liquid treatment	PSF & ACF: Capacity-4000LPH, Operating pressure-1.5kg/cm2, Filter Sand (silex), 900iv Coconut shell-based carbon, NB25 MPV UV disinfection: Capacity: 4000LPH, Number of lamps-4, Power-514W, 220- 240V / 50 60Hz, MOC-Stainless Steel 316L

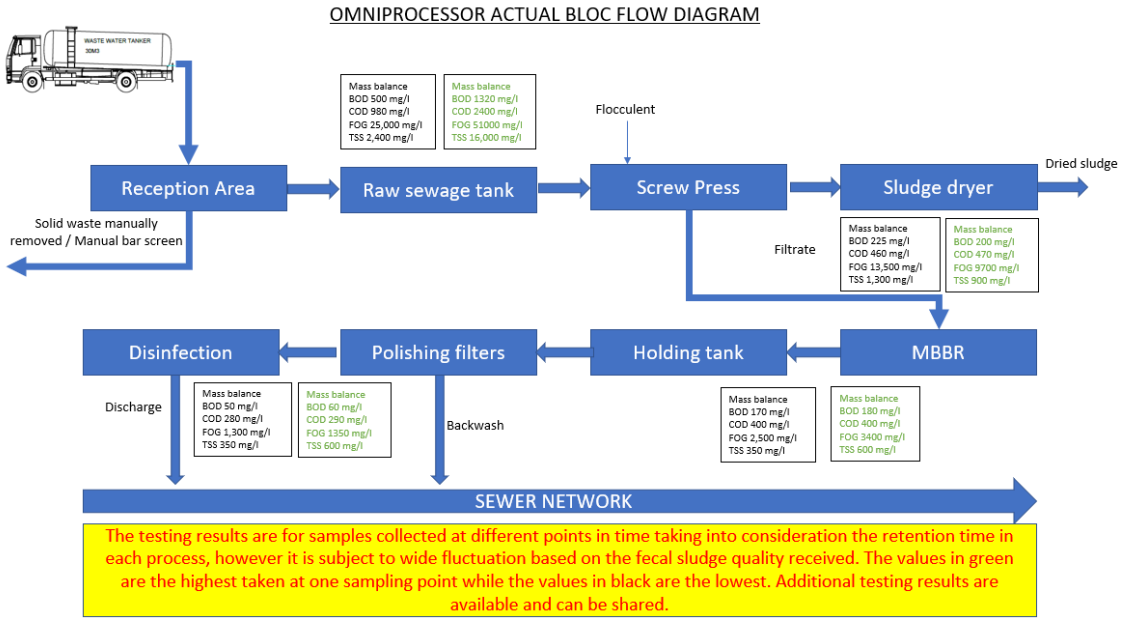
The block flow diagram presented hereafter enables to capture of the heterogeneity and fluctuation of the Wastewater / Faecal sludge received. The values collected are the highest tested in green and the lowest in black.

The different The objective of this tender is to select a company able to install and supply the following types of equipment:

- one Dissolved Air Floatation system,
- one Automatic Polymer preparation system,
- one coagulant preparation system,
- one alkaline solutions preparation system
- and one inline static mixer.

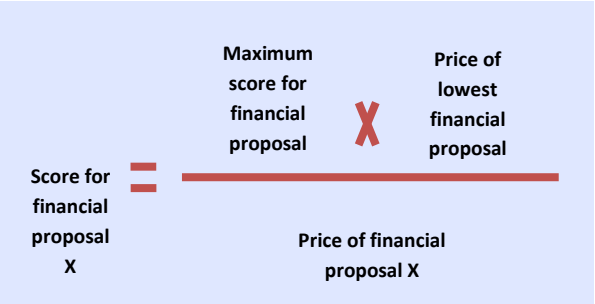
Methodology

Any interested companies will be invited to a mandatory field visit to ensure the relevance of their offer with the existing equipment constraints, space availability, and power constraints (solar systems and batteries)…



	Thus to ensure complying with the limit of discharge of treated wastewater into the Environment, UNICEF is looking for a company able to install the following types of equipment. The below-mentioned specifications are related to the upgrades, and the bidders shall ensure the proposed material meets the different technical specifications set in annexe 1.
Profile requirement	The institution consists of a team of full-time individuals who will be coordinating directly with the WaSH officer at the UNICEF LCO. The applicants should have a combination of technical skills (understanding of the Omniprocessor treatment process and features and civil works background) and an understanding of Environmental Lebanese. It's important to know that the company should have Fluency in Arabic and English amongst the team overall to ensure smooth communication with operators and UNICEF. The team leader should have at least seven years of work experience in the construction of wastewater treatment systems/plants, with ideally a background in innovative wastewater treatment or operation. The composition of the team would need to combine the following expected profiles and skills: The Project manager will be responsible for ensuring the timely and effective implementation of the contract. Therefore, the proposed person should have experience in undertaking a similar role. **Experience:** • Experience in environmental and safety audit • Demonstrated experience in wastewater treatment • Minimum five years experience in similar scale wastewater treatment project **Technical knowledge:** • Strong understanding of the technical and wastewater treatment processes. • Understands the Omniprocessor treatment process. • In addition, the team needs to demonstrate experience in Civil works, mechanical, Electronic and electrical fields. • Demonstrated experience in civil works. **Languages:** Mastering Arabic and English reading, writing and speaking.
Deliverables and schedule	○ Procurement and installation of - one Dissolved Air Floatation system, - one Automatic Polymer preparation system, - one coagulant preparation system, - one alkaline solutions preparation system - and one inline static mixer. All the equipment will be procured, shipped and installed by or under the supervision of the Company. The company will provide a proposed schedule in its offer.
Qualifications	The offers will be evaluated regarding the different criteria listed under:

A bid will be considered to pass the technical evaluation only with a minimum score of **49** over 70 points.

Criteria	Marks	Benchmarcks
Team relevant experience	5 points	The availability of necessary staff and their experience will be assessed as follow: Programme Manager with at least seven years experience (**1 point**) Team members with experience in Civil Works, Mechanical, Electrical (**1 point per each**) HSE experience (**1 point**)
Timeframe of the offer	5 points	The bidder needs to provide a timeframe for the offer. The minimum duration is about 60 working days. The maximum points will be given for the minimum number of days.
Organization capability	10 points	The organization needs to provide all the different accreditation to the Ministry of Energy and Water (MoEW), and the Council for Development and Reconstruction (CDR). (**5 points for each**)
Methodology for executing the scope of work -	30 points	The bidder will provide a 2 to 5 pager detailing the tasks they will handle when installing the different systems, the expected timeframe, demonstrating the understanding of the scope of works and compliance of the specifications of the items procured **25 points** Understanding of the septage treatment **5 points**
Demonstrating experience of similar executed projects.	20 points	Report provided on: small projects **2 points** per project, wastewater treatment related project **3 points** per project, non-sewer wastewater treatment **5 points** per project
Cost	30 points	The maximum score will be assigned to the lowest financial proposal. All other financial proposals receive scores in inverse proportion according to the following formula: 

Timing	The contract should ideally start end of Mars 2023