

ADDENDUM NO. 1

May 20, 2022

**PROJECT: CITY OF GORDON
WATER TREATMENT PLANT IMPROVEMENTS
TWDB PROJECT NO. 62862**

BID DATE: May 31, 2022

The following changes and/or additions shall be made to the Plans, Specifications and Contract Documents for the above referenced project. Bidder shall acknowledge receipt of this Addendum by signing below and returning this Addendum with the Bid.

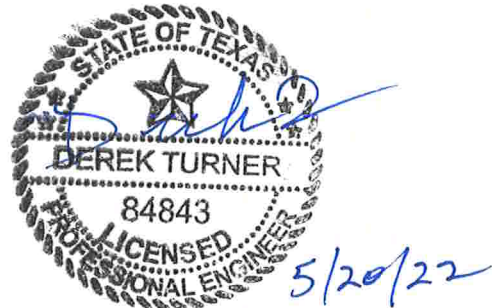
1. The bid date for this project will be moved to June 8, 2022 at 3:00 PM.
2. The existing Wonderware license should be upgraded to the current version. The plant PLC shall be upgraded to include additional input and output as necessary for this project. However, connection to the new MF skid shall be through ethernet connection by way of the existing process building.
3. No autodialer is required for this contract. Note 3 on Sheet I-13 should be disregarded.
4. The Pump discharge header and pump suction header shall have 6" isolation gate valves (one on each) on the main lines separating the pumps.
5. The Dupont microfilter system supply documentation is included with this addendum. The contact is Carl Hillerns 978-863-4644.

Prepared by:

JACOB | MARTIN
1508 Santa Fe Drive, Suite 203
Weatherford, Texas 76086
TBPE Firm No. 2448

Bidder's Acknowledgment

Date





MEMCOR® Membrane Filtration System Proposal

Gordon, TX

Quotation # 18Q1322XSD

November 6th, 2017

Submitted To

Jacob and Martin Ltd.
1508 Santa Fe Drive
Weatherford, TX 76086
Attention: Derek Turner

Submitted By

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EXECUTIVE SUMMARY

Thank you for your interest in Evoqua Water Technologies LLC's (EVOQUA) MEMCOR® Low Pressure Membrane Filtration systems. EVOQUA is pleased to offer this proposal for a MEMCOR® XS packaged water treatment plant, a pre-engineered, skid-mounted, low-pressure membrane filtration system using submerged membrane technology with a unique design to provide easy access to the membrane modules without the need for external lifting equipment. As the world leader in water and wastewater process equipment, EVOQUA has the unique qualifications and experience necessary to provide your advanced state-of-the-art process equipment solution design to meet the specific requirements of your water treatment facility. Our experienced process engineers have designed the MEMCOR® XS to deliver the following operational and design criteria:

- Filtrate water quality less than 0.1 NTU providing proven rejection of pathogens
- Simple installation
- Factory tested and configured for ease of installation and start-up
- Fully automatic membrane integrity test
- Control system complete with all necessary functions for fully automated operation

Today, MEMCOR® membrane plants treat more than 1,000,000,000 gallons per day globally in applications ranging from wastewater reclamation to drinking water to high-purity industrial water, proving the depth of experience of EVOQUA in the membrane filtration market. EVOQUA's leadership in engineering, research and development, together with the greatest experience in the global membrane water market, ensures the minimum risk across all facets of project execution. Our lasting partnerships with utilities, engineers and construction groups demonstrate this.

We would like to thank you again for your interest in EVOQUA's line of MEMCOR® Products. We hope that in your review of our 18Q1322XSD proposal, you will find the information provided complete and that you will conclude that Evoqua Water Technologies LLC offers the best overall value for your project. Should you have any questions regarding this quotation, or would like to request any additional information please contact us the Technical Sales Manager or the EVOQUA Regional Representative listed on the cover.

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Project Overview

The following table summarizes the contents of this quotation:

MEMCOR® XS 48 skid	Expansion of existing XS 24 skid
Skid mounted pressurized membrane system with local piping, Membrane Integrity Test, Feed System, CIP System, Compressed Air System	Including 2 nd stainless steel membrane cell and modules and replacement of on skid pump and blower,
O & M Manual	Manufacturer Services (Commissioning / Training)
Price:	USD\$580,000

Please note that the pricing above does not include insurance, bonds, or any applicable taxes.

The scope of supply and pricing are based on EVOQUA standard equipment selection, standard terms of sale and warranty terms as described herein. Any variations from these standards may affect this quotation.

In the event Evoqua Water Technologies LLC (“EWT”) is the selected vendor for the products and services contemplated in this proposal, EWT will not be obligated to supply products or services pursuant to this proposal unless and until (i) EWT has, at its option, completed a satisfactory anti-corruption due diligence review and/or credit check; and (ii) the parties have entered into an agreement based on the terms and conditions set forth herein.

Payment Terms:

- 5% - On Notice to Proceed with Engineering Submittals, net 30
- 15% - On Engineering Submittals, net 30
- 60% - On delivery, net 30
- 15% - On the earlier of: (i) commissioning of System; or (ii) date occurring 120 days after delivery of equipment provided any delay in commissioning is not attributable to the sole fault of Seller, net 30.
- 5% - On the earlier of: (i) Completion of Performance Testing; or (ii) date occurring 180 days after delivery of equipment provided any delay in Start Up is not attributable to the sole fault of Seller, net 30.

Freight: F.O.B. shipping point, with freight prepaid to the jobsite.

Shipments: 12 -14 weeks after submittal approval by Purchaser or its design engineer.

Drawings: Three (3) sets of submittal drawings will be issued 6 – 8 weeks after Notice to Proceed with Engineering Submittals issued by Purchaser or its design engineer.

Manuals: Three (3) copies of English language owner’s manuals are included. Additional manuals will cost \$150 each.

Detailed Engineering and Technical Information

1 Design Basis

This section details the design basis of the equipment offered.

1.1 Feed and Filtrate Quality



fiber bundles causing fiber damage.

The feed to the system must be chemically compatible with the CMF unit, the membrane and other module components. In general, PVdF membranes are resistant to oxidizing feeds. Specific resistances can be found on the module data sheet. The feed water shall not contain (i) any polar organic solvents (such as Acetone); or (ii) any water treatment polymers (anionic, cationic or else). If the presence of oil and grease or fibrous material is suspected, consult MEMCOR®. Iron and Manganese must be properly oxidized to ensure compliance with water quality limits and avoid membrane fouling. The feed water must be pre-screened to protect the membrane fibers. The pre-screening will prevent solids from building up in the

The proposed design is based on the feed water having the following characteristics:

Table 1.1

Raw Water Quality Specifications

PARAMETER ¹	UNITS	AVERAGE	MAX OR RANGE
Temperature	Deg C	*	10 – 25
Total Organic Carbon	mg/L	*	< 2.0
Turbidity	NTU	*	< 7
pH ²	pH units	*	7.5 – 8.5
LSI	SU	*	+0.5
Alkalinity	mg/L as CaCO ₃	*	*
Hardness	mg/L as CaCO ₃	*	< 100
Iron	mg/L	*	< 0.3
Dissolved Iron	mg/L	*	< 0.1
Manganese	mg/L	*	< 0.05
Dissolved Manganese	mg/L	*	< 0.025

¹ Customer must confirm all assumed parameters and values, and provide any missing information.

² For applications where feed water undergoes chemical pretreatment, such as oxidation, direct coagulation, or settled feeds, the pH range shall be adjusted to 7 – 8.

The equipment offered will provide the following filtrate quality:

Table 1.2
Filtrate Quality Specifications

PARAMETER	UNITS	QUALITY
Turbidity ³	NTU	< 0.1
Silt Density Index (SDI)		< 3.0
Particle Removal ⁴	Log Removal	> 4.0

³ The Filtrate Quality Specifications identified in Table 1.2 above are for reference purposes only. See “Extended Low Pressure Membrane Module Warranty” for warranties related to parameters noted above.

⁴ Filtrate turbidity shall be <0.1 NTU 95% of the time and <0.3 NTU 100% of the time.

⁵ As measured by EVOQUA’s standard Air Hold Test for removal of particles 3.0+ microns in size.

1.2 Process Design

The proposed system has been designed based on the following process parameters:

- XS 24 expanded to 48 and the additional XS 48
 - Filtrate Flow: 688,000 GPD (nominal)
 - Design Operation N
 - Instantaneous Flux Rate: 35.26 GFD
 - Backwash Interval: 25 minutes
 - Chlorine Maintenance Wash Interval: 48 hours
 - Acid Maintenance Wash Interval: 48 hours
 - Clean-In-Place (CIP) Interval: 30 days
 - System Recovery: > 93.5%

1.3 Footprint

The MEMCOR® design has been pre-engineered to minimize system footprint. Each unit in the proposed system has the following dimensions:

- Length = 180"
- Width = 92"
- Height = 107"
- Footprint = 180" x 92" OR 115 square feet

Maintenance access recommended:

- Lengthwise: 90" – to open the membrane module drawer providing access to the membrane modules
- Widthwise: 38" – minimum access between two units

1.4 Design Requirements and Assumptions

The table below lists the design requirements for the proposed system:

Table 1.3
MEMCOR® XS Design Requirements

REQUIREMENT	VALUE
Feed water flow	Design flow +20%
Feed water pressure	7 – 40 psi
Filtrate terminal point back pressure	3 – 15 psi
Backwash outlet line	Gravity drain to waste
Chemical storage tank volume ⁴	20 gallons (minimum)
Site layout drawings	Reviewed by EVOQUA

⁴ Two (2) chemical storage tanks are existing.

In addition to the design requirements provided above the proposed system design is based on the following design assumptions.

1. Design calculations are based on the plant being available for operation 100% of the time.
2. Design calculations are based on one (1) air hold test per unit per day.
3. Design calculations are based on the external hydraulics allowing for a 45 second drain time and a 60 second fill time.
4. The unit's minimum flow is based on 70% of the maximum unit flow.
5. Heater sizing is based on a heat time of 6 hours.
6. The recoveries stated are based on the maximum unit flow (excluding strainer waste). As flow decreases through the unit, the recovery may also be reduced while cleaning intervals remain constant.
7. The design capacity is based on an average daily flow over the CIP interval. On the days where CIPs are conducted the net production flow will be reduced. Conversely, production flow will exceed the design capacity on non-CIP days.

2 Process Description

All normal plant operation and process sequences are automatically controlled by the PLC and control system. Most sequences can also be triggered manually by the operator and some sequences such as chemical cleaning (CIP) can be manually initiated by the operator but automatically carried out once initiated.

The main operating states are as follows:

Shutdown

SHUTDOWN is the normal power up and shutdown state of a unit. In this sequence, no active cycles are running and no solenoid valves are energized. A unit remains in this state until called upon to start up.

Standby

STANDBY is an active state that a unit enters when the unit is available to run but no run command exists. One or more units can enter the STANDBY state when there is no, or insufficient demand. A unit in standby can return to filtration automatically.

Startup

During this sequence, the filtrate manifold is primed. Air is removed from the filtrate side of the modules and from the rack and unit filtrate header as well as from the section of pipe connecting the filtrate header to the filtrate pump. A slight vacuum is applied to the filtrate pipework with an air-driven ejector to expedite the priming process. Each unit has an independent ejector which receives compressed air from the Process Air Receiver. The water level is above the filtrate suction pipework and therefore the pump primes under gravity.

Filtration

In filtration, the filtrate pump maintains the unit flow setpoint in a PID loop with the unit flow meter and the inlet modulating valves maintains the filtration level setpoint in a PID loop with the unit level transmitter. Water is drawn through the membranes by the filtrate pump.

Operation Mode

“N” designates the number of units supplied.

N Operation

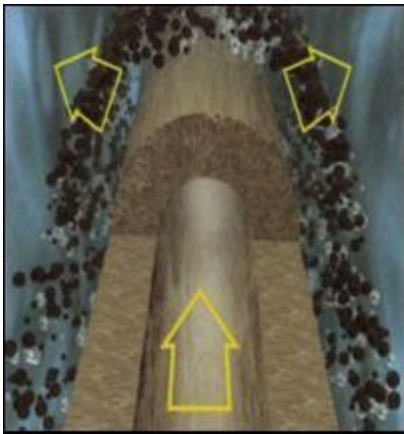
All the units participate to make the required flow on an average daily basis over a CIP interval.

Backwash

Over time, particles rejected by the sieving action of the membranes build up on the outside of each fiber. As a result, the resistance to flow increases until a backwash is performed. The backwash is used to remove the build up of solids and reduce the transmembrane pressure. The backwash uses mechanical action only to remove solids - no chemicals are used during the backwash. A backwash is typically initiated after a pre-set period of time but can also be initiated when the change in resistance to flow exceeds a pre-set limit.

The ultrafiltration system utilizes reverse filtration (reversing the flow of filtrate from inside to outside of the fibers), combined with air scour and drain down. It provides for efficient removal of solids without resulting in low recovery or generating a high volume of waste.

The backwash is fully automated and typically takes approximately 3.5 - 4 minutes, depending on onsite hydraulics and the product line. The backwash sequence includes the following steps:



- Reverse Filtration: The filtrate pump on board the unit pumps filtered water from the holding tank on the unit back thru the membrane modules;
- Air Scour: The blower on the unit delivers scour air to the modules. The air bubbles quickly rising from the bottom of each module, scour the surface of the fibers and dislodge the solids.
- Drain Down: The water is drained from the membrane tanks to efficiently remove all solids from the system.

At the end of the backwash, tanks are refilled with feed water and the unit returns to filtration (or enters STANDBY). The filtrate pumps start and the feed control valve maintains the water level in the unit.

Clean-In-Place (CIP) / Maintenance Wash (MW)

The Clean-In-Place sequence is used to maintain long-term membrane performance. The CIP is initiated based either on transmembrane pressure (TMP) or calendar time. Under normal operating conditions, the CIP will be initiated based on calendar time. The maintenance wash sequence is similar to the CIP, but with shorter recirculation and soak sequences and different chemical concentrations. The maintenance washing is used to increase the time between Clean-In-Place events. Maintenance washes typically take about 45 minutes, while CIPs are approximately 2.5 hours per chemical clean. After manual operator initiation, the maintenance wash and CIPs are fully-automated.

The steps of the MW and CIP are shown below:

1. Backwash - The unit is backwashed to remove excess solids and maximize the chemical cleaning efficiency. The backwash waste is drained to the regular waste outlet.

-
2. Membrane Tank Fill - Following a normal backwash the membrane tank is filled with feed water.
 3. Heating - For acid CIPs, the water in the membrane tank is recirculated through an in-line heater by the filtrate pump on board the unit. For chlorine CIPs, the water in the membrane tank may be heated if the water temperature reaches low temperatures for prolonged periods of time. MWs are not typically heated.
 4. Chemical Dosing - Once the temperature has reached a target value, acid or chlorine (as sodium hypochlorite) is added in-line from the automatic or manual transfer system.
 5. Recirculation - The cleaning solution is recirculated through the membranes.
 6. Soak - The modules are left to soak for a pre-set time.
 7. Drain - The cleaning solution is drained by gravity away from the unit to the drain or neutralization system.
 8. Chemical Rinses - The unit is refilled with feed water and rinsed to remove residual chemical. All rinse water is directed to the drain or neutralization system. Two or three chemical rinses may be necessary after a CIP.
 9. Filtration to Waste - The unit is put into filtration but the filtrate with chemical residue is sent to drain or the neutralization system.

3 Controls Description

The PLC and OIT are located in the existing central Process Control Panel. This panel connects to the new MEMCOR® XS Unit Panel via a Profibus DP communications network. This building block approach provides flexibility to control additional equipment that may be supplied by Evoqua. The complete control design meets NEC, UL 508A and C/UL requirements. The control panels are NEMA 4 painted carbon steel.

The MEMCOR® XS Unit Panel includes the following components:

- Digital and Analog I/O Modules
- 24 VDC Power Supply
- Blower and Heater Starters
- Filtrate pump Variable Frequency Drive (VFD)

All of the process functions are controlled by the existing PLC, receiving information from the XS Unit Panel remote input/output (RIO) modules and instrumentation located throughout the system. The operation can be controlled via the Evoqua Operator Interface located in the front door of the PCP.

The PLC controls each unit to meet the capacity target determined by the operator. The various process sequences such as backwash, maintenance wash, and membrane integrity testing are controlled automatically by the PLC and do not require operation intervention. The CIP chemical cleaning is automatic after the operator to initiates the action.

4 MEMCOR® 1 x XS 48 and Expansion of Existing XS 24 Scope of supply

The following represents the standard scope of supply to provide a MEMCOR® XS Low Pressure Membrane Filtration System. The system uses hollow fiber polyvinylidene fluoride (PVDF) membrane modules.

There are three main sub-systems that encompass the scope for a fully operable system. These systems, described in detail below, include the following:

1. Feed Water System
2. MEMCOR® XS Unit
3. Expansion of Existing Unit

Also included in the scope of supply for the MEMCOR® XS system are the following:

4. Control System
5. Manufacturer's Engineering Support and Services

1. Feed Water System

The feed water system to the MEMCOR® XS units consists of equipment and instrumentation that is important to ensure that the system is protected from contamination. The following equipment is included as part of the feed system:

Quantity	Per Unit	Common for Plant	Description
1		a	Simplex Strainer with cast iron body and 316SS 250 micron basket
2		a	Lot of manual butterfly valves for isolation of the feed strainer, wafer or lug style, resilient seated with cast iron body, nylon coated ductile iron disc, 416SS stem, and EPDM seat

2. MEMCOR® XS Unit

Each MEMCOR® XS unit forms an individual filter that is operated independently of the other units in the system. Each unit includes arrayed membrane modules, integral pipework, a compressor, receiver, blower, filtrate tank and pump all mounted on a single skid for simple installation.

Each unit is controlled by the existing plant PLC from the plant Process Control Panel via remote I/O. Each unit can be fully isolated from the rest of the system using automatic block and bleed valves. The following equipment is included for each MEMCOR® XS unit:

Quantity	Per Unit	Common for Plant	Description
1	a		Painted carbon steel frame
2	a		Membrane tank fabricated of 316SS with side removal mechanism for membrane access
1	a		Schedule 80 PVC and 316SS pipework
48	a		Membrane Modules fabricated of polyvinylidene fluoride (PVDF) membrane material manufactured by Evoqua
2	a		Rack headers that can accommodate up to (24) modules, in (6) clovers of (4) modules
1	a		Pump for filtration, backwash and recirculation during the cleaning process, with 316SS wetted parts, TEFC motor (460VAC/3ph/60Hz), controlled by variable frequency drive (VFDs supplied by EVOQUA)

Quantity	Per Unit	Common for Plant	Description
1	a		Off skid Ingersoll Rand Rotary Screw Air Compressor sized for 100% of both of the units required capacity at 125 psig discharge pressure, with integral refrigerated dryer, 80 gallon integral horizontal air receiver, food grade oil, and auto drain (shipped loose for installation by others)
1	a		Control air regulator assemble including (1) isolation ball valves, (2) solenoid vales, (2) check valves, (1) coalescing filter and housing, (2) pressure regulators, (2) pressure gauges, (1) pressure switch, and (1) pressure relief valve
1	a		Regenerative blower sized for 100% of the units required capacity, with inlet filter silencer and discharge blow off silencer
1	a		320 gallon fiberglass reinforced plastic (FRP) filtrate storage tank
1	a		12 kW immersion type heater with stainless steel sheath elements and flange, J-type thermocouple, moisture resistant enclosure
1	a		Filtrate water 660 Laser Turbidimeter with controller, panel mounted with bubble trap, isolation valves and accessories
1	a		Filtrate pH sensor/transmitter
1	a		Air release valve
1	a		Lot of automatic butterfly valves, wafer style, resilient seated with cast iron body, nylon coated ductile iron disc, 416SS stem, EPDM seat, and double acting pneumatic actuators. The valve configuration includes block valves (shipped loose) as part of the block and bleed isolation at the following unit terminal connections: feed and filtrate
3	a		Automatic globe valves, right angle seated with stainless steel body, EPDM seat, and chrome plated brass actuator, for bleed valve (shipped loose) in the block and bleed configuration at the following unit terminal connections: feed and filtrate
2	a		Automatic diaphragm valves, for chemical injection isolation with pneumatic actuator
1	a		Vacuum pump for priming of the filtrate suction pump

Quantity	Per Unit	Common for Plant	Description
1	a		Flow control valve, wafer style, resilient seated with cast iron body, nylon coated ductile iron disc, 416SS stem, EPDM seat, and double acting pneumatic actuators, with electro-pneumatic positioner
1	a		Filtrate water magnetic flow sensor, with PTFE liner, Hastelloy-C electrodes, and flow transmitter
1	a		Blower discharge air flow meter
3		a	Corporation stops (Injection quills), PVC construction
1	a		Membrane tank level transmitter
3	a		Filtrate storage tank compact float type level switches
2	a		Manual butterfly valve for feed inlet isolation and tank drain, wafer style, resilient seated with cast iron body, nylon coated ductile iron disc, 416SS stem, and EPDM seat
1	a		Manual PVC ball valve for blower bleed isolation
3	a		Sample manual PVC ball valve
1	a		CIP recirculation line wafer type swing check valve with 316SS body, disc, and trim, and EPDM seal
1	a		Pressure transmitters
2	a		Pressure indicating gauge for pump and blower discharge
1	a		Filtrate temperature transmitter with 100 Ohm platinum RTD and 316SS thermowell

All equipment will be shipped as one pre-assembled skid to be installed on site. (except for items marked "shipped loose").

3. Expansion of Existing System

The existing XS 24 will be expanded to an XS 48 using the following equipment (all items shipped loose for installation on site):

Quantity	Per Unit	Common for Plant	Description
24	a		Membrane modules
1	a		Membrane tank fabricated of 316SS with side removal mechanism for membrane access
1	a		Rack headers that can accommodate up to (24) modules, in (6) clovers of (4) modules
1	a		Pump for filtration, backwash and recirculation during the cleaning process, with 316SS wetted parts, TEFC motor (460VAC/3ph/60Hz), controlled by variable frequency drive (VFDs supplied by EVOQUA)
1	a		Regenerative blower sized for 100% of the units required capacity, with inlet filter silencer and discharge blow off silencer
1	a		On skid piping changes for blower and pump modifications as necessary.

4. Control System

The control system provided for the new MEMCOR® XS system includes the following equipment:

Quantity	Per Unit	Common for Plant	Description
1	a		Unit panel, mounted directly to the skid unit, used to relay information to/from the existing Process Control Panel and the individual MEMCOR® XS units via Profibus DP communications network, including digital and analog I/O modules, 24 VDC power supply, blower and heater starters, and pump variable frequency drive (VFD)

5. Manufacturer’s Engineering Support and Services

The entire execution process from design to start-up will be overseen by MEMCOR® personnel. A certified project manager will act as a single contact point between MEMCOR® and the customer. The following services will be provided during the execution of this project:

Quantity	Per Unit	Common for Plant	Description
3 copies		a	<p>Standard MEMCOR® XS system submittal including:</p> <ul style="list-style-type: none"> - Submittal Approval Form - Clarifications and Exceptions - Process Overview - Valve, Equipment and Instrumentation List - Manufacturer’s Cut Sheets - Mechanical Drawings <ul style="list-style-type: none"> o Membrane System P&ID (showing EVOQUA supplied equipment) o XS Unit P&ID o XS Unit General Arrangement (including location of termination points) o Drawings and data for tanks supplied by EVOQUA - I/O List - Electrical Bill of Materials - Electrical Drawings <ul style="list-style-type: none"> o Control Single Line o Three Phase Power Single Line o Field Interface Connections o Process Control Panel diagrams
3 copies		a	<p>Operation and maintenance manuals are included. Manuals will be to EVOQUA ’ commercial standards. This shall include detailed project specific manufacturer drawings, equipment, valves, instruments and pipe schedules. No drawings, except those used internally by consultant/customer are to be reproduced without the expressed, written permission of EVOQUA .</p>

Quantity	Per Unit	Common for Plant	Description
27		a	<p>Eight hour service-days for manufacturer’s services at regular intervals during the project to ensure proper installation and assembly procedures are followed as well as commissioning and training of the MEMCOR® XS system. Additional services may be retained at MEMCOR® scheduled rates of US\$1,800.00 per day, per person plus travel expenses at cost plus 5% mark up. The services included are:</p> <ul style="list-style-type: none"> - On-site services for plant commissioning which includes startup, - Training of operators and technical staff in conjunction of startup. Training will include; equipment description, field instrumentation, control panels, detailed component description, preventive maintenance and troubleshooting.

Equipment and Services Provided by Others

All other works and equipment necessary to complete the project and not shown as being supplied by EVOQUA shall be supplied by others, including but not limited to:

- Existing feed turbidimeter, process control panel, chemical transfer system and custom tools (module repair assembly)
- Civil work and civil design of any kind, building and building design including any concrete slab or other support for the units or any other ancillary equipment.
- Anchor bolts and anchor bolts calculations including any certification by a licensed professional engineer;
- Power distribution for any voltage (including without limitation switchboard or distribution board housing incoming connections, fused isolator, metering equipment and fused circuit breakers), lighting, conduit, wiring and associated hardware including design. Conduits and wiring within the limit of the Memcor XS skid is supplied by Evoqua .
- Single phase power distribution to field mounted instruments and other appurtenances.
- Interconnect power cabling and supports (Evoqua will supply a terminal strip in each of the control panel listed in the scope of supply).
- Interconnect Profibus communication cabling between Process Control Panel and each MEMCOR XS Unit Panel.
- Positioning and installation of any equipment.
- Any interconnecting pipework design, supply, installation or testing for piping between the Memcor XS units or between the units and any ancillary system or equipment either supplied by Evoqua or otherwise.
- Pipe support and hangers for the interconnecting pipework.

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- Floor drain plumbing and installation and safety equipment such as safety shower and eye wash stations.
 - Compliance, permitting and approval (Federal, State and/or local).
 - Protection and appropriate storage of the material and equipment supplied by Evoqua prior to installation. The membrane modules must be stored in strict accordance with Evoqua ' requirements.
 - Unloading of equipment from delivery carrier.
 - Disposal system for backwash and disposal/neutralization for any chemical cleaning waste.
 - Chemicals required for MEMCOR XS system cleaning, maintenance, and/or operation.
 - Taxes, bonds, etc. not specifically listed in this proposal.
 - Any other items not specifically detailed in Evoqua ' Scope of Supply.

5 Service

EVOQUA is committed to project execution and ensuring customer satisfaction. At the time of award, a project manager will be assigned based on current project workload and product expertise in an effort to pair the best project manager for your Membrane Filtration System.

In an effort to ensure project support and customer satisfaction, 24/7 phone support can be had by dialing 800-MEMCOR4. During working hours there are eight telephone support personnel available and after working hours the Service Department is on a rotating schedule to ensure that someone is always available to assist our customers.

EVOQUA maintains a vast network of local service branches. The map below shows the location of each branch.



EVOQUA can offer a one-time or an ongoing Service Agreement to assist with the maintenance of your new system. Our ongoing service agreements are designed as preventive maintenance programs to help minimize your total plant operating cost.

A variety of levels of service are available to suit your needs from infrequent check-ups to almost complete take over of your maintenance requirements. We can provide more information and discuss this further at your convenience.

Proposal and Order Form

To (Purchaser): City of Gordon, TX

Reference: Gordon, TX

November 6th, 2017

Proposal Date:

EVOQUA Water Technologies LLC proposes to furnish materials, equipment and/or technical service in accordance with Proposal Number 18Q1322XSD. Materials, equipment and/or technical service not shown below or on attachments to this proposal are EXCLUDED:

Equipment Description: **MEMCOR XS System Expansion and Addition** US\$ 580,000

(Not including duty taxes or use taxes)

This price is firm for 90 days after proposal date. Prices are subject to 1.5% per month escalation if shipments are delayed by purchaser.

Payment Terms: 5% - On Notice to Proceed with Engineering Submittals, net 30

15% - On Engineering Submittals, net 30

60% - On delivery, net 30

15% - On the earlier of: (i) commissioning of System; or (ii) date occurring 120 days after delivery of equipment provided any delay in commissioning is not attributable to the sole fault of Seller, net 30.

5% - On the earlier of: (i) Completion of Performance Testing; or (ii) date occurring 180 days after delivery of equipment provided any delay in Start Up is not attributable to the sole fault of Seller, net 30.

Freight: F.O.B. shipping point, with freight prepaid to the jobsite.

Shipment(s): Truck

Shipments: 12 -14 weeks after submittal approval by Purchaser or its design engineer.

Drawings: Three (3) sets of submittal drawings will be issued 6 – 8 weeks after Notice to Proceed with Engineering Submittals issued by Purchaser or its design engineer.

Manuals: Three (3) copies of English language owner's manuals are included. Additional manuals will cost \$150 each.

Notice to Proceed: Purchaser will not be responsible for any costs until Purchaser provides Evoqua with a notice to proceed, once all procurement requirements from the Texas Water Development Board (TWDB) have been met and TWDB releases the project funds.

NOTE: **Any order resulting from this proposal is subject to Evoqua's Standard Terms of Sale, attached hereto and incorporated herein by reference. Purchaser's acceptance of this offer is expressly limited to such terms and conditions without change or addition.**

PURCHASER

Name: _____
Address: _____

Signature: _____
Title: _____
Date: _____

PRESENTED BY:

Signature: _____

Approved by EVOQUA Water Technologies LLC

By: _____
Signature: _____
Date: _____

Process Performance Warranty

Equipment Performance Criteria

Subject to provisions below, Evoqua Water Technologies LLC (the “Seller”) warrants to The City of Gordon (the “Owner”) that Seller’s Equipment will meet the following performance criteria during the Test (the “Performance Warranty”):

PARAMETER	UNITS	VALUE
Turbidity	NTU	< 0.1 ^{1,2,3}
Filtrate Capacity	MGD (nominal)	0.688 ⁴

Notes:

1 Filtrate turbidity shall be <0.1 NTU 95% of the time and <0.3 NTU 100% of the time.

2 When a properly maintained and calibrated analyzer receives the appropriate sample flow.

3 Excluding potential regrowth.

4 Temp range 1 to 25 degrees C.

Feed Water Characteristics

The Performance Warranty is expressly conditioned upon Owner delivering a minimum of 734,601 GPD of feed water to the membrane unit (the “Equipment”) having the following characteristics (“Feed Water Characteristics”):

PARAMETER ¹	UNITS	AVERAGE	MAX OR RANGE
Temperature	Deg C	*	10 – 25
Total Organic Carbon	mg/L	*	< 2.0
Turbidity	NTU	*	< 7
pH ¹	pH units	*	7.5 – 8.5
LSI	SU	*	+0.5
Alkalinity	mg/L as CaCO ₃	*	*
Hardness	mg/L as CaCO ₃	*	< 100
Iron	mg/L	*	< 0.3
Dissolved Iron	mg/L	*	< 0.1
Manganese	mg/L	*	< 0.05
Dissolved Manganese	mg/L	*	< 0.025

Notes:

¹For applications where feed water undergoes chemical pretreatment, such as oxidation, direct coagulation, or settled feeds, the pH range shall be adjusted to 7 – 8.

Performance Test

The Performance Warranty shall be verified by a performance test of the Equipment (the "Test"). The Test shall start upon completion of startup and commissioning, but no later than six (6) months from delivery of the Equipment and shall be completed no later than six (6) months after startup and commissioning.

The Test shall be completed after 5 days of operation. If there is an interruption to the Test of greater than seventy two (72) hours, the Test shall be restarted. Alarms raised by the control system shall be addressed by the Owner and shall not cause an interruption of the Test.

Prior to and during the Test, the Owner shall be responsible for the following: (i) operation of the Equipment in accordance with Seller's O&M manual and Seller's instructions, (ii) resolution, to Seller's satisfaction, of any issues identified by Seller as described in the following paragraph, (iii) demonstration that the feed water quality has continuously met the Feed Water Characteristics by means of a sampling and water analysis program mutually agreed to by Owner and Seller, (vi) payment of all costs associated with the Test including without limitation, laboratory testing services, and (v) site preparedness including without limitation, availability of water, calibration of instruments, permits and resolution of Seller's issue list. The Owner's failure to meet any of these responsibilities shall nullify the Performance Warranty.

Provided that Owner has met its responsibilities as provided above, the Seller shall be responsible for the following: (i) performance, in its sole discretion, of a site inspection prior to the commencement of the Test and Seller may provide a list of issues for Owner to resolve prior to the commencement of the Test, and (ii) upon completion of the Test, Seller shall provide a Test report to Owner demonstrating that the Equipment complied with the Performance Warranty.

If during the Test the Equipment fails to meet the Equipment Performance Criteria provided above the Owner shall provide Seller access to its plant and all relevant operating data so that Seller may evaluate the performance of the Equipment. In addition, Seller shall have the right to inspect the Equipment and recommend operational changes for implementation by Owner. Upon implementation of any Seller-recommended operational changes, Seller shall have the right to commence a second Test. If during the second Test, the Equipment fails to comply with the Equipment Performance Criteria listed above while the feed water continues to comply with the Feed Water Characteristics, Seller shall be in breach of the Performance Warranty.

Remedies

If Seller is in breach of the Performance Warranty as provided above, the Seller shall, as its sole obligation and as Owner's sole and exclusive remedy, subject to the limitations below, in its sole discretion, either: (i) pay liquidated damages in the lump sum amount of five (5) percent of the price paid by Owner to Seller for the Equipment or, (ii) provide additional equipment or make modifications to the plant to enable Seller's equipment to meet the Equipment Performance Criteria, provided, however, that Owner agrees in writing to provide space for the additional equipment and further acknowledges that additional operating expenses related to the additional equipment will be for Owner's account.

Completion of Obligations

The Seller shall have met or been deemed to have met its Performance Warranty obligations and shall have no further obligations or liability to Owner upon: (i) the Seller's Test report confirming successful completion of the Test, (ii) the Equipment being exposed to feed water that is outside of the feed water characteristics, the feed water contains substances that are harmful to membrane systems including without limitation solvents, oil, polymers other than polymers expressly approved by Seller, or the feed water contains sand, grit and/or debris, (iii) the Owner is in default of its payment obligation to Seller, (iv) the Owner makes any repairs or alterations to the Equipment without Seller's prior written consent, or (v) the Owner fails to commence or complete the Test within the timeframes specified above for reasons other than those reasonably attributable to Seller

Limitations

THE REMEDIES PROVIDED TO OWNER ABOVE ARE THE OWNER'S SOLE AND EXCLUSIVE REMEDIES FOR ANY FAILURE BY SELLER TO SATISFY THIS PERFORMANCE WARRANTY. NOTWITHSTANDING ANYTHING TO THE CONTRARY INCLUDING THE FAILURE OF ESSENTIAL PURPOSE OF ANY REMEDY EXPRESSLY PROVIDED HEREIN, SELLER SHALL IN NO EVENT BE LIABLE FOR ANY INDIRECT, CONSEQUENTIAL, INCIDENTAL, SPECIAL OR PUNITIVE DAMAGES. SELLER'S LIABILITY UNDER THIS PERFORMANCE WARRANTY SHALL NOT EXCEED 5% OF THE PRICE PAID TO SELLER UNDER THE EQUIPMENT CONTRACT. SELLER'S TOTAL CUMULATIVE LIABILITY UNDER THIS PERFORMANCE WARRANTY AND THE EQUIPMENT CONTRACT, INCLUDING WITHOUT LIMITATION ANY LIABILITY FOR MECHANICAL WARRANTY CLAIMS OR FOR ANY BREACH OR FAILURE TO PERFORM ANY OBLIGATION UNDER THE EQUIPMENT CONTRACT, SHALL NOT EXCEED THE LIABILITY LIMITATION SET FORTH IN THE EQUIPMENT CONTRACT. THE FOREGOING LIMITATIONS APPLY REGARDLESS OF WHETHER THE LIABILITIES OR DAMAGES ARISE, OR ARE ALLEGED TO ARISE, UNDER CONTRACT, TORT, STRICT LIABILITY OR ANY OTHER THEORY.

EVOQUA WATER TECHNOLOGIES LLC

Standard Terms of Sale

1. **Applicable Terms.** These terms govern the purchase and sale of equipment, products, related services, leased products, and media goods if any (collectively herein "Work"), referred to in Seller's proposal ("Seller's Documentation"). Whether these terms are included in an offer or an acceptance by Seller, such offer or acceptance is expressly conditioned on Buyer's assent to these terms. Seller rejects all additional or different terms in any of Buyer's forms or documents.
2. **Payment.** Buyer shall pay Seller the full purchase price as set forth in Seller's Documentation. Unless Seller's Documentation specifically provides otherwise, freight, storage, insurance and all taxes, levies, duties, tariffs, permits or license fees or other governmental charges relating to the Work or any incremental increases thereto shall be paid by Buyer. If Seller is required to pay any such charges, Buyer shall immediately reimburse Seller. If Buyer claims a tax or other exemption or direct payment permit, it shall provide Seller with a valid exemption certificate or permit and indemnify, defend and hold Seller harmless from any taxes, costs and penalties arising out of same. All payments are due within 30 days after receipt of invoice. Buyer shall be charged the lower of 1 ½% interest per month or the maximum legal rate on all amounts not received by the due date and shall pay all of Seller's reasonable costs (including attorneys' fees) of collecting amounts due but unpaid. All orders are subject to credit approval by Seller. Back charges without Seller's prior written approval shall not be accepted.
3. **Delivery.** Delivery of the Work shall be in material compliance with the schedule in Seller's Documentation. Unless Seller's Documentation provides otherwise, delivery terms are ExWorks Seller's factory (Incoterms 2010). Title to all Work shall pass upon receipt of payment for the Work under the respective invoice. Unless otherwise agreed to in writing by Seller, shipping dates are approximate only and Seller shall not be liable for any loss or expense (consequential or otherwise) incurred by Buyer or Buyer's customer if Seller fails to meet the specified delivery schedule.
4. **Ownership of Materials and Licenses.** All devices, designs (including drawings, plans and specifications), estimates, prices, notes, electronic data, software and other documents or information prepared or disclosed by Seller, and all related intellectual property rights, shall remain Seller's property. Seller grants Buyer a non-exclusive, non-transferable license to use any such material solely for Buyer's use of the Work. Buyer shall not disclose any such material to third parties without Seller's prior written consent. Buyer grants Seller a non-exclusive, non-transferable license to use Buyer's name and logo for marketing purposes, including but not limited to, press releases, marketing and promotional materials, and web site content.
5. **Changes.** Neither party shall implement any changes in the scope of Work described in Seller's Documentation without a mutually agreed upon change order. Any change to the scope of the Work, delivery schedule for the Work, any Force Majeure Event, any law, rule, regulation, order, code, standard or requirement which requires any change hereunder shall entitle Seller to an equitable adjustment in the price and time of performance.
6. **Force Majeure Event.** Neither Buyer nor Seller shall have any liability for any breach or delay (except for breach of payment obligations) caused by a Force Majeure Event. If a Force Majeure Event exceeds six (6) months in duration, the Seller shall have the right to terminate the Agreement without liability, upon fifteen (15) days written notice to Buyer, and shall be entitled to payment for work performed prior to the date of termination. "**Force Majeure Event**" shall mean events or circumstances that are beyond the affected party's control and could not reasonably have been easily avoided or overcome by the affected party and are not substantially attributable to the other party. Force Majeure Event may include, but is not limited to, the following circumstances or events: war, act of foreign enemies, terrorism, riot, strike, or lockout by persons other than by Seller or its sub-suppliers, natural catastrophes or (with respect to on-site work), unusual weather conditions.
7. **Warranty.** Subject to the following sentence, Seller warrants to Buyer that the (i) Work shall materially conform to the description in Seller's Documentation and shall be free from defects in material and workmanship and (ii) the Services shall be performed in a timely and workmanlike manner. Determination of suitability of treated water for any use by Buyer shall be the sole and exclusive responsibility of Buyer. The foregoing warranty shall not apply to any Work that is specified or otherwise demanded by Buyer and is not manufactured or selected by Seller, as to which (i) Seller hereby assigns to Buyer, to the extent assignable, any warranties made to Seller and (ii) Seller shall have no other liability to Buyer under warranty, tort or any other legal theory. The Seller warrants the Work, or any components thereof, through the earlier of (i) eighteen (18) months from delivery of the Work or (ii) twelve (12) months from initial operation of the Work or ninety (90) days from the performance of services (the "Warranty Period"). If Buyer gives Seller prompt written notice of breach of this warranty within the Warranty Period, Seller shall, at its sole option and as Buyer's sole and exclusive remedy, repair or replace the subject parts, re-perform the Service or refund the purchase price. Unless otherwise agreed to in writing by Seller, (i) Buyer shall be responsible for any labor required to gain access to the Work so that Seller can assess the available remedies and (ii) Buyer shall be responsible for all costs of installation of repaired or replaced Work. If Seller determines that any claimed breach is not, in fact, covered by this

warranty, Buyer shall pay Seller its then customary charges for any repair or replacement made by Seller. Seller's warranty is conditioned on Buyer's (a) operating and maintaining the Work in accordance with Seller's instructions, (b) not making any unauthorized repairs or alterations, and (c) not being in default of any payment obligation to Seller. Seller's warranty does not cover (i) damage caused by chemical action or abrasive material, misuse or improper installation (unless installed by Seller) and (ii) media goods (such as, but not limited to, resin, membranes, or granular activated carbon media) once media goods are installed. THE WARRANTIES SET FORTH IN THIS SECTION 7 AND THE WARRANTY SET FOR IN THE "EXTENDED LOW PRESSURE MEMBRANE MODULE WARRANTY" SECTION OF EVOQUA'S PROPOSAL ARE THE SELLER'S SOLE AND EXCLUSIVE WARRANTIES AND ARE SUBJECT TO THE LIMITATION OF LIABILITY PROVISION BELOW. SELLER MAKES NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE.

8. **Indemnity.** Seller shall indemnify, defend and hold Buyer harmless from any claim, cause of action or liability incurred by Buyer as a result of third party claims for personal injury, death or damage to tangible property, to the extent caused by Seller's negligence. Seller shall have the sole authority to direct the defense of and settle any indemnified claim. Seller's indemnification is conditioned on Buyer (a) promptly, within the Warranty Period, notifying Seller of any claim, and (b) providing reasonable cooperation in the defense of any claim.

9. **Assignment.** Neither party may assign this Agreement, in whole or in part, nor any rights or obligations hereunder without the prior written consent of the other party; provided, however, the Seller may assign its rights and obligations under these terms to its affiliates or in connection with the sale or transfer of the Seller's business and Seller may grant a security interest in the Agreement and/or assign proceeds of the agreement without Buyer's consent.

10. **Termination.** Either party may terminate this agreement, upon issuance of a written notice of breach and a thirty (30) day cure period, for a material breach (including but not limited to, filing of bankruptcy, or failure to fulfill the material obligations of this agreement). If Buyer suspends an order without a change order for ninety (90) or more days, Seller may thereafter terminate this Agreement without liability, upon fifteen (15) days written notice to Buyer, and shall be entitled to payment for work performed, whether delivered or undelivered, prior to the date of termination.

11. **Dispute Resolution.** Seller and Buyer shall negotiate in good faith to resolve any dispute relating hereto. If, despite good faith efforts, the parties are unable to resolve a dispute or claim arising out of or relating to this Agreement or its breach, termination, enforcement, interpretation or validity, the parties will first seek to agree on a forum for mediation to be held in a mutually agreeable site. If the parties are unable to resolve the dispute through mediation, then *any dispute, claim or controversy arising out of or relating to this Agreement or the breach, termination, enforcement, interpretation or validity thereof, including the determination of the scope or applicability of this agreement to arbitrate, shall be determined by arbitration in Pittsburgh, Pennsylvania before three arbitrators* who are lawyers experienced in the discipline that is the subject of the dispute and shall be jointly selected by Seller and Buyer. *The arbitration shall be administered by JAMS pursuant to its Comprehensive Arbitration Rules and Procedures. The Arbitrators shall issue a reasoned decision of a majority of the arbitrators, which shall be the decision of the panel.* Judgment may be entered upon the arbitrators' decision in any court of competent jurisdiction. The substantially prevailing party as determined by the arbitrators shall be reimbursed by the other party for all costs, expenses and charges, including without limitation reasonable attorneys' fees, incurred by the prevailing party in connection with the arbitration. For any order shipped outside of the United States, any dispute shall be referred to and finally determined by the International Center for Dispute Resolution in accordance with the provisions of its International Arbitration Rules, enforceable under the New York Convention (Convention on the Recognition and Enforcement of Foreign Arbitral Awards) and the governing language shall be English.

12. **Export Compliance.** Buyer acknowledges that Seller is required to comply with applicable export laws and regulations relating to the sale, exportation, transfer, assignment, disposal and usage of the Work provided under this Agreement, including any export license requirements. Buyer agrees that such Work shall not at any time directly or indirectly be used, exported, sold, transferred, assigned or otherwise disposed of in a manner which will result in non-compliance with such applicable export laws and regulations. It shall be a condition of the continuing performance by Seller of its obligations hereunder that compliance with such export laws and regulations be maintained at all times. BUYER AGREES TO INDEMNIFY AND HOLD SELLER HARMLESS FROM ANY AND ALL COSTS, LIABILITIES, PENALTIES, SANCTIONS AND FINES RELATED TO NON-COMPLIANCE WITH APPLICABLE EXPORT LAWS AND REGULATIONS.

13. **LIMITATION OF LIABILITY.** NOTWITHSTANDING ANYTHING ELSE TO THE CONTRARY, SELLER SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, PUNITIVE OR OTHER INDIRECT DAMAGES, AND SELLER'S TOTAL LIABILITY ARISING AT ANY TIME FROM THE SALE OR USE OF THE WORK, INCLUDING WITHOUT LIMITATION ANY LIABILITY FOR ALL WARRANTY CLAIMS OR FOR ANY BREACH OR

FAILURE TO PERFORM ANY OBLIGATION UNDER THE CONTRACT, SHALL NOT EXCEED THE PURCHASE PRICE PAID FOR THE WORK. THESE LIMITATIONS APPLY WHETHER THE LIABILITY IS BASED ON CONTRACT, TORT, STRICT LIABILITY OR ANY OTHER THEORY.

14. **Rental Equipment / Services.** Any leased or rented equipment (“Leased Equipment”) provided by Seller shall at all times be the property of Seller with the exception of certain miscellaneous installation materials purchased by the Buyer, and no right or property interest is transferred to the Buyer, except the right to use any such Leased Equipment as provided herein. Buyer agrees that it shall not pledge, lend, or create a security interest in, part with possession of, or relocate the Leased Equipment. Buyer shall be responsible to maintain the Leased Equipment in good and efficient working order. At the end of the initial term specified in the order, the terms shall automatically renew for the identical period unless canceled in writing by Buyer or Seller not sooner than three (3) months nor later than one (1) month from termination of the initial order or any renewal terms. Upon any renewal, Seller shall have the right to issue notice of increased pricing which shall be effective for any renewed terms unless Buyer objects in writing within fifteen (15) days of issuance of said notice. If Buyer timely cancels service in writing prior to the end of the initial or any renewal term this shall not relieve Buyer of its obligations under the order for the monthly rental service charge which shall continue to be due and owing. Upon the expiration or termination of this Agreement, Buyer shall promptly make any Leased Equipment available to Seller for removal. Buyer hereby agrees that it shall grant Seller access to the Leased Equipment location and shall permit Seller to take possession of and remove the Leased Equipment without resort to legal process and hereby releases Seller from any claim or right of action for trespass or damages caused by reason of such entry and removal.

15. **Miscellaneous.** These terms, together with any Contract Documents issued or signed by the Seller, comprise the complete and exclusive statement of the agreement between the parties (the “Agreement”) and supersede any terms contained in Buyer’s documents, unless separately signed by Seller. No part of the Agreement may be changed or cancelled except by a written document signed by Seller and Buyer. No course of dealing or performance, usage of trade or failure to enforce any term shall be used to modify the Agreement. To the extent the Agreement is considered a subcontract under Buyer’s prime contract with an agency of the United States government, in case of Federal Acquisition Regulations (FARs) flow down terms, Seller will be in compliance with Section 44.403 of the FAR relating to commercial items and those additional clauses as specifically listed in 52.244-6, Subcontracts for Commercial Items (OCT 2014). If any of these terms is unenforceable, such term shall be limited only to the extent necessary to make it enforceable, and all other terms shall remain in full force and effect. The Agreement shall be governed by the laws of the Commonwealth of Pennsylvania without regard to its conflict of laws provisions. Both Buyer and Seller reject the applicability of the United Nations Convention on Contracts for the international sales of goods to the relationship between the parties and to all transactions arising from said relationship.

Extended Low Pressure Membrane Module Warranty

1. Term of the Low Pressure Membrane Module Warranty
 - a. This Warranty shall commence (“Commencement Date”) on the earlier of:
 - i) wet start up of the equipment, or
 - ii) 6 months after the delivery of the final low pressure membrane skid/rack to the Buyer.
 - b. This Warranty shall continue for a period of 7 years from the Commencement Date (the “Module Warranty Period”).
2. Repair and Replacement Conditions
 - a. In the event an individual low pressure membrane module exhibits defects in material or workmanship, as defined in Paragraph 2.b. below, the Seller shall, at its sole option and as the Buyer’s sole remedy, conduct either of the following:
 - i) Repair the low pressure membrane module at no cost to Buyer; or
 - ii) Provide replacement low pressure membrane modules per the warranty replacement schedule listed in Paragraph 5 below.
 - b. Low pressure membrane modules shall be deemed to be exhibiting defects in material or workmanship under the following conditions:
 - i) If the low pressure membrane module fails Seller’s standard integrity test and cannot be repaired by the Buyer; or
 - ii) If a low pressure membrane module fails Seller’s standard integrity test and requires pin repair by Buyer on more than three occasions in any three month period or more than six occasions in any twelve month period after commencement of the Module Warranty Period, it may be repaired or replaced by Seller under the terms of low pressure membrane module warranty.
 - c. Buyer will return to Seller the end of each low pressure membrane module with the serial number to qualify for a replacement module.
3. Low Pressure Membrane Module Warranty Exclusions: The Buyer recognizes that damage resulting from any of the following shall be excluded from coverage under the low pressure membrane module warranty:
 - a. Alteration or faulty installation of membrane system equipment, components or low pressure membrane modules by any person other than an employee or representative of Seller without the Seller’s prior written consent.

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- b. Buyer causing or permitting any low pressure membrane modules to dry or to have a moisture content below that specified in the operating instructions.
 - c. Chemical or physical conditions such as (but not limited to) pH, temperature or climatic factors outside recommended operating parameters in the appropriate section of the Operating and Maintenance Manual even where Seller is aware of the existence of these conditions.
 - d. Supply of influent water exhibiting parameters inconsistent with the parameters determined or specified at the time of bid and/or pilot testing. Deviance from any specified influent parameters may diminish or, in certain cases, void this warranty.
 - e. Exposure of the low pressure membrane modules to oil, organic solvents and other substances not normally present in water. In particular, waste water from oil filters and/or compressors shall not be permitted to come in contact with the low pressure membrane modules at any time.
 - f. Permanent or temporary exposure of the low pressure membrane modules to sand, grit or other particulate that may result in fiber damage or abrasion.
 - g. Improper maintenance of the equipment (including failure to perform general pinning maintenance) as defined in Seller supplied Operating and Maintenance Manual.
 - h. Use of water treatment chemicals or cleaning procedures other than chemicals, cleaning solutions and procedures approved by the Seller.
 - i. Use of cationic polymer in the Buyer's water treatment process without the prior written consent of Seller.
4. Warranty Conditions: This warranty is conditioned upon Buyer:
 - a. Not being in default of any payment obligations to Seller; and
 - b. Maintaining hand-written or electronic operational logs and providing such logs to Seller in the event of a warranty claim.
 5. Warranty Replacement Schedule
 - a. **First 12 Months:** If a low pressure membrane module shall require replacement under the repair and replacement conditions described in section 2 above during the first twelve (12) months of the "Module Warranty Period", a replacement will be supplied by Seller at no charge.
 - b. **Next 72 Months:** If a low pressure membrane module shall require replacement under the repair and replacement conditions described in section 2 above during the next seventy-two (72) months of the Module Warranty Period, a replacement will be supplied by Seller and invoiced based upon a pro-rata value of a total of eighty-four (84) months. The pro-rata value shall be determined using a replacement price of US\$1,100.00 per module adjusted by the increase in the North American Consumer Price Index (CPI) All

Urban Consumers (US City Average), and reducing this price by 1/84th for each month remaining in the 84-month period.

- c. Replacement modules supplied by the Seller to Buyer under warranty shall assume the balance of the low pressure membrane module warranty that remained on the defective low pressure membrane module that was replaced under warranty.
 - d. Freight costs associated with the furnishing of replacement modules provided under the low pressure membrane module warranty is not included in the warranty replacement price. Accordingly, the shipping/delivery terms for replacement modules supplied under the low pressure membrane module warranty shall be “Ex Works Seller’s Facility” and Seller shall arrange, and Buyer shall pay for, transportation of replacement membrane modules to Buyer’s facility.
6. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INDIRECT, CONSEQUENTIAL, INCIDENTAL, SPECIAL, PUNITIVE OR OTHER DAMAGES AND SELLER’S TOTAL LIABILITY UNDER THIS EXTENDED LOW PRESSURE MEMBRANE MODULE WARRANTY, WHEN ADDED TO ALL LIABILITY OF SELLER TO THE BUYER AND ANY END USER OF THE SYSTEM, IF DIFFERENT FROM THE BUYER, UNDER THE SYSTEM SALE CONTRACT, SHALL NOT EXCEED THE LIMITATION ON LIABILITY SET FORTH IN THE SYSTEM SALE CONTRACT. THE FOREGOING LIMITATIONS APPLY REGARDLESS OF WHETHER THE LIABILITIES OR DAMAGES ARISE OR ARE ALLEGED TO ARISE UNDER CONTRACT, TORT, STRICT LIABILITY OR ANY OTHER THEORY.