

as-sold proposal for the
**English River Property Management (ERPM)
Wastewater Treatment Facility (WWTF)
ZeeWeed membrane bioreactor system**

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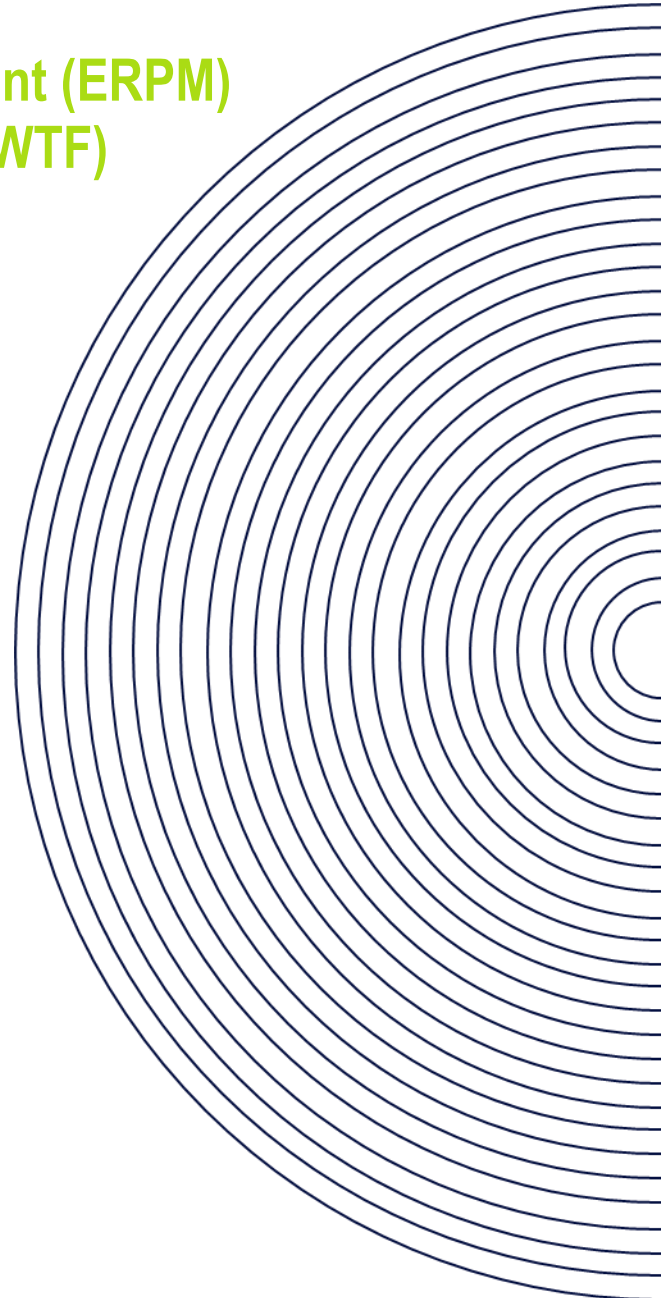


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1 SUEZ qualifications & experience

1.1 about SUEZ

Since the creation of the Universal Suez Canal Company by Ferdinand de Lesseps in 1858, SUEZ has participated in some of the main social changes of its time: public health in the 19th century, and urban comfort and quality of life in the 20th. Today, recent changes in its governance have put the company in a position to take up one of the greatest challenges of the 21st century: **the resource revolution**.

With 90,000 people on five continents, SUEZ is a world leader in smart and sustainable resource management. We provide water and waste management solutions that enable cities and industries to optimize their resource management and strengthen their environmental and economic performances, in line with regulatory standards. To meet increasing demands to overcome resource quality and scarcity challenges, SUEZ is fully engaged in the resource revolution. With the full potential of digital technologies and innovative solutions, SUEZ recovers 17 million tons of waste a year, produces 3.9 million tons of secondary raw materials and 7 TWh of local renewable energy. It also secures water resources, delivering wastewater treatment services to 58 million people and reusing 882 million m³ (233 billion gallons) of wastewater. SUEZ generated total revenues of 15.8 billion euros in 2017. The complete annual report can be found at: www.suez.com/en/Finance/Financial-information



SUEZ is adding innovation and value to municipal and industrial customers around the world, including:



a **vast geographical footprint** to serve our global customers



one of the **largest portfolios** in the market to contribute to the circular economy – the heart of the resource revolution



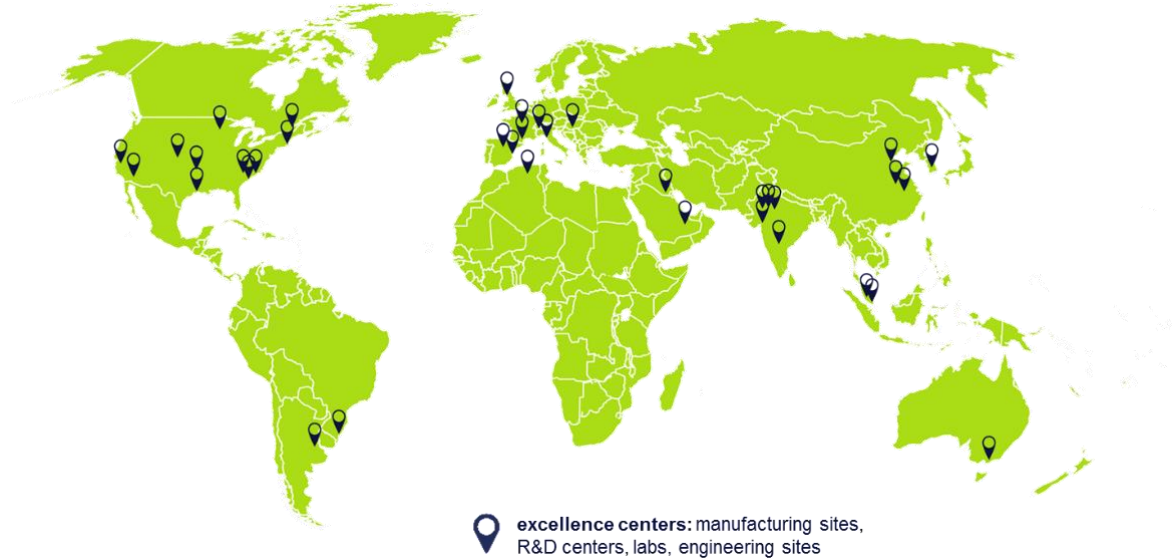
state-of-the art **digital and smart** capabilities to drive process optimization and resource conservation



expert **R&D teams** and strong go-to-market capabilities to bring new solutions to our customers faster

A global footprint: present in 130+ countries

SUEZ is serving customers globally on all five (5) continents.



On this map of the world, we have summarized the number of excellence centers (main manufacturing sites, R&D centers, labs and engineering offices) SUEZ has in each region. The closer we are to our customers, the quicker we can anticipate challenges, and solve issues before they become real problems. Our global footprint speeds up and improves delivery of services, technologies and expertise.

Key North American Locations

SUEZ – Oakville, Ontario
 3239 Dundas Street West
 Oakville, ON L6M 4B2, Canada
 Phone – 905-465-3030

SUEZ – Edmonton, Alberta
 9408 – 39th Avenue NW
 Edmonton, Alberta, Canada T6E 5T9
 Phone - 780 465 5451

To provide maximum support to the **English River Property Management (ERPM) Wastewater Treatment Facility (WWTF)**, the SUEZ offices in Oakville, Ontario and Edmonton, Alberta in conjunction with our representative Mequipco located in Winnipeg, Manitoba will support the execution of this project. Our expert technicians can provide on-site support throughout all stages of the project and continuing during long-term operation. **SUEZ Oakville** is the global UF/MBR Centre of Excellence and North American membrane design headquarters. The Oakville office employs approximately 420 staff, and is focused on developing, designing, and supporting water and wastewater treatment solutions using leading-edge membrane technologies. The **SUEZ Edmonton Service Center** is our local hub for technical support and from which long-term support will be provided. The office has thirty employees dedicated to supporting SUEZ installed equipment in the region.

2 introduction

2.1 company history

From modest beginnings in 1980, ZENON Environmental Inc. grew to become the global leader of low pressure membrane filtration technology. Spurred by the vision that membranes are the world's answer to water shortages, overuse, and pollution, the company has always focused on a single goal—to make superior membrane systems a cost-effective solution for everyone who needs them.



The ZeeWeed ultrafiltration membrane, developed in 1990, was a paradigm shift in membrane technology. At that time, membrane systems were primarily using pressurized cartridges with many components and high energy requirements. ZENON transformed the industry with the introduction of membranes that are immersed directly into process tanks and need only a slight vacuum to filter water.

GE Water & Process Technologies acquired ZENON Environmental Inc. on June 1, 2006, uniting patented ZENON technologies with GE's corporate leadership and financial depth to provide unparalleled performance and the best overall water treatment solutions. GE Water & Process Technologies became a worldwide leading systems and services provider for municipal and industrial customers, supplying state-of-the-art water, wastewater and process system solutions. GE Water & Process Technologies generated ~\$2.1 billion USD in revenues in 2016 with 7,500 highly skilled salesmen and engineers with strong digital capabilities.



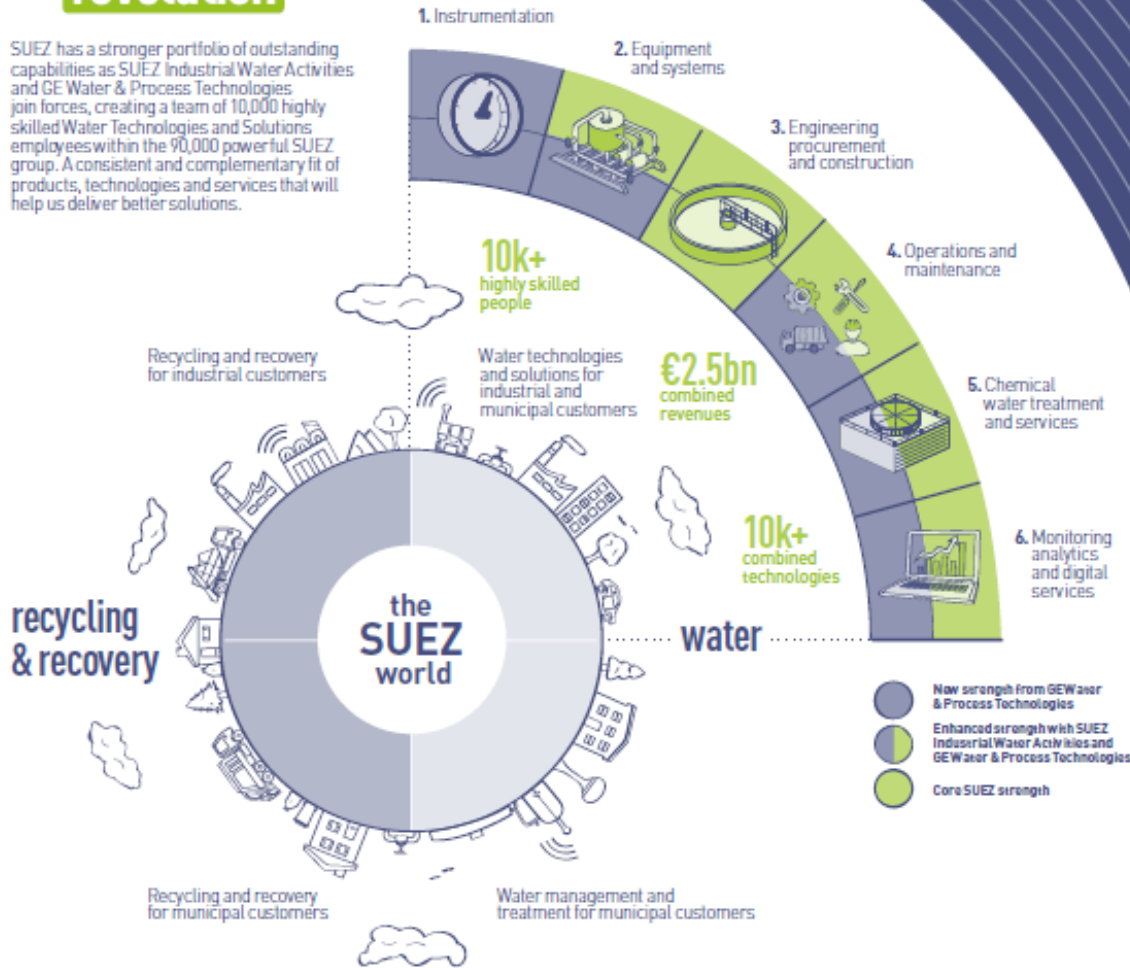
On October 1, 2017, SUEZ purchased GE Water & Process Technologies. GE Water & Process Technologies now joins forces with SUEZ's Industrial Water activities to create the **Water Technologies & Solutions** business unit within the SUEZ Group. With a solid financial position and a wide breadth of portfolios, this business unit aims to be a worldwide leader in water and treatment solutions for the industrial and municipal markets. SUEZ Water Technologies & Solutions now operates with over 10,000



employees and addresses the needs of over 50,000 customers worldwide. Additionally, relying on 650 R&D and expert staff as well as 17 Research & Excellence Centers of SUEZ, the business unit is committed to expanding its water treatment offerings and digital capabilities to deliver best-in-class solutions.

joining forces for the resource revolution

SUEZ has a stronger portfolio of outstanding capabilities as SUEZ Industrial Water Activities and GE Water & Process Technologies join forces, creating a team of 10,000 highly skilled Water Technologies and Solutions employees within the 90,000 powerful SUEZ group. A consistent and complementary fit of products, technologies and services that will help us deliver better solutions.



ready for the resource revolution

In a world where population growth, industrialization and climate change are contributing to increased scarcity, SUEZ, with GE Water & Process Technologies, is getting our customers ready for the resource revolution. Our extended geographic footprint, solutions and enhanced digital capabilities will bring innovation and new value to industrial and municipal customers around the world.

- SUEZ new key figures**
- 90k+** employees
 - €17bn** combined 2016 annual revenues
 - 450k** industrial and business customers worldwide
 - €120m** combined annual R&D investment
 - 17** research and excellence centers
 - 3,200+** patents

2.2 UF/MBR operations

From its inception 40 years ago, the company had endeavored to listen to customers and anticipate the needs of the market in order to respond with practical solutions for drinking water, wastewater treatment, and water reuse. Today, SUEZ carries on with a complete family of UF/MBR membrane products which provide large-, medium- and small-scale solutions for municipalities, industries, land development and emergency applications.

ZeeWeed ultrafiltration membranes are utilized for drinking water, wastewater, tertiary and water reuse applications, as well as industrial feedwater and reverse osmosis (RO) pretreatment. The advanced technology is operational in thousands of municipal, industrial and commercial applications worldwide:

ZeeWeed 500: immersed membrane designed to handle challenging wastewater, with a greater tolerance of solids and high turbidity. It is the core of our LEAPmbr technology – an advanced, low energy MBR designed for wastewater treatment and reuse.

ZeeWeed 1000: immersed membrane designed for retrofits and larger plants, making it ideal for tertiary, drinking water, brackish, and seawater pretreatment applications.

ZeeWeed 1500: a pressurized membrane ideal for drinking water treatment, tertiary filtration, and pretreatment applications for brackish and seawater desalination in small to medium sized plants.

ZeeWeed 700B: an “inside-out” ultrafiltration membrane ideal for lower solids feedwater like pretreatment for reverse osmosis, high quality industrial processes, high pressure offshore EOR and membrane upgrades. Also appropriate for non-water applications like juice, wine and beer clarification.

SUEZ’s global UF/MBR center of excellence in Oakville Ontario, Canada, is the focal point of SUEZ’s ultrafiltration (UF) membrane research and development, as well as the design and delivery of UF-based water and wastewater treatment systems. The UF membrane division is 100% focused on developing, manufacturing, and supporting leading-edge, hollow fiber water and wastewater treatment solutions. **All design and engineering for the English River Property Management (ERPM) Wastewater Treatment Facility (WWTF) will be directed out of the Oakville, Ontario UF/MBR center of excellence.**



SUEZ’s global UF/MBR center of excellence located in Oakville, Ontario, Canada

2.3 membrane manufacturing

With a world-class manufacturing facility located in Oroszlány, Hungary (the plant where the ZeeWeed 500 membrane modules proposed for the **English River Property Management (ERPM) Wastewater Treatment Facility (WWTF)** project would be produced), SUEZ leads the membrane industry with the world’s largest capacity for

membrane manufacturing. By leveraging the capabilities of this manufacturing hub, SUEZ can assure customers of on-time and on-budget product delivery no matter where treatment plants are located.

A dedicated team of individuals monitor incoming project orders that incorporate ZeeWeed membranes, and are responsible for planning the production at the Oroszlány factory to ensure that all projects are delivered on time. As our backlog of orders increases, production capacity is continually reviewed to ensure that it is adequate. Several plant expansions have been implemented to ensure sufficient capacity to meet the demands of all pending and anticipated orders.



membrane manufacturing plant located in Oroszlány, Hungary

Built on a solid foundation of dedication and excellence, the SUEZ membrane manufacturing division is committed to delivering high quality membrane products to global customers. SUEZ owns and operates all of its manufacturing resources to ensure strict controls over the manufacturing process and rigid quality standards for every membrane module that leaves the plants.

SUEZ employs the industry’s most advanced manufacturing techniques, which enables the production of top quality membranes with maximum efficiency. The manufacturing process is almost completely automated, which minimizes quality issues and maximizes product consistency. Over the past several years, our manufacturing infrastructure has easily accommodated the rapid increases in demand for SUEZ products – increasing production by more than 500 percent during this period.

While the manufacturing facilities maintain an inventory of products, we constantly monitor bidding activity to confirm that sufficient manufacturing capacity is available to meet customer demand and that adequate product supplies are available to avoid project delays.

Prior to shipping, all of our products undergo a rigorous inspection to verify that all system components meet the quality and performance standards that SUEZ customers have come to expect.

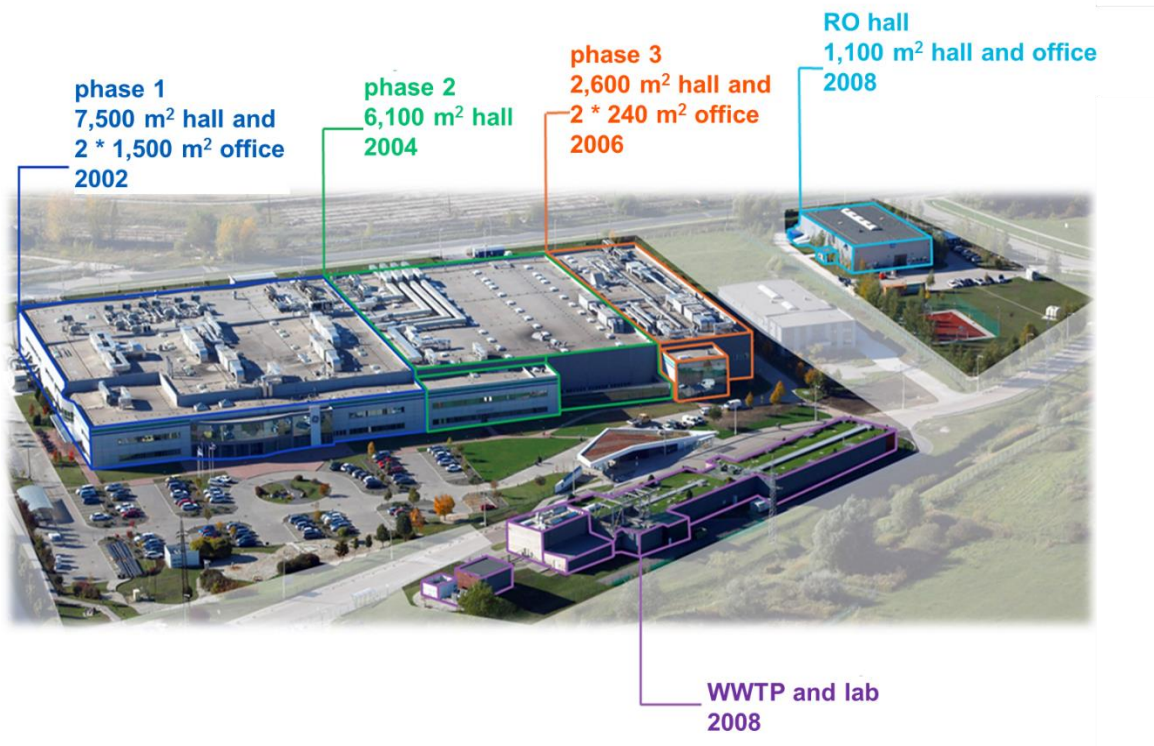
Over the next several years, membranes are expected to comprise more than 20 percent of the global market for water and wastewater treatment equipment. Our proactive manufacturing plan has accounted for this growth, and SUEZ is well positioned to increase manufacturing capacity over this period.

Our production increases, coupled with continued efficiencies in manufacturing, will enable our manufacturing teams to quickly and efficiently deliver high quality membrane products while constantly improving system performance and value. Through these streamlining efforts, SUEZ also strives to improve on a key success metric shared by both the company and its customers—reducing the cost of each gallon of water treated.

Globally, SUEZ currently has over 300,000 square feet of manufacturing and production area at its disposal. Over 660 employees are utilized in the manufacturing of the ZeeWeed membranes and assembling of process equipment.

production expansion

The Oroszlány manufacturing plant has undergone three plant expansions since opening in 2002. Most recently some of our production lines have been expanded for further capacity in 2013.



facts about the Oroszlány facility

physical size

- total area: 80 000 m²
- constructed area: 19 300 m²
- total manufacturing area: 11 700 m²
- total warehouse area: 5 000 m²

general facts

- initial building built: 2002
- activities:
 - UF/MBR manufacturing center of excellence
 - RO manufacturing
 - European distribution center

product mix

- ZeeWeed 500, 1000, 1500 manufacturing

- ❑ RO element manufacturing

certifications

- ❑ ISO 9001 / ISO14001 / OHSAS 18001
- ❑ NSF 61
- ❑ KTW-TZW (Ger) / DWA (GB) / Gost (Rus)
- ❑ ÁNTSZ (Hun) / PZH (Pol) / KWWA (Kor)
- ❑ MOH (China)

annual transactions

- ❑ number of shipments: 3500
- ❑ number of inbound deliveries: 660

3 MBR experience

3.1 MBR Experience summary

SUEZ Water Technologies & Solutions is the world leader in membrane filtration technology for wastewater treatment, and has been a pioneer in the development of membranes for all water and wastewater treatment applications. Developed in the early 1990's, the patented ZeeWeed membrane is well-proven, with hundreds of ZeeWeed MBR plants in operation around the world, in a variety of wastewater treatment applications.

SUEZ Water Technologies & Solutions has more experience related to the design, delivery, commissioning, operation, and after-sales support of MBR systems than any other supplier in the world. From a small Canadian company started in 1980, to the delivery of the world's largest membrane wastewater treatment plants, SUEZ Water Technologies & Solutions has the knowledge, experience and capabilities to make the English River Property Management (ERPM) Wastewater Treatment Facility (WWTF) project a successful one.

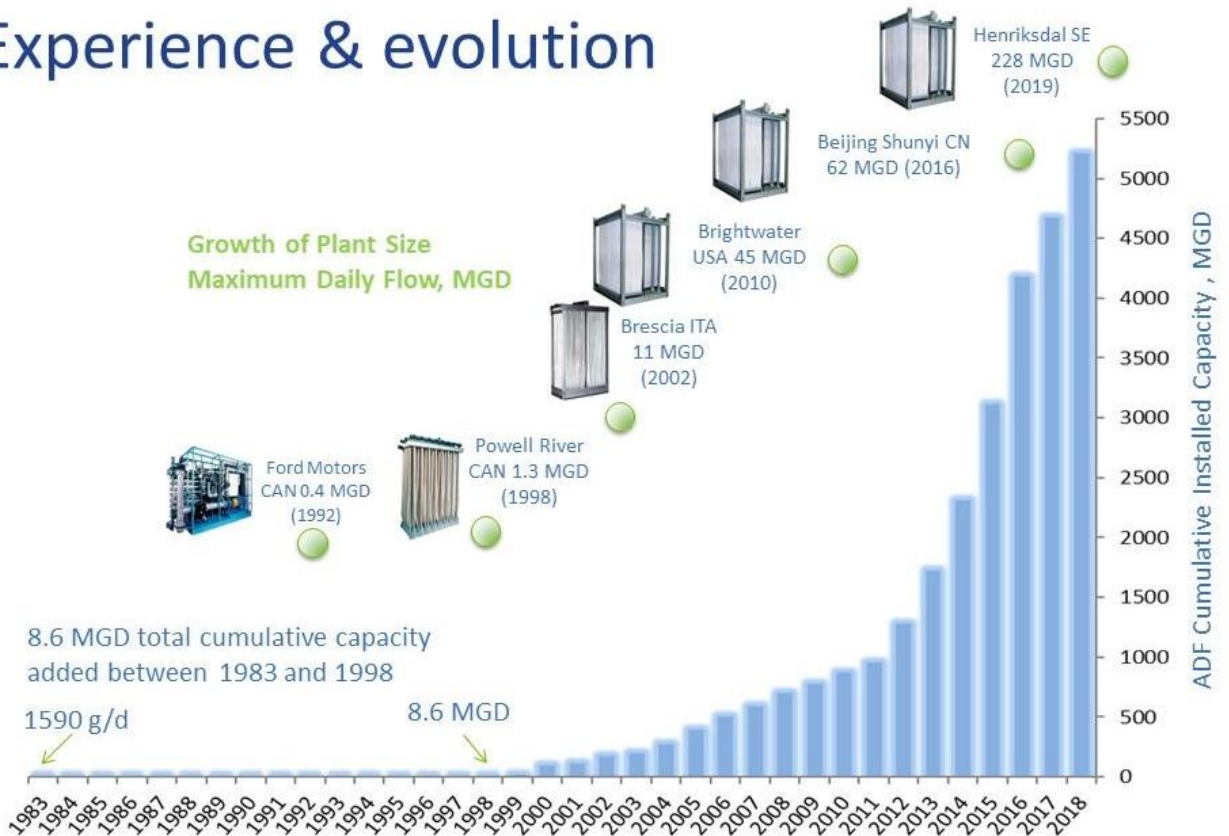
The **English River Property Management (ERPM) Wastewater Treatment Facility (WWTF) project** will benefit from all the experience gained and lessons learned through the completion of hundreds of previous MBR projects. SUEZ Water Technologies & Solutions regional knowledge, combined with our experience in delivering membrane treatment projects of all sizes, means choosing SUEZ as a partner for this project will substantially reduce risk and minimize additional project costs.

Highlights of SUEZ's extensive MBR experiences also include:

- First MBR installations, using Permaflow tubular membranes, in the early 1980's
- Earliest ZeeWeed immersed MBR systems in operation for nearly 20 years
- Largest operating municipal and industrial MBR's worldwide
- 8 of the 10 largest MBR plants awarded worldwide use SUEZ ZeeWeed membranes
- ZeeWeed wastewater treatment installations in 58 countries
- Total MBR online treatment capacity that is more than double that of the next largest membrane supplier

Since the installation of the first ZeeWeed wastewater treatment facility in 1993, total installed capacity has grown at an exponential rate. Over the next few years, global ZeeWeed treatment capacity will double, as plants currently in design and/ or under construction are brought online.

Experience & evolution



Treatment plants currently in operation using ZeeWeed membranes (including both wastewater and water treatment applications) range in size from less than 1,500 gallons per day to over 90 million gallons per day.

Total number of ZeeWeed membrane treatment plants worldwide	> 2,000
Total number of ZeeWeed membrane wastewater treatment plants in North America	558
Total number of ZeeWeed membrane wastewater treatment plants in the USA	488
Total number of ZeeWeed membrane wastewater treatment plants in Canada	70

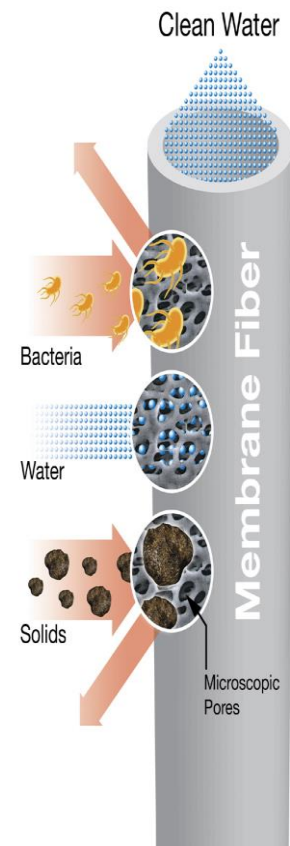
4 benefits of SUEZ system design

ZeeWeed systems are focused on ultrafiltration as the heart of the MBR process, with the ability to add biological or other additional components into the system as required.

Each system has been engineered with a multitude of design options, features and benefits to enable engineers, clients and operators to design and configure the MBR system that best fits each individual application.

ZeeWeed systems are designed with 3 key attributes in mind:

- ❑ lowest lifecycle cost MBR – lowest cost of ownership for the Owner;
- ❑ simple operations – simple & automated operations coupled with SUEZ support for the operating team;
- ❑ robust design – prove design parameters with scope and configuration options for a wide variety of conditions.



ZeeWeed UF membranes operate under a low-pressure vacuum, drawing clean water to the inside of the fiber (outside-in flow path), while leaving impurities in the process tank.

4.1 low lifecycle cost MBR

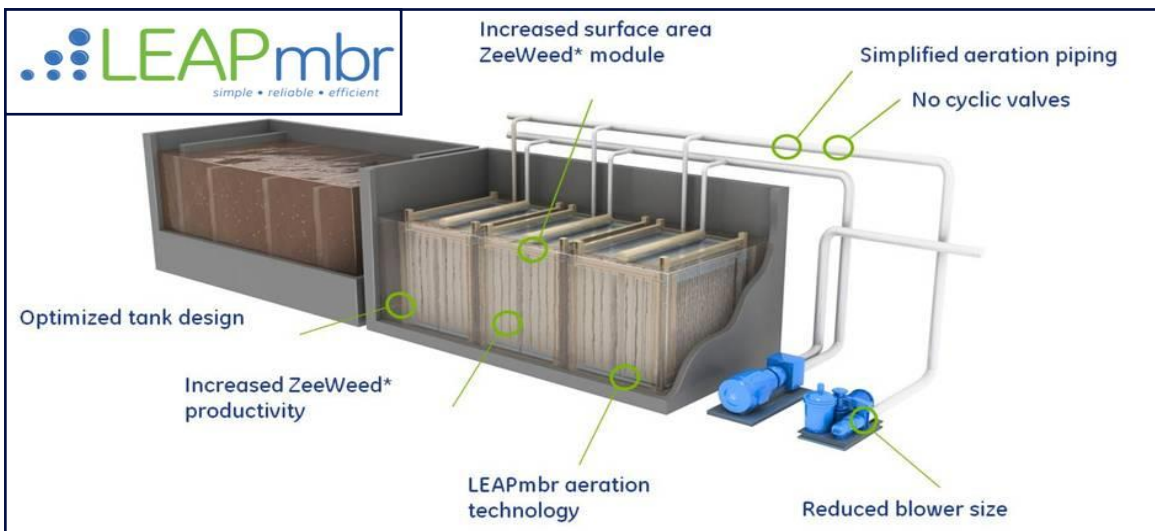
At the heart of a low lifecycle MBR system are the two most important parameters: efficient MBR design and operation and SUEZ's ZeeWeed 500 membrane technology.

4.2 LEAPmbr... simple, reliable, efficient

SUEZ's ZeeWeed system is designed to incorporate the latest innovations of LEAPmbr technology making it the most energy efficient and productive MBR that SUEZ is able to provide to owners.

LEAPmbr's combined initiatives will directly impact your plant design by:

- improving your productivity by 15%;
- decreasing your membrane system footprint by 20%;
- removing equipment needed to provide aeration to your membranes by 50%;
- saving you over 30% in membrane aeration power costs.



4.3 membrane life, cleanability & replacement

SUEZ's ZW500 membrane technology has the following key benefits to ensure an owner's peace of mind for the life of their MBR facility:

- ❑ ZeeWeed MBR membrane with a proven membrane life and high resistance to upset conditions;
- ❑ system designed with multiple cleaning options to ensure the highest chance of achieving maximum membrane life;
- ❑ SUEZ as a single point of responsibility provides an integrated supply chain between the system & membrane warranty provider and the membrane manufacturer;
- ❑ a straightforward membrane warranty with clear performance triggers.

4.4 simple MBR operations

The ZeeWeed UF is designed to ensure the system is simple to operate without compromising any operational robustness.

The operators have a range of flexible options to ensure the MBR system is able to meet varying operating conditions should they arise.

4.5 membrane aeration system design

Aeration is one of the most important operating parameters for successful long term MBR operations and is a significant component of operating cost.

Suez's ZeeWeed UF utilizes a very simple aeration strategy which minimizes the amount of instrumentation and controls required to achieve energy efficient membrane aeration.

No complex control loops or complicated airflow measurement devices are required for LEAPmbr aeration technology to achieve energy efficiency.

4.6 membrane cleaning systems

SUEZ has developed MBR design principles based on best engineering practices that ensure the permeability of the membrane is maintained over the life of the membranes.

A fully automated suite of membrane maintenance procedures will ensure long-term, successful operation, including:

- ❑ in situ chemical membrane cleaning performed directly in the membrane process tanks so your operators don't waste time moving cassettes;
- ❑ the ability to increase or decrease the frequency of maintenance cleans to fit the operating conditions;
- ❑ the ability to backpulse, when needed, to greatly improve your operator's ability to recover from non-design conditions.

The above cleaning systems are automated resulting in operators having available a full suite of comprehensive cleaning systems which are simple to use and initiate.

5 Z-MOD robust design basis

The Z-MOD pump skids are designed to ensure operators have a system with sufficient design robustness to accommodate a wide range of potential conditions.

5.1 positive displacement process pumps

Z-MOD pump skid uses positive displacement process pumps to draw permeate through the membranes.

- The positive displacement design of these pumps allows for variations within the hydraulic profile that will not adversely affect the pump performance;
- The pumps come complete with an ability to backpulse the membranes should sludge conditions deteriorate;
- A wide range of pump turndown provides the operator to wide window of flow adjustment for a variety of situations.



This pump selection provides a high level of security and flexibility for engineers and operators.

5.2 permeate for membrane cleaning

Z-MOD pump skid ensures a volume of clean permeate is always stored ready for use for membrane cleaning.

- takes permeate from its production cycle and stores this treated water in the backpulse tank (or pipe of a similar volume) ready for use. This ensures no reliance or costs from a potable water system to supply cleaning solution to the site for the membrane cleaning process;
- systems include a backpulse tank which provides the operations staff with a readily available source of water for cleaning whenever it is required.

This allows cleaning processes to occur automatically while allowing the operator flexibility to select different cleaning methods.

5.3 mixed liquor concentration range

SUEZ MBR/UF systems rely solely on the pore size of the membrane to effect filtration of the mixed liquor. This allows the MBR to operate at a wide range of mixed liquor concentrations.

This removes the need for mixed liquor concentration to be within the intended range during start-up process or low flow scenarios.

5.4 electrical design

Z-MOD pump skids are designed with the following electrical architecture:

- central PLC and common equipment I/O panel;
- remote I/O panel, VFD and disconnect mounted on the process pump skid

This design basis allows the system to readily accommodate additional trains and allows operators to isolate or troubleshoot individual trains without the loss of the central PLC.

6 basis of design

This proposal is offered based on SUEZ supplying one membrane bioreactor (MBR) system utilizing Z-MOD L equipment for the English River Property Management (ERPM) Wastewater Treatment Facility (WWTF).

The following tables summarize the main design parameters on which the system has been designed.

6.1 influent flow data

The English River Property Management WWTF influent flows are listed below:

Parameter	phase 1	phase 2	unit
average day flow (ADF)	188	288	m3/d
maximum month flow (MMF)	282	432	m3/d
maximum day flow (MDF)	376	576	m3/d
maximum flow with one train off-line for maintenance and membrane cleaning for less than 1 day	376	576	m3/d

Note: Any flow conditions that exceed the above-noted flow limit must be equalized prior to treatment in the membrane bioreactor unit.

- ADF – The average flow rate occurring over a 24-hour period based on annual flow rate data.
- MMF – The average flow rate occurring over a 24-hour period during the 30-day period with the highest flow based on annual flow rate data.
- MDF – The maximum flow rate averaged over a 24-hour period occurring within annual flow rate data.

6.2 influent quality

The design solution proposed is based on the wastewater characteristics detailed below.

parameter	quantity			unit
	average day	max month	max day	
minimum influent temperature	9.0			°C
COD	714	508	408	
BOD ₅	350	250	200	mg/L
TSS	350	250	200	mg/L
VSS ¹	280	200	160	
TKN	55	34	34	mg/L
NH ₃ -N	32	20	20	mg/L
TP	11	5.6	5.6	mg/L
alkalinity ^{1, 2}	250			mg/L as CaCO ₃

note 1: Parameter value assumed.

note 2: SUEZ is assuming that influent alkalinity is insufficient to ensure proper performance of the biological

system and has included in the design a backup NaOH dosing system for pH control. Supply of the NaOH dosing equipment is not included in Suez's price and can be quoted at a later time.

6.3 effluent quality

The following performance parameters are expected upon equipment startup and once the biological system has stabilized, based on the data listed in Sections 6.1 and 6.2.

Parameter	Value	units
BOD ₅	≤ 5	mg/L
TSS	≤ 5	mg/L
NH ₃ -N	≤ 1	mg/L
NO ₃	≤ 10	mg/L
TP ¹	≤ 1	mg/L
fecal coliform and total coliform	≤ 200	MPN/100 mL
turbidity	≤ 0.3 monthly average	NTU

Note 1: With coagulant addition

6.4 influent variability

Influent wastewater flows or loads in excess of the design criteria defined above must be equalized prior to entering the membrane tanks. In the event that the influent exceeds the specifications used in engineering this proposal, or the source of influent changes, the ability of the treatment system to produce the designed treated water quality and/or quantity may be impaired. Buyer may choose to continue to operate the system but assumes the risk of damage to the system and/or additional costs due to increased membrane cleanings, potential for biological upset and/or increased consumable usage.

6.5 biological system design

The biological design was developed to treat the maximum monthly flow given in Section 6.1 above and the anticipated maximum month water quality given in Section 6.2 above. The design also accounts for the higher TKN and TP loadings at the average day condition with higher coagulant and pH adjustment chemical flows.

The same biological volume is used in both Phase 1 and 2 with differing MLSS concentrations.

Parameter	Phase 1	Phase 2	units
total anoxic volume	26		m ³
total aerobic volume (excluding membranes)	110		m ³
total reactor volume (excluding membranes)	136	136	m ³
minimum biological tank water depth	3.52	3.79	m

bioreactor mixed liquor suspended solids	8,000	10,000	mg/L
SRT – aerobic/total (excluding membranes)	17/21	13/16	days
total HRT (excluding membranes)	11.6	7.6	hours
Bioreactor MLSS	8,000	10,000	mg/L
Sludge wasting rate	5.3	7.0	m3/day

6.6 ultrafiltration system design

The ultrafiltration system design is summarized in the table below. Membrane modules are assembled into cassettes and cassettes are assembled into trains installed in concrete tanks supplied by buyer.

Parameter	Phase 1	Phase 2
type of membrane	ZW500D 422 ft ²	
number of membrane trains	2	2
number of ZMOD L skids	2	2
number of cassette spaces per train	2	
number of cassettes installed per train	1	2
number of modules per cassette	16	16
number of modules installed per cassette	14	12
total number of modules installed per train	14	24
total number of modules installed per plant	28	48
total number of cassettes installed per plant	2	4
membrane Tank Dimensions (each) m	2.540 x 2.134 x 4.760 (LxWxH)	

Note 1: Dimensions are preliminary only and may change after detailed engineering design.

6.7 equipment description

The following is a description of the equipment included in SUEZ’s scope of supply. Pre-assembled components include the Z-MOD process pump skids, membrane cassette assemblies, and chemical addition system skids. Critical items that will be shipped loose for installation by buyer include the master control panel, backpulse tank, blowers, RAS pumps and other equipment. Please refer to Section 7 for a complete list of SUEZ supplied equipment.

master PLC panel

An Allen-Bradley CompactLogix Programmable Logic Controller (PLC) and PanelView Plus 6 1250 Human Machine Interface (HMI), installed in the UL type 12 main control panel, monitors and manages all critical process operations.

The master PLC panel communicates using Ethernet TCP/IP and includes I/O for common equipment items such as membrane blowers, air compressors, RAS pumps and other items (if included in SUEZ Scope).

Level controls monitor the level of mixed liquor in the process tanks and transmit this information to the SUEZ PLC. The PLC will automatically adjust the flow of the Z-MOD trains based on proportional control to the process or membrane tank levels.

screening system

Trash and non-biodegradable solids, such as hair, lint, grit and plastics may foul or damage the membranes if allowed to pass into the membrane chamber. An internally-fed drum screen with wire-mesh or punched-hole openings less than or equal to 2-mm in size with no possibility of bypass or carryover is absolutely required to maintain both membrane warranty, and optimal MBR operation.

One duty 2-mm internally fed drum screens and one standby have been included for this purpose including compactor.

process pump equipment

One reversible process pump per train is used to draw water through the membranes. The process pump, associated valves, and piping for the train are mounted on a factory assembled, epoxy-coated carbon steel skid.

Each process pump skid is designed to include a remote I/O panel UL type 4, which distributes control wiring to the pump, skid mounted VFD UL type 4X and instrumentation including magnetic flowmeter required to operate the pump system, all located on the process pump skid.

A dedicated effluent turbidity analyzer will be supplied on each skid to monitor effluent water quality and alert operators if effluent turbidity rises beyond acceptable set point.

membrane scour aeration system

One duty membrane blower per train will be supplied with one common standby blower to be shared by all trains.

Blowers will typically come complete with required isolation valves, check valves, pressure relief valve, pressure indicators and flow indicators.

process aeration system

The process aeration blowers provide air for the biological tank and ensure that sufficient oxygen is available to maintain the biological processes in the tank. The process aeration blowers are shipped loose for installation on site.

fine-bubble diffusers

A fine-bubble diffused aeration system delivers air from the process aeration blowers to the aerobic zone of the process tank.

mixed liquor recirculation equipment

Mixed liquor flows by gravity from the bioreactors to the membrane tanks, Return activated sludge (RAS) is pumped from the membrane tanks to the bioreactors. The recirculation (RAS) pumps will be supplied as well as check valves, isolation valves, magmeters and pressure indicators.

sludge wasting system

Sludge wasting is accomplished by periodically diverting mixed liquor from the RAS return line via manual control. The frequency of wasting is a function of influent characteristics, reactor design and operator preference. In certain operating circumstances, bioreactors can be designed to accommodate client preferences with regards to wasting frequencies; however, the preferred fashion of wasting would be continuous 24-hour bleeding at a fixed flow rate.

TWAS aeration system

The thickener waste tank drop legs, diffuser, and blowers provide air to ensure little to no sludge settling.

SUEZ has provided 1 duty blower and coarse bubble diffusers.

sodium hypochlorite dosing system

The sodium hypochlorite dosing system is used for membrane cleaning to remove organic foulants from the membrane surface.

citric acid dosing system

The citric acid dosing system is used for membrane cleaning to remove inorganic scaling from the membrane surface.

pH adjustment system

The pH control system doses sodium hydroxide into the process tank in order to maintain a desired pH for optimal biological performance. A sodium hydroxide system has been accounted for in the current MBR design for procurement, installation and use at a later date.

coagulant addition system

The coagulant dosing system is used to feed a metal salt to assist in precipitating (converting to a particulate form) influent phosphorus. This precipitate is then filtered by the ultrafiltration membranes and removed with waste activated sludge, preventing phosphorus from entering the effluent stream.

effluent flow measurement

Each train will include a magnetic flow meter to provide daily discharge flow measurements.

UV

UV disinfection will be provided as post treatment to ensure fecal and total coliform levels achieved in the effluent.

SUEZ has provided 1 UV system in Phase 1.

InSight Pro – process consulting service

Water and process applications generate vast amounts of operating data. InSight, SUEZ's easy-to-use, cloud-based knowledge management platform, captures and transforms your plant data into meaningful and actionable information, ultimately providing the knowledge you need to maximize performance, avoid operational interruptions, optimize your processes, and reduce the total cost of operation.

InSight Pro – process consulting service has been provided with your MBR/UF system for two (2) years of operation. InSight Pro pairs you with a SUEZ process expert and provides you a level of personal attention that is currently not available in the market. Your process expert is specifically assigned to your plant and will monitor key parameters on a regular rhythm using InSight. The process expert will be in frequent contact with key members of your operations team to discuss and resolve performance, process and operational issues. While supporting your team with day-to-day operations, the process expert will use InSight to focus on long term trends and provide you with recommendations that will help maximize membrane and equipment life and reduce costs. As part of the service, your process expert will provide process and performance review reports that contain insights to help you improve performance, optimize your process parameters and avoid operational downtime. If the need for troubleshooting does arise, you will have a SUEZ process expert on your team, deeply familiar with your system and empowered with information to assist.

7 scope of supply

7.1 SUEZ scope of supply – Phase 1

The following items are included in SUEZ's scope of supply. All equipment is shipped loose for installation by others. The following sections should be read in conjunction with the Piping & Instrumentation Drawings. If there is a discrepancy between the drawings and the scope table, the P&ID's take precedence with regards to SUEZ scope.

table 6.1 scope of supply by SUEZ ⁽¹⁾

Quantity	tag number	description	SUEZ Scope	Scope by Others
screens/integral compactor & associated equipment (506752-WTS-PR-T02-8521-DS-101)				
4	03-HV-202-A/B 03-HV-203-A/B	fine screen & compactor wash water influent isolation valves	√	
2	03-PY-201-A/B	fine screen influent pressure relief valves	√	
2	03-PI-201-A/B	fine screen influent pressure indicators	√	
2	03-SCR-201-A/B	fine screens with compactors (package) incl. mechanical weir, overflow sensor and local e-stops	√	
2	NA	screenings baggers	√	
lot	NA	bins for bagger		√
lot	NA	screen/compactor access stairs and platforms		√
1	NA	influent flow meter		√
2	03-HV-201-A/B	fine screen inlet valves		√
lot	Various	other valves and items generally as noted on DWG: 506752-WTS-PR-8521-DS-101		√
membrane blowers & associated equipment (506752-WTS-PR-T02-8521-DS-102)				
3	20-B-201-A/B/C	membrane blowers & associated filters & instrumentation (includes enclosures) (2 duty + 1 standby)	√	
3	20-FSL-201-A/B/C	membrane blower discharge flow switch low	√	
3	20-HV-201-A/B/C	membrane blower discharge isolation valve	√	
lot	Various	other valves and items generally		√

Quantity	tag number	description	SUEZ Scope	Scope by Others
		as noted on DWG: 506752-WTS-PR-T02-8521-DS-102		
process & WAS blowers & associated equipment (506752-WTS-PR-T02-8521-DS-103)				
3	16-B-501-A/B 16-B-801	biological process (1 duty + 1 standby) & WAS blowers & associated filters & instrumentation (includes enclosures)	√	
3	16-FSL-501-A/B 16-FSL-801	biological process & WAS blower discharge flow switch low	√	
3	16-HV-501-A/B 16-HV-801	biological process & WAS blower discharge isolation valve	√	
1	16-HV-503	bypass valve	√	
lot	Various	other valves and items generally as noted on DWG: 506752-WTS-PR-T02-8521-DS-103		√
bioreactor tanks & associated equipment (506752-WTS-PR-T02-8521-DS-104)				
1	16-MX-211	anoxic zone mixer	√	
1	10-HV-610	Alum dosing isolation valves		√
1	15-HV-605	NaOH dosing isolation valves		√
lot	NA	Sprayer system (if required)		√
2	16-HV-505-1/2	air to aerobic tank diffuser grid isolation valve	√	
2	NA	fine bubble diffuser grid including drop leg piping	√	
2	16-AE-405-1/2	DO meter	√	
2	16-AE-402-1/2	pH meter	√	
2	16-AIT-405-1/2	DO & pH controller	√	
2	16-LSHH-401-1/2	aerobic tank level switches	√	
2	16-LIT-403-1/2	aerobic tank level transmitter	√	
lot	Various	other valves and items generally as noted on DWG: 506752-WTS-PR-T02-8521-DS-104		√
membrane tanks & associated equipment (506752-WTS-PR-T02-8521-DS-105)				
lot	NA	membrane cassette installation hardware for membrane tank (excludes wall anchors)	√	
2	NA	ZeeWeed 500D 16- module membrane cassettes (1 cassette per membrane tank Phase 1)	√	

Quantity	tag number	description	SUEZ Scope	Scope by Others
28	NA	Membrane modules (14 modules per cassette Phase 1)	√	
lot	NA	blank headers	√	
2	NA	air distribution spools	√	
2	20-FV-205-1/2	air distribution control valves	√	
4	20-HV-204A/B-1/2	cassette air isolation valves	√	
4	20-HV-310A/B-1/2	cassette permeate isolation valves	√	
2	NA	permeate header assembly	√	
2	20-FV-209-1/2	membrane tank influent butterfly valve		√
2	NA	membrane tank influent deflector plate		√
2	20-LSHH-201-1/2	membrane tank level switches - high	√	
2	20-LSLL-201-1/2	membrane tank level switches – low	√	
2	20-LIT-203-1/2	membrane tank level transmitters	√	
2	20-HV-307-1/2	effluent header PIT isolation valve	√	
2	20-PIT-301-1/2	permeate header pressure indicating transmitter	√	
2	20-FV-501-1/2	RAS/WAS/Drain tank isolation valve	√	
2 ea.	20-E-801-1/2 20-FV-801-1/2 20-HV-801-1/2 20-FV-802-1/2 20-F-801-1/2 20-HV-802-1/2	air ejector systems including ejector assembly and air supply assembly	√	
2	23-HV-803-1/2	Instrument air bleed ball valve	√	
lot	Various	other valves and items generally as noted on DWG: 506752-WTS-PR-T02-8521-DS-105		√
process pump & associated equipment (506752-WTS-PR-T02-8521-DS-106)				
2	90-HV-010-1/2	instrument air isolation valve	√	
2	23-FV-102-1/2	sodium hypochlorite injection pneumatic isolation valve	√	
2	23-FV-302-1/2	citric acid injection pneumatic	√	

Quantity	tag number	description	SUEZ Scope	Scope by Others
		isolation valve		
2	23-CV-101-1/2	sodium hypochlorite injection check valve	√	
2	23-CV-301-1/2	citric acid injection check valve	√	
2	20-FV-302-1/2	process pump suction isolation valve w/ pneumatic actuator	√	
2	20-PI-304-1/2	process pump suction pressure gauges	√	
2	20-HV-304-1/2	process pump suction pressure gauge isolation valves	√	
4	20-PSH-302-1/2 20-PSH-301-1/2	process pump pressure high switch (inlet and outlet)	√	
2	20-P-301-1/2	rotary lobe process pumps (VFD not included)	√	
2	NA	ZMOD-L skids (including skid base, piping/support, local IO panel; ; excluding VFD and local e-stops)	√	
2	20-PI-303-1/2	process pump discharge pressure gauge	√	
2	20-HV-303-1/2	process pump discharge pressure gauge isolation valve	√	
4	20-HV-306-1/2 20-HV-305-1/2	process pump suction and discharge drain valves	√	
2	20-FIT-307-1/2	process pump flow transmitters	√	
2	20-HV-301-1/2	process pump discharge isolation butterfly valves	√	
2	20-HV-320-1/2	process turbidimeters isolation ball valve	√	
2 ea.	20-AE/AIT-320-1/2	process turbidimeters and controller	√	
2	20-HCV-320-1/2	process turbidimeter flow control valve	√	
2	20-FV-320-1/2	process turbidimeter solenoid valve	√	
2	20-FV-609-1/2	Backpulse isolation valve with pneumatic actuator	√	
2	20-CV-301-1/2	permeate to UV check valve	√	
lot	Various	other valves and items generally as noted on DWG: 506752-WTS-PR-T02-8521-DS-106		√

Quantity	tag number	description	SUEZ Scope	Scope by Others
backpulse tank & associated equipment (506752-WTS-PR-T02-8521-DS-107)				
1	20-HV-609	backpulse tank effluent to permeate pump isolation valve	√	
1	23-FV-161	sodium hypochlorite influent to backpulse tank isolation valve	√	
1	23-CV-110	sodium hypochlorite influent to backpulse tank check valve	√	
1	20-TT/TW-001	permeate temperature transmitter with thermowell	√	
1	20-FV-641	backpulse tank fill valve with pneumatic actuator	√	
1	20-LIT-603	membrane Backpulse Tank level transmitter	√	
1	20-HV-611	membrane Backpulse Tank level transmitter isolation valve	√	
1	20-TK-601	membrane Backpulse tank	√	
1	20-HV-608	membrane Backpulse Tank drain valve	√	
lot	Various	other valves and items generally as noted on DWG: 506752-WTS-PR-T02-8521-DS-107		√
RAS/WAS/Drain pump & associated equipment (506752-WTS-PR-T02-8521-DS-108 sheet 1 of 2)				
4	20-HV-504/503-A/B	RAS pump influent/effluent pressure gauge isolation valve	√	
4	20-PI-504/503-A/B-1/2	RAS pump influent/effluent pressure gauge including diaphragm seals	√	
4	20-HV-506-1/2 20-HV-505-1/2	RAS pump influent and effluent drain valves	√	
2	20-P-501-1/2	RAS/WAS pumps	√	
2	20-CV-501-1/2	RAS effluent check valves	√	
2	20-HV-501-1/2	RAS effluent isolation valves	√	
2	20-FIT-507-1/2	RAS effluent flow meter	√	
1	20-FV-807	RAS effluent isolation valve	√	
1	20-HV-407	WAS effluent isolation valve	√	
1	20-FIT-401	WAS flow meter	√	
1	20-FV-701	WAS to sludge handling isolation valve	√	
lot	Various	other valves and items generally		√

Quantity	tag number	description	SUEZ Scope	Scope by Others
		as noted on DWG: 506752-WTS-PR-T02-8521-DS-108 sheet 1 of 2 vacuum breaker not supplied by SUEZ		
TWAS storage tank & associated equipment (506752-WTS-PR-T02-8521-DS-108 sheet 2 of 2)				
1	NA	diffuser grid & drop leg	√	
2	16-LSH-703 16-LSHH-703	TWAS storage tank level switches		√
1	16-LIT-701	TWAS storage tank level transmitter		√
lot	Various	other valves and items generally as noted on DWG: 506752-WTS-PR-T02-8521-DS-108 sheet 2 of 2		√
UV system (506752-WTS-PR-T02-8521-DS-109)				
1	38-FIT-101	UV influent flow meter	√	
1	38-HV-101	UV influent service water line isolation valve	√	
2	38-SV-101 38-SV-102	UV drain valve	√	
1	38-UV-101-1	UV system	√	
1	38-HV-102	UV effluent isolation valve	√	
2	38-HV-103 38-HV-104	Manual bypass and isolation butterfly valves	√	
lot	Various	other valves and items generally as noted on DWG: 506752-WTS-PR-T02-8521-DS-109		√
chemical skids (506752-WTS-PR-T02-8521-DS-110 sheet 1 of 2 and 2 of 2)				
2	23-CV-101 23-CV-301	chemical feed foot valve	√	
1	10-CV-601	chemical feed foot valve	√	
2	23-LSL-101 23-LSL-301	chemical tank level switch	√	
1	10-LSL-601	chemical tank level switch	√	
1	NA	panel mounted chemical dosing pumps & associated instrumentation and valves – Sodium Hypochlorite 2 pumps on 1 panel	√	

Quantity	tag number	description	SUEZ Scope	Scope by Others
		(chemical day tanks and secondary containment not included in SUEZ scope)		
1	NA	panel mounted chemical dosing pumps & associated instrumentation and valves – Citric Acid 2 pumps on 1 panel (chemical day tanks and secondary containment not included in SUEZ scope)	√	
1	NA	panel mounted chemical dosing pumps & associated instrumentation and valves – Alum 2 pumps on 1 skid (chemical day tanks and secondary containment not included in SUEZ scope)	√	
lot	NA	Chemical day tanks and secondary containment		√
1	23-PSV-109	pressure safety valve		√
3	23-PCV-101 23-PCV-301 10-PCV-601	pressure control valves	√	
1	10-FIT-601	Alum flow indicating transmitter		√
lot	Various	other valves and items generally as noted on DWG: 506752-WTS-PR-T02-8521-DS-110 sheet 1 of 2		√
membrane air compressors & associated equipment (506752-WTS-PR-T02-8521-DS-111)				
1 skid	90-AC-001-A/B 90-F-001-A/B	skidded compressors w/ filters and local control panel containing starters and control wiring [includes 90-TK-001, 90-FV-001, 90-PI-001, 90-PSL-001, 90-PSV-001, 90-HV-001]	√	
1	90-HV-004 90-DPI-001 90-F-020 90-HV-005 90-HV-006 90-PSL-003 90-PY-001 90-PSLL-002	filter air panel	√	

Quantity	tag number	description	SUEZ Scope	Scope by Others
2	90-HV-002-A/B	refrigerated air drier influent isolation valves	√	
2	90-DR-001-A/B	refrigerated air driers	√	
2	90-HV-003-A/B	refrigerated air driers effluent isolation valves	√	
1	90-HV-XXX	isolation valve to locally mounted solenoids		√
1	90-FV-011	condensate drain valve		√
lot	Various	other valves and items generally as noted on DWG: 506752-WTS-PR-T02-8521-DS-111		√
electrical & control components				
1	NA	CompactLogix Processor with IO	√	
1	NA	MCP NEMA 12 Panel with UPS	√	
2	NA	Remote IO enclosures (mounted on ZMOD-L skids)	√	
lot	NA	Field wiring of SUEZ-supplied equipment (except for skid-mounted equipment wired to remote IO panel)		√
lot	NA	VPN-secured high-speed internet for Insight and remote support from SUEZ ⁽²⁾		√
lot	NA	RS4000 VPN router (if required)	<i>Additional charges will apply if required</i>	
lot	NA	Local e-stops (except for the fine screen/compactor units)		√
Lot	NA	VFDs		√
lot	NA	SCADA system incl. alarm call-out functionality		√
General				
Included	Operating & maintenance manuals		√	
Included	FAT testing for SUEZ ZMOD-L skids (Suez standard testing)		√	
Included	field service and start-up assistance for 30 days over 3 site visits from SUEZ field-service personnel for commissioning, plant start-up, and operator training ⁽³⁾		√	
Included	on-site operational support: 5 days on-site operational support over 5 site visits from		√	

Quantity	tag number	description	SUEZ Scope	Scope by Others
		SUEZ field service professionals for the first 2 years		
Included		InSight Pro monitoring service – 2 years	√	
Included		24/7 telephone technical support service – 2 years	√	
Included		Equipment warranty – 1 year (parts and labour included)	√	
Included		Membrane warranty – 2 year cliff + 8 year pro-rated (freight and labour included as defined in Appendix)	√	
Included		Equipment shipment CIP customer job site per INCOTERMS 2010	√	

note 1: All SUEZ supplied equipment is designed for installation in an unclassified area.

note 2: To receive complete 24/7 Emergency Telephone Technical Support Service and to allow for InSight

note 3: Additional hours will be billed separately from the proposed system capital cost at a rate of \$1,600 per 8-hour day plus living and traveling expenses. Detailed SUEZ service rates are available upon request.

7.2 buyer scope of supply

The following items are for supply by buyer and will include, but are not limited to:

- Overall plant design responsibility
- Installation on site of all SUEZ-supplied skids and loose-shipped equipment
- Review and approval of design parameters related to the membrane separation system
- Review and approval of SUEZ-supplied equipment drawings and specifications
- Detail drawings of all termination points where SUEZ equipment or materials tie into equipment or materials supplied by others
- Equipment foundations, civil work, full floor coverage, equipment contact pads, buildings, etc.
- Receiving, unloading and safe storage of SUEZ -supplied equipment at site until ready for installation
- HVAC equipment design, specifications and installation (where applicable)
- UPS, Power Conditioner, Emergency power supply and specification (where applicable)
- Lifting devices including Crane able to lift 2 ton for membrane removal, lifting davit crane and guide rails for submersible mixers and pumps, hoists, etc.
- Membrane tanks including RFP covers (as required)
- Biological tanks including RFP covers (if required)

- Equalization tank if required
- Influent splitter box
- All chemical storage tanks, day tanks, and containments
- Treated water storage tank – as required
- Sludge drainage pumps
- Sludge storage tank – as required
- VFDs and motor starters for all pumps, blowers, and compressors
- Process and utilities piping, pipe supports, hangers, valves, etc. including but not limited to:
 - Piping, pipe supports and valves between SUEZ-supplied equipment, between SUEZ-supplied equipment and other plant process equipment, between SUEZ-supplied skids and tanks Process tank aeration system air piping, equalization tank system piping, sludge storage tank piping, etc.
- Electrical wiring, conduit and other appurtenances required to provide power connections as required from the electrical power source to the SUEZ control panel and from the control panel to any electrical equipment, pump motors and instruments external to the SUEZ-supplied enclosure
- Electrical grounding of SUEZ-supplied equipment and skids
- SCADA system, integration of the SUEZ program/alarms in the SCADA, remote access and alarm call-out
- suitable, secure remote internet connection for 24/7 emergency telephone technical support service and InSight remote monitoring & diagnostics service
- All bolts, brackets and fasteners to install SUEZ-supplied equipment. Seismic structural analysis and anchor bolt sizing.
- Alignment of rotating equipment
- Raw materials, chemicals, and utilities during equipment start-up and operation
- Supply of seed sludge for process start-up purposes
- Disposal of initial start-up wastewater and associated chemicals
- Weather protection as required for all SUEZ supplied equipment. Skids and electrical panels are designed for indoor operation and will need shelter from the elements
- laboratory services, operating and maintenance personnel during equipment checkout, start-up and operation
- touch up primer and finish paint surfaces on equipment as required at the completion of the project
- All permits

8 commercial

8.1 system price

The pricing to supply equipment and services as described in this proposal is as follows.

Pricing for the proposed equipment and services is summarized in the table below. All pricing is based on the operating conditions and influent analysis that are described in this proposal Section 6 and scope of supply as outlined in Section 7.

Table 8.1 – Firm Pricing for Phase 1 Design

price: equipment and services	
ZeeWeed 500D UF-MBR system (Phase 1 Design)	\$ 1,357,670 CAD
Engineering Design & Drawing Submittals (previously completed)	- \$107,000 CAD
Total Base Price	\$ 1,250,670 CAD
Additional Design Engineering and additional Engineering submittals ¹	\$190/hour

Note 1: The SUEZ project execution team assigned to this project will work with the awarded Contractor to address any questions and discussions throughout the project life. Engineering design has been completed and the drawing package has been submitted. A copy of the drawing submittal package will be provided to the Contractor. Additional charges will apply should additional engineering design services be required.

Please note that the presented pricing does not include any provision for any procurement restrictions imposed on Seller by Buyer’s funding parties. Should these restrictions be required, Seller reserves the right to adjust the pricing herein upon review of the restrictions.

8.2 price validity

The quoted system price (Table 8.1) will be valid until December 16th, 2020. If a formal Purchase Order or Procurement Agreement is not received and accepted within this Validity Period, both the pricing and delivery schedule are subject to review and adjustment.

The proposed system pricing is based upon receipt of a Notice to Proceed (NTP) for Manufacturing/Equipment Procurement being provided by February 15th, 2021. In the event the NTP for Manufacturing/Equipment Procurement is not received before this date, the equipment and service prices contained herein will be subject to adjustment for any increase in the North American Consumer Price Index (CPI) + 1.0%. This adjustment will be from the end of the proposal validity date to the date of the NTP for Manufacturing/Equipment Procurement is received.

If a formal NTP for Manufacturing/Equipment Procurement is not received and accepted within 3 months of the NTP date referenced above, Seller will be afforded the right to review and adjust the scope of supply, pricing and delivery schedule offered herein.

8.3 taxes

Pricing provided herein does not include any taxes or duties.

Buyer shall be directly responsible, and reimburse Seller, for the gross amount of any present, for future sales, use, excise, value-added, environmental, or other similar tax or duty applicable to the price, sale or delivery of any equipment or services furnished under this proposal. Unless Buyer has furnished Seller with evidence of tax exemption or direct pay permit acceptable to taxing authorities prior to the execution of any Purchase Order / Agreement or Seller's acceptance of Buyer's Purchase Order (as applicable), Buyer shall pay all taxes as invoiced by Seller and Seller is relieved of any obligation to (i) apply any tax exemption or direct pay permit, and/or (ii) refund the Buyer any tax paid by the Seller.

Seller's price and schedule shall be based on applicable Federal and Provincial laws, local ordinances, codes, and standards as well as duties, sales or use taxes in effect as of the date of Seller's proposal. Should such laws, codes, taxes and standards change and increase the cost of performing the work or impact the schedule, Seller shall, upon notice to Buyer of such, be entitled to an equitable adjustment of price and /or schedule. Similarly, should such laws, codes, taxes and standards change and decrease the cost of performing the work, Buyer shall be entitled to an equitable adjustment of price.

8.4 order confirmation centre

In order to facilitate efficient order handling, Seller has instituted an Order Confirmation Centre (OCC). All Purchase Orders or Contracts being issued to Seller are to be directed to OCC following the methods indicated below:

- via email: WTS.equipmentpo@suez.com
- via facsimile: 905-469-2236
- via courier: SUEZ Water Technologies & Solutions Canada
3239 Dundas Street West
Oakville, Ontario, L6M 4B2
Attn: OCC

8.5 delivery

The following freight terms for delivery of equipment used are as defined by INCOTERMS.

All pricing is CIP designated Project site **English River, SK**. Delivery to the project site is conditional upon provision of access roads of a nature that will permit access by tractor-trailers. Off-loading and positioning of equipment at the job-site is not included.

8.6 shipment to storage

If any part of the equipment cannot be delivered when ready due to any cause not attributable to Seller, Buyer shall designate a climate-controlled storage location and Seller shall ship such equipment to storage. Upon shipment to the storage location then (i) title and risk of loss shall thereupon pass to the Buyer if it had not already passed; (ii) any amounts payable to the Seller upon delivery or shipment shall become payable upon presentation of Seller's invoice(s); (iii) any amounts otherwise payable to Seller, such as for preparation for storage, handling, inspection, preservation, insurance and any taxes shall be payable by Buyer upon submission of Seller's invoice(s); (iv) the Services provided herein shall subsequently charged at the rate prevailing at the time of actual use and Buyer shall pay the net increase; and (v) Buyer is responsible for direct payment of all costs for storage of the equipment and subsequent transportation from the storage facility to their place of installation.

8.7 bonds

A Performance and/or Labor & Material Payment Bonds are not included in the system price. These bonds can be purchased on request but will be at additional cost.

8.8 payment terms

The pricing quoted in this proposal is based upon the following payment terms, subject to approval of Buyer credit (all payments are net 30 days):

Equipment – Purchase price

- 5% with Purchase Order;
- 20% on Notice to Procure Equipment;
- 65% on shipment of equipment (partial shipments permitted);
- 10% on completion of commissioning, or net 60 days from equipment shipment whichever occurs first.
- No financial allowance has been made for any Holdbacks on submitted invoices.

The Buyer shall have the right to terminate Seller's Contract for convenience at any time upon 30 days written notice to Seller. Upon receipt of such termination notice by Seller, payment to Seller shall include:

- payment in full for unpaid invoices presented by Seller to Buyer to date of termination notice.
- payment for Seller's costs not yet invoiced to date of termination notice, plus 10% termination fee.
- payment to Seller for any restocking costs and Seller's costs to terminate orders with Seller's suppliers, plus 10% termination fee regarding such costs.

Seller shall only proceed with procurement and production of equipment and materials upon receipt of a formal Purchase Order and a written Notice to Proceed with

Manufacturing/Equipment Procurement from the Buyer.

8.9 proposed project schedule

Equipment shipment is estimated at 20 to 24 weeks after notice to procure. The buyer and seller will arrange a kick-off meeting after contract acceptance to develop a firm shipment schedule.

typical drawing submission and equipment shipment schedule

	3 weeks	1-2 weeks	2 weeks	20-24 weeks		2 weeks
acceptance of PO & project setup and kickoff						
review of SUEZ engineering drawing package (previously completed)						
notice to procure						
equipment manufacturing						
equipment shipment						
plant operations manuals						

The delivery schedule is presented based on current workload backlogs and production capacity. This estimated delivery schedule assumes no more than 2 weeks for buyer review of submittal drawings. Any delays in buyer approvals or requested changes may result in additional charges and/or a delay to the schedule.

If a formal Purchase Order is not approved within the period of validity of this proposal, the delivery schedule is subject to review and adjustment.

Seller would like to note that under the current exceptional circumstances under the COVID 19 Pandemic situation, Seller may not be in a position to guarantee and comply with the planned schedule for project delivery or performance and that should there be any new measures taken by any governmental authority which may impede or delay the said schedule or performance, Seller reserves the right to modify the schedule / contract accordingly. Seller will promptly inform you of any changes which may impact the contract or the project.

8.10 membrane module replacement price

The price of replacement ZeeWeed 500 membrane modules for this project is \$1200 CAD per module. Seller will guarantee this price for ten (10) years from the start date of the membrane warranty. Pricing for replacement modules is subject to adjustment for inflation from the date of this proposal according to the North American Consumer Price

Index (CPI) + 1.0%. If the same module is not available due to product improvements, an equivalent price per gallon of treatment capacity will be used.

The membrane replacement price quoted refers to replacement of installed membranes under the following two scenarios;

- replacement of membrane modules during the warranty period,
- replacement of membrane modules no longer under warranty but still within the guaranteed membrane replacement price period.

Under the first scenario, membrane modules replaced under warranty shall assume the remainder of the warranty for the membrane modules being replaced, with such warranty to be not less than a two (2) year full replacement warranty from the date of replacement with a new membrane module.

Under the second scenario, unless specified otherwise, membrane modules purchased to replace a membrane module whose warranty has expired shall be provided with a standard two (2) year full replacement warranty.

The membrane module replacement price is not applicable for membrane modules purchased for any non-replacement purposes, such as for flux reduction or hydraulic capacity increase. Modules purchased under these scenarios will be purchased at the list price at the time of order.

Membrane module replacement price does not include bagging, boxing, crating, and will be shipped on the basis of INCOTERMS 2010 FCA SUEZ Manufacturing Facility. Membrane module replacement price is quoted without taxes.

8.11 royalty and license fees

8.11.1 application patents

Seller has a number of patents covering the products, equipment and applications offered in this proposal.

8.11.2 non-exclusive royalty free license

Seller grants Buyer a non-exclusive, non-terminable, royalty free license to use the intellectual property embedded in the equipment delivered to and paid for by the Buyer, as well as any drawings, design or data delivered to and paid for by the Buyer, for the purposes of owning, financing, using, operating, and maintaining the relevant equipment at Buyer's site. Such license may only be assigned to a subsequent owner of the equipment or to an operations and maintenance sub-contractor. Such license does not extend to the re-creation of the equipment or the manufacture of spares or consumables by Buyer or third parties.

Any software Seller owns and provides pursuant to this proposal shall remain Seller's property. Seller provides to Buyer a limited, non-exclusive and terminable royalty free project-specific license to such software for the use, operation or maintenance at Buyer's site of any equipment purchased hereunder to which software is a necessary component. Buyer agrees not to copy, sub-license, translate, transfer or reverse

engineer, or decode the software. Single user versions of software may be used on one CPU. LAN/WAN versions may be used on a single server with only the number of concurrent users as agreed to by the Parties. Unless otherwise expressly agreed by Seller, this license shall terminate and the software shall be returned to Seller as soon as the Buyer no longer operates the equipment as sold, or upon the material breach of these terms.

Furthermore, the chemistries used in the manufacture of Seller's ultrafiltration and microfiltration membranes sold under the ZeeWeed brands are proprietary and the Buyer undertakes not to analyze these membranes or to permit analysis of these membranes by a third party.

8.12 terms and conditions

By accepting our proposal, the Buyer agrees to include Seller's proposal as a Contract document in any Purchase Order or Procurement Agreement.

This proposal has been prepared and is submitted based on Seller's General Terms and Conditions of Sale as attached in Appendix D.

It should be noted that once the Buyer's Terms and Conditions are received, the final Terms and Conditions can be negotiated to the mutual agreement of Seller and the Buyer. Buyer's Terms & Conditions may typically include specific bonding requirements, liquidated damages, cancellation clauses, equipment warranty requirements and other contractual liabilities for which Seller has made no provision in the pricing provided herein. Seller therefore reserves the right to adjust the pricing herein upon review of any Buyer supplied Terms and Conditions.

appendix a P&IDs & Layouts

As submitted to MPE during Engineering Design Phase.

appendix b - warranties

appendix b warranties

introduction

The seller offers a comprehensive three-part warranty for the English River First Nation MBR as follows:

- ❑ **mechanical warranty:** seller will repair or replace any device or part thereof that was supplied by the seller that proves to be defective. This warranty excludes the membrane modules.
- ❑ **membrane warranty:** This warranty provides protection and assurances to the buyer/owner with respect to the membrane modules.
- ❑ **performance warranty:** This warranty provides protection and assurances to the buyer/owner with respect to the ability of the seller's system to meet the established performance criteria.

The start date for all warranties is upon substantial completion or six (6) months from equipment shipment, whichever occurs first. Substantial completion is defined as when the buyer/owner makes beneficial use of the equipment supplied by the seller.

mechanical warranty

material and workmanship warranty

The mechanical warranty is only applicable to equipment supplied by the seller. Seller's obligation under this warranty is to the repair or replace, at its factory, of any device or part thereof, which shall prove to have been thus defective. The mechanical warranty period on all equipment supplied, unless otherwise noted, is twelve (12) months from the date of substantial completion or eighteen (18) months from equipment shipment, whichever occurs first. Warranty repair, replacement or re-performance by seller shall not extend or renew the applicable warranty period.

Seller assumes no liability for any damage to equipment caused by inadequate storage or handling per manufacturer's recommendations in supplied technical literature, or by defective or sub-standard workmanship or materials provided by the buyer/owner or any other third party responsible for handling, storing or installing the equipment.

The buyer/owner undertakes to give immediate notice to seller if goods or performance appear defective and to provide seller with reasonable opportunity to make inspections and tests. If seller is not at fault, the buyer/owner shall pay seller the costs and expenses of the inspections and tests.

Goods shall not be returned to seller without seller's permission. Seller will provide buyer/owner with a "return goods authorization" (RGA) number to use for returned goods. All returns are F.C.A. – Oakville, Ontario, Canada. All costs associated with the removal and shipment of the defective part from the buyer/owner's facility to the seller's factory and all costs related to return shipment to the buyer/owner's facility and installation of a repaired or replacement part shall be the buyer/owner's responsibility.

Implied warranties, including but not limited to warranties of fitness for particular purpose, use or application, and all other obligations or liabilities on the part of the seller, unless such warranties, obligations or liabilities are expressly agreed to in writing by seller, are null and void.

membrane warranty

A ten (10) year prorated warranty is offered on the membrane modules with the first twenty-four (24) months offered as a full replacement warranty and the remaining ninety-six (96) months as a prorated warranty. Refer to “seller’s warranty – ZeeWeed membrane modules” in appendix B for a detailed description of the membrane warranty offered.

warranty provisions

In addition to the membrane warranty limitations as defined in the “seller’s warranty – ZeeWeed membrane modules”, the membrane warranty is subject to the following provisions:

- the equipment is operated and maintained at all times in accordance with the seller’s operations and maintenance manual,
- the equipment is operated within the mixed liquor characteristics defined in table 1 of this section,
- seller has, until performance of its obligation herein is met, reasonable access to the equipment and the operational data relating thereto,
- the buyer/owner furnishes adequate and competent operating, supervisory and maintenance staff, and necessary laboratory facilities with test equipment and personnel,
- the buyer/owner utilizes the services of seller until its performance obligations are met,
- the buyer/owner supplies all necessary raw materials and services of a quantity and of a quality specified by the seller,
- an adequate and continuous power supply is available that will enable operation of all required equipment,
- the following pre-treatment guidelines are followed:
 - **fats, oil and grease (FOG)** – FOG concentration shall not exceed 150 mg/L of emulsified FOG in the feed with no free oil and less than 10 mg/L of mineral or non-biodegradable oil.
 - **pretreatment** - A punched hole or woven wire mesh screen with a maximum size opening of no greater than 2 mm and without possibility of bypass of any particle larger than 2 mm in all directions must be included in the headwork’s. Seller must be consulted regarding the type, capacity, and size opening of the screens that are to be installed.

- **process chemical additives** - The use of any chemicals added to the wastewater treatment process (e.g.: polymers, flocculants, coagulants, antifoams) that may come in contact with the ZeeWeed membranes must be approved by seller prior to use. This includes chemicals used in processes outside of the seller's system that may be transferred to the seller's system, such as in solids handling facilities.

table 1: mixed liquor characteristics for warranty purposes

parameter	design value	accepted operating range
mixed liquor temperature (°C)	9	9 – 30
MLSS concentration in membrane tanks (mg/L) ¹	10,000	≤ 12,000
pH of mixed liquor in membrane tanks (SU)	7.0	6.5 – 7.5
soluble cBOD ₅ concentration in mixed liquor entering membrane tanks (mg/L)	5	≤ 5
NH ₃ -N concentration in mixed liquor entering membrane tanks (mg/L)	0.5	≤ 1.0
colloidal TOC (cTOC) concentration in mixed liquor entering membrane tanks (mg/L) ²	7	≤ 10
soluble alkalinity of mixed liquor entering membrane tanks (mg/L as CaCO ₃)	100	50 – 150
time to filter (TTF) of mixed liquor in membrane tanks ³	100	≤ 200
material greater than 2-mm in size in mixed liquor in membrane tanks (mg/L) ⁴	0	≤ 1
fats, oil & grease (FOG) (mg/L)	Refer to Note 6	

1. Membrane tank MLSS concentration of 12,000 mg/L is permissible during MDF and PHF events only. Membrane tank MLSS concentration to be ≤ 10,000 mg/L during all other flow conditions.
2. Colloidal TOC (cTOC) is the difference between the TOC measured in the filtrate passing through a 1.5 µm filter paper and the TOC measured in the ZeeWeed membrane permeate.
3. Per seller's standard time to filter (TTF) procedure (available upon request).
4. Per seller's standard sieve test procedure (available upon request).
5. Chemicals that are not compatible with the ZeeWeed PVDF membrane are not permitted in the membrane tank.
6. FOG concentration shall not exceed 150 mg/L of emulsified FOG in the feed with no free oil and less than 10 mg/L of mineral or non-biodegradable oil.

membrane performance

Seller warrants, subject to the provisions set forth above, that after stable operation of the seller’s system has been attained and operators have acquired reasonable skills, the membrane modules supplied for this project will be capable of producing the results set forth in table 2.

table 2: guaranteed membrane filtration system performance

parameter	guaranteed values
membrane filtration system hydraulic capacity	
average day flow, ADF, with all trains in service (m ³ /d) ¹	≤ 188
maximum month flow, MMF, with all trains in service (m ³ /d) ¹	≤ 282
maximum day flow, MDF, with all trains in service (m ³ /d) ¹	≤ 376
flow with one membrane train out of service for maximum duration of 24-hours (m ³ /d)	≤ 376
membrane filtration system permeate quality	
TSS (mg/L)	≤ 5
turbidity (NTU)	≤ 1

- The flow conditions are defined as follows:

Average Day Flow (ADF) – The average flow rate occurring over a 24-hour period based on annual flow rate data.

Maximum Month Flow (MMF) – The average daily flow rate occurring during the 30-day period with the highest flow based on annual flow rate data.

Maximum Day Flow (MDF) – The maximum flow rate that occurs over a 24-hour period based on annual flow rate data.

performance warranty

This warranty provides protection and assurances to the buyer/owner with respect to the ability of the seller’s MBR system to meet the established performance criteria. Based on the influent wastewater and/or mixed liquor characteristics and system operating parameters specified in this document, the equipment offered herein will be capable of meeting the performance defined below.

The performance warranty period, is twelve (12) months from the date of substantial completion or eighteen (18) months from membrane shipment, whichever occurs first. Once the performance warranty period has expired, mechanical and membrane warranty provisions shall apply.

biological treatment system

Subject to the terms defined above, the influent wastewater characteristics defined in table 3, and the biological treatment system operating parameters specified in table 4, the equipment offered herein will be capable of meeting the permeate quality defined in table 5.

table 3: influent wastewater characteristics for biological treatment system

parameter	design value	accepted operating range
wastewater flow (m ³ /d) ¹	282	See note 1
wastewater temperature (°C)	9	≥ 9.0
total suspended solids, TSS (kg/d)	71	64 – 78
volatile suspended solids, VSS (kg/d)	57	51 - 63
biochemical oxygen demand, cBOD ₅ (kg/d)	71	64 – 78
total kjeldahl nitrogen, TKN (kg/d)	9.5	8.6 - 10.5
ammonia, NH ₃ -N (kg/d)	6.0	5.4 – 6.6
total phosphorous, TP (kg/d)	1.6	1.4 – 1.8
pH (SU)	7.0	6.5 – 7.0
alkalinity (mg/L as CaCO ₃)	100	50 - 150
cBOD ₅ :TKN ratio (-) ²	7.4	≥ 6.0
rDON (mg/L) ⁴	1.0	≤ 1.0

1. The biological system design considers the maximum monthly flow (MMF) as the design flow condition. Refer to the membrane filtration system design (Table 2) for other flow conditions.
2. The ratio of cBOD₅ to TKN needs to be maintained at the stated design value to assure nitrogen removal performance. If the ratio drops below the design value, methanol (or other supplemental carbon source) consumption may increase to compensate for the loss of the carbon source required to meet the total nitrogen discharge limit.
3. rDON refers to recalcitrant (not biologically degradable) dissolved organic nitrogen.

table 4: biological system operating parameters for warranty purposes

parameter	design value	accepted operating range
mixed liquor temperature in bioreactor (°C)	9.0	≥ 9.0
MLSS concentration in bioreactor (mg/L)	8,000	≤ 8,000
MLVSS/MLSS ratio in bioreactor (-)	0.8	0.7 – 0.9
solids retention time, SRT (d)	21	19 – 23
pH of mixed liquor in bioreactor (SU)	7.0	6.5 – 7.5
dissolved oxygen (DO) concentration in anoxic zones (mg/L)	0.2	≤ 0.2
dissolved oxygen (DO) concentration in aerobic zones (mg/L)	2.0	≥ 1.5

table 5: guaranteed biological treatment system performance

parameter	guaranteed values ¹
biochemical oxygen demand, cBOD ₅ (mg/L)	≤ 5
ammonia, NH ₃ -N (mg/l)	≤ 1
nitrate, NO ₃ (mg/L)	≤ 10
E. Coli (MPN/100 mL)	≤ 1 ²
fecal coliform/total coliform (MPN/100 mL)	≤ 200 ²

1. Guaranteed concentrations are based on a monthly average value of a minimum of four (4) 24-hour composite samples collected at regular intervals with testing performed to applicable industry-approved standards.
2. After UV disinfection. Microbiological parameters may be subject to regrowth in the permeate piping (by contractor). Any exceedance of microbiological parameters due to re-growth or improper operation or maintenance of the treatment system are excluded from the warranty.

seller's warranty - ZeeWeed membrane modules standard full replacement

This schedule sets out the warranty with respect to ZeeWeed Membrane Modules ("Membrane Modules"). No other warranties, expressed or implied are made in connection with the sale of these products, including, without limitation, warranties as to fitness for any particular purpose or use or merchantability of these products. The warranty provided herein will be the exclusive and sole remedy of the Buyer, and in no event will the Seller be liable for any special, direct, indirect or consequential damages, including, without limitation, loss of profits. Buyer is not entitled to extend or transfer this warranty to any other party, without the express written consent of Seller.

1 product

This warranty applies to only the Membrane Modules supplied under the contract of sale. Membrane Module means the fibers and potted plastic header(s). This warranty does not cover air piping to the Membrane Module, permeate piping from the Membrane Module, piping connection fittings, connecting hardware and cassette frames with their associated components including but not limited to spacers, aerator tubes, aerator assemblies, screen, module dummies or module blanks.

Identification: Membrane Modules are shipped by the Seller with a serial number identification which confirms their place in the cohort set of Membrane Modules covered by this Membrane Module warranty.

2 seller

"Seller as SUEZ Water Technologies & Solutions Canada" is the name of the Seller, and means a business component of, or legal entity within the SUEZ Water Technologies & Solutions business (SUEZ) which is selling ZeeWeed modules. The Seller may assign this warranty to other SUEZ affiliates.

3 buyer

Buyer is English River 1st Nations Reserve, and means the party purchasing the ZeeWeed modules from the Seller.

4 project

Project means English River 1st Nations Reserve MBR

5 contract of sale

Contract of sale means the sales contract governing the sale of Membrane Module(s) between the Buyer and the Seller or its SUEZ affiliate.

6 scope of warranty

The Seller warrants that its Membrane Module(s) will be free of defects due to faulty materials or errors in manufacturing workmanship.

Regular Membrane Module inspection and normal fiber repair shall be the responsibility of the Buyer.

All replacement Membrane Modules will be shipped on the basis of INCOTERMS 2010 FCA SUEZ membrane manufacturing facility.

All ancillary costs including but not limited to bagging, boxing, crating, freight, freight insurance, applicable taxes, import duties, brokerage, receiving, forklift services, storage at site, re-attachment hardware, hose/clamp/camlock replacement, crane services, installation, fiber repair materials, glycerin flushing, commissioning and waste disposal are the responsibility of Buyer.

full replacement – Full replacement means that in the case of a valid warranty claim for a Membrane Module failure, the Buyer receives a replacement Membrane Module and does not pay for the value of use of the Membrane Module prior to failure.

prorated replacement – Prorated replacement means the Buyer pays for actual use of a membrane module from which the Buyer has derived value over time. See **section 12 membrane module replacement price – prorated replacement** for the formula for calculating the prorated amount payable. Prorated replacement allows the Seller to pay reasonable compensation under warranty for any product use not enjoyed by the Buyer due to premature failure.

The ratio of full replacement to prorated replacement in this warranty is set out in **section 8 warranty duration**.

7 warranty start date

This warranty will start on the earlier of:

- a) the date that installation of the original Membrane Module(s) has been substantially completed, or
- b) six (6) months from the date of shipment of the original Membrane Module(s) to the Buyer as per supplied bill of lading date

For replacement Membrane Modules, this warranty will start the earlier of:

- a) the date of installation as provided in writing by Buyer to Seller, or
- b) one (1) month from the date of delivery by Seller to the plant site

8 warranty duration

total warranty duration: a total of **one hundred twenty (120) months** composed of a base period and an extended period.

base period with full replacement: twenty-four (24) months

All purchasers of ZeeWeed Membrane Modules are entitled to this base period of full replacement warranty coverage without purchasing an extended Seller's warranty.

extended period with prorated replacement: a total of **ninety-six (96) months** following the base period

Replacement Membrane Modules are covered by warranty only for the balance of the warranty of the original Membrane Module which has been replaced. At all events, this warranty shall expire and be of no force or effect **one hundred twenty (120) months** following the warranty start date.

9 notification of claim

All claims filed under this warranty shall be made in writing by the Buyer within thirty (30) days of identifying a defect.

The Buyer shall provide the following information:

- a) a description of the defect giving rise to the claim
- b) photographs showing the manufacturing defect
- c) the serial number(s) of the Membrane Module(s) which is (are) the subject of the warranty claim and
- d) operating data and repair history for the life of Membrane Modules which are the subject of a warranty claim

10 verification of claim

After receipt of written notification of a defect, the Seller will promptly undertake such investigations as, in the Seller's opinion, are necessary to verify whether a defect exists. The Seller reserves the right to require additional data as necessary to validate claims. Buyer may, in the course of these investigations, be requested to return Membrane Module(s) to the Seller for examination. The Seller may also conduct reasonable tests and inspections at the Buyer's plant or premises. If the results of the investigation do not validate the defect claimed, the Buyer will reimburse the Seller for all reasonable expenses associated with said investigation, including expenses for all tests, inspections, and associated travel.

11 satisfaction of claims

The Seller will have the right to satisfy claims under this warranty in a flexible manner. Such flexibility may include the repair of existing Membrane Modules or changes in operating protocols or Membrane Module replacement or by upgrading failed Membrane Modules with newer Membrane Module(s) that may embody design and efficiency improvements. The Buyer consents to the supply of replacement Membrane Modules which may be of a different design than original Membrane Modules.

12 membrane module replacement price – prorated replacement

The base Membrane Module Replacement Price (MMRP) used to calculate the prorated amount to be paid by the Buyer to replace defective Membrane Modules under warranty shall be as specified in the contract or, if not so specified, the price determined by Seller from time to time.

For Membrane Modules supplied under valid warranty claims, the prorated share that the Buyer will pay is calculated as follows:

$\text{prorated share of price} = \frac{\text{number of whole months elapsed between the membrane module replacement date and the warranty start date}}{\text{warranty duration in months}} \times \text{membrane module replacement price}$
--

13 operating information

To maintain the Membrane Module warranty, membrane system operation records from initial start-up date until claim must be maintained by the Buyer and made available to the Seller upon request. Records must be provided in sufficient detail to verify uninterrupted compliance with the Seller’s operations and maintenance manual prepared by the Seller and supplied to the Buyer as part of the contract. At a minimum, operation data must include information on feedwater quality, temperatures, flows, trans-membrane pressures, aeration rates, permeate quality, cleaning intervals, cleaning chemical concentrations, elapsed time since start-up, relevant analytical data and reporting of any screen bypass events.

The Buyer shall maintain and share access to a single reference copy in electronic form of a Membrane Module map containing the history of activity by Membrane Module. The Buyer shall log its procedures performed related to a Membrane Module including relocation of Membrane Modules, repairs, replacements and any other noteworthy events.

The Buyer authorizes the Seller to conduct any reasonable review of operation and maintenance records or to inspect facilities where Membrane Modules are installed, upon reasonable notice to the Buyer. Such reviews and/or inspections are intended to also assist the Seller and the Buyer in detection of membrane system faults and to optimize the care and operation of the Membrane Modules.

14 limitation of warranties

Occurrence of any of the following as reasonably determined by the Seller will void this warranty:

- a) a material failure to operate the membrane system in accordance with Seller’s operations and maintenance manual supplied to the Buyer as part of the contract, including material failure to adhere to the Seller’s specified Membrane Module cleaning procedures and the use of anything other than Seller-approved Membrane Module cleaning agents
- b) failure to adhere to the preventive maintenance program as presented in the Seller’s operations and maintenance manual, and all published product manuals & specifications
- c) failure to adhere to all transportation and module storage recommendations as outlined by Seller
- d) failure to ensure correct operation and/or functioning of the screening equipment.
- e) introduction of destructive foreign materials into the Membrane Modules and/or associated membrane tanks. Destructive foreign materials may include natural or man-made materials that are introduced into the membranes originating from construction and maintenance activities or from inadequate pretreatment or from aquatic species including clams and snails or from damage to the tank or tank coating. The Buyer shall be responsible to maintain correct function of the screen mechanism and to flush membranes and tanks of any accumulated foreign materials.
- f) failure to install and maintain operating data acquisition and electronic data transmission functions at the plant

- g) physical abuse or misuse, incorrect removal or installation of Membrane Modules by non-Seller personnel including fiber damage caused by operator error in handling of Membrane Modules or cassettes
- h) unauthorized alteration of any components or parts originally supplied by the Seller
- i) intentional damage

15 return procedure

In the event that the return of a Membrane Module is required pursuant to this warranty, the Buyer will first obtain a Return Goods Authorization (RGA) number from the Seller. Membrane Module(s) shipped to the Seller for warranty examination must be shipped freight prepaid. If the Buyer desires temporary replacement Membrane Module(s) to replace those alleged to be defective and returned to the Seller for warranty examination, the Buyer shall be responsible for the cost associated with any such replacements until examination of the returned Membrane Modules pursuant to this warranty is complete. Any Membrane Module examined by Seller as part of a warranty claim where the Membrane Module is subsequently found to be performing as warranted or where a Membrane Module failure is not covered under the warranty will be returned to the Buyer, freight collect.

appendix c - cutsheets

As submitted to MPE during Engineering Design Phase in BOM & Cutsheet Package.

appendix d – SUEZ Terms & Conditions

general terms and conditions of sale – sale of capital equipment

1. Exclusive Terms and Conditions.

Together with any other terms the Parties agree to in writing, these General Terms and Conditions – together with the last proposal in order of time issued by the Seller – form the exclusive terms (“Agreement”) whereby Buyer agrees to purchase, and Seller agrees to sell products and equipment (jointly “Equipment”) and to provide advice, instruction and other services in connection with the sale of that Equipment (“Services”). If Buyer sends to Seller other terms and conditions to which Seller may not respond, including but not limited to those contained in Buyer’s purchase order, such shall not apply. This Agreement may only be revised by a change order approved in writing by both Parties. All terms not defined herein shall be defined in Seller’s proposal.

2. Equipment and Services. The Equipment to be delivered and the Services to be provided shall be as set out in this Agreement. Unloading, handling, storage, installation, and operation of Buyer’s systems or the Equipment are the responsibility of Buyer. Buyer shall not require or permit Seller’s personnel to operate Buyer’s systems or the Equipment at Buyer’s site.

3. Prices and Payment. Buyer shall pay Seller for the Equipment and Services in accordance with the payment schedule (as set forth in Seller’s proposal or, if applicable, in any special conditions agreed to in writing by the Parties). Unless otherwise specified in writing, payment is due net thirty (30) days from the date of Seller’s invoice. Seller may require a Letter of Credit or other payment guarantee, in which case the stated amount of the guarantee will be adjusted by Buyer in the event of any currency-based adjustment to prices or payment amounts per the Payment Schedule, and Buyer shall deliver the adjusted guarantee within five (5) days of request by Seller. Buyer agrees to reimburse Seller for collection costs, including 2% (two percent) interest per month (not to exceed the maximum amount permitted by applicable law), should Buyer fail to timely pay. Buyer shall have no rights to make any deduction, retention, withholding or setoff relating to any payments due under this Agreement.

4. Taxes and Duties Seller shall be responsible for all corporate taxes measured by net income due to performance of or payment for work under this Agreement (“Seller Taxes”). Buyer shall be responsible for all taxes, duties, fees, or other charges of any nature (including, but not limited to, consumption, gross receipts, import, property, sales, stamp, turnover, use, or value-added taxes, and all items of withholding, deficiency, penalty, addition to tax, interest, or assessment related thereto, imposed

by any governmental authority on Buyer or Seller or its subcontractors) in relation to the Agreement or the performance of or payment for work under the Agreement other than Seller Taxes (“Buyer Taxes”). The Agreement prices do not include the amount of any Buyer Taxes. If Buyer deducts or withholds Buyer Taxes, Buyer shall pay additional amounts so that Seller receives the full Agreement price without reduction for Buyer Taxes. Buyer shall provide to Seller, within one month of payment, official receipts from the applicable governmental authority for deducted or withheld taxes. Buyer shall furnish Seller with evidence of tax exemption acceptable to taxing authorities if applicable, prior to execution of the Agreement by both Parties or issuance by the Seller of the order acceptance. Buyer’s failure to provide evidence of exemption at time of order will relieve Seller of any obligation to refund taxes paid by Seller.

5. Delivery, Title, Risk of Loss. Unless otherwise specified in this Agreement, Seller shall deliver all Equipment to Buyer FCA (Incoterms 2010) Seller’s facility. The time for delivery of the Equipment to Buyer shall be specified in this Agreement. Seller’s sole liability for any delay in delivery of the Equipment shall be as expressly set out in this Agreement. The place of delivery specified herein shall be firm and fixed, provided that Buyer may notify Seller no later than forty-five (45) days prior to the scheduled shipment date of the Equipment of an alternate point of delivery, Buyer shall compensate Seller for any additional cost in implementing the change. If any part of the Equipment cannot be delivered when ready due to any cause not attributable to Seller, Buyer shall designate a climate-controlled storage location, and Seller shall ship such Equipment to storage. Title and risk of loss shall thereupon pass to Buyer, and amounts payable to Seller upon delivery or shipment shall be paid by Buyer along with expenses incurred by Seller. Services provided herein shall be charged at the rate prevailing at the time of actual use and Buyer shall pay any increase, and Buyer shall pay directly all costs for storage and subsequent transportation. Failure by Buyer to take delivery of the Equipment shall be a material breach of this Agreement.

Title and risk of loss to the Equipment shall be transferred from Seller to Buyer at the point of delivery upon handover in accordance with this Agreement. Title and risk of loss to the Services shall pass as they are performed.

6. Warranties and Remedies. Seller warrants that Equipment shall be delivered free from defects in material, workmanship and title and that Services

shall be performed in a competent, diligent manner in accordance with any mutually agreed specifications. Seller's warranty does not cover the results of improper handling, storage, installation, commissioning, operation or maintenance of the Equipment by Buyer or third parties, repairs or alterations made by Buyer without Seller's written consent, influent water which does not comply with agreed parameters, or fair wear and tear.

Unless otherwise expressly provided in this Agreement, the foregoing warranties are valid:

- (a) for chemicals and Services, for six (6) months from their date of delivery or the provision of Services;
- (b) for consumables, including filters and membranes (other than membranes for process treatment), twelve (12) months from their date of delivery;
- (c) for membranes for process treatment, ninety (90) days from their date of delivery, ;
- (d) for Equipment other than chemicals and consumables, the earlier of, fifteen (15) months from delivery or shipment to storage, or twelve (12) months from start-up/first use;
- (e) for software, ninety (90) days from the date of receipt;
- (f) for Equipment not manufactured by Seller, the warranty shall be the manufacturer's transferable warranty only,

Any claim for breach of these warranties must be promptly notified in writing, and Buyer shall make the defective item available to the Seller, or the claim will be void. Seller's sole responsibility and Buyer's exclusive remedy arising out of or relating to the Equipment or Services or any breach of these warranties is limited to repair at Seller's facility or (at Seller's option) replace at Seller's facility the defective items of Equipment, and re-perform defective Services. In performance of its obligations hereunder, Seller will not control the actual operation of either Buyer's systems or the Equipment at the Buyer's site.

Warranty repair, replacement or re-performance by Seller shall not extend or renew the applicable warranty period.

The warranties and remedies are conditioned upon

- (a) proper unloading, handling, storage, installation, use, operation, and maintenance of the Equipment and Buyer's facility and all related system in accordance with Seller's instructions and, in the absence, generally accepted industry practice,
- (b) Buyer keeping accurate and complete records of operation and maintenance during the warranty period and providing Seller access to those records, and
- (c) modification or repair of Equipment or Services only as authorized by Seller in writing. Failure to meet

any such conditions renders the warranty null and void.

Buyer is not entitled to extend or transfer this warranty to any other party. The warranties and remedies set forth in this article are in lieu of and exclude all other warranties and remedies, statutory, express or implied, including any warranty of merchantability or of fitness for a particular purpose.

Unless otherwise expressly stipulated in this Agreement, Seller gives no warranty or guarantee as to process results or performance of the Equipment, including but not limited to product quality, flow, production, capacity, membrane life, chemical consumption, regulatory compliance or energy consumption.

7. General Indemnity. Seller shall indemnify and hold harmless Buyer from claims for physical damage to third party property or injury to persons, including death, to the extent caused by the negligence of Seller or its officers, agents, employees, and/or assigns while engaged in activities under this Agreement. Buyer shall likewise indemnify and hold harmless Seller from claims for physical damage to third party property or injury to persons, including death, to the extent caused by the negligence of the Buyer, its officers, agents, employees, and/or assigns. In the event such damage or injury is caused by the joint or concurrent negligence of Seller and Buyer, the loss shall be borne by each Party in proportion to its negligence. For the purposes of this article (i) "Third party" shall not include Buyer or any subsequent owner of the Equipment, their subsidiaries, parents, affiliates, agents, successors or assigns including any operation or maintenance contractor, or their insurer; and (ii) no portion of the Equipment is "third party property".

8. Compliance with Laws and Permits. All permits, authorizations, and licenses which are required to construct, install and/or operate Buyer's facility or equipment, to use the Equipment, or to manage and dispose of any wastes, discharges, and residues resulting from Buyer's use of the Equipment, shall be obtained and maintained by Buyer at Buyer's sole expense. Buyer is responsible for compliance with all laws and regulations applicable to the storage, use, handling, installation, maintenance, removal, registration, and labeling of all Equipment after delivery of the Equipment, as well as for the proper management and disposal of all wastes, discharges, and residues.

9. Buyer's Site Conditions. Buyer warrants that any data furnished to the Seller concerning conditions at Buyer's site (including but not limited to any existing Buyer facility, equipment or processes, influent water or other substances to be treated or measured with the Equipment) is accurate and complete, and the Seller reserves the right to utilize

the most appropriate design compatible with generally accepted engineering practices, and to make changes in details of design, manufacture and arrangement of Equipment unless precluded by any limitations specified in this Agreement. Seller shall notify Buyer of (1) any conditions at Buyer's site which materially differ from those indicated in the data furnished by Buyer, (2) any previously unknown physical conditions at Buyer's site of an unusual nature, not revealed by previous investigations and differing from those ordinarily encountered in the type of work provided for in this Agreement, and (3) the presence of any Hazardous Materials (as defined below), the existence of a contaminated soil, unexploded ordnance, or archaeological remains. If such conditions cause an increase in Seller's cost or in the time required for the performance of Seller's obligations, Seller shall be entitled to an equitable adjustment in the Agreement Price and an extension in the time for performance.

10. Hazardous Materials and Wastes. In the event that Seller encounters any Hazardous Materials (meaning toxic substances, hazardous substances, pollutants, contaminants, regulated wastes, or hazardous wastes as such terms may be defined or classified in any law, statute, directive, ordinance or regulations promulgated by any applicable governmental entity) at Buyer's site, other than Hazardous Materials introduced by Seller or that are otherwise the express responsibility of Seller under this Agreement, Buyer shall immediately take whatever precautions are required to legally eliminate such Hazardous Materials so that the Seller's work under this Agreement may safely proceed. At no time shall Seller be deemed to have taken title to or the responsibility for the management or disposal of any wastes, Hazardous Materials, influent water, any resultant product streams, wastewater streams, discharges, cleaning materials, or any other materials or substances processed by the Equipment or otherwise located at Buyer's site. Seller does not take responsibility for and hereby expressly disclaims responsibility for the characterization of wastes, Hazardous Materials, or for the identification, selection, or management of disposal facilities for any wastes.

11. Excusable Delays. Seller shall not be liable nor in breach or default of its obligations under this Agreement to the extent performance of such obligations is delayed or prevented, directly or indirectly, due to causes beyond the reasonable control of Seller, including, but not limited to: acts of God, natural disasters, unusually severe weather, fire, terrorism, war (declared or undeclared) epidemics, material shortages, insurrection, act (or omissions) of Buyer or Buyer's suppliers or agents, any act (or omission) by any governmental authority, strikes, labor disputes, transportation shortages, or vendor

non-performance. The delivery or performance date shall be extended for a period equal to the time lost by reason of delay or non-performance, plus such additional time as may be necessary to overcome the effect of the delay or non-performance. If delivery or performance is delayed for a period exceeding 180 (one hundred and eighty) days, either Party may terminate this Agreement without further liability provided that Seller shall be paid an amount equal to that which would be payable to Seller under the article entitled "Termination". If Seller is delayed by any acts (or omissions) of Buyer, or by the prerequisite work of Buyer's other contractors or suppliers, Seller shall be entitled to an equitable adjustment in schedule, price and/or performance, as applicable.

12. Emergencies. If the safety of Seller's personnel is threatened or likely to be threatened by circumstances outside the reasonable control of Seller, including but not limited to war, armed conflict, civil unrest, riots, terrorism, kidnapping, presence of or exposure to hazardous materials, unsafe working conditions, or by the threat of such circumstances or a lack of adequate protections against such circumstances, Seller shall be entitled to take all necessary steps to ensure the security and safety of its personnel including the evacuation of personnel until such circumstances no longer apply. Any such occurrence shall be considered an excusable delay event. Buyer shall reasonably assist in the event of any such evacuation.

13. Confidentiality, Intellectual Property. Both Parties agree to keep confidential the other Party's proprietary non-public information, if any, which may be acquired in connection with this Agreement. Buyer will not, without Seller's advance written consent, subject Equipment to testing, analysis, or any type of reverse engineering. Seller retains all intellectual property rights including copyright which it has in all drawings and data or other deliverables (including the Equipment) supplied or developed under this Agreement. Buyer agrees that it will not file patent applications on the Equipment or any development or enhancement of the Equipment, or of processes and methods of using the Equipment, without Seller's express prior written permission. Buyer further agrees that in any event any such patents will not be asserted against Seller or its other buyers based upon purchase and use of such Equipment. Seller grants to Buyer a non-exclusive, non-terminable, royalty free license to use the intellectual property embedded in Equipment delivered to and paid for by the Buyer, as well as any drawings, design or data delivered to and paid for by the Buyer, for the purposes of owning, financing, using, operating and maintaining the relevant Equipment at Buyer's site. Such license may only be assigned to a subsequent owner of the Equipment or to an operations and maintenance subcontractor. Such license does not extend to the re-

creation of the Equipment or the manufacture of spares or consumables by Buyer or third parties

Any software Seller owns and provides pursuant to this Agreement shall remain Seller's property. Seller provides to Buyer a limited, non-exclusive and terminable royalty free project-specific license to such software for the use, operation or maintenance at Buyer's site of any Equipment purchased hereunder to which the software is a necessary component. Buyer agrees not to copy, sub-license, translate, transfer, reverse engineer, or decode the software.

Seller shall indemnify and hold harmless Buyer from any rightful claim of any third party that any Equipment or Service infringe a patent in effect in the USA, or country of delivery (provided there is a corresponding patent issued by the USA), or USA copyright or copyright registered in the country of delivery. If the Buyer notifies the Seller promptly of the receipt of any such claim, does not take any position adverse to the Seller regarding such claim and gives the Seller information, assistance and exclusive authority to settle and defend the claim, the Seller shall, at its own expense and choice, either (i) settle or defend the claim and pay all damages and costs awarded in it against the Buyer, or (ii) procure for the Buyer the right to continue using the Equipment or Service, or (iii) modify or replace the Equipment or Service so that it becomes non-infringing, or (iv) remove the infringing Equipment and refund the price. The above paragraph shall not apply to any misuse of Equipment or Equipment which is manufactured to the Buyer's design, or to alleged infringement arising from the combination, operation, or use of any Equipment or Services with other equipment or services when such combination is part of any allegedly infringing subject matter. The foregoing list of sub-sections (i), (ii), (iii), and (iv) and related terms state the entire liability of the Seller for intellectual property infringement by any Equipment or Service.

14. Limitations on Liability. Notwithstanding anything else contained in this Agreement, to the maximum extent permitted by law, and regardless of whether a claim is based in contract (including warranty or indemnity), extra-contractual liability, tort (including negligence or strict liability), statute, equity or any other legal theory:

(a) THE TOTAL LIABILITY OF THE SELLER AND OF ITS INSURER FOR ALL CLAIMS ARISING OUT OF OR RELATING TO THE PERFORMANCE OR BREACH OF THIS AGREEMENT OR USE OF ANY EQUIPMENT OR SERVICES SHALL NOT EXCEED THE TOTAL PRICE PAID BY BUYER UNDER THIS AGREEMENT OR (IN THE CASE OF AN AGREEMENT FOR SERVICES WITH A TERM OF MORE THAN ONE YEAR) THE ANNUAL PRICE PAYABLE BY BUYER UNDER THIS AGREEMENT;

(b) IN NO EVENT SHALL SELLER BE LIABLE FOR ANY LOSS OF PROFITOR REVENUES, LOSS OF PRODUCTION, LOSS OF USE OF EQUIPMENT OR SERVICES OR ANY ASSOCIATED EQUIPMENT, INTERRUPTION OF BUSINESS, COST OF CAPITAL, COST OF REPLACEMENT WATER OR POWER, DOWNTIME COSTS, INCREASED OPERATING COSTS, CLAIMS OF BUYER'S CUSTOMERS FOR SUCH DAMAGES, OR FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, INDIRECT, PUNITIVE OR EXEMPLARY DAMAGES;

(c) SELLER'S LIABILITY SHALL END UPON EXPIRATION OF THE APPLICABLE WARRANTY PERIOD, PROVIDED THAT BUYER MAY CONTINUE TO ENFORCE A CLAIM FOR WHICH IT HAS GIVEN NOTICE PRIOR TO THAT DATE BY COMMENCING AN ACTION OR ARBITRATION, AS APPLICABLE UNDER THIS AGREEMENT, BEFORE EXPIRATION OF ANY STATUTE OF LIMITATIONS OR OTHER LEGAL TIME LIMITATION BUT IN NO EVENT – TO THE EXTENT PERMITTED BY APPLICABLE LAW – LATER THAN FIVE (5) MONTHS AFTER EXPIRATION OF SUCH WARRANTY PERIOD.

For the purposes of this article, "Seller" shall mean Seller, its affiliates, subcontractors and suppliers of any tier, and their respective agents and employees, individually or collectively. If Buyer is supplying Seller's Equipment or Services to a third party, Buyer shall require the third party to agree to be bound by this article. If Buyer does not obtain this agreement for Seller's benefit for any reason, Buyer shall indemnify and hold Seller harmless from all liability arising out of claims made by the third party in excess of the limitations and exclusion of this article.

15. Termination. This Agreement and any performance pursuant to it may be terminated by either Party, and the consequences of such termination shall be as set out in the next paragraph, if the other Party

(a) becomes insolvent, makes an assignment for the benefit of its creditors, has a receiver or trustee appointed for the benefit of its creditors, or files for protection from creditors under any bankruptcy or insolvency laws; or

(b) fails to make any payment when due or to establish any payment security required by this Agreement, or commits a material breach or defaults in its material obligations under this Agreement, and such default is not cured within thirty (30) days of written notice from the other Party.

Upon the termination of this Agreement by Buyer for cause (i) Seller shall reimburse Buyer the difference between that portion of the Agreement price allocable

to the terminated scope and the actual amounts reasonably incurred by Buyer to complete that scope, and (ii) Buyer shall pay to Seller (a) the portion of the Agreement price allocable to Equipment completed, and (b) amounts for Services performed before the effective date of termination. Upon the termination of this Agreement by Seller for cause Buyer shall pay to Seller within thirty (30) days of receipt of invoice the price of all Equipment or Services delivered at the date of termination, plus an amount equal to all costs and expenses incurred in the engineering, sourcing, financing, procurement, manufacture, storage and transportation of the Equipment including materials, work in progress and any cancellation charges assessed against Seller by Seller's suppliers including reasonable overhead and profit on all such costs and expenses. Alternatively, if any schedule of termination payments has been agreed between the Parties, Buyer shall pay to Seller within thirty (30) days of receipt of invoice the amounts set out in that schedule.

16. Governing Law, Dispute Resolution. This Agreement shall be governed by the substantive laws of the State of New York. In the event of a dispute concerning this Agreement, the complaining Party shall notify the other Party in writing thereof. Management level representatives of both Parties shall meet at an agreed location to attempt to resolve the dispute in good faith. Should the dispute not be resolved within thirty (30) days after such notice, the complaining Party shall seek remedies exclusively through arbitration. The seat of arbitration shall be the federal district court in Philadelphia, PA, and the rules of the arbitration will be the Commercial Arbitration Rules of the American Arbitration Association, which are incorporated by reference into this article

Notwithstanding the foregoing, each Party shall have the right to commence an action or proceeding in a court of competent jurisdiction, subject to the terms of this Agreement, in order to seek and obtain a restraining order or injunction to enforce the confidentiality intellectual property provisions set forth in the first two paragraphs of article 13; nuclear use restrictions set forth in article 17, or to seek interim or conservatory measures not involving monetary damages.

17. No Nuclear Use. Equipment and Services sold by Seller are not intended for use in connection with any nuclear facility or activity, the Buyer warrants that it shall not use or permit others to use the Equipment or Services for such purposes, without the advance written consent of Seller. If, in breach of this, any such use occurs, Seller (and its parent, affiliates, suppliers and subcontractors) disclaims all liability for any nuclear or other damage, injury or contamination, and, in addition to any other rights of Seller, Buyer shall indemnify and hold Seller (and its parent, affiliates, suppliers and subcontractors) harmless against all such liability.

18. Export Control. Seller's obligations are conditioned upon Buyer's compliance with all USA and other applicable trade control laws and regulations. Buyer shall not trans-ship, re-export, divert or direct Equipment (including software and technical data) other than in and to the ultimate country of destination declared by Buyer and specified as the country of ultimate destination on Seller's invoice.

19. Changes. Each Party may at any time propose changes in the schedule or scope of Equipment or Services. All changes to the Equipment or Services shall be subject to mutual agreement via a written change order or variation, which shall only become effective once signed by both Parties. The scope, Agreement price, schedule, and other provisions will be equitably adjusted to reflect additional costs or obligations incurred by Seller resulting from a change, after Seller's proposal date, in Buyer's site-specific requirements or procedures, or in industry specifications, codes, standards, applicable laws or regulations. It shall be acceptable and not considered a change if Seller delivers Equipment (including Equipment replacement under warranty) that bears a different, superseding or new part or version number compared to the part or version number listed in the Agreement, provided that in no circumstance shall this affect any other of Seller's obligations including those set forth in article 6.

20. Conflicts; Survival, Assignment. If there is any conflict between this Agreement and any written proposal or quotation provided by Seller, then the terms and conditions set forth in this Agreement shall prevail. If any term or condition of this Agreement or any accompanying terms and conditions are held invalid or illegal, then such terms and conditions shall be reformed to be made legal or valid, or deleted, but the remaining terms and conditions shall remain in full force and effect, and this Agreement shall be interpreted and implemented in a manner which best fulfills Parties' intended agreement. Those provisions which by their nature remain applicable after termination shall survive the termination of this Agreement for any reason. Seller may assign or novate its rights and obligations under the Agreement, in whole or in part, to any of its affiliates or may assign any of its accounts receivable under this Agreement to any party without Buyer's consent, and the Buyer hereby agrees, by signing this Agreement, to such assignment and to execute any document that may be necessary to complete Seller's assignment or novation. This Agreement shall not otherwise be assigned by either Party without the other Party's prior written consent, and any assignment without such consent shall be void

Seller may (i) manufacture and source the Equipment and any part thereof globally in the country or countries of its choosing; and (ii) may subcontract

portions of the Services, so long as Seller remains responsible for such.

21. No third party beneficiary. Except as specifically set forth in the article entitled "Limitations on Liability" and "No Nuclear Use", this Agreement is not intended to, and does not, give to any person who is not a party to this Agreement any rights to enforce any provisions contained in this Agreement.

22. Entire Agreement. This Agreement embodies the entire agreement between Buyer and Seller and supersedes any previous documents, correspondence or agreements between them. No modification, amendment, revision, waiver, or other change shall be binding on either Party unless agreed in writing by the Party's authorized representative. Any oral or written representation, warranty, course of dealing, or trade usage not specified herein shall not be binding on either Party. Each Party agrees that it has not relied on, or been induced by, any representations of the other Party not contained in this Agreement.

23. USA Government Contracts. This article 23 applies only if the Agreement is for the direct or indirect sale to any agency of the USA Government and/or is funded in whole or in part by any agency of the USA Government. Buyer agrees that all Equipment and Services provided by Seller meet the definition of "commercial-off-the-shelf" ("COTS") or "commercial item" as those terms are defined in Federal Acquisition Regulation ("FAR") 2.101. To the extent the Buy American Act, Trade Agreements Act, or other domestic preference requirements are applicable to this Agreement, the country of origin of Equipment is unknown unless otherwise specifically stated by Seller in this Agreement. Buyer agrees that any Services offered by Seller are exempt from the Service Contract Act of 1965 (FAR 52.222-41). Buyer represents and agrees that this Agreement is not funded in whole or in part by American Recovery Reinvestment Act funds unless otherwise specifically stated in the Agreement. The version of any applicable FAR clause listed in this Section 18 shall be the one in effect on the effective date of this Agreement. If Buyer is an agency of the USA Government, then as permitted by FAR 12.302, Buyer agrees that all paragraphs of FAR 52.212-4 (except those listed in 12.302(b)) are replaced with these Terms and Conditions. Buyer further agrees the subparagraphs of FAR 52.212-5 apply only to the extent applicable for sale of COTS and/or commercial items and as appropriate for the prices under this Agreement. If Buyer is procuring the Equipment or Services as a contractor, or subcontractor at any tier, on behalf of any agency of the U.S Government, then Buyer agrees that FAR 52.212-5(e) or 52.244-6 (whichever is applicable) applies only to the extent applicable for sale of COTS and/or commercial items

and as appropriate for the prices under this Agreement.

appendix e – aftermarket services

appendix e: Aftermarket Services Detailed

SUEZ is a proven leader in delivering tangible value to our clients over the life of the plant. Our measure of success is how well we deliver solutions that help our clients meet their critical business objectives in each and every year of operation.

SUEZ has distinguished itself from other UF membrane manufacturers with the quality and range of post-commissioning service support offered to its clients. After initial project start-up and commissioning is complete, SUEZ equipment system owners have access to comprehensive support through flexible, responsive, and professional service packages. SUEZ has developed the systems and technical expertise necessary to anticipate and resolve any process or equipment problem.

For ZeeWeed membrane systems alone, SUEZ has 110 service staff in North America including:

- technical support staff for 24/7 emergency telephone support;
- process support engineers and technicians;
- system controls staff;
- local field service representatives;
- pre- or post-commissioning training staff;
- spare parts personnel;
- warranty support and service planning specialists, and
- regional lifecycle managers.

1.1.1 24/7 telephone technical support

SUEZ's 24/7 telephone technical support provides operators with access to a team of specialists who provide operations, control, or process support to help to keep plants online if the MBR systems are forced to operate outside of design conditions.

Plant operators can call the telephone number provided below for technical support.

Telephone, toll free in North America:	+1 866-271-5425
Outside North America:	+1 905-469-7723
Daytime Hours email address	Suez.technicalsupport.wts@suez.com

calls during business hours

For the life of the system, Plant operators have telephone access to a skilled SUEZ technical support specialist who will assist plant operators in troubleshooting of system problems such as electrical (PLC/HMI), mechanical and process control issues.

calls after-hours - emergency telephone technical support

Our technical support team is always on call and is equipped with system information to effectively talk a plant operator through an emergency, potentially averting loss of plant production and expensive call outs. The telephone technical support group maintains access to all plant drawings for rapid reference during 24/7 support calls. The telephone technical support group has portable computers equipped to access the plant control

system remotely, in order to gain a better understanding of the situation, and to make any necessary adjustments to control set-points or software. Remote access requires a high-speed internet connection at your facility and requires that you have permissions set up in advance. The technical support specialist will manage the resources needed within SUEZ to assist you in resolving your plant issues. All client issues are tracked through to resolution using SUEZ's state-of-the-art issue tracking software.

1.1.2 InSight

InSight leverages the power of the internet to monitor plants and ensure ease of operability and maintainability. SUEZ's cloud-based knowledge management platform provides the means to capture and translate data into valuable information, ultimately providing the knowledge you need to get the most out of your water and process applications that support production assets, at the lowest total cost of operation.

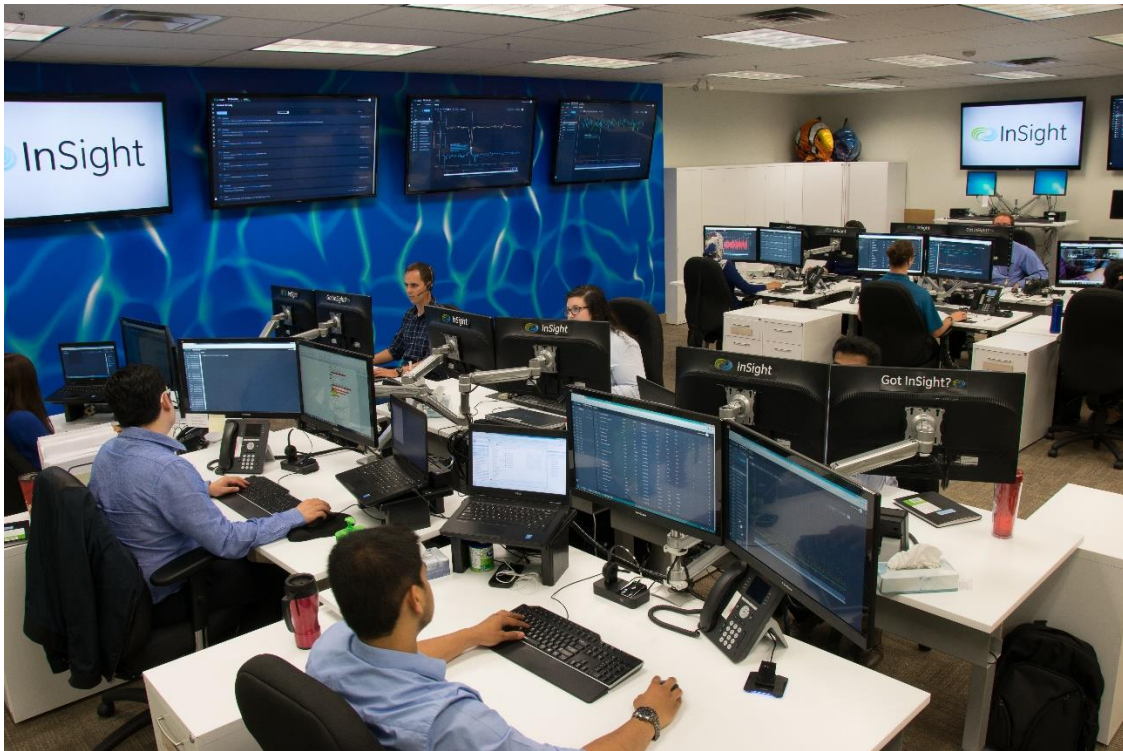
You are leading your team away from a model where when something breaks, we fix it, to a model where we predict and prevent equipment from breaking in the first place. As manager of a membrane treatment process, you are challenged to lead with foresight and prudent decision-making, maintaining a watchful eye on the long term issues of your plant:

- ❑ Avoiding operational interruptions and loss of revenue moving with our customers toward zero unscheduled downtime
- ❑ Maximizing the useful life of membranes and equipment
- ❑ Reducing operating and maintenance costs including chemical and energy costs
- ❑ Reducing non-value added labor – optimizing operator efficiency and usage

InSight provides:

- ❑ **analytics:** InSight allows review of historical and current plant performance against success criteria.
- ❑ **early detection and alarming:** InSight helps operators detect emerging problems, so that action can be taken before a failure is experienced in the future.
- ❑ **productivity:** InSight's automated data collection reduces the tedious work of entering and reporting operator-collected data, including data required for membrane warranties. InSight helps staff get more done with tools that enhance their personal productivity, enabling them to see and do more.
- ❑ **reporting:** InSight's automated performance reports highlight operational details for key performance indicators.
- ❑ **membrane replacement strategy:** InSight data provides the information needed to plan a cost effective strategy for membrane replacement and upgrades with a deep understanding of factors affecting membrane performance
- ❑ **mobility:** Provides smartphone or tablet access allowing the user the same abilities to see system health, current data, trends, reports and even enter operational data and notes.
- ❑ **security:** Archives all plant data securely in an off-site central database. Data is password protected.

- **data sources:** Allows for data to be acquired from a wide range of sources and modes of capture – including automatic (wired and wireless) and direct manual data entry



InSight Pro

InSight Pro puts a professional SUEZ process expert onto your team, collaborating to empower your operating team to apply the power of InSight.

The process expert is specifically assigned to your plant and will monitor key parameters on a regular rhythm using the InSight platform. The process expert will be in regular contact with the key members of your operations team to discuss and resolve performance, process and operational issues. While supporting your operations team with day-to-day issues, the process expert will also use InSight to bring attention to long term trends and provide operational recommendations.

As part of InSight pro, the process expert provides bi-weekly process reports with analysis of key trends and recommendations to support plant operation, membrane cleaning and overall performance. In addition, an annual summary performance report is provided.

If the need for troubleshooting does arise, your SUEZ process expert is accessible, familiar with your system and empowered with accurate information to assist.

1.1.3 site visits

SUEZ and English River 1st Nations Reserve will cooperatively plan the time allotted to service visits to complete priority activities identified by English River 1st Nations Reserve or selected from the scope of service below and produce maximum value from the service visit. Not all items in this scope or checklist are necessarily performed on

every visit. The SUEZ field service representative (FSR) and the plant operators will initially define priority deliverables and jointly revise these priorities as required. Activities to monitor, diagnose and repair membrane issues will take precedence over other activities.

process monitoring

- Inspect and confirm proper operation of the membrane system in accordance with the SUEZ operation & maintenance manual.
- Review operating logs, analytical tests and InSight data (if available) with the operator(s). Discuss operator concerns and SUEZ issues emerging from this review.
- Discuss imminent seasonal shifts. Plan and implement forward looking adjustments.
- Advise the operations manager of technical updates as they become available from SUEZ.

membrane integrity

- Evaluate the aeration patterns in the tank, inspect tank walls and floors.
- Lift and inspect membrane cassettes, as required to assess condition.
- Assess pressure decay test or bubble test data as it correlates to the membrane condition and/or permeate water quality. Assist plant operators to repair membrane fibers as required.
- Assess the effectiveness of on-going membrane cleaning procedures (air scouring, recovery cleaning, maintenance cleaning, relaxation and/or back-pulsing) and provide recommendations to the plant operators as necessary.

controls

- Review system alarm history, discuss any related issues with operator(s) and recommend appropriate actions to be taken.
- Perform limited PLC code modifications as planned in advance, secured by proper documentation, dial-in capabilities and file backup precautions.
- Verify operation of all safety interlock/controllers, pressure switches and temperature switches.

verification of instrument calibration

- Review set points, verify the condition of all control instruments, sensors, probes, and transmitters, including switching action and output. Assist operators with re-calibration, as necessary.
- Collaborate with the plant operator in maintaining a log of calibration activities.

preventive maintenance planning

- Develop a preventive maintenance plan with the plant operator.
- Review the spare parts provisions with the plant operator and identify any additional parts to provide the desired level of security, including spares related to non-SUEZ equipment.

training

SUEZ recognizes the critical role that training can play in contributing to plant success. While training is integral to the commissioning process, there are times over the life of a plant when additional training is not only desirable but essential. During scheduled site visits, the SUEZ service representative can provide operators with informal training on any areas of concern; to explain the operation, process, maintenance or troubleshooting activities and, in general, to enhance operator ability and confidence.

reporting

SUEZ will provide a report to record membrane condition, tasks accomplished during the visit and identify key operating and maintenance issues.

spares

The SUEZ service representative will review the spares provisions with the plant operator to identify any additional spare parts which should be brought into inventory to provide the desired level of security to the plant including spares related to non-SUEZ equipment.

1.1.4 membrane warranty support

To quickly manage warranty claims, SUEZ Lifecycle Services has a Warranty Coordinator dedicated to that function and that function only. Our Warranty Coordinator has access to all SUEZ resources to ensure timely resolution of problems that may occur.

1.1.5 lifecycle services team

At SUEZ, you can be assured your calls will be answered by a passionate group of individuals who truly believe that a warm and professional response to callers will help in the resolution of the most impactful issues to your plant.

Our team of specialists is comprised of Technicians, Technologists and Engineers with years of field service and commissioning experience that can help you resolve process, mechanical, electrical and programming issues.

partnership communication

SUEZ knows the importance and long-term implications involved in selecting a membrane supplier. SUEZ is committed to building a partnership with English River 1st Nations Reserve and believes communication is the essential ingredient to achieve this. SUEZ invests in the partnership through the following communication mechanisms,

- Access to a Regional Lifecycle Manager (RLM)
- Participation in the ZeeWeed Users Group
- Customer Forums
- Dedicated Warranty Coordinator

1.1.6 regional lifecycle manager – SUEZ water services

The Regional Lifecycle Manager (RLM) will act as the SUEZ Water Services “quarterback”, engaging in frequent communication with plant staff, ensuring timely access to all the technical resources provided by SUEZ. The RLM will also design a schedule and package of services suited to your needs and budget, including:

- Additional years of 24/7 Telephone Technical support coverage
- Additional years of InSight
- Greater frequency of site visits and or special provisions for emergency site visits
- Plant optimization and plant upgrades
- Membrane replacement planning/budgeting
- Membrane cleaning studies