

NanoH₂O Application Questionnaire



The following information will allow NanoH₂O to propose a solution that best meets your needs. For additional information about NanoH₂O and our industry-leading high performance SWRO membrane elements, please visit www.nanoh2o.com.

1. General

1.1 Prepared by: _____ E-mail: _____

1.2 Company Name: _____ Phone: _____

1.3 Project Name: _____ Location: _____

1.4 What is your application? _____

Seawater Desalination Brackish Water Treatment Industrial Water Reuse

1.5 How do you want to use NanoH₂O membranes? _____

Retrofit Existing System Plant Expansion New Build

1.6 Prioritize your goals by ranking the choices below (High=1; Low=6): _____

() Maximize/Increase Production Capacity () Minimize Energy () Minimize Footprint

() Minimize Capital Expenditure () Improve Product Quality () Other: _____

1.7 Which design options do you allow? _____

1-Pass System 2-Pass System pH Adjustment Recycling Staging with Booster Pump

2. System Overview (Current design for existing system or desired design for new build)

2.1 Plant Capacity: _____ (gpm gpd MGD m³/d m³/hr)

2.2 Number of 1ST Pass Trains: _____ Number of 2ND Pass Trains: _____

2.3 Number of Stages in 1ST Pass: _____ Number of Stages in 2ND Pass: _____

2.4 Overall Recovery: % 1ST Pass Recovery: % 2ND Pass Recovery: %

2.5 Product Maximum Acceptable Levels: _____

TDS: (ppm mg/l μS/cm) Chloride: (ppm mg/l) Boron: (ppm mg/l) Other: _____

2.6 System Startup Date: _____ Current RO Element Installation Date: _____

3. Feedwater Description (Please provide the feed water analysis)

3.1 Feed Water Salinity: (ppm mg/l μS/cm) at Temperature: (°C °F)

3.2 Feed Water Temperature Range: (°C °F)

3.3 SDI: Turbidity: (NTU)

3.4 Water Source:

Open Intake	Beach Well	Brackish Well	Brackish Surface Water	Tertiary Waste
-------------	------------	---------------	------------------------	----------------

3.5 Pretreatment:

Filtration	Describe:
Cartridge Microfiltration	Describe:
Chemical Dosing	Describe:
Other	Describe:

4. System Design

4.1 1ST Pass Design per Train:

4.1.1 Equipment:

Number of Pressure Vessels (PV):	Number of Elements per PV:			
Current RO Element Manufacturer and Model:				
High Pressure Pump (HPP) Type:	Centrifugal	Positive Displacement	Other:	
HPP Model and Make:				
HPP Size:	HP	VFD:	YES NO	
Energy Recovery Device (ERD) Type:	P/W Exchanger	Turbo	Pelton Wheel	Other:
ERD Model and Make:				
ERD Booster Pump Description:				

4.1.2 Operating Parameters:

Feed Flow:	(gpm gpd m ³ /hr m ³ /d)	Brine Flow:	(gpm gpd m ³ /hr m ³ /d)		
Permeate Flow:	(gpm gpd m ³ /hr m ³ /d)				
Operating Feed Pressure:	(psi bar)	Maximum Allowable Feed Pressure:	(psi bar)		
Brine Feed Pressure:	(psi bar)	Permeate Back Pressure:	(psi bar)		
Current Product Quality:					
TDS:	(ppm mg/l μS/cm)	Chloride:	(ppm mg/l)	Boron:	(ppm mg/l)

4.2 2ND Pass Design Per Train:

4.2.1 Equipment:

Number of Pressure Vessels (PV):	Number of Elements per PV:
Current RO Element Manufacturer and Model:	

High Pressure Pump (HPP) Type: Centrifugal Positive Displacement Other:

HPP Model and Make:

HPP Size: HP VFD: YES NO

4.2.2 Operating Parameters:

Feed Flow: (gpm gpd m³/hr m³/d) Brine Flow: (gpm gpd m³/hr m³/d)

Permeate Flow: (gpm gpd m³/hr m³/d)

Operating Feed Pressure: (psi bar) Maximum Allowable Feed Pressure: (psi bar)

Brine Feed Pressure: (psi bar) Permeate Back Pressure: (psi bar)

Current Product Quality:

TDS: (ppm mg/l μS/cm) Chloride: (ppm mg/l) Boron: (ppm mg/l)

5. Control

5.1 PLC Model and Make: SCADA/PCS: YES NO

6. Operating Cost

6.1 Electricity Cost: US\$ /kWh

7. Additional Comments

Official Use Only

Reviewed by: Date:

Notes:
