39250 Pioneer Blvd
Sandy, OR 97055
503-668-5533

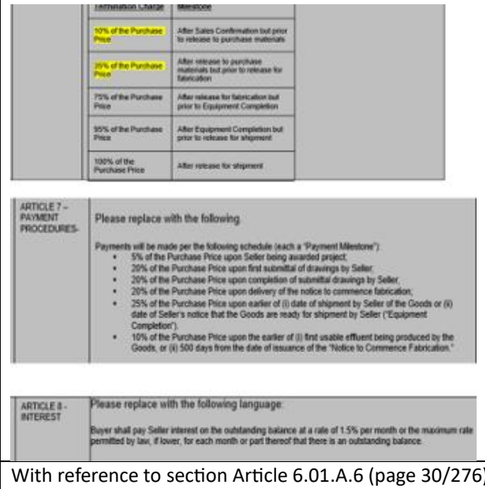
ADDENDUM NO. 5
TO THE REQUEST FOR PROPOSAL
DOCUMENTS FOR PROJECT NO. SDWRP-02-24

CITY OF SANDY

MEMBRANE EQUIPMENT FOR UPGRADED WATER TREATMENT PLANT

This addendum, issued on the **19th day of March 2024,** affects the request for proposal documents for the **Membrane Equipment for Upgraded Water Treatment Plant Project No. SDWRP-02-24** and shall be deemed an integral part of the above referenced documents.

CLARIFICATIONS

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
	00 52 00 00 80 50						No changes made. Seller will be provided with compensation for shop drawing and submittal development. 18% APR is excessive. Not accepted	No spec modification.
	With reference to section Article 6.01.A.6 (page 30/276):			With reference to section Article 6.01.A.6 (page 30/276): we will include the commercial exceptions and clarifications in our proposal document, and we would be happy to address these during negotiation phase later provided we are selected as the successful bidder. Please confirm if this approach is acceptable and will not impact the scoring for evaluation/selection purposes. 6. Letter from an officer of Proposers firm stating that proposer takes no exceptions to the Form of Agreement.			We believe Article 2, 2.02, allows you to submit the letter and still provide exceptions. *The Buyer will execute the Agreement, subject to Seller's exceptions herein, and administer the Contract for Special Engineering Services associated with the preparation of Shop Drawings and other*	No spec modification.

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
							Submittals required for the project.	
	Supplementary Conditions to EJCDC Procurement General Conditions, Article 11.01.A.1.			**Revise to:** **Remove Supplementary Conditions to EJCDC Procurement General Conditions, Article 11.01.A.1.in its entirety. And revise EJCDC P-700 General Conditions for Procurement Contracts, Article 11.01.A.:** **A. Buyer has the right to cancel the Contract, without cause, at any time prior to delivery of the Goods by written notice. Cancellation pursuant to the terms of this paragraph shall not constitute a breach of contract by Buyer. Upon cancellation:** **1. Buyer shall pay Seller for Seller's recovery of costs plus reasonable profit. In addition, with respect to any Goods returned on cancellation, Buyer will pay Sellers cost of placing the returned Goods in a saleable condition, sales expenses incurred by Seller in connection with such returned Goods, a reasonable restocking charge and freight costs incurred in connection with the original shipment and in connection with returning such Goods to Seller. ~~Goods, specially manufactured for the Project, plus any documented reasonable direct and indirect costs incurred by Seller in producing such Goods not recovered by payment for the reasonable value of the Goods.~~** **2. ~~For Goods which are not specially manufactured for the Project, Seller shall be entitled to a restocking charge of 10 percent of the unpaid Contract Price of such Goods.~~**			Article 11 is fair to Seller. Proposed language is vague.	No spec modification.
	11 30 00 2.03. A.9. a. 2					(Pneumatic Valve actuator), states that "All valve actuators shall include proximity type limit switches". - Aria Filtra standard containerized MF equipment do not carry limit switches on the all the valves. In case, where the limit switches are not available, the process is controlled through additional monitoring devices such as pressure transmitters, flow switches etc. Adding limit switches to the valve	Agreed - limit switches will not be required	No spec modification.

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						actuators in standard containerized MF equipment is challenging due to space restrictions and is a cost adder to the offering. Please allow Aria Filtra to use limit switches where applicable in our standard design.		
	01 09 10 1.02. B					under the Reference standards, Anti-friction Bearing Manufacturers Association (AFBMA), Hydraulic Institute (HI), and International Building Code (IBC) are not applicable to the Aria Filtra's standardized containerized MF equipment. - Please remove above mentioned reference standards for their applicability to the supplier's scope of supply.	IBC is not applicable. Other codes are standard	Revised spec
	I-001 to I-007					After reviewing drawings, I-001 to I-007, Aria Filtra would like to provide additional clarification to have individual chemical drums for each chemical at close proximity to each containerized equipment to achieve consistent flow to chemical transfer systems inside the container. Secondly, the chemical lines must be freeze protected especially for the plant operation in winter, and chemical lines freeze protection shall not be under the Aria filtra's scope of supply	Yes, each chemical will be at close proximity to each container. Chemical lines will be insulated and possibly heat traced. Insulation and heat tracing will be by others	No spec change.
1	11 30 00 1.01. C. 2.	2	Coordination	Equipment will be installed and interconnections made by the Contractor under a separate installation contract	Clarification	Aria Filtra would like to clarify that the interconnect piping design is NOT included in standard design package. Please remove the requirement of design of	Confirmed. The Seller is not required to provided interconnection piping outside of the container/skid.	No spec change.

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						interconnecting piping from supplier's scope of supply and to be scoped under the contractor.		
2	11 30 00 1.01. D. 4. I.	5	Drawings	These drawings may differ from the installed system depending on the selected Seller. Systems integral to each containerized unit such as the backwash system and CIP system are not shown but included in the scope of supply by the Seller.	Clarification	Aria Filtra would like to clarify that the Chemical transfer pumps are mounted internal to the main 40' containers. Dip tubes with foot valves and screens are provided by Aria Filtra for site installation by others. All other chemical transfer equipment in the CIP system (chemical totes/housings, spill containment, heaters, and insulation of drum/tote exterior chemical lines) is supplied and installed by others. Please include the above exceptions to the sellers scope of supply for CIP and backwash systems.	Chemical totes/housings, spill containment, heaters, and insulation of drum/tote exterior chemical lines is supplied and installed by others.	No spec change.
3	11 30 00 1.02. B. 4.	6	Manufacturer's Quality Assurance/Quality Control Program	American Welding Society	Clarification	Aria Filtra fabrication standard for our containerized equipment is CSA W47.1 / W59. Please allow CSA W47.1 / W59 standard and include in the specifications.	Accepted	Spec updated
4	11 30 00 1.03. A. 2. a.	7	Drawings and Samples	Electronic drawings shall also be submitted in 3-D format compatible with the Revit design model.	Clarification	3D CAD format not available in standard design package and not offered in our engineering design. 2D drawings are provided as part of engineering submittals. Please remove the specification.	Accepted	No spec change.
5	11 30 00 1.03. A. 2. a. 3)	8	Containerized Neutralization System Drawings:	The Seller shall coordinate production and submit each of the following Arrangement drawings for approval:	Clarification	Additional neutralization skid is not required for the Aria Filtra's containerized membrane system offering in this proposal. Neutralization is performed on	Accepted	No spec change.

39250 Pioneer Blvd
Sandy, OR 97055
503-668-5533

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						membrane skid equipment. Please remove this specification.		
6	11 30 00 1.03. A. 2. b. 2)	8	Shop drawings	Piping Fabrication and Assembly Drawings:	Clarification	Aria Filtra standrad offering is providing assembly drawings as part of submittals but not the fabrication drawings. Aria Filtra would like to clarify that assembly drawings will be provided as part of submittals but they are not fabrication drawings. Please change the specifications accordingly.	Accepted	No spec change.
7	11 30 00 1.03. A. 2. b.. 3)	9	Design Calculations	Design calculations related to sizing of key components, including the overall System, pumps, valves, Units, process air system, backwash system, CIP system, chemical transfer pumps, CIP pumps, and electrical controls and instrumentation supplied by the Seller. Calculations for the piping system shall be sufficient to demonstrate that the system is hydraulically stable (balanced) under normal and backwash operation within the Seller's and/or good engineering practice limits. Submittals for pump(s) and throttling and modulating valve(s) shall also include calculations to show that cavitation does not occur over the intended minimum and maximum operating range.	Clarification	Aria Filtra would like to clarify that MF containerized sizing and design have been developed on the good engineering practices, pump sizing by historiacal hydraulic loss value of comparable piping. Aria Filtra don't have a written basis of design summary with the corresponding detailed calculations. Please accept a full wet FAT testing demonstrated much of this in lieu of calculations, and modify specifications accordingly.	Accepted	No spec change.
8	11 30 00 2.01 A. 4.	10	Process Description	The feed stream shown on Drawing I-001 may have undergone pre- treatment via coagulation and chlorination and pH control prior to entering the membrane feed tank. Flow from the feed tank will be split between one of two or three containerized membrane systems, as determined by the containerized system capacity.	Clarification	Aria Filtra would like to clarify that the feed tank must provide 5- 15 PSI at the flow rate required for each containerized system.	It's currently understood that not all containers may have membrane feed pumps, and that Owner provided feed pumps may be required outside of the container. This will be evaluated during bid review	No spec change.
9	11 30 00 2.01 A. 6.	11	Process Description	Feed pressure will be used to backwash the automatic backwashing strainers. The feed system is controlled using the pressure transmitter located downstream of the strainers.	Clarification	In the Aria Filtra's standard design, the feed system is controlled through the flow control valve in our design but not through the	Accepted	No spec change.

39250 Pioneer Blvd
Sandy, OR 97055
503-668-5533

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						pressure transmitter located down stream of strainers. Please modify the specifications accordingly.		
10	11 30 00 2.01 A. 8.	11	Process Description	Drawing I-002 shows the arrangement of interconnecting piping for the containerized membrane treatment units. Note that the design of the interconnecting piping is to be prepared by the Seller	Exception	Aria Filtra would like to take an exception to design the interconnecting piping. Aria Filtra do not have the engineering resources to design the interconnecting piping and should be scoped under contractor's scope of supply.	Confirmed. Interconnected piping by Owner	No spec change.
11	11 30 00 2.01 A. 9.	11	Process Description	The feed shall be designed with an air/vacuum relief located at the highest point of the membrane unit to relieve air that may have accumulated during the air scour sequence or relieve vacuum conditions during draining of the unit. Prior to discharge, the filtrate flow is measured and the turbidity is also monitored.	Clarification	Aria Filtra standard containerized MF equipment design do not carry air/vacuum relief in feed instead carries feed drain flush sequence in the process to accommodate the same purpose. Please allow for the change in the specification to reflect this.	Accepted	No spec change.
12	11 30 00 2.01 A. 13	11	Process Description	The CIP system will be integral to each containerized unit and be supplied by the Seller including air diaphragm metering pumps and instrumentation for chemical addition during the CIP process.	Clarification	In Aria Filtra's standard design, chemical transfer pumps are mounted internal to the main 40' containers. Dip tubes with foot valves and screens are provided by water for site installation by others. Aria Filtra would like to clarify that all other chemical transfer equipment (chemical totes/housings, spill containment, heaters, and insulation of drum/tote exterior chemical lines) is supplied and installed by contractor.	Accepted	No spec change.

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
13	11 30 00 2.01 A. 14	11	Process Description	Spent cleaning and chemical maintenance cleaning waste are collected, neutralized, and dechlorinated in the neutralization tank prior to discharge. The neutralization system is shown on Drawing I-004. The neutralization system, shall be skid mounted and all necessary equipment including pumps, instrumentation and the neutralization tank should be supplied by the Seller. Neutralized CIP waste solution will discharge to a holding tank at the WTP site. Neutralized chemical maintenance clean solution will discharge to the Backwash pond.	Clarification	Additional neutralization skid is not required for the Aria Filtra's containerized membrane system offering in this proposal. Neutralization is performed on membrane skid equipment. Please remove this specification.	It is understood that this system can be inside the container	No spec change.
14	11 30 00 2.01 A. 14	12	Process Description	Calcium thiosulfate will be delivered in liquid form by 55 gal drums and will be transfer-pumped to the neutralization tank as needed as shown on Drawing I-004. Transfer pumps will be supplied by the Seller.	Clarification	Our standard containerized MF design do not use calcium thiosulfate for neutralization. Please allow the use of sodium bisulfite and specify it in the specifications.	Accepted	No spec change.
15	11 30 00 2.01 A. 20 & 21	12	Process Description	20. Each containerized system shall have a dedicated PLC or Remote I/O module(s) which shall report back to the centralized PLC. The seller shall also supply a master PLC to control communications between each trailer and the neutralization system. 21. The master PLC shall be complete with a secondary standby, hot-swappable PLC system that shall be capable of taking over system operation in the event of a failure to the primary PLC.	Clarification	Aria Filtra's PLC design in the standard containerized MF design do not offer hot backup, and we will offer shelf spare PLC to achieve the intended use. Please change the specifcations accordingly.	The spec's indicate that the MASTER PLC is to be provided with a hot swappable PLC. Your comments seems to indicate that the individual container should be provided with a shelf spare PLC, which is not the intent.	No spec change.
16	11 30 00 2.01 A. 22	12	Process Description	A compressed air system shown will supply control air including air for daily integrity testing, air scour cleanings during backwash, pneumatically controlled valves, and supply any pressurized air required by the neutralization system. Each containerized unit will be equipped with a compressor, dryer, receiver and filters.	Exception	Air compressor in our design is purposed only for valve actuation and air dryer is not scoped in the design. Air supply for backwash is through blowers. Aria Filtra would like to take an exception for air dryer on the compressor.	It is the Owners intent to maintain an air dryer. These containers are "permanent" and mainteance of valves and seals is important	No spec change.
17	11 30 00 2.01 B. 1.d.	0	Service conditions	Environment: Rural area west of the City of Sandy, approximately 38 percent sunny days, annual rainfall approximately 78 inches, winds up to 42 mph and potential for wildfire smoke.	Clarification	Aria Filtra containerized system design does not carry provisions for wildfire smoke. The containerized systems carry HVAC system inside the container. Please remove wild fire smoke from specifications.	It is understood that the HVAC system does not carry provisions for wild fire smoke.	Spec updated

39250 Pioneer Blvd
Sandy, OR 97055
503-668-5533

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
18	11 30 00 2.01 C. 2.d. 1)	0	Membrane System Design Criteria	The Buyer may operate the membrane facility at any capacity up to the amount maximum permitted by the Oregon Health Authority or at 1.5 times the maximum presented turbidity conditions without invalidating the membrane warranty.	Clarification	Based on the graphical presentation used to provide the turbidity concentrations in the raw water, Aria Filtra assumes that the maximum occurring concentrations in the raw water is 10 mg/L. Alternatively, please include maximum expected concentrations (in words) in the specification to develop the membrane system design criteria.	Accepted	Spec updated
19	11 30 00 2.02. A. 2.a.	0	Equipment Design and Fabrication Requirements	Lifting Lugs: All equipment items or component assemblies weighing in excess of 100 pounds shall be furnished with lifting lugs.	Clarification	Lift lugs are not available for stariners on the standard containerized system. Strainers can be dismantled for repairs or replacment. Please provide an exception for strainers in the specifications.	Accepted	No spec change.
20	11 30 00 2.02. A. 2.b.	0	Equipment Design and Fabrication Requirements	Miscellaneous Fasteners: Bolts, nuts, washers, flange backing rings, and other miscellaneous metal components not specifically addressed elsewhere in these specifications shall be Type 316 stainless steel.	Clarification	In our containerized equipment, not all hardware and backing rings are made of 316 stainless steel. Some are made of ductile iron. Please allow to use ductile steel on mislleanous fasteners where applicable.	Accepted	ductile iron added to specification lanaguage for various fasteners
21	11 30 00 2.02. C. 2.	15	Process Design Requirements	Membrane System Design Criteria: The Seller shall list guaranteed design and operating criteriaThe selected Seller shall demonstrate the guaranteed design and operating criteria during a proof pilot test per Section 11 30 20, Performance Pilot Testing of Membrane Equipment. If design and operating criteria cannot be demonstrated, the Seller shall adjust the pilot test and full-scale system accordingly at no additional cost to the Buyer per Section 00 52 00, Procurement Agreement.	Clarification	Please confirm if piloting is required to establish the membrane system design criteria. Can a waiver on the piloting requirement be issued in similar to Port of Morrow? Please clarify.	The Owner has not been given a waiver at this time. Please assume piloting will be required.	
22	11 30 00 2.02. C. 2. f.	15	Process Design Requirements	The system shall operate at or above the Seller's design recovery at all times during operation. Design recovery values shall be calculated as follows:	Clarification	Aria Filtra would like to clarify that if the system is running at lower flux than that of the design flux, and time that triggers the backwash/FM	Noted	No specification change made

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						(adjustably set point), the recovery will drop.		
23	11 30 00 2.02. C. 2. h.	16	Process Design Requirements	Minimum maintenance cleaning interval: 72 hrs frequency	Clarification	If the TOC concentration in the raw water does not exceed the presented value in the specification, frequency of 72 hours is acceptable. Coagulant dosing concentration will be contribute to the cleaning frequency less than 72 hours.	Noted	No specification change made
24	11 30 00 2.02. A. 4. c.	17	Piping System Design	All piping (including flanges), valves and components that comprise the permanent piping system on the membrane unit shall be pressure rated for a minimum of 150 psi.	Clarification	In the Aria Filtra containerized MF equipment design, The CIP PVC piping are rated at 90 PSI due to elevated water temperatures. Please changes the specifications to reflect the piping rating of 90 PSI.	Accepted	Specification has been updated to reflect a minimum pressure rating of 90 psi
25	11 30 00 2.02. A. 4. d.	18	Piping System Design	Unless stated otherwise or approved by the Engineer, a maximum fluid velocity of 10 feet per second shall be used for the design of the pressure piping systems.	Clarification	Aria Filtra containerized MF equipment design, in a few short sections, the fluid velocity exceeds 10 feet per second. Please allow for maximum fluid velocity of 12 feet per second in the specifications.	Accepted	maximum fluid velocity increased to 12 fps
26	11 30 00 2.02. A. 4. d.	18	Piping System Design	Unit piping shall be arranged in order to assure that a straight run of pipe is used for the flow meters. If not possible, the vendor shall use 0D (Zero Diameter) flow meters or submit a letter of acceptable use from manufacturer. For the purposes of determining the length of a straight run, the length is determined by the length of the spool piece of pipe used before or after the flow meter. Flow meter lay length shall comply with the flow meter manufactures installation requirements or have manufacturer acceptance of installed straight lengths. The flow from each Unit shall be measured directly or through addition or subtraction of two or more flow meters.	Clarification	Aria Filtra's standard containerized MF equipment design does not meet the specifications due to restricted space requirements, however, contains the flow meter for flow measurement. Please remove this specification.	This discussion has already been had with Aria and Aria stated they can submit a manufacturer acceptance of installed straight lengths and specs were previously modified to accept that change.	No specification change made
27	11 30 00 2.02. A. 5. a.	18	Pneumatic system	When used, pneumatic solenoid valves shall have a pilot indicator and a manual override.	Clarification	Aria Filtra standard containerized MF equipment design does not carry this specifications on the	Accepted	Requirement stricken from specification

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						solenoid valves, but the shall meet the penumatic soleniod valve functioning as required. Please remove this specification.		
28	11 30 00 2.02. A. 5. e.	18	Pneumatic system	The inlet to the membrane unit process shall include a check valve to prevent contamination of the air supply.	Clarification	Aria Filtra containerized MF equipment design carries air blower for the back air supply, and contamination of feed water by air supply is not concern in our design. Check valve to prevent contamination of the air supply is not required. Please remove this specification.	Noted	Language added stating this requirement only applies when compressed air is in direct contact with water
29	11 30 00 2.02. A. 6.	18	Equipment Design and Fabrication Requirements	The Seller shall submit calculations to the Engineer that verify that valve or pump cavitation does not occur over the intended operating range.	Clarification	Aria Filtra would like to clarify that MF containerized system sizing and design have been developed on the good engineering practices. Aria Filtra don't have a written basis of design summary with the corresponding detailed calculations. Please accept a full wet FAT testing demonstrated much of this in lieu of calculations, and modify specifications accordingly.	Accepted.	Spec has been modified so accept wet FAT testing in lieu of calculations.
30	11 30 00 2.02. B. 5.d.	21	Clean-In-Place (CIP) and Chemical Maintenance Clean (MC)	Spent CIP solution shall be discharged in a controlled manner. Intermittent CIP solutions will be discharged to the neutralization tank for pH-neutralization, dichlorination, and equalization. The neutralization system shall include a neutralized waste pump that can be used to mix the tank contents or discharge the tank contents to either the sanitary sewer for CIP wastes or the solids drying beds for maintenance clean wastes.	Clarification	Additional neutralization skid are not required for the Aria Filtra's containerized membrane system offering in this proposal. Neutralization is performed on membrane skid equipment. Please remove this specification.	For trailer units this is not true, and this specification would still be true for the equipment aboard the C60.	No specification change made in response to this comment, however, "sanitary sewer" in this section is stricken out and replaced with "CIP waste holding tank"
31	11 30 00 2.02. B. 5.f.	21	Clean-In-Place (CIP) and Chemical Maintenance Clean (MC)	Minimum energy demand (kW) - 80	Clarification	Aria Filtra's standard containerized MF equipment design carries CIP heater with energy demand of 18 kW to meet the CIP requirements. 80 kW heaters are not required.	Accepted	80 stricken from specs and replaced with 18

39250 Pioneer Blvd
Sandy, OR 97055
503-668-5533

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						Please change the specifications to include energy demand of 18 kW or remove the requirement.		
32	11 30 00 2.02. B. 5.k.	21	Clean-In-Place (CIP) and Chemical Maintenance Clean (MC)	The cleaning pumps shall be per vertical in-line centrifugal type.	Clarification	Aria Filtra uses horizontal end-suction centrifugal pumps in the standardized containerized MF equipment design to perform the CIP and have been effective in meeting the design requirments. Please specify in the specifications.	Accepted	specification modified to allow both types of centrifugal pumps
33	11 30 00 2.02. B. 7.a.1)	22	Membrane Filtrate Sampling System	An automatic sample valve located on the filtrate (permeate) discharge line on each membrane rack	Clarification	Aria Filtra would like to clarify that the auto sampler shall be used only for turbidity monitoring, not for any other sample measurements. If the autosampler is required for any another analytical measurements, please specify.	Autosampler is only meant to supply turbidimeter	No specification change made
34	11 30 00 2.02. C. 1.	23	Fabrication Requirements	All welding shall be in accordance with the latest applicable codes of the American Welding Society and/or ASME Boiler Code.	Clarification	Please allow CSA W47.1 / W59 standards, as our fabrication methods are according to CSA W47.1/W59, and include it in the specifications.	Accepted	Spec modifed to allow these standards as well as previously listed standards
35	11 30 00 2.02. C. 3. a. 1)	24	Unit Frame Construction	The method of fabrication shall be continuous fillet and bevel welds. The strength of these welds shall meet or exceed the strength of the structural shape or tubing material. All welding operators shall be qualified in accordance with the current AWS requirements. All exterior welds shall be ground flush and smooth prior to sandblasting. Metal Inert Gas (MIG) welding techniques shall not be used in the frame fabrication. Stitch and spot welding will not be accepted. Bolt holes, mounting holes, etc., shall be drilled prior to painting wherever possible.	Clarification	Please allow CSA W47.1 / W59 standards, as our fabrication methods are according to CSA W47.1/W59, and include it in the specifications.	Accepted	Spec modifed to allow these standards as well as previously listed standards
36	11 30 00 2.02. C. 3. b. 1)	24	Painting	Refer to Section 09 90 00, Painting.	Clarification	Section 09 90 00 is not specified in specifications. Aria Filtra is attaching their standard painting specification for reference.	Accepted	reference to 09 99 00 deleted

39250 Pioneer Blvd
Sandy, OR 97055
503-668-5533

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						Please state painting as per Aria Filtra's standard.		
37	11 30 00 2.03. A. 3. d. 3)	25	Centrifugal Pumps	Coating: Interior water passages of cast iron and ductile iron casing shall be coated with 10- to 12-mils DFT vitreous enamel or 10- to 12-mils DFT fusion bonded epoxy per Section 09 96 00, Painting. All external surfaces of cast iron and carbon steel materials shall be coated in accordance with Section 09 90 00, Painting. Stainless steels shall not be coated.	Clarification	Section 09 90 00 is not specified in specifications. Please state coating as per Aria Filtra's standard.	Accepted	References to 09 99 00 deleted and coatings shall compy with manufacturers recommendations
38	11 30 00 2.03. A. 3. e. 3)	25	Centrifugal Pumps	Motors shall have space heaters to prevent condensation in the motor.	Clarification	Spacers heaters are not able to be accommodated in to the centrifugal pumps with Aria Filtra containerized MF equipment due to the electrical distribution design. Please allow to use centrifugal pumps in the containerized MF equipment without soace heaters. Please remove this specification.	Accepted	space heater requirement stricken from specification
39	11 30 00 2.03. A. 4. a. 2)	26	Air diaphragm pumps	1% Caustic Soda	Clarification	The air diaphragm pumps in the Aria Filtra's standardized containerized MF equipment requires 25% or 50% Caustic Soda. Air diaphragm pumps are not sized for 1% caustic and creates space restrictions in equipping such larger pumps. Please change the specifications to include 25/50% caustic soda.	Accepted, this is a typo	1% changed to "25 or 50%"
40	11 30 00 2.03. A. 4. a. 4)	26	Air diaphragm pumps	Calcium Thiosulfate	Clarification	Aria Filtra's standardized containerized MF equipment design do not use calcium thiosulfate for neutralization. Please allow the use of sodium bisulfite and specify it in the specifications.	Accepted	"or sodium bisfulfite" added to list
41	11 30 00 2.03. A. 5.b.	28	Compressed Air System	Refrigerated Air Dryers	Exception	Air compressor in the Aria Filtra MF design is purposed only for valve actuation and air dryer is not	Accepted	language added to clarify dryers only required if

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						scoped in the design. Air supply for backwash is through air blowers. Aria Filtra would like to take an exception for air dryer on the compressor.		compressed air is used for backwash air supply.
42	11 30 00 2.03. A. 5.c.	29	Compressed Air System	Air Receivers and Air Surge Tank	Clarification	Air receiver is integrated into the air compressor in the Aria Filtra's containerized MF equipment. The receiver size and pressure rating meet the requirements. Please change the specifications to allow for integrated air receiver.	Accepted	Language added to section to allow integrated receivers.
43	11 30 00 2.03. A. 5.c. 6)	29	Compressed Air System	Air Receivers and Air Surge Tank: Manufacturer	Clarification	Air receiver is integrated into the air compressor in the Aria Filtra's containerized MF equipment. Air compressor manufacturer is Ingersoll Rand. Please specify 'Ingersol Rand' in the air receiver manufacturer.	Accepted	Ingersol Rand added to manufacturers for air receivers
44	11 30 00 2.03. A. 5.e.	30	Compressed Air System	Particulate or Membrane Air Filters	Clarification	Aria Filtra's containerized MF equipment air compressor do not carry Particulate or Membrane Air Filters as the Air compressor in Aria Filtra MF design is purposed only for valve actuation. Air supply for backwash is through air blowers. Please remove the requirment of particulate or membrane air filters from the specification.	Air filters are only required if air is in direct contact with water, which in the cases of Aria's offering is not, no change to specification is required.	No specification change made.
45	11 30 00 2.03. A. 5.f. 5)	30	Compressed Air System	Air Regulator Assembly: Manufacturer	Clarification	Air regulator assembly manufacture that Aria Filtra uses in the standardized air compressor assembly is Emerson ASCO. Please specify the manufacturer.	Accepted	Emerson ASCO added to manufacturer list

39250 Pioneer Blvd
Sandy, OR 97055
503-668-5533

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
46	11 30 00 2.03. A. 6. a.	31	Automatic Self-Cleaning Strainers	Strainers shall be of the motorized automatic self-cleaning type. The equipment shall be designed to continuously remove suspended particles from the pumped raw water.	Clarification	The strainers in the Aria Filter containerized MF equipment are not motorized, they are pneumatically actuated. Please change the specifications to reflect it.	Accepted	Specification modifed to also allow pneumatically actuated strainers (same response as item 56)
47	11 30 00 2.03. A. 6. b. 1)	31	Automatic Self-Cleaning Strainers	It shall consist of an outer carbon steel with potable grade interior epoxy coating, cast-iron or ductile iron body, an internal 316 stainless steel screen element sealed with an upper and lower seal ring, and a rotating, backwash arm that discharges the backwash water through an outlet nozzle.	Clarification	The body of the strainer in the Aria Filtra's standardized containerized MF equipment is constructed with stainless steel. Please change the specifications to reflect it.	Accepted	Stainless steel added to body material
48	11 30 00 2.03. A. 6. b. 6) & 7)	32	Automatic Self-Cleaning Strainers	6) The strainer shall be rated for service at 150 psi @ 100°F and ASME code stamped. Inlet and outlet connection shall be flanged and designed and constructed in accordance with both ANSI and ASME Section VIII, Division 1. 7) An inspection port shall be provided to permit visual inspection of filter element without removing drum.	Clarification	The strainers in the Aria Filtra's standardized containerized MF equipment do not have inspection port or lower drain port. Please allow to use the standard offering and modify the specifications accordingly.	Accepted	Inspection port requirement stricken from specification
49	11 30 00 2.03. A. 6. c.	32	Automatic Self-Cleaning Strainers	Motors	Clarification	The strainers in the Aria Filter containerized MF equipment are not motorized, they are pneumatically actuated. Please remove the motor requirement from specifications or modify the specifications to include pneumatically actuated strainers.	Accepted	Specification modifed to also allow pneumatically actuated strainers
50	11 30 00 2.03. A. 7. b.	33	Containerized membrane system control system	The control panel shall be capable of communicating with the main Water Treatment Plant's GE/Emerson PLC system through a suitable protocol converter. All process data, alarms, operator controls, and process setpoints shall be made available to be read and written by either the Alder Creek Main PLC or the Alder Creek SCADA system.	Cost Adder	If the owner wants to develop communication between the Master PLC of the MF equipment to the Alder Creek Main PLC or the Alder Creek SCADA system, what kind of the Alder Creek SCADA is running must be discussed. This work would be cost adder and separate scope of must be developed to identify what is necessary to develop	It is expected that Alder Creek WTP Scada system/PLC should be able to provide permissives to start/stop the membrane system depending on raw water conditions, flows, etc and also provide the plant scada/PLC with conditions/feedback of the	No specification change

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						communications between the Master PLC of the MF equipment to the Alder Creek Main PLC or the Alder Creek SCADA system. Aria Filtra would like to clarify that the requirement doesn't fall into "Standard Equipment" offering.	membrane system (i.e. any alarms, flow, filtrate turbidity).	
51	11 30 00 2.03. A. 7. e.	33	Containerized membrane system control system	A 19" Allen Bradley Advantech Panel PC with Factory Talk View ME color touchscreen graphical operator interface shall be provided in the PLC panel for viewing system status and entering operator selected functions and operating variables	Clarification	Aria Filtra's standard offering of industrial PC manufacturer in containerized MF system is B&R Automation. Please include the B&R manufacturer for industrial PC in the specifications.	Accepted	B&R also listed as acceptable, but with 19" touchscreen graphical operator interface, please let us know if the interface is an issue.
52	11 30 00 2.03. A. 8. a.3) a)	34	Automated Butterfly Valves	Body: 316 stainless steel	Clarification	Approved Bray 31 valves do not carry 316 stainless body. Please allow cast iron body on Bray 31 valves. Please change the specification accordingly	Accepted	cast iron added to materials of construction list for body
53	11 30 00 2.03. A. 8. a.3) f)	34	Automated Butterfly Valves	Compressed Air - Teflon - PTFE	Clarification	Air valves have EPDM seats on Bray 31 valves. Please change the specification accordingly	accepted	EPDM added to acceptable compressed air seats and seals material
54	11 30 00 2.03. A. 8. a.4)	35	Automated Butterfly Valves	Throttling or rate of flow control valves may be of the butterfly type. The Seller shall submit calculations to verify that valve cavitation does not occur over the operating range of the valve.	Clarification	Aria Filtra would like to clarify that MF containerized sizing and design have been developed on the good engineering practices, pump sizing by historical hydraulic loss value of comparable piping. Please accept a full wet FAT testing demonstrated much of this in lieu of calculations, and modify specifications accordingly.	Accepted	FAT testing demonstration acceptable and added to spec section
55	11 30 00 2.03. A. 8. c.3) c)	37	Type 3 Butterfly Valves	Bray Series 22/23	Clarification	Bray series 31 valves are used for this application in the Aria Filtra's standardized containerized MF	Accepted	Series 31 valves added to acceptable list

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						equipment. Please include them in the specifications.		
56	11 30 00 2.03. A. 9. a. 2).	42	Valve Actuators	Pneumatic actuators shall be capable of producing a minimum of 1.5 times the required operating torque.	Clarification	Aria Filtra containerized MF equipment design offers Bray series 92/93 actuators. Bray series 92/93 actuators may not offer 1.5x torque. Please remove this specification.	Bray performed calculations on their series 31 valves and 92/93 series actuators and this is not an issue.	No specification change made
57	11 30 00 2.03. A. 9. a. 7).	42	Valve Actuators	Acceptable Manufacturers	Clarification	Aria Filtra containerized MF equipment design offers Bray series 92/93 actuators. Please specify the Bray 02/93 series in the manufacturer's list.	Accepted	Bray series 92/93 added to acceptable manufacturers list.
58	11 30 00 2.03. A. 11.	44	Neutralization system	Neutralization system	Clarification	Additional neutralization skid are not required for the Aria Filtra's standardized containerized MF equipment offering in this proposal. Neutralization is performed on membrane skid equipment itself. Please remove this specification.	Additional neutralization skids are required if trailer mounted units are bid instead of the C60s, along with offerings from other manufacturers. Having the system be onboard the treatment containers is acceptable per 2.03.A.11.b	No specification change made
59	00 52 00 5.03. A.	3	DAYS TO ACHIEVE SUBMITTAL OF SHOP DRAWINGS AND SAMPLES	All Shop Drawings and Samples required by the Contract Documents will be submitted to the Buyer for Engineer's review and approval in accordance with the following schedule.	Clarification	Seismic Calculations on the Container and external Tanks to be submitted at a later date on what is mentioned for first and second submittals due to longer lead times and may result in some minor changes to the schedule of submittals for seismic calculations.	Acknowledged, submittal of seismic calcs can be delayed if needed.	No Specification change made.
60	00 52 00 5.03. A.	3	DAYS TO ACHIEVE SUBMITTAL OF SHOP DRAWINGS AND SAMPLES	Second Shop Drawing Submittal : 75 days	Clarification	Please change the specifications to allow for second shop drawing submittal to 90 days instead of 75 days due to longer engineering	Accepted	second shop drawing submittal has been changed to 90 days per request in 5.03.A.

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						hours required in meeting the second submittal requirements.		Approval of submittal has been changed to 135 days.
61	00 52 00 5.04. A.	0	DAYS TO ACHIEVE DELIVERY OF GOODS	The Goods are to be complete and ready for the Buyer's receipt of delivery at the Facility in accordance with the following schedule	Clarification	Long lead items will be needed for purchasing (specifically for main and auxillary containers) by Aria Filtra prior to Release to Manufacture to meet the Requested Schedule. In such case, Aria Filtra would like to obtain approval from Buyer prior to making such purchase, and it is in prior to the Release to Manufacture. In addition, please change the delivery of goods lead time to 340 days after the notice to fabrication due to longer lead times.	Accepted	delivery of goods updated ot 340 days and a long lead items, with prior approval, has been added as 5.04.A.3.
62	01 01 00 1.1. A.2.d.	1	Project background	The raw water will be coagulated with polyaluminum chloride (PACL) or aluminum chlorohydrate (ACH), dosed with sodium hydroxide for pH control, and sodium hypochlorite added for oxidation, and will pass through a static mixer.	Clarification	Please clarify in the specifications if the control of the pretreatment is under the Aria Filtra's scope of supply.	This is not in the Seller's scope of supply to control pretreatment. Coagulant dosing will be controlled by the Alder Creek WTP SCADA system and master control panel, not by Seller's master control panel.	No specification change made
63	01 01 00 1.2. A. 4. a. 1)	4	Project responsibilities	The Seller shall provide the Engineer with design assistance and review of the General Arrangement and detail drawings for the interconnecting piping between membrane units and between the membrane filtration system and support facilities (i.e., raw water supply, Clearwell, backwash waste pipeline, cleaning systems, air systems, etc.).	Clarification	Please clarify if Aria Filtra would be doing the design of interconnecting piping or just assisting and reviewing the interconnecting drawings. Aria filtra would like to taken an exception if the interconnecting piping design due to lack of engineering resources to meet the requirments.	Seller's responsibility would just be for review of the interconnecting piping	"design" removed from specification section
64	01 09 10	1	Reference Standard	General	Clarification	The reference standards list is not applicable as this section do not specify to which each standard in this section that the containerized equipment must be adhere to. If	01 09 10 is just a list of reference standards. Specific equipment that must meet	No specification changes made

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						Aria Filtra Containerized equipment must meet all the reference standards we would like to taken exception to some standards in this section.	standards is listed throughout 11 33 00.	
65	01 34 00 1.07.	7	PROFESSIONAL ENGINEER (P.E.) CERTIFICATION FORM	If specifically required in other related Sections, submit a P.E. Certification for each item required, in the form attached to this Section, completely filled in and stamped.	Clarification	It is Aria Filtra's understanding and clarification that the PE certification form only applicable to seismic calculations that are required on the containerized equipment and external tanks. PE Certification Form is not applicable to the engineering design on the membrane equipment and auxiliary equipment which includes mechanical, control and electrical equipment.	That is correct	No specification changes made
66	01 34 00	Table A and B	FIRST SHOP DRAWING SUBMITTALS	0	Clarification	Aria Filtra would like to have following changes to the shop drawings submittal list to the fist and second submittal due to longer enginnering hours in meeting the requirment on the Aria Filtra's standardized containerized MF equipment: First submittal (45 days after acknowledgement) 1.M embrane System and Warranty 2.S ystem P&ID 3.G A Drawings 4.E lectrical one-line drawing 5.V alve, Instrument and Equipment lists Second Submittal (90 days after order acknowledgment) 1.C atalog cut sheets for all tagged equipment 2.S pare Parts List 3.T ank Drawings 4.S FD 5.C ontrol Panel Drawings	Accepted	Tables updated to reflect these submittals

39250 Pioneer Blvd
Sandy, OR 97055
503-668-5533

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						Please modify the specifications accordingly.		
67	01 67 00 3.01. H.	3	ACCEPTANCE TESTING	After the Acceptance Testing is completed, the Engineer and Buyer will meet with the Seller to determine compliance with the Contract Documents. At that time, if it is determined that the Seller has fulfilled the requirements of the Contract Documents, the Seller will be released from its on-site obligation unless otherwise retained.	Clarification	Please clarify on the acceptance criteria. Please clarify on what concludes the completion acceptance testing. Aria Filtra understands that 30 consecutive days with one or more Unit(s) per train of units operate at the design flow to produce the targeted water quality in 11 30 00 2.01.C.i. Aria Filtra confirms the completion of acceptance testing after submitting a report with in 30 days of completion of acceptance tetsing. Please change the specifications accordingly.	Acceptance criteria is as listed in 01 67 00 3.01.H and that the system meets all specifications/design requirements in 11 33 00.	No specification change made.
68	01 74 00 1.02 B. 1. b.	1	Seller's Quality Assurance/Quality Control (QA/QC) Procedures	The membrane module normalized specific flux (permeability, gfd/psi at 20°C).	Clarification	Aria Filtra would like to clarify that permeability data per module is not available for UNA 620A modules. General specification sheets can be provided but not for individual serialized documentation. Please remove the specification.	This specification is not intended to require specific flux for each individual serialized module, just for the product line.	No specification change made.
69	01 74 00 1.02. 1. c. & d.	1	Seller's Quality Assurance/Quality Control (QA/QC) Procedures	c. A certification by the membrane module supplier that: 1) Each membrane module has passed the Seller's QA/QC (integrity) tests. d. Certification of wet testing for each membrane module conducted at the Seller's facilities. Seller shall certify that each membrane module has passed the QA/QC tests for membrane element integrity. Acceptable QA/QC tests include bubble point or pressure hold tests above the minimum value recommended by the Seller and approved by the Engineer.	Clarification	Aria Filtra offers Quality Control Release Value (QCRV). The QCRV is a pressure hold test as opposed to a pressure decay test. It is for 29 psi for 1 minute (1 minute as opposed to 5) with no visible bubbles. Aria Filtra offers a pass/fail value indication for every module with serial number. Please change the specifications accordingly.	the QCRV test would fall under the Sellers QC/QC tests and be acceptable.	No specification change made.
70	01 74 00 1.04. A. 1. b.	3	Membrane Warranty	Provide a listing of chemical constituents, concentrations and exposure times that would result in voiding the membrane warranty.	Clarification	This can be provided based on the chemicals that are intended to use in the water plant. Please change	Specification is intended for Seller to provide chemicals that would be an issue.	No specification change made.

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						the specifications to reflect list of chemicals used in the water treatment such that the contacts and exposure time will be based on the chemicals used in the plant operation.	Chemicals intended for use are sodium hypochlorite, sodium hydroxide, coagulant (polyaluminum chloride or ACH), a dechlorination chemical (calcium thiosulfate or sodium bisulfite) and citric acid.	
71	01 74 00 1.04. A. 1. c.	3	Membrane Warranty	For each of the above chemical constituents, identify the instrumentation required and alarm limits necessary to satisfy the warranty provisions of this section.	Clarification	The instruments required and alarm limits can be established if the list of chemicals that will used in the water plant operation. Please provide the list.	Chemicals intended for use are sodium hypochlorite, sodium hydroxide, coagulant (polyaluminum chloride or ACH), a dechlorination chemical (calcium thiosulfate or sodium bisulfite) and citric acid.	No specification change made
72	01 74 00 1.04. A. 2. b.	3	MF membrane modules	Include standard performance parameters. 1) Operating temperature. 2) pH and oxidant tolerance (continuous and intermittent). 3) Range of membrane flux. 4) Clean water normalized specific flux (permeability or resistivity). 5) Minimum bubble point or maximum pressure decay test parameters	Clarification	Flux range and clean water normalized specific flux values are not available for UNA 620A modules. Flux will be determined based on the design and permeability data, which be should be captured onsite during commissioning. Aria Filtra would like to clarify that permeability data per module is not available for UNA 620A modules. Please remove this specification.	The requirement is not meant to require the seller to submit specific flux and permeability data for each individual module. Rather submit the range of membrane flux for the general module, and the values used in the individual site specific design.	No specification change made.
73	01 74 00 1.04. B. 1. b.	3	Factory Test Reports	Seller shall provide the membrane specification sheets that specify each membrane module's normalized specific flux (gfd/psi at 20°C), nominal pore size, and the nominal inside and outside surface area of the filter module.	Clarification	Aria Filtra would like to clarify that specific flux/permeability data per module is not available for UNA 620A modules. Please remove the requirement.	See response above for item 72	No specification change made
74	01 74 00 1.06. I. 3. a.	9	Membrane Integrity Failure	a. Membrane modules shall be considered to have non-conforming integrity failure if the number of Membrane Integrity Failure Occurrences per membrane unit exceeds three (3) occurrences in a three (3) month period or six (6) occurrences in a 12 month period.	Clarification	There are number of things that can cause an IT failure (leaking valves, o-rings, fiber drying, water quality variations, and debris) that are not	Understood, a failure is seeng as a failing test that is resolved by membrane fiber pinning.	The following language has been added to 1.06.I.3.a "A failing membrane integrity test shall be considered a

39250 Pioneer Blvd
Sandy, OR 97055
503-668-5533

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
				1. Seller will define the number of fiber breaks per Unit that constitutes Membrane Integrity Failure Occurrence for their particular membrane module.		related to module integrity. Aria Filtra would like to clarify that water quality variations (other than that are provided in specifications), and debris will not be scope in this work for non-confirming integrity failure. Malfunctioning valves, o-rings and, fiber drying must be excluded in the specifications for the non-confirming integrity failure. Please change the specifications accordingly.		membrane integrity failure occurrence if the problem is resolved by pinning of a membrane fiber".
75	01 74 00 1.06. I. 3. c. 1. a)	10	Prior to Acceptance Testing	If for a single membrane module, more than 0.05 percent of the fibers have required repair (e.g., by pinning or gluing) in any 12 consecutive months.	Clarification	Aria Filtra would request to increase the module percentage 0.25% for 12 months for UNA620-A based on water quality and system design . Please modify the specifications accordingly.	0.25% is acceptable	0.05% has been changed to 0.25% in the specification
76	01 74 00 1.06. I. 3. c. 3. d)	11	Anytime	If more than 0.2 percent of the fibers have required repairs over the life of the membrane module. An individual membrane fiber shall be defined as requiring repair if it visually leaks during an air pressure integrity test at the integrity test pressure.	Clarification	Aria Filtra would request to increase the fibers percent to 0.5% over the life of the membrane due to system design and water quality. Please change the specifications accordingly.	0.5% is acceptable	0.2% has been changed to 0.5% in the specification
77	01 74 00 1.06. J. 1. b. 2)	12	Irreversible Flux Loss	If the permeability is not at least 95 percent of the bid permeability, the modules will be considered to have non-conforming irreversible flux loss.	Clarification	Baseline permeability is required to compare the permeability test with. Baseline permeability should be recorded following a CIP performed after at least 30 days of initial operation at the design capacity. Baseline permeability must be within the first 5 minutes of resuming the filtration following a CIP. In addition, permeability values are to be recorded at the same flow rates as baseline. Aria filtra requires permeability of	Accepted	specification language has been modified

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						at least 92.5% of the base permeability rather at least 95 percent of the bid permeability, to have non-conforming irreversible flux loss on the modules. Please change the specifications to reflect "95% of the baseline permeability established following a CIP performed after at least 30 days of initial operation at the design capacity".		
78	01 74 00 4.01	13	Membrane Cleaning (Includes CIP/MC Processes)	Hydrogen Peroxide 200 mg/L maximum	Clarification	Aria Filtra would like to clarify that hydrogen peroxide is not used in CIP cleaning process of the Aria Filtra's standardized MF design. Please remove the specification.	Confirmed. Hydrogen Peroxide not used for cleaning process.	Removed from specification.
79	01 74 00 4.01	13	Membrane Cleaning (Includes CIP/MC Processes)	NaOH: 40 g/L maximum	Clarification	Aria Filtra require 2%w/v NaOH in the CIP cleaning process of the Aria Filtra's standardized MF design. Please include the caustic concentration requirement.	Caustic concentrations changed in 4.01	Concentrations updated to 20 g/L
80	01 74 00 4.01	13	Membrane Cleaning (Includes CIP/MC Processes)	Citric Acid: 300 g/L maximum	Clarification	Aria Filtra require 3%w/v citric acid in the CIP cleaning process of the Aria Filtra's standardized MF design. Please include the citric acid concentration requirement.	Citric acid concentrations changed in 4.01	Concentrations updated to 300 g/L
81	01 74 00 4.01	14	Membrane storage	Short Term Storage: If not in use, flush daily with up to 100 mg/L of free available chlorine. Long Term Storage: First perform a Clean in Place, store wet, completely filled with 50-mg/L sodium hypochlorite solution.	Clarification	Aria Filtra establishes the short term, mid range, and long term storage requirements based on the site specific conditions. The O&M manual that is provided after the plant commissioning covers long term and short term storage chemical concentrations and procedures specific to that site. Please change the specifications to	Agreed, Seller shall dictate storage requirements.	Storage requirements deleted and replaced with "according to Sellers requirements."

39250 Pioneer Blvd
Sandy, OR 97055
503-668-5533

No.	Specification Reference		Comment Category	Specification Statement of Concern	Disposition	Comments	Stantec Response	Specification Modified
	Section	Page						
						meet the Aria Filtra offering.		