CITY OF PFLUGERVILLE STANDARD CAPITAL IMPROVEMENT PROJECT (CIP) PROCUREMENT AGREEMENT BETWEEN CITY AND SUPPLIER

THIS AGREEMENT is entered into by and between City of Pflugerville, Texas (CITY) and DuPont/Memcor (SUPPLIER). CITY and SUPPLIER, in consideration of the mutual covenants, obligations and responsibilities herein established, agree as follows:

SECTION I. Generally.

Terms. Terms used in this Agreement, unless the context clearly indicates otherwise, will have the meanings indicated in the General Conditions attached hereto.

Work. SUPPLIER shall complete all Work as defined in the General Conditions, and as specified or indicated in the other Contract Documents. The Work is generally referred to as City of Pflugerville Water Treatment Plant Expansion – Membrane Filtration System Pre-Procurement regardless of whether the Work may only be a part of the Project, with the Work being generally described as follows:

Major items of the Work includes:

- Phase 1 – Design Technical Assistance as outlined in the Membrane Filtration System Procurement Package
- Phase 2 – Pilot Plant Construction and Pilot Testing as outlined in the Membrane Filtration System Procurement Package

The Project. The Project, for which the Work under the Contract Documents may be the whole or only a part of, is generally described under Article I above.

Design Consultant. The Design Consultant for the Project is:

Ardurra Group, Inc.
Yue Sun
ysun@ardurra.com
713-208-9463
3115 Allen Parkway, Suite #300
Houston, TX 77019

who is referred to as such in the Contract Documents for the purposes stated therein. The CITY shall provide written notice to the SUPPLIER if any information regarding this designation should change during the course of this Agreement.

SECTION II. Contract Times/Liquidated Damages.

Time of the Essence. All time limits for Milestones, if any, Substantial Completion, and Final Completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

Milestones, Substantial Completion and Final Completion. The Work will be Substantially Completed within See Attachment A days after the date when the Contract Times commence to run as provided in **Section 2.3** of the General Conditions, and Finally Completed and ready for final payment in accordance with **Section**

10.2 of the General Conditions within See Attachment A days after the date when the Contract Times commence to run.

Liquidated Damages. SUPPLIER and CITY recognize that time is of the essence of this Agreement and that CITY will suffer financial loss if the Work is not completed within the times specified in **Section II** herein above, plus any extensions thereof allowed in accordance with the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by CITY if the Work is not completed on time. Accordingly, instead of requiring any such proof, CITY and SUPPLIER agree that as liquidated damages for delay, but expressly acknowledged herein as not being a penalty, **SUPPLIER shall pay CITY $500.00 for each day that expires after the time specified in Section II herein for Substantial Completion until the Work is Substantially Complete**. After Substantial Completion, if SUPPLIER shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by CITY for Final Completion, **SUPPLIER shall pay CITY $500.00for each day that expires after the time specified in Section II herein for Final Completion and readiness for final payment until the Work is completed and ready for final payment**.

SECTION III. Contract Sum.

CITY shall pay SUPPLIER for completion of the Work in accordance with the Contract Documents an amount equal to the sum of the following, as applicable:

(1) For Phase 1 – Design Technical Assistance, a Lump Sum of:

Three hundred fifty-one thousand six hundred dollars ($351,600.00).

The Lump Sum above includes submittals listed in **Attachment B Payment Terms**.

(2) For Phase 2 – Pilot Plant Construction, a Lump Sum of:

Two hundred eighty-three thousand five hundred dollars ($283,500.00).

The Lump Sum above includes cost to lease the membrane pilot unit for five (5) months, pretreatment unit lease and miscellaneous pilot facility construction, and one month of extended membrane pilot unit lease. See **Attachment B Payment Terms**.

SUPPLIER acknowledges that estimated quantities are not guaranteed and that the determination of actual quantities will be made in accordance with **Article 10** of the General Conditions.

SECTION IV. Payments.

Submittal and Processing of Payments. SUPPLIER shall submit Applications for Payment in accordance with **Article 10** of the General Conditions. CITY shall make progress payments on account of the Contract Sum on the basis of SUPPLIER's Applications for Payment in accordance with **Article 10** of the General Conditions. Prior to Final Completion, progress payments will be made in an amount equal to authorized amount, less the applicable retainage percentage indicated within **Attachment B Payment Terms.**

SECTION V. Representations.

Representations. In order to induce CITY to enter into this Agreement SUPPLIER makes the following representations in addition to those otherwise provided in the Contract Documents:

(1) SUPPLIER has comprehensively evaluated the Contract Documents and the other information identified in the Bidding Documents and has visited the Project Site and is satisfied as to the Site conditions that may affect completion of the Work.

(2) SUPPLIER has further carefully evaluated all: (a) information regarding subsurface conditions at or contiguous to the Site and all drawings relating to existing surface or subsurface structures at or contiguous to the Site that have been identified in the Contract Documents, if any; and (b) information regarding a Hazardous Environmental Condition, if any, at the Site as identified in Contract Documents.

(3) SUPPLIER has obtained and carefully evaluated all additional or supplementary information concerning surface and subsurface conditions at or contiguous to the Site that may affect SUPPLIER'S completion of the Work for the stated Contract Sum within the stated Contract Time. Accordingly, based on said evaluations, SUPPLIER hereby acknowledges and confirms that no additional information is necessary for the performance of the Work at the Contract Sum, within the Contract Times, and in accordance with the conditions of the Contract Documents.

(4) Finally, SUPPLIER has provided written notice of all discrepancies that SUPPLIER has discovered in the Contract Documents to the City or Design Consultant, and hereby acknowledges that all such discrepancies have been resolved sufficiently by the Design Consultant

SECTION VI. Additional Terms.

Controlling Law/Venue. This Agreement shall be governed by the laws of the State of Texas without regard to its conflicts of laws. Venue for any dispute resolution or legal proceedings lies exclusively in the Courts of Travis County, Texas.

Waiver. The failure of either Party hereto to enforce any provision of this Agreement does not constitute a waiver of that provision, affect the enforceability of that provision, or the enforceability of the remainder of this Agreement.

Third Party Beneficiaries. Nothing in this Agreement is intended to by the Parties hereto or shall be construed to create rights in any person or entity other than the Parties hereto.

Execution. This Agreement may be executed in one or more counterparts and may be exchanged by facsimile or other electronic means. It is stipulated and agreed that any counterpart containing a signature or facsimile signature of the authorized representatives of the respective Party will be deemed an original for all purposes.

Authorization. SUPPLIER represents that SUPPLIER has the power and authority to execute and enter into this Agreement. The execution and delivery of this Agreement and the performance of the Work hereunder has been duly authorized by all necessary corporate action, if applicable. Upon execution, this Agreement will constitute the binding and valid obligations of SUPPLIER and shall be enforceable in accordance with its terms. SUPPLIER further represents that it is in good standing in and qualified to do business in the State of Texas.

CITY Ordinance Compliance and Certification. SUPPLIER represents that SUPPLIER has fully read and understood the terms and conditions for eligibility to contract with the CITY pursuant to Chapter 38 of the

CITY'S Code of Ordinances and by entering into this Agreement certifies that SUPPLIER is qualified to contract with the CITY compliance with all applicable requirements.

Texas Government Code Compliance. SUPPLIER acknowledges that the CITY may not enter into an Agreement with a company for goods and services unless the Agreement contains a written verification from the company that; (i) it does not Boycott Israel; and (ii) will not Boycott Israel during the term of the contract. (Texas Government Code, Chapter 2270). SUPPLIER, by entering into this Agreement, hereby verifies and certifies that it does not Boycott Israel and agrees that during the term of this Agreement will not Boycott Israel as that term is defined in the Texas Government Code Section 808.001, as amended.

Certificate of Interested Parties (TEC Form 1295). SUPPLIER acknowledges that for contracts needing CITY Council approval, the CITY may not accept or enter into a contract until it has received from the SUPPLIER a completed, signed, and notarized TEC Form 1295 complete with a certificate number assigned by the Texas Ethics Commission ("TEC"), pursuant to Texas Government Code § 2252.908 and the rules promulgated thereunder by the TEC. SUPPLIER understands that failure to provide said form complete with a certificate number assigned by the TEC may prohibit the City from entering into this Agreement. Pursuant to the rules prescribed by the TEC, the TEC Form 1295 must be completed online through the TEC's website, assigned a certificate number, printed, signed and notarized, and provided to the CITY. The TEC Form 1295 may accompany the bid or may be submitted separately but must be provided to the CITY prior to the award of this Agreement. Neither the City nor its Design Consultant have the ability to verify the information included in a TEC Form 1295, and neither have an obligation nor undertake responsibility for advising SUPPLIER with respect to the proper completion of the TEC Form 1295.

Assignment of Contract. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound in accordance with the General Conditions.

Successors and Assigns. CITY and SUPPLIER each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

Severability. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon CITY and SUPPLIER, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

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In consideration for the mutual obligations, representations, terms and conditions herein recited, CITY and SUPPLIER have agreed to and signed this Agreement to be effective on _____, (Effective Date).

CITY OF PFUGERVILLE, TEXAS:

By: _____

Sereniah Breland, City Manager

Attest _____
Trista Evans, City Secretary

Address for giving notices:

_____

Pflugerville, Texas 78660

CITY'S Designated Representative:

Name: Raul Morales

Title: Project Manager

Address: _____

_____

Phone/Fax: _____

Email: _____

SUPPLIER:

FilmTec Corporation

By: DocuSigned by: Hara Prasad Nanda
A4C52A2A4EA9416...

Name/Title Hara Prasad Nanda, President and CEO

Attest DocuSigned by: Loriann.Lea-Sharpe@dupont.com
42E2CD421B194C6...

By: Loriann Lea Sharpe, Secretary
Name/Title

Address for giving notices:

455 Forest Street

Marlborough, MA 01752

SUPPLIER'S Designated Representative:

Name: Will Wittich

Title: Technical Sales Manager

Address: 455 Forest Street

Marlborough, MA 01752

Phone/Fax: Tel.: 719-330-5578

Email: william.wittich@dupont.com

Attachment A CONTRACT TIME

Work Task	Time to Complete Task	Comments
Phase 1 Design Technical Assistance		
Submission of Initial Submittal	4 weeks from Commencement of Contract Time and Receipt of Purchase Order from the City.[1]	Primary Shop Drawings Include: • P&IDs • Membrane Cassette/Rack Assembly Drawings • Electrical One Line Diagram • Network Diagram/System Interconnection Details Drawings • Footprint dimensions of all ancillary equipment provided by the MFSS.
Submission of Primary Shop Drawings (Table 1 Section 01300) and Additional Drawings	10 to 12 weeks from Commencement of Contract Time and Receipt of Purchase Order from the City.[1]	Additional Shop Drawings shall include, but are not limited to: • CIP/MC/Neutralization System Drawings • Component Equipment Drawings • Electrical panel drawings • Instrument List and Supporting Vendor Information • Valve List and Supporting Vendor Information • O&M Manual Including Module Storage Procedure • Installation Data
Submission of Secondary Shop Drawings (Table 2 Section 01300)	14 to 16 weeks from Commencement of Contract Time and Receipt of Purchase Order from the City.[1]	
Phase 2 – Pilot Plant Construction and Pilot Testing		
Conduct Pilot Testing	42 days from Commencement of Contract Time and Receipt of Purchase Order	
Submission of Pilot Data Summary Report	Within 30 days after completion of pilot testing .	

1. The MFSS is required to provide an updated submittal schedule which lists each submittal to be included in the Initial Shop Drawing, Primary Shop Drawing and Secondary Shop Drawing tasks including the anticipated date of submission. Shop drawing submitted together as one package is not encouraged due to impacts on the project schedule.

Attachment B PAYMENT TERMS

Work Task	Time to Complete Task	Comments	Payment Terms
Phase 1 Design Technical Assistance			**$351,600.00**
Submission of Initial Submittal	4 weeks from Commencement of Contract Time and Receipt of Purchase Order from the City.[1]	Primary Shop Drawings Include: • P&IDs • Membrane Cassette/Rack Assembly Drawings • Electrical One Line Diagram • Network Diagram/System Interconnection Details Drawings • Footprint dimensions of all ancillary equipment provided by the MFSS.	15% of Phase 1 Service, lump sum not to exceed $52,740.00
Submission of Primary Shop Drawings (Table 1 Section 01300) and Additional Drawings	10 to 12 weeks from Commencement of Contract Time and Receipt of Purchase Order from the City.[1]	Additional Shop Drawings shall include, but are not limited to: • CIP/MC/Neutralization System Drawings • Component Equipment Drawings • Electrical panel drawings • Instrument List and Supporting Vendor Information • Valve List and Supporting Vendor Information • O&M Manual Including Module Storage Procedure • Installation Data	50% of Phase 1 Service, lump sum not to exceed $175,800.00
Submission of Secondary Shop Drawings (Table 2 Section 01300)	14 to 16 weeks from Commencement of Contract Time and Receipt of Purchase Order from the City.[1]		35% of Phase 1 Service, lump sum not to exceed $123,060.00
Phase 2 – Pilot Plant Construction and Pilot Testing			**$283,500.00**
Conduct Pilot Testing	42 days from Commencement of Contract Time and Receipt of Purchase Order		1. 5% on mobilization; 2. 5% retainage payable at final completion; 3) monthly payment based on percent completion of work from submitted schedule of values
Submission of Pilot Data Summary Report	Within 30 days after completion of pilot testing .		

1. The MFSS is required to provide an updated submittal schedule which lists each submittal to be included in the Initial Shop Drawing, Primary Shop Drawing and Secondary Shop Drawing tasks including the anticipated date of submission. Shop drawing submitted together as one package is not encouraged due to impacts on the project schedule.

SECTION 01010
SUMMARY OF WORK

PART 1 GENERAL

1.01 SCOPE OF WORK

A. The Work specified under this Procurement Agreement ("Agreement") is to be furnished by the selected Membrane Filtration System Supplier (MFSS) to the General Contractor (Contractor) for the City of Pflugerville Water Treatment Plant (WTP) Expansion project, located in Travis County Texas and shall include:

1. Phase 1: Design Technical Assistance - is to be provided by the MFSS to assist Ardurra Group, Inc. (Engineer) to finalize the design of the selected submerged Membrane Filtration System (MFS). This Technical Assistance consists of designing Equipment to be provided by the MFSS, providing 3D models of all Equipment for incorporation into Engineer's design prior to the 90 percent design submittal, submittal of Shop Drawings and samples, general arrangement of membrane units, installation manuals, and project coordination with Engineer during the design phase, including participation in progress design meetings.

ANY WORK RELATED TO PHASE 3, PHASE 4, AND PHASE 5 SERVICES WILL BE UNDER A SEPARATE CONTACT TO BE AWARDED AT A LATER DATE AND IS NOT INCLUDED IN THIS AGREEMENT

2. Phase 2: Pilot Plant Construction and Pilot Testing – consists of supply, delivery, installation, startup, operational assistance, decommissioning and removal of a pilot facility that simulates the full-scale treatment process and consists of coagulation, flocculation, and plate settles pretreatment followed by membrane to treat Lake Pflugerville water. The MFSS is to provide pre-treatment and membrane pilot units and other ancillary equipment, piping and valving, field instruments and devices, and electrical components for a fully functional pilot system. A detailed description of MFSS's scope of work during this phase is provided in Appendix C.

3. Phase 3: Equipment Fabrication, Delivery and Installation Oversight - consists of furnishing the Equipment required for the Pflugerville WTP membrane filtration system set forth in this Agreement. The Equipment also consists of furnishing manufacturer- trained personnel for the oversight of the installation of the equipment when specifically required by the City.

4. Phase 4: Start-up, Commissioning, Testing, and Training – consists of training, operation and maintenance manuals, start-up, commissioning, demonstration testing and acceptance testing as specified or requested by Engineer.

5. Phase 5 On-call Assistance: The MFSS shall provide post-start-up, non-warranty Technical Assistance during the Overall Monitoring Testing as required by Owner.

B. The summary of Work described herein is an overall summary of the responsibilities of the MFSS and its relation to the Owner, Engineer, and Contractor.

C. Project Background

1. The City is expanding its current water treatment plant by retrofitting the existing membrane filtration building and basins with a new membrane filtration system which is to be procured by these Procurement Documents. The membrane filtration system will provide removal of suspended solids, turbidity and pathogens that may be present in the pre-treated feed water. The system will be implemented according to the schedule set forth in this Agreement, and the delivery process generally consists of (Phase 1) Design Technical Assistance by the MFSS, (Phase 2) Pilot Plant Construction and Pilot testing, (Phase 3) Equipment Fabrication, Delivery and Installation Oversight support as required by the Contractor for the membrane equipment, (Phase 4) Furnishing operation and maintenance manuals, completion of start-up, commissioning, demonstration testing, and training, and (Phase 5) on-call assistance throughout the 30-day Overall Monitoring Testing period as required by the Specifications.

2. The raw water source for the Pflugerville WTP is the surface water from Lake Pflugerville, fed from the Colorado River. Feed water to the membrane filtration basins will receive pretreatment consisting of coagulation with aluminum chlorohydrate (ACH); flocculation and sedimentation with high-rate plate settlers. Feed water to the MFS will be prescreened using automatically backwashing strainers (part of the MFSS equipment). Waste backwash water from the membrane units will be sent to the Backwash Waste Clarifier and recycled to the raw water pipeline for blending with the raw water. Historical raw water quality and the anticipated feed water quality developed during a plate settler pilot study conducted by the Owner's Advisor are shown in Appendix A. It is intended for the MFSS to use this water quality data to determine compatibility in the selection of materials of construction for all the equipment within the MFSS scope of supply.

3. The City assumes no responsibility for the interpretation of the information provided in this Section or Appendices of this Procurement Agreement. The MFSS shall acknowledge that the information is for general information purposes only and is being provided for MFSS's convenience. Requests for additional information may be submitted to the City in writing during the procurement process. The City will attempt to provide the information if it is readily available, but the receipt of a request for additional information in no way obligates the City to provide the requested information.

1.02 DIVISION OF WORK

A. The Work provided by the MFSS under Phase 1 of this Procurement Agreement shall include but is not limited to the following:

1. Assist with the development of the piloting program and finalization of the pilot design.

2. Detailed Design of the Equipment provided by the MFSS;

3. Submittal of Shop Drawings and samples for all Equipment to be provided, as required by the Specifications or requested by Engineer during the Phase 1 Task of this Agreement;

4. Submittal of general arrangement Shop Drawings of the low-pressure membrane filtration system and equipment. Shop Drawings shall show arrangement of MFSS furnished

equipment. The layout shall maintain acceptable clearances and working spaces as approved by the Engineer for operation and maintenance;

5. Submittal of electronic 3-Dimensional (3D) models of the membrane trains and equipment. The 3D models shall be provided as a file that needs to be a 3D solid .dwg file, an .stp file, or in Revit for incorporation into the 90 percent design submittal.

6. Submittal of shop drawings pertaining to the process instrumentation and control system, including Programmable Logic Controllers (PLCs), control panel drawings, I/O lists, PLC to PLC communication memory map, SCADA computer hardware and software, network equipment, and all other related submittals required by Division 13.

7. Submittal of all electrical loads and electrical connection points;

8. Participate in ten (10) virtual meetings up to 60 hours and assist the Engineer during the design. MFSS shall provide personnel for the necessary disciplines to be present at these meetings; for example, Control System Personnel may have a separate meeting in parallel with Process Mechanical Personnel. Participate in regular conference calls; MFSS shall perform two (2) site visits, at a minimum, to the project site to gather existing data and verify field condition for any design needs.

9. Network architecture for MFSS's control system; and

10. Provide Engineer with information and assistance in obtaining regulatory approval. The MFSS shall provide the Engineer the direct integrity test results for each process train and reports documenting that each process train has passed the integrity test and meets all EPA and TCEQ requirements. The MFSS shall assist the City and Engineer in generating the information that TCEQ needs for determining direct integrity test parameters, and log removal value (LRV) to receive credit for *Cryptosporidium* and *Giardia* per TCEQ requirements. The MFSS should provide 40 hours of consultation time to assist in this effort. The treated water shall not be discharged into the City's distribution system until it is approved by the TCEQ. Participate in up to four (4) virtual meetings with the TCEQ. Assist Engineer in responding to City and permitting authority agency review comments on plan review as it relates to the system being furnished herein.

B. The Work provided by the MFSS under Phase 2 of this Procurement Agreement is summarized here and includes but is not limited to the following:

1. A complete membrane filtration pilot unit.

2. The MFSS shall be responsible for supplying the ancillary pumps, tanks, pretreatment pilot, interconnection piping system, instrumentation, electrical connections and process control for the construction of a complete pilot treatment train to simulate the full-scale treatment process as proposed for the plant expansion. See Appendix C for details.

3. Delivery and installation of all pilot related equipment and ancillary facilities.

4. Commissioning of the pilot plant.

5. Training for the operation of the pilot plant to the Engineer and the City.

6. Assist with remote data collection and analysis.

7. Provide technical support with remote troubleshooting of the pilot plant operation as required during the pilot testing program. There shall be three (3) trips for a total of nine (9) days, excluding travel days, for troubleshooting after start-up and commissioning.

8. Collect data required to validate membrane design criteria, backwashing and chemical cleaning protocols, and process guarantees.

9. Prepare a written report at the conclusion of the pilot testing, summarizing the results of the pilot data collection.

10. Decommissioning and removal of all pilot related facilities and equipment.

C. The Work provided by the MFSS under Phase 3 of this Procurement Agreement is summarized here and includes but is not limited to the following:

1. Complete membrane filtration system and process trains as specified in Division 11 specifications, including:
   a. Automatic backwash strainers and strainer backwash pumps;
   b. Membrane filtration cassettes or racks;
   c. Membrane permeate pumps;
   d. Membrane integrity testing and monitoring system;
   e. Compressed air receivers;
   f. Air scour blowers;
   g. Backpulse water pumps;
   h. Waste backwash pumps;
   i. Clean-in-Place (CIP) system, including CIP tanks, heaters, CIP pumps, and chemical feed pumps.
   j. Neutralization system, including neutralization tank and pumps

2. Piping valves and fittings, as specified in Division 15;

3. Electrical control panels for the membrane equipment;

4. Process Logic Controllers for the membrane equipment;

5. Human Machine Interface for membrane equipment

6. Field mounted instrumentation as shown on PID including:
   a. Switches
   b. Gauges;
   c. Flow meters;
   d. Pressure transmitters;
   e. Turbidity meters;
   f. Level transmitters;
   g. Chlorine residual analyzers

h. pH/ORP Meters
i. Temperature Transmitters
j. Other analytical instrumentation

7. Design and programming of the process control system (PCS) for the membrane filtration system including but not limited to:
   a. Design and programming of operator interface screens.
   b. Coordination between Supplier and Contractor equipment interfaces;
   c. Coordination with SCADA HMI systems integrator during planning, installation and testing phases.
   d. Programming of PLC supplied with system; and
   e. Factory acceptance testing of PLC system.
   f. Attend coordination workshops with the system integrator and the Contractor to coordinate the desired membrane control system and system integration

8. Installation manuals for all equipment provided. Operational and maintenance manuals for all equipment provided;

9. Assist Contractor by responding to Requests for Information (RFI) and clarifications as needed.

10. Scheduling of equipment delivery;

11. Review of equipment installation;

12. Submittal of electronic maintenance information using format as specified herein;

D. The Work provided by the MFSS under Phase 4 of this Procurement Agreement is summarized here and includes but is not limited to the following:

1. Commissioning of the Equipment.

2. Calibration of MFSS's supplied instrumentation. With respect to turbidimeters, these shall be provided with sufficient volume of calibration standards to service the manufacturer's recommended calibration frequency until the end of the Demonstration Testing Period;

3. Equipment and Technical Assistance for commissioning and Demonstration Testing Period of the membrane systems;

4. Training and supervision of Contractor for the installation of the Equipment;

5. Formal operator training; and

6. Warranties and bonds.

7. Participation in bi-weekly conference calls and monthly meetings and assist Contractor during the construction, commissioning and acceptance testing of the Equipment, according to the requirements of this Procurement Agreement, including all appendices

E. The Work provided by the MFSS under Phase 5 of this Procurement Agreement is summarized here and includes but is not limited to the following:

1. On call technical assistance over the 30-day Overall Monitoring Testing period of the membrane systems.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

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APPENDIX C
MEMBRANE PILOT FACILITY SCOPE OF SUPPLY

PART 1 GENERAL

1.01 SCOPE OF SUPPLY

A. City Scope of Supply:

1. The City will notify the MFSS of acceptance of its equipment for use in the pilot program at least four (4) weeks before the expected equipment delivery date.

2. The City will allow the Membrane Filtration Building to be used as a shelter for the pilot equipment. The temperature in the building must be maintained above freezing and at less than 104°F.

3. The City will provide a forklift and qualified operator for unloading the equipment from the shipping truck and the proper placement of the pilot equipment. The equipment crates, if provided, should remain on site for the purpose of shipping the equipment back to the MFSS and should not be disposed of.

4. The City will supply an electrical power supply of the correct voltage and amperage rating required for the pilot and associated equipment as shown in Figure E-1.

5. The City is responsible to receive waste and effluent streams and dispose of these streams in compliance with local regulations.

6. The City is responsible to obtain any necessary permits, including but not limited to, those required for discharging water to receiving body (including chemicals), building permits, electrical permits, etc.

7. The Engineer/City shall provide pilot operators for the daily operation and maintenance of the pilot equipment.

8. The City shall provide any on-site safety training required for the MFSS field service representative or project manager.

9. The Engineer will set and monitor any required chemical doses during the pilot test period. This includes refilling chemical dosing tanks on an as needed basis.

10. The Engineer/City will work with the MFSS to troubleshoot and resolve issues that may arise within a reasonable timeframe.

11. The Engineer/City will be responsible for collection, shipment and laboratory analysis of all water samples required for the pilot study and any associated costs.

12. The Engineer/City shall communicate any analytical data received to the MFSS as soon as possible and no later than one week from its receipt.

13. The City will provide any required process chemicals for the duration of the pilot study, including, but not limited to coagulant and neutralizing chemicals such as sodium bisulfite and caustic. The MFSS shall determine the quantity of chemicals related to the membrane pilot unit to be used for the duration of the pilot testing

14. The City will provide any required membrane cleaning chemicals including sodium hypochlorite, citric acid, and an appropriate mineral acid. The MFSS shall determine the quantity of chemicals related to the membrane pilot unit to be used for the duration of the pilot testing.

15. The City will be responsible for the proper disposal of any unused chemicals at the completion of the pilot study.

16. The Engineer/City will take extra caution during the pilot operation to avoid any damage to the pilot equipment. Ordinary wear and tear shall mean only the normal deterioration caused by reasonable and proper use of the equipment. The equipment or its reusable shipping crate shall be returned without damaged or without parts missing.

17. The Engineer/City will be responsible for assisting the MFSS with the pilot equipment decommissioning procedure. It is expected that the pilot equipment be returned to the MFSS in the same condition as it arrived, excepting normal equipment wear and tear (as defined by the MFSS).

18. The City will provide a forklift and qualified operator for loading the system on to the shipping truck at the completion of the pilot study for return to the MFSS.

19. The Engineer/City shall retain control of all raw data collected through sampling, remote data collection or otherwise.

B. MFSS/Contractor Scope of Supply:

1. The MFSS will be responsible for the installation and construction of all aspects of the pilot plant including, but not limited to, the pretreatment pilot unit, all interconnecting piping, and all components.

2. The MFSS will supply one standard membrane pilot unit for the pilot testing.

3. The MFSS will coordinate and be responsible for the cost of shipment of all pilot and ancillary equipment to and from the site.

4. The MFSS will be responsible for connecting the pilot systems to the electrical power supply provided by the City.

5. The MFSS will provided at least five (5) days of on-site support for the pilot system installation, commissioning and operator training. Such site support will commence within five (5) working days from confirmation that the pilot plant has been fully constructed.

6. The MFSS will provide three (3) trips to the site, for a total of nine days on site (not including travel days), outside of the provided commissioning and decommissioning trips.

7. The MFSS representative shall be on site for each monthly Clean-in-Place event.

8. The MFSS will provide a cellular modem to facilitate a remote connection to the pilot equipment.

9. The MFSS will be responsible for supplying the ancillary pumps/tanks, pretreatment pilot, interconnection piping system for the construction of a complete pilot treatment process train to simulate the full-scale treatment process as proposed for the plant expansion. See Figure M-1 for the proposed equipment process flow diagram and equipment.

10. The MFSS will provide in-house technical support via telephone and e-mail during the testing pilot period to ensure the completion of a successful pilot study.

11. The MFSS will submit to the City a summary of the pilot testing data on a regular basis. The MFSS will also coordinate weekly conference calls with the City/Engineer during the pilot study.

12. The MFSS shall provide all data necessary to meet the requirements spelled out by the TCEQ's Public Drinking Water Program Staff Guidance in the Review of Pilot Study Reports for Membrane Filtration (30 TAC 290.30 and 30 TAC 290.42(g)), including, but not limited to, all process flows, feed filtrate and transmembrane pressure, temperatures during filtration and cleaning, details of the pilot scale and proposed full scale direct integrity test necessary to calculate log removal values and all backwash and chemical cleaning cycle sequences and setpoints.

13. The MFSS will be responsible for providing replacement parts, which fail under normal operation.

14. The MFSS will provide on-site assistance for decommissioning the pilot equipment at the conclusion of the pilot study.

15. The MFSS will provide a report summarizing the pilot study results within thirty (30) days after the pilot study is complete.

16. The MFSS will be responsible for the cost of labor and other expenses associated with the installation of any replacement parts, provided special tools and labor are not required.

END OF SECTION

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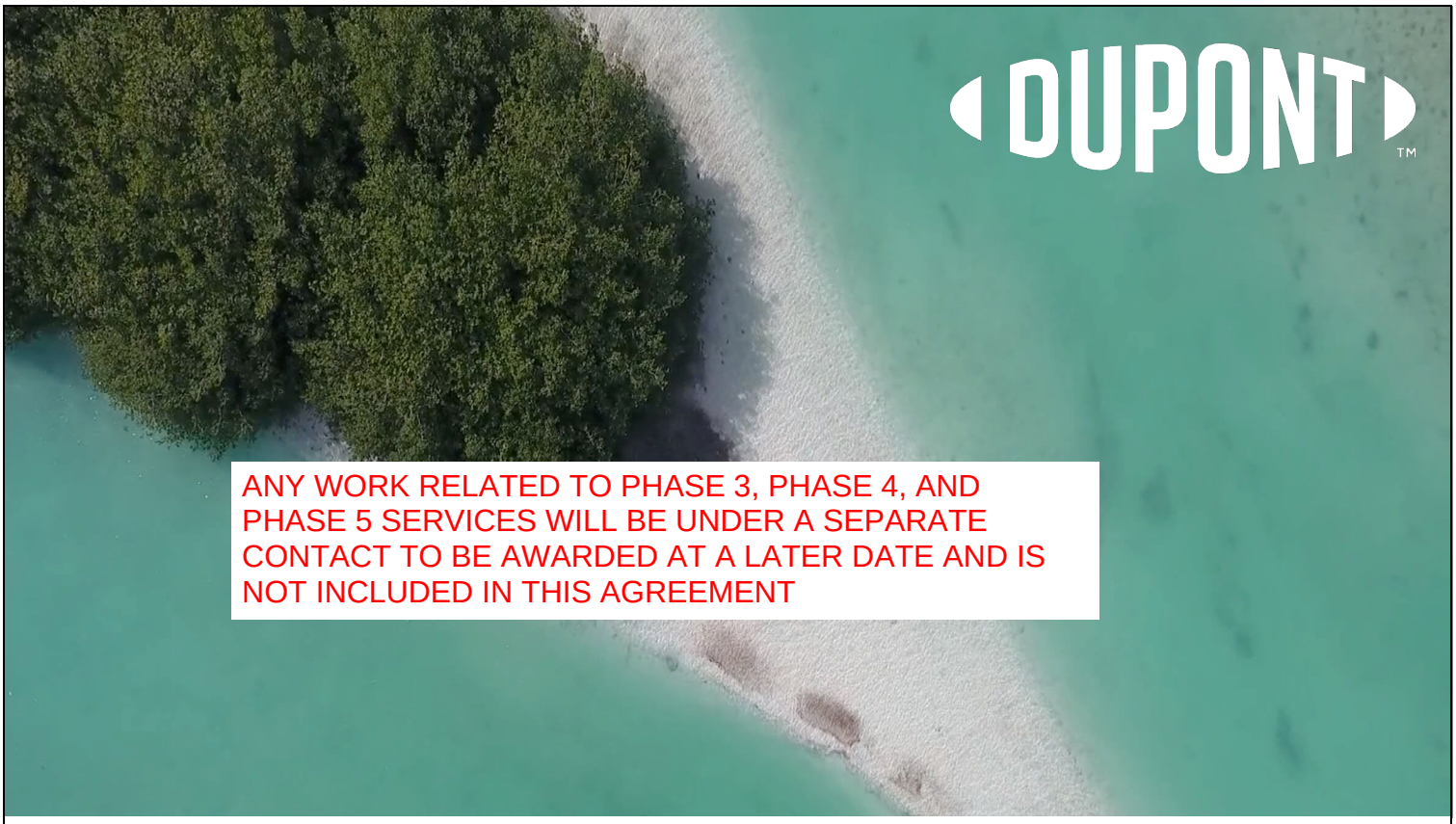


MEMCOR® CSII MEMBRANE FILTRATION SYSTEM

CITY OF PFLUGERVILLE WATER TREATMENT PLANT EXPANSION

MEMBRANE FILTRATION SYSTEM PROCUREMENT

Proposal Number A-211203

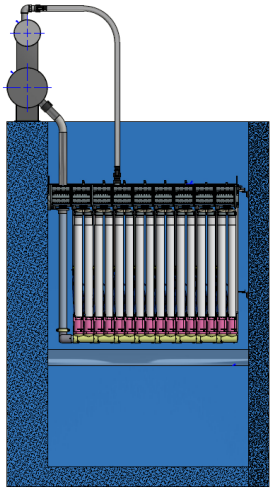
December 3rd, 2021

Honorable Victor Gonzales, Mayor
City of Pflugerville
100 E Main Street #500
Pflugerville, TX 78660
projects@pflugervilletx.gov

EXECUTIVE SUMMARY

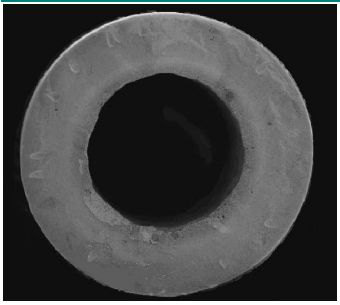
Honorable Mayor Victor Gonzales, City of Pflugerville Staff and Ardurra Engineering:

DuPont/MEMCOR and our local representative, Newman Regency Group, would like to thank the City of Pflugerville and Ardurra Engineering, for the opportunity to participate in this important project to expand the City of Pflugerville WTP to 30 MGD. MEMCOR was one the first hollow-fiber membrane manufactures of ultrafiltration (UF) products on the market dating back to 1984. We were also the first to commercially apply membranes to the municipal drinking water market. Since then we have been dedicated to make MEMCOR products adaptable to the evolving needs of our customers in the water industry. MEMCOR began retrofitting conventional filtration systems in 2005 with submerged membranes. Since then we have retrofitted multiple plants and continue to bring a vast amount of experience in retrofits of existing water filtration systems.



DuPont understands the challenges that come with retrofit projects and recognizes it will require a collaborative effort between Ardurra, the City of Pflugerville, and MEMCOR to overcome obstacles that may arise when working within an operating plant. DuPont would like to highlight our compliance to the detailed specifications and initial design provided as the basis of our proposal, with attention to many of the complex requirements of the project. Additionally, to help with ease of installation, DuPont has proposed our MEMCOR CSII system that can be easily installed without any modification to the existing basins. This slight design modification from our previous proposal demonstrates the flexibility available with the MEMCOR CSII system, maximizes utilization of existing space, and significantly reduces installation time and cost. Detailed drawings can be found in **Appendix B: Membrane System Drawings**.

The N Fiber and L20N Module:

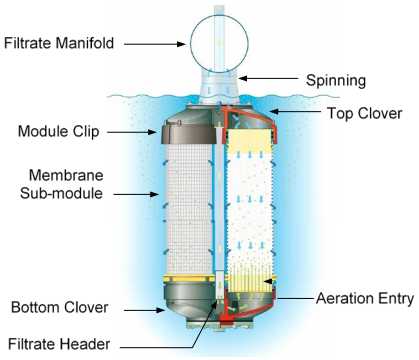


At the heart of the ultrafiltration technology is the 'N' membrane fiber. The N fiber is manufactured from robust and chlorine-resistant PVDF polymer, with specific improvements to the membrane morphology to impart a more consistent, break-resistant fiber. MEMCOR has also improved the potting formulation of the N module to provide more consistent performance under a variety of operating conditions. The L20N module operates in an outside-in flow path, providing better treatability of high-solids feeds or any upsets in pretreatment equipment. Additionally, the L20N fibers are arranged vertically compared to horizontally. This gives a more effective removal of solids during a backwash and doesn't put any stress on the fiber/potting interface.

MEMCOR has provided a design to use our latest generation of the L20N module, approved by TCEQ, which will further reduce the number of modules required to meet the 30.51 MGD requirement and allow room for future expansion.

Vertical Orientation of Membrane Fibers

- More efficient backwash aeration
- No impingement of aeration through the module
- No impediment to backwash solids draining from the cell
- No need to aerate during cell drain down
- No additional strain on fiber/potting interface
- Results: Better backwashing and solids removal



The CSII System:

The MEMCOR CSII system is a submerged ultrafiltration system technology that offers affordable treatment to municipalities. The MEMCOR CS II submerged membrane technology provides an economical solution to large capacity treatment systems with reduced plant footprint, chemicals, and power consumption.

The new MEMCOR CSII Ultrafiltration System features innovative double-ended filtration that allows lowest cost of ownership in the industry. This latest submerged ultrafiltration system delivers a 20 percent reduction in backwash aeration energy. This proven module design enables customers to either reduce footprint by up to 30 percent or utilize that new space and increase capacity up to 30 percent.

The MEMCOR CSII System consists of multiple MemRACKs® module rack header assemblies of the required length for the Cells in a plant. The module racks are then fitted with L20N ultrafiltration modules in groups of four (referred to as a clover) prior to installation of the rack into a membrane cell.

CSII plants are engineered and built to project specific requirements and can be installed in existing infrastructure. A complete system consists of membrane cells, piping manifolds, filtrate pumps, controls and instrumentation for a fully automated submerged ultrafiltration system.

Service and On-going Support:

DuPont has a long history designing, commissioning and supporting plants in Texas and throughout the United States. We continually stand behind our customers to ensure a successful operation and continued performance. Our service team is personally dedicated to supporting the plant during startup and after the plant is commissioned. Our local partner Newman Regency Group will be a local point of contact for general support, while MEMCOR factory trained technicians and process engineers will support membrane specific issues. We have included Texas plants in addition to the requested references and encourage you to contact them to get a first-hand account of MEMCORs continual customer care in **Section 9: Plant References.**

Additionally, to ensure the City of Pflugerville the highest level of support, MEMCOR ***has included two years of semi-annual services visits at no additional cost***. The first year of operation is a critical period where operators are adapting to the new technology and an ongoing relationship with the technology supplier is critical. Further details are shown in **Section 13.2: Manufacturer's Engineering Support and Services.** The City will always have access to following customer service:

- Service through the 1-800-MEMCOR4 hotline is available 24 hours a day, 7 days a week, at no additional cost for the life of the plant.
- MEMCOR Aftermarket Customer Care Representative, Joe Marzullo, has been with MEMCOR for over 25 years and resides in Colorado Springs, CO. This will be a primary point of contact to ensure the highest level of service for your plant for years to come.

Again, we would like to thank the City of Pflugerville and Ardurra Engineering for the opportunity to participate in this project. We are eager to share our retrofit experience and provide the City of Pflugerville and the support and knowledge of MEMCOR's dedicated team of membrane scientists, engineers, and technicians who stand behind every installation. Should you have any questions regarding this proposal or would like to request any additional information please don't hesitate to contact us. We look forward to the opportunity to discuss our proposal with the City of Pflugerville in person on December 16th, 2021.

DuPont Sales Manager:

William Wittich

Technical Sales Manager, MEMCOR
Telephone: 719-330-5578
william.wittich@dupont.com

Local Representative:

Newman Regency Group
Telephone: 214-957-8320
mcuin@newmanregency.com

Table of Contents

1 City of Pflugerville Proposal and Bid Schedule

The completed Proposal and Bid Schedule, provided in the pages below, consists of the following subsections:

- Proposal and Bid Schedule
- Officer's Certificate – Evidence of Authority to Sign
- Attachment A – Contract Time
- Attachment B - Design Criteria
- Attachment C - Startup Chemicals
- Attachment D – Proposal
- Signed Addenda Pages

CITY OF PFLUGERVILLE PROPOSAL AND BID SCHEDULE

Proposal of FilmTec Corporation (hereinafter called "Bidder"), doing business as a corporation / ~~a partnership / an individual~~ (strike out inapplicable terms), to the CITY OF PFLUGERVILLE (hereinafter called "Owner").

City of Pflugerville:

The Bidder, in compliance with your invitation for bids for the Procurement of Membrane Filtration System for the Pflugerville Water Treatment Plant Expansion, having examined the Plans and Specifications and related documents, the site of the proposed Work, and being familiar with all of the conditions surrounding the construction of the proposed project, including materials and supplies, and to construct the project in accordance with the Plans, Specifications and Contract Documents, within the time set forth therein, and in performing the Work required under the Contract Documents, of which this proposal is part.

Bidder hereby agrees to commence work under this Contract per schedule as defined in **Attachment A**. Bidder further agrees to pay as liquidated damages the sum set forth in the City of Pflugerville Standard Capital Improvement Project (CIP) Construction Agreement between City and Bidder for each consecutive calendar day thereafter.

Bidder acknowledges receipt of the following ADDENDA:

Addendum No. 1 dated November 9, 2021	Received November 9, 2021
Addendum No. 2 dated November 16, 2021	Received November 16, 2021
Addendum No. 3 dated November 19, 2021	Received November 19, 2021
Addendum No. 4 dated November 24, 2021	Received November 24, 2021
Addendum No. 5 dated December 1, 2021	Received December 1, 2021
Addendum No. 6 dated _____	Received _____

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Bidder hereby acknowledges and agrees that the description of Work to be done at unit prices is intended principally to serve as a guide in evaluating bids and is not intended to fully describe all Work required.

Bidder further agrees that the Work to be done and material to be furnished at unit prices may be increased or diminished as may be considered necessary in the opinion of the Design Consultant and approved by the Owner to complete the Work fully as planned and contemplated, and that estimated quantities may be increased to cover additional work ordered by the Design Consultant and approved by the Owner, but not shown on the Plans or required by the Specifications, in accordance with the provisions of the General Conditions. Similarly, they may be decreased to cover deletion of the work so ordered.

Bidder hereby represents that the foregoing prices shall include all labor, materials, removal, overhead, profit, insurance, and any other costs from whatever source derived necessary to cover the finished work called for to complete the project. Changes shall be processed in accordance with applicable provisions of the General Conditions.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding, and also reserves all other rights afforded under applicable law whether stated in the Owner's proposal or not.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of sixty (60) calendar days after the scheduled closing and opening time for receiving bids.

Upon receipt of written Notice of Award of contract based on this bid, Bidder will execute the formal contract attached and deliver performance and payment bonds as required by the Contract Documents within ten (10) days.

The bid security attached in the sum of $445,500.00 (five percent (5%) of the bid amount) shall become the property of the Owner in the event the contract and performance and payment bonds are not executed and delivered within the time above set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

Bidder represents that the following Architects, Engineers, Consultants, Sub-Consultants, job-site superintendents, Subcontractors and suppliers, as applicable, shall be involved in Project construction.

(Attach additional sheet if necessary)

Respectfully submitted:

Bidder: FilmTec Corporation
(typed or printed name of organization)

Signature: DocuSigned by: Hara Prasad Nanda A4C62A2A4EA0419...
(individual's signature)

Name: Hara Prasad Nanda
(typed or printed)

Title: President & CEO
(typed or printed)

Date: December 2, 2021
(typed or printed)

Business Address:
5400 Dewey Hill Road
Edina, MN 55439

Email: william.wittich@dupont.com
Phone: 719-330-5578 (Will Wittich, Technical Sales Mgr)

(Attach evidence of authority to sign if Bidder is a corporation, partnership, or a joint venture.)

(Seal – if bid by a corporation)

DUPONT

FILMTEC CORPORATION

OFFICER'S CERTIFICATE

I, Loriann Lea Sharpe, Secretary of FilmTec Corporation, a corporation incorporated in the state of Delaware (the "Company"), do hereby certify on behalf of the Company that Hara Prasad Nanda is the President and CEO of the Company, and that in such capacity, Hara Prasad Nanda has full power and authority to execute and deliver the Company's bid and all related ancillary agreements in connection with the supply of the Ultrafiltration System to the City of Pflugerville, Texas.

IN WITNESS WHEREOF, the undersigned has executed this certificate on the 3rd day of December 2021.

FILMTEC CORPORATION CORPORATE SEAL 2018 DELAWARE

Loriann Lea Sharpe
Secretary

ATTACHMENT A CONTRACT TIME

All time limits for Milestones, if any, including the submittal of Shop Drawings and Samples, the delivery of Goods, and the furnishing of Special Services as stated in the Contract Documents, are of the essence of the Contract.

The following defines the milestones to be met with regard to the Contract Time. The time shown below is based upon calendar days.

Work Task	Time to Complete Task	Comments
Phase 1 Design Technical Assistance		
Submission of Initial Submittal	28 days from Commencement of Contract Time and Receipt of Purchase Order from the City.	Primary Shop Drawings Include: • P&IDs • Membrane Cassette/Rack Assembly Drawings • Electrical One Line Diagram • Network Diagram/System Interconnection Details Drawings • Footprint dimensions of all ancillary equipment provided by the MFSS.
Submission of Primary Shop Drawings (Table 1 Section 01300) and Additional Drawings	58 days from Commencement of Contract Time and Receipt of Purchase Order from the City.	Additional Shop Drawings shall include, but are not limited to: • CIP/MC/Neutralization System Drawings • Component Equipment Drawings • Electrical panel drawings • Instrument List and Supporting Vendor Information • Valve List and Supporting Vendor Information • O&M Manual Including Module Storage Procedure • Installation Data
Submission of Secondary Shop Drawings (Table 2 Section 01300)	75 days from Commencement of Contract Time and Receipt of Purchase Order from the City.	
Phase 2 – Pilot Plant Construction and Pilot Testing		
Conduct Pilot Testing	42 days from Commencement of Contract Time and Receipt of Purchase Order	
Submission of Pilot Data Summary Report	Within 30 days after completion of pilot testing .	

Phase 3 - Equipment Fabrication, Delivery and Installation Oversight		
Complete Manufacturing and Shipment of entire membrane system	180 days from approval of Shop Drawings	Provide a complete set of shop drawings reflecting any changes made to the system during the manufacturing process.
Phase 4 - Start-up, Commissioning, Testing, and Training		
Field startup, testing and training services.	30 days from date of issuing "Notice of Completed Installation" for each membrane train by the OWNER.	

Shipment of the membrane system shall be coordinated with WTP expansion overall construction schedule. Notice to Proceed from the City is expected on or around January 18, 2022. Delivery of equipment to the site shall be within 300 days of receipt of purchase order from the City. Construction of the WTP Expansion is expected to be completed in February 2024.

DuPont Note: Please see attached section 8. Pilot Availability and Delivering to Schedule for statement on proposed delivery schedule.

ATTACHMENT B DESIGN CRITERIA

MFSS shall provide required information by filling in all blanks designated as "MFSS Specified" in the Table below.

Submitted Proposal shall comply with all OWNER specified and MFSS specified design criteria listed in the Table. Submitted proposed system and operational parameters shall meet all requirements of USEPA and Texas Commission on Environmental Quality (TCEQ).

MFSS shall note that performance information provided in the table must be guaranteed over the warranty period and will serve as the baseline against which future system performance will be compared to determine whether system is non-performing. See Section 01740 for warranty information.

MFSS shall submit with the bid an explanation of the methodology used to calculate the proposed net flux rates specified in the Table below. The methodology shall include a description of all key assumptions made and example calculations.

	Description	Amount	Designation
1	Total System Design Capacity (net filtered water @ 20°C)	30.51 MGD of net capacity	OWNER Specified
2	Minimum Membrane CIP Chemical Cleaning Interval under Design Conditions	30 days	OWNER Specified
3	Number of parallel membrane filtration treatment trains.	5 trains	OWNER Specified
4	Maximum net flux rate under Design Conditions, (gfd). Flux rates and operational parameters shall meet all requirements of the TCEQ.	33	OWNER Specified (subject to refinement during Pilot Testing)
5	Maximum instantaneous flux rate under Design Conditions, (gfd).	41	OWNER Specified (subject to refinement during Pilot Testing)
6	Minimum net membrane capacity of each Train under Design Conditions, (MGD).	= 7.627 MGD each online @ 20°C water temperature	OWNER Specified
7	Net hydraulic capacity of piping, pumps, and appurtenances for each Train, (MGD).	= 7.627 MGD net hydraulic capacity divided by the number of parallel membrane filtration treatment trains provided minus one train.	OWNER Specified
8	Minimum water recovery rate	95%	OWNER Specified
9	Supplied and installed membrane surface area per Train, (sf).	266,364 sf	MFSS Specified

	Description	Amount	Designation
10	Number of membrane modules supplied and installed per Train.	588	MFSS Specified
11	Total number of membrane modules supplied and installed in all Trains.	2940	MFSS Specified
12	Total number of membrane modules that each Train can accommodate.	960	MFSS Specified
13	Number of membrane fibers per membrane module.	9,926	MFSS Specified
14	Membrane Surface area of each proposed membrane module, (sf).	453 sf	MFSS Specified
17	Total membrane surface area supplied and installed in all Trains, (sf)	1,331,820 sf	MFSS Specified
18	Total number of spare slots to be provided in each to accommodate the installation of additional membrane modules.	1860	MFSS Specified
19	Maximum operating transmembrane pressure under Design Conditions	12.3 psi	MFSS Specified
20	Average transmembrane pressure under Design Conditions	4 psi	MFSS Specified
21	Estimated volume of filtrate water used for each backwash procedure, (gallons)	2,590 gallons	MFSS Specified
22	Estimated volume of wastewater generated during each backwash procedure, (gallons)	10,896 gallons	MFSS Specified
23	Estimated volume of filtrate water used per maintenance clean/maintenance wash procedure including rinse water (gallons)	11,636 gallons	MFSS Specified
24	Estimated volume of wastewater generated during each maintenance clean/maintenance wash procedure including rinse water, (gallons)	25,595 gallons	MFSS Specified

	Description	Amount	Designation
25	Proposed frequency of maintenance clean/maintenance wash procedure under Design Conditions using sodium hypochlorite, (days)	3.5 days	MFSS Specified
26	Recommended sodium hypochlorite dose used during maintenance clean/maintenance wash, (mg/L)	200 mg/L	MFSS Specified
27	Estimated quantity of 12.5% sodium hypochlorite used during each maintenance clean/maintenance wash procedure, (gallons)	11.2 gallons	MFSS Specified
28	Proposed frequency of maintenance clean/maintenance wash procedure under Design Conditions using acid, (days)	3.5 days	MFSS Specified
29	Recommended citric acid dose used during maintenance clean/maintenance wash, (mg/L)	0 mg/L	MFSS Specified
30	Estimated quantity of 50% citric acid used during each maintenance clean/maintenance wash procedure, (gallons)	0 gallons	MFSS Specified
31	Recommended hydrochloric acid dose used during maintenance clean/maintenance wash, (mg/L)	0 mg/L	MFSS Specified
32	Estimated quantity of 33% hydrochloric acid used during each maintenance clean/maintenance wash procedure, (gallons)	0 gallons	MFSS Specified
33	Recommended sulfuric acid dose used during maintenance clean/maintenance wash, (mg/L)	600 mg/L	MFSS Specified
34	Estimated quantity of 50% sulfuric acid used during each maintenance clean/maintenance wash procedure, (gallons)	7.2 gallons	MFSS Specified
35	Proposed frequency of membrane Clean-In-Place procedure under Design Conditions using sodium hypochlorite, (days).	30 days	MFSS Specified
36	Recommended sodium hypochlorite dose used during Clean-In-Place, (mg/L)	500 mg/L	MFSS Specified
37	Estimated quantity of 12.5% sodium hypochlorite used during each chlorine Clean-In-Place, (gallons)	28.1 gallons	MFSS Specified

	Description	Amount	Designation
38	Proposed frequency of membrane Clean-In-Place procedure under Design Conditions using acid. (days)	30 days	MFSS Specified
39	Recommended citric acid dose used during Clean-In- Place, (mg/L)	2,500 mg/L	MFSS Specified
40	Estimated quantity of 50% citric acid used for each acid Clean-In-Place, (gallons)	34.2 gallons	MFSS Specified
41	Recommended hydrochloric acid dose used during Clean-In- Place, (mg/L)	0 mg/L	MFSS Specified
42	Estimated quantity of 33% hydrochloric acid used for each acid Clean-In-Place, (gallons)	0 gallons	MFSS Specified
43	Recommended sulfuric acid dose used during Clean-In-Place, (mg/L)	600 mg/L	MFSS Specified
44	Estimated quantity of 50% sulfuric acid used for each acid Clean-In-Place, (gallons)	7.2 gallons	MFSS Specified
45	Estimated volume of wastewater generated during each sodium hypochlorite and acid Clean-In-Place including rinse water, (gallons)	56,368 gallons	MFSS Specified
46	Estimated quantity of 38% sodium bisulfite used to neutralize each sodium hypochlorite maintenance clean/maintenance wash waste solution, (gallons)	4.6 gallons	MFSS Specified
47	Estimated quantity of 50% sodium hydroxide used to neutralize each acid maintenance clean/maintenance wash waste solution, (gallons)	5.4 gallons	MFSS Specified
48	Estimated quantity of 38% sodium bisulfite used to neutralize each sodium hypochlorite Clean-In-Place waste solution, (gallons)	11.5 gallons	MFSS Specified
49	Estimated quantity of 50% sodium hydroxide used to neutralize acid Clean-In-Place waste solution, (gallons)	28.1 gallons	MFSS Specified

ATTACHMENT C START-UP CHEMICALS

MFSS shall provide required information by filling in all blanks designated as "MFSS Specified" in the Table below.

Submitted Proposal shall comply with all OWNER specified and MFSS specified design criteria listed in the Table. Submitted proposed system and operational parameters shall meet all requirements of USEPA and Texas Commission on Environmental Quality (TCEQ).

	Description	Amount	Designation
1	Estimated quantity of 12.5% sodium hypochlorite required to complete commissioning and testing of the membrane filtration system as described in Division 1 and additional start-up processes recommended by the MFSS.	168.1	MFSS Specified
2	Estimated quantity of 50% sodium hydroxide required to complete commissioning and testing of the membrane filtration system as described in Division 1 and additional start-up processes recommended by the MFSS.	28.1	MFSS Specified
3	Estimated quantity of 50% citric acid required to complete commissioning and testing of the membrane filtration system as described in Division 1 and additional start-up processes recommended by the MFSS.	34.2	MFSS Specified
4	Estimated quantity of 38% sodium bisulfite required to complete commissioning and testing of the membrane filtration system as described in Division 1 and additional start-up processes recommended by the MFSS.	68.75	MFSS Specified
5	Estimated quantity of 50% sulfuric acid required to complete commissioning and testing of the membrane filtration system as described in Division 1 and additional start-up processes recommended by the MFSS.	7.2	MFSS Specified
6	Estimated quantity of 33% hydrochloric acid required to complete commissioning and testing of the membrane filtration system as described in Division 1 and additional start-up processes recommended by the MFSS.	0	MFSS Specified

ATTACHMENT D PROPOSAL

MFSS shall provide required information by filling in all blanks shown in the Proposal below. If the blanks provided in the proposal are not applicable to the MFSS's membrane system, please write, "not applicable" in the blank. Life-cycle costs will be developed based upon:

Base Bid of the Membrane Filtration System equipment (Item A).

Present worth value of membrane replacement cost, based on membrane replacement in 10 years using 6% interest rate and 3% inflation rate. (Item B)

5.1.3 Present worth value of operating and maintenance costs for 10 years using 6% interest rate and 3% inflation rate (Items C and E). Operating and maintenance costs will be estimated by the ENGINEER using information provided in the Proposals, with modifications, as deemed appropriate, by the judgment of the ENGINEER and the City.

Item A: 30.51-MGD Net Filtered Capacity Membrane Filtration System Goods and Special Services Contract Price

Indicate the Contract Price for Goods and Special Services to provide a membrane filtration system with 30.51-MGD of net filtered water capacity per the requirements of the Table in Attachment B and the technical specifications.

Eight Million Nine Hundred and Ten Thousand Dollars

amount in words

$ 8,910,000

amount in figures

Item B: Present-Worth Value of Membrane Replacement

Guaranteed Maximum Membrane Replacement Price = $ 800 per module.

The Present-worth value of membrane replacement cost is calculated as follows:

Guaranteed Maximum Membrane Module Replacement Price $ 800 per module X 2,940 modules (total number for all basins) X present worth factor of 0.744 = Present Worth Value.

One Million Seven Hundred and Forty-Nine Thousand Eight Hundred and Eighty-Eight Dollars

amount in words

$ 1,749,888

amount in figures

Item C: Present-Worth Value of Average Rate of Energy Consumption

Guaranteed average energy consumption for producing an average daily rate of 16.5 MGal (anticipated average plant flow) of net filtrate water at 20°C = 1,732.2 KW-Hr.

The Present-worth value of energy consumption cost for a 10-year period is calculated as follows: Guaranteed average energy consumption for producing an average daily rate of 16.5 MGal of net filtrate water at 20°C = 1,732.2 KW-Hr X $0.11 per KW-Hr (unit price provided by the City) X 365 days per year X a present worth factor of 8.53 = Present Worth Value.

Five Hundred and Ninety Three Thousand Two Hundred and Forty Three Dollars

amount in words

$ $593,243

amount in figures

Item D: Present-Worth Value of Averaged Rate of Chemical Costs

Present-worth value of the average rate of chemical costs for the Membrane Filtration System for membrane cleaning, chemically enhanced backwashes and maintenance washes, and neutralization of waste flows for producing 16.5 MGD of net filtrate water at 20°C calculated as follows:

1) Gallons of 12.5 percent concentration of sodium hypochlorite per year = 4,777 gal/yr X $ 1.25 /gal = $ 5,971 /yr

2) Gallons of 50 percent concentration of sodium hydroxide per year = 2,856 gal/yr X $ 2.95 /gal = $ 8,425 /yr

3) Gallons of 50 percent concentration of citric acid per year = 1,310 gal/yr X $ 5.00 /gal = $ 6,550 /yr

4) Gallons of 38 percent concentration of sodium bisulfite per year = 1,945 gal/yr X $ 2.85 /gal = $ 5,543 /yr

5) Gallons of 50 percent concentration of sulfuric acid per year = 2,656 gal/yr X $ 3.88 /gal = $ 10,305 /yr

6) Gallons of 33 percent concentration of hydrochloric acid per year = 0 gal/yr X $ 2.50 /gal = $ N/A /yr

7) Gallons of ___ percent concentration of N/A per year = _____ gal/yr X $_____ /gal = $ N/A /yr

DuPont Note:
1. Bid form values based on 16.5 MGD operations with three (3) membrane cells in service for both chemical and power consumption.

2. Bid form values note 12.5% Sodium Hypochlorite while Addendum 2 lists 0.8% Sodium Hypochlorite. Bid form completed based on 12.5% Sodium Hypochlorite usage. Additional details on 0.8% Sodium Hypochlorite consumption is listed in proposal Section 12.4 Operation and Maintenance Cost.

8) Gallons of ___ percent concentration of N/A per year = _____gal/yr X $_____ /gal = $N/A /yr

9) Sum of items 1) through 8) = $$36,795 /yr

Item 9) multiplied by 8.53 for the present-worth chemical cost of:

Three Hundred and Thirteen Thousand Eight Hundred and Sixty One Dollars

amount in words

$ 313,861

amount in figures

Item E: Total Present Worth Cost of Membrane Filtration System (Total of Items A, B, C and D).

Eleven Million Five Hundred and Sixty Six Thousand Nine Hundred and Ninety Two Dollars

amount in words

$ $11,566,992

amount in figures

Item F: Cost Adder – Extended Membrane Module Warranty

Indicate the additional cost to extend the full Membrane Module warranty from thirty-seven (37) through one hundred twenty (120) months. See Specification Section 01740.

One Million Eight Hundred and Twenty Thousand Dollars

amount in words

$ 1,820,000

amount in figures

Item G: Cost Adder – Drain Valves and Pneumatic Actuators

Indicate the cost to add five (5) 30-inch butterfly valves and five (5) pneumatic actuators for the membrane basin backwash drain line (one per train for five trains).

One Hundred and Forty Four Thousand Dollars

amount in words

$ 144,000

Item H: Membrane Pilot Unit Lease

Indicate the cost to lease the Membrane Pilot Unit for five (5) months.

Thirty Thousand Dollars

amount in words

$ 30,000

amount in figures

Item I: Cost Adder – Extended Membrane Pilot Unit Lease

Indicate the additional cost to extend the Membrane Pilot Unit lease on a month-to-month basis.

Three Thousand Five Hundred Dollars

amount in words

$ 3,500

amount in figures

Item J: Cost Adder – Membrane Pinning Station

Indicate the cost to provide the manufacturer's standard membrane fiber pinning station.

Ten Thousand Dollars

amount in words

$ 10,000

amount in figures

Item K: Pretreatment Pilot Unit Lease and Miscellaneous Pilot Facility Allowance

Allowance for furnishing a pretreatment pilot unit and required miscellaneous pilot facility components as shown in the Pilot Facility Design Documents for five (5) months, and installation complete in place to provide a fully operable pilot facility. The allowance is used for the plate settler pilot unit, all interconnecting piping, fittings, valves, tanks, pumps, field instruments, miscellaneous appurtenances and work as shown on the pilot process flow diagram and pilot plant layout, excluding the membrane pilot unit. This is an installed allowance.

two-hundred fifty thousand dollars
amount in words

$ 250,000
amount in figures

4

Item L: Cost Adder – New Warranty for Replacement Modules

Indicate the cost to provide a new warranty, equal to the original module warranty, to all modules supplied as a warranty replacement.

No Bid - Please see note below.
amount in words

$ N/A
amount in figures

DuPont Note: 1. DuPont would like to further understand the intent of this request and which warranty option the City will select. Alternatively DuPont could offer a minimum warranty on module replaced at the end of warranty. DuPont is willing to discuss further with the City of Pflugerville.

CITY OF PFLUGERVILLE
CAPITAL IMPROVEMENT PROGRAM DEPARTMENT

Water Treatment Plant Expansion
Membrane Filtration System Procurement Package

ADDENDUM NO. 1

November 9, 2021

This Addendum has been provided as clarification and/or updates of information related to the City of Pflugerville Water Treatment Plant Expansion Membrane Filtration System Procurement Package which shall take precedence over any contrary provisions in the prior documents.

Each Offeror shall acknowledge receipt of this Addendum by affixing their signature below, by noting this Addendum and including this Addendum Cover sheet with the submittal of the proposals in addition to acknowledging this Addendum in the Proposal and Bid Schedule.

Should you have any questions or need additional information, please submit questions by the deadline as noted in the Procurement Package and directed via email to projects@pflugervilletx.gov and copy ysun@ardurra.com.

APPROVED:

Patricia A. Davis, M.S.C.E., P.E., City Engineer
City of Pflugerville

ACKNOWLEDGMENT OF RECEIPT OF ADDENDUM:
Receipt of Response is hereby acknowledged and included in the submittal due December 3, 2021.

FilmTec Corporation
Respondent

Hara Prasad Nanda, President & CEO
Printed Name & Title of Authorized Representative

DocuSigned by:
Hara Prasad Nanda
A4C52A2A4EA9416...
Signature of Authorized Representative

December 2, 2021
Date

CITY OF PFLUGERVILLE
P.O. BOX 589
Pflugerville, TX 78691-0589

STREET ADDRESS
15500 Sun Light Near Way #B, Bldg 6
Pflugerville, TX 78660

TEL: 512.990.6400
FAX: 512.989.1052
www.pflugervilletx.gov

CITY OF PFLUGERVILLE
CAPITAL IMPROVEMENT PROGRAM DEPARTMENT

Water Treatment Plant Expansion
Membrane Filtration System Procurement Package

ADDENDUM NO. 2

November 16, 2021

This Addendum has been provided as clarification and/or updates of information related to the City of Pflugerville Water Treatment Plant Expansion Membrane Filtration System Procurement Package which shall take precedence over any contrary provisions in the prior documents.

Each Offeror shall acknowledge receipt of this Addendum by affixing their signature below, by noting this Addendum and including this Addendum Cover sheet with the submittal of the proposals in addition to acknowledging this Addendum in the Proposal and Bid Schedule.

Should you have any questions or need additional information, please submit questions by the deadline as noted in the Procurement Package and directed via email to projects@pflugervilletx.gov and copy ysun@ardurra.com.

APPROVED:

Yue Sun, P.E., BCEE
Project Director
Ardurra Group, Inc.

11/16/21

ACKNOWLEDGMENT OF RECEIPT OF ADDENDUM:
Receipt of Response is hereby acknowledged and included in the submittal due December 3, 2021.

FilmTec Corporation
Respondent

Hara Prasad Nanda, President & CEO
Printed Name & Title of Authorized Representative

DocuSigned by:
Hara Prasad Nanda
A4C52A2A4EA9416...
Signature of Authorized Representative

December 2, 2021
Date

CITY OF PFLUGERVILLE
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Pflugerville, TX 78691-0589

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www.pflugervilletx.gov

CITY OF PFLUGERVILLE
CAPITAL IMPROVEMENT PROGRAM DEPARTMENT

Water Treatment Plant Expansion
Membrane Filtration System Procurement Package

ADDENDUM NO. 3

November 19, 2021

This Addendum has been provided as clarification and/or updates of information related to the City of Pflugerville Water Treatment Plant Expansion Membrane Filtration System Procurement Package which shall take precedence over any contrary provisions in the prior documents.

Each Offeror shall acknowledge receipt of this Addendum by affixing their signature below, by noting this Addendum and including this Addendum Cover sheet with the submittal of the proposals in addition to acknowledging this Addendum in the Proposal and Bid Schedule.

Should you have any questions or need additional information, please submit questions by the deadline as noted in the Procurement Package and directed via email to projects@pflugervilletx.gov and copy ysun@ardurra.com.

APPROVED:

Yue Sun, P.E., BCEE
Project Director
Ardurra Group, Inc.

11/19/21

ACKNOWLEDGMENT OF RECEIPT OF ADDENDUM:
Receipt of Response is hereby acknowledged and included in the submittal due December 3, 2021.

FilmTec Corporation
Respondent

Hara Prasad Nanda, President and CEO
Printed Name & Title of Authorized Representative

DocuSigned by:
Hara Prasad NANDA
A4C52A2A4EA9416...
Signature of Authorized Representative

December 2, 2021
Date

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www.pflugervilletx.gov

CITY OF PFLUGERVILLE
CAPITAL IMPROVEMENT PROGRAM DEPARTMENT

Water Treatment Plant Expansion
Membrane Filtration System Procurement Package

ADDENDUM NO. 4

November 24, 2021

This Addendum has been provided as clarification and/or updates of information related to the City of Pflugerville Water Treatment Plant Expansion Membrane Filtration System Procurement Package which shall take precedence over any contrary provisions in the prior documents.

Each Offeror shall acknowledge receipt of this Addendum by affixing their signature below, by noting this Addendum and including this Addendum Cover sheet with the submittal of the proposals in addition to acknowledging this Addendum in the Proposal and Bid Schedule.

Should you have any questions or need additional information, please submit questions by the deadline as noted in the Procurement Package and directed via email to projects@pflugervilletx.gov and copy ysun@ardurra.com.

APPROVED:

Yue Sun, P.E., BCEE
Project Director
Ardurra Group, Inc.

11/24/21

ACKNOWLEDGMENT OF RECEIPT OF ADDENDUM:
Receipt of Response is hereby acknowledged and included in the submittal due December 3, 2021.

FilmTec Corporation
Respondent

Hara Prasad Nanda, President and CEO
Printed Name & Title of Authorized Representative

DocuSigned by:
Hara Prasad Nanda
A4C52A2A4EA9416...
Signature of Authorized Representative

December 2, 2021
Date

CITY OF PFLUGERVILLE
P.O. BOX 589
Pflugerville, TX 78691-0589

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www.pflugervilletx.gov

CITY OF PFLUGERVILLE
CAPITAL IMPROVEMENT PROGRAM DEPARTMENT

Water Treatment Plant Expansion
Membrane Filtration System Procurement Package

ADDENDUM NO. 5

December 1, 2021

This Addendum has been provided as clarification and/or updates of information related to the City of Pflugerville Water Treatment Plant Expansion Membrane Filtration System Procurement Package which shall take precedence over any contrary provisions in the prior documents.

Each Offeror shall acknowledge receipt of this Addendum by affixing their signature below, by noting this Addendum and including this Addendum Cover sheet with the submittal of the proposals in addition to acknowledging this Addendum in the Proposal and Bid Schedule.

Should you have any questions or need additional information, please submit questions by the deadline as noted in the Procurement Package and directed via email to projects@pflugervilletx.gov and copy ysun@ardurra.com.

APPROVED:

Yue Sun, P.E., BCEE
Project Director
Ardurra Group, Inc.

12/1/21

ACKNOWLEDGMENT OF RECEIPT OF ADDENDUM:
Receipt of Response is hereby acknowledged and included in the submittal due December 3, 2021.

FilmTec Corporation
Respondent

Hara Prasad Nanda, President and CEO
Printed Name & Title of Authorized Representative

DocuSigned by:
Hara Prasad NANDA
A4C52A2A4EA9416...
Signature of Authorized Representative

December 2, 2021
Date

CITY OF PFLUGERVILLE
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Pflugerville, TX 78691-0589

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www.pflugervilletx.gov

2 City of Pflugerville State of Texas Tax Code, Cht. 151 Compliance Certificate

The completed City of Pflugerville State of Texas Tax Code, Chapter 151 Compliance Certificate is provided below.

CITY OF PFLUGERVILLE STATE OF TEXAS TAX CODE, CHAPTER 151 COMPLIANCE CERTIFICATE

Contractor shall comply with all applicable sales, excise, and use tax requirements of the Texas Tax Code. The Contractor hereby certifies that the Contract Sum is divided as follows:

Tax exempt products, materials, and services (See Notes 1 and 2)	$	$9,190,000[1]
Taxable products, materials, and services (See Note 3)	$	
Total (See Note 4)	$	$9,190,000[1]

Contractor: FilmTec Corporation
(typed or printed name of organization)

Signature: DocuSigned by: Hara Prasad Nanda A4C52A2A4EA9416... *(individual's signature)*

Name: Hara Prasad Nanda
(typed or printed)

Title: President & CEO
(typed or printed

Business Address:

5400 Dewey Hill Road

Edina, MN 55439

Phone: 719-330-5578 Email: willliam.wittich@dupont.com (Will Wittich, Technical Sales Mgr)

Note:

1. Exempt products and materials are those items purchased for the Project which are physically incorporated into the Project constructed for the City or are necessary and essential for providing the Work and are completely consumed for the Project. For purposes of this definition, products and materials are completely consumed if after being used once for its intended purpose it is used up or destroyed. Products and materials rented or leased for use in providing the Work cannot be completely consumed for the purposes of this definition.
2. Exempt services are those services performed at the Project Site where the Contract expressly requires the specific service to be provided or purchased by the person performing the service and is integral to completing the Work.
3. Products, materials, and services are not tax exempt if they are used by the Contractor but are not physically incorporated into the City's Project or are not consumed by construction or installation as defined above. Machinery or equipment and its accessories and repair and replacement parts used in providing the Work are not exempt.
4. The total sum of the amount for tax exempt and taxable products, materials, and services must equal the Contract Sum.

END OF SECTION

DuPont Note: Total contract sum dependent on "Cost Adders" and Deducts offered in Section 16. of this proposal herein to be selected by the City of Pflugerville.

3 Compliance to Texas State Law Regarding Nonresident Bidders

The completed Compliance to Texas State Law Regarding Nonresident Bidders form is provided below.

CITY OF PFLUGERVILLE COMPLIANCE TO TEXAS STATE

LAW REGARDING NONRESIDENT BIDDERS

Texas Government Code Chapter 2252 applies to the award of government contract to nonresident bidders. This chapter provides that:

> "a government entity may not award a governmental contract to a nonresident bidder unless the nonresident underbids the lower bid submitted by a responsible resident bidder by an amount that is not less than the amount by which a resident bidder would be required to underbid the nonresident bidder to obtain a comparable contract in the state in which the nonresident's principal place of business is located."
>
> "Nonresident bidder" refers to a person who is not a resident of Texas.
>
> "Resident bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

Check the statement that is correct for Bidder:

☐ Bidder (includes parent company or majority owner) qualifies as a resident bidder whose principal place of business is in the state of Texas.

☒ Bidder qualifies as a nonresident bidder whose principal place of business or residency is in the state of: Principle Place of Business: Edina, MN
Incorporated in Delaware

Any determination of state bidder preference law is based on the Texas Comptroller's annual summary of other state bidder preference laws.

Bidder: FilmTec Corporation
(typed or printed name of organization)

Signature: DocuSigned by: Hara Prasad Nanda A4C52A2A4EA9416... *(individual's signature)*

Name: Hara Prasad Nanda
(typed or printed)

Title: President & CEO
(typed or printed

Business Address:

5400 Dewey Hill Road

Edina, MN 55439

Phone: 719-330-5578 Email: william.wittich@dupont.com (Will Wittich, Technical Sales Mgr)

(Attach evidence of authority to sign if Offeror is a corporation, partnership, or a joint venture.)

END OF SECTION

4 Conflict of Interest Questionnaire

The completed Conflict of Interest Questionnaire is provided below.

CONFLICT OF INTEREST QUESTIONNAIRE — FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176 of the Local Government Code by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

To the best of our knowledge, FilmTec Corporation has no business relationship with a local government entity.

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information is being disclosed.**

Not Applicable
Name of Officer

4 **Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No Not Applicable

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No Not Applicable

5 **Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.**

Not Applicable

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1)

7 Hara Prasad Nanda, President & CEO — DocuSigned by: Hara Prasad Nanda A4C52A2A4EA9416... — December 2, 2021

Signature of vendor doing business with the governmental entity — Date

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

(A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;

(B) a transaction conducted at a price and subject to terms available to the public; or

(C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

***

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds $2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than $100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

END OF SECTION

5 City of Pflugerville Non-Collusion Certificate

The completed Non-Collusion Certificate is provided below.

CITY OF PFLUGERVILLE NON-COLLUSION CERTIFICATION

STATE OF Texas
COUNTY
OF Travis

Contractor: **[Buyer]** FilmTec Corporation
[Street address] 5400 Dewey Hill Road
[City, state, zip code] Edina, MN 55439

Contract: **City of Pflugerville Water Treatment Plant Expansion – Membrane Filtration System Pre-Procurement**
2020-0952

Contractor certifies that it has not been a party to any collusion among Contractors in the restraint of freedom of competition by agreement to submit a Bid or Proposal at a fixed price or to refrain from submitting a Bid or Proposal; or with any official or employee of the City as to quantity, quality, or price in the prospective contract, or any other terms of said prospective contract; or in any discussion between Contractors and any official of the City concerning exchange of money or other thing of value for special consideration in the letting of a contract.

Contractor: FilmTec Corporation
(typed or printed name of organization)

Signature: DocuSigned by: Hara Prasad NANDA A4C52A2A4EA9416... _____
(individual's signature)

Name: Hara Prasad Nanda
(typed or printed)

Title: President & CEO
(typed or printed

Business Address:

5400 Dewey Hill Road

Edina, MN 55439

Phone: 719-330-5578 Email: william.wittich@dupont.com (Will Wittich, Technical Sales Manager)

(Attach evidence of authority to sign if Contractor is a corporation, partnership, or a joint venture.)

END OF SECTION

6 City of Pflugerville Bid Bond

The completed City of Pflugerville Bid Bond is provided below.

CITY OF PFLUGERVILLE BID BOND

STATE OF TEXAS §
COUNTY OF TRAVIS §
CITY OF PFLUGERVILLE §

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____ FilmTec Corporation _____ as Principal, and _____ Federal Insurance Company _____ as Surety, are hereby held and firmly bound unto the City of Pflugerville, Texas as OWNER in the penal sum of Five percent of the total amount bid Dollars ($ 5%) (5% of Bid Amount) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The Condition of the above obligation is such that whereas the Principal has submitted to OWNER a certain BID, to enter into a contract in writing for the City of Pflugerville Water Treatment Plant Expansion - Membrane Filtration System Procurement (the "Project"), which is attached hereto and incorporated herein for all purposes.

NOW ,THEREFORE, Principal and Surety agree as follows:

(a) If said BID shall be rejected; or,

(b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the form of Contract attached hereto and incorporated herein for all purposes (properly completed in accordance with the Contract Documents) and shall furnish a performance bond ensuring faithful performance of said Contract, and a payment bond ensuring the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects enter into the Contract under the terms of said BID proposal,

then this obligation shall be void; otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within

which the OWNER may accept such BID and said Surety does hereby waive notice of any such extension.

The obligations of the parties under this BOND shall be performable in Travis County, Texas and shall be construed under the laws of the State of Texas. If legal action is necessary in connection with this BOND, exclusive venue shall be in Travis County, Texas.

Surety companies executing this BOND must appear on the United States Treasury Department's most current list (Circular 570, as amended) and otherwise be authorized to transact business in the State of Texas.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Signed and Agreed to this 17th **day of** November, **20** 21.

SURETY (seal)

By: _____

(Signature)

Kathleen K. Freund

(Print Name)

Attorney-in-Fact

(Print Title)

[ATTACH POWER OF ATTORNEY]

ATTEST: _____

PRINCIPAL/CONTRACTOR

By: Hara Prasad Nanda

(Signature)

Hara Prasad Nanda

(Print Name)

President and CEO

(Print Title)

[Additional signatures, if any, attached]

ATTEST: _____

Loriann Lea Sharpe , Secretary

FILMTEC CORPORATION CORPORATE SEAL 2018 DELAWARE

DNRBZ 2018 1026

CHUBB

Power of Attorney

Federal Insurance Company | Vigilant Insurance Company | Pacific Indemnity Company
Westchester Fire Insurance Company | ACE American Insurance Company

Know All by These Presents, that **FEDERAL INSURANCE COMPANY**, an Indiana corporation, **VIGILANT INSURANCE COMPANY**, a New York corporation, **PACIFIC INDEMNITY COMPANY**, a Wisconsin corporation, **WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** corporations of the Commonwealth of Pennsylvania, do each hereby constitute and appoint Kathleen K. Freund of Denver, Colorado----------

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY** and **ACE AMERICAN INSURANCE COMPANY** have each executed and attested these presents and affixed their corporate seals on this **16th** day of **September, 2021.**

Dawn M. Chloros, Assistant Secretary

Stephen M. Haney, Vice President

STATE OF NEW JERSEY
County of Hunterdon ss.

On this **16th** day of **September, 2021** before me, a Notary Public of New Jersey, personally came Dawn M. Chloros and Stephen M. Haney, to me known to be Assistant Secretary and Vice President, respectively, of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY, the companies which executed the foregoing Power of Attorney, and the said Dawn M. Chloros and Stephen M. Haney, being by me duly sworn, severally and each for herself and himself did depose and say that they are Assistant Secretary and Vice President, respectively, of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY and know the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of said Companies; and that their signatures as such officers were duly affixed and subscribed by like authority.

Notarial Seal

KATHERINE J. ADELAAR
NOTARY PUBLIC OF NEW JERSEY
No. 2316685
Commission Expires July 16, 2024

Notary Public

CERTIFICATION

Resolutions adopted by the Boards of Directors of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY on August 30, 2016; WESTCHESTER FIRE INSURANCE COMPANY on December 11, 2006; and ACE AMERICAN INSURANCE COMPANY on March 20, 2009:

"RESOLVED, that the following authorizations relate to the execution, for and on behalf of the Company, of bonds, undertakings, recognizances, contracts and other written commitments of the Company entered into in the ordinary course of business (each a "Written Commitment"):

(1) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise.

(2) Each duly appointed attorney-in-fact of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise, to the extent that such action is authorized by the grant of powers provided for in such person's written appointment as such attorney-in-fact.

(3) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to appoint in writing any person the attorney-in-fact of the Company with full power and authority to execute, for and on behalf of the Company, under the seal of the Company or otherwise, such Written Commitments of the Company as may be specified in such written appointment, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.

(4) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to delegate in writing to any other officer of the Company the authority to execute, for and on behalf of the Company, under the Company's seal or otherwise, such Written Commitments of the Company as are specified in such written delegation, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.

(5) The signature of any officer or other person executing any Written Commitment or appointment or delegation pursuant to this Resolution, and the seal of the Company, may be affixed by facsimile on such Written Commitment or written appointment or delegation.

FURTHER RESOLVED, that the foregoing Resolution shall not be deemed to be an exclusive statement of the powers and authority of officers, employees and other persons to act for and on behalf of the Company, and such Resolution shall not limit or otherwise affect the exercise of any such power or authority otherwise validly granted or vested."

I, Dawn M. Chloros, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY (the "Companies") do hereby certify that

(i) the foregoing Resolutions adopted by the Board of Directors of the Companies are true, correct and in full force and effect,
(ii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Whitehouse Station, NJ, this November 17, 2021

Dawn M. Chloros, Assistant Secretary

IN THE EVENT YOU WISH TO VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT:
Telephone (908) 903- 3493 Fax (908) 903- 3656 e-mail: surety@chubb.com

8 Pilot Availability and Delivering to Schedule

ABILITY TO MEET PILOT SCHEDULE

Pilot Availability

DuPont has reserved a pilot unit for the period between January and May 2022, based on the contract documents, specifically for pilot testing at Pflugerville should DuPont be selected for an award. This dedicated pilot is stored and maintained in our pilot location in Marlborough, MA. DuPont has a pilot team who will coordinate directly with the design engineer, contractor, and end user for any support needed to facilitate a successful pilot demonstration.

In addition, we have worked with our partners at MRI to reserve the Plate Settler pilot unit for this important project. Should DuPont be favored with an award, we can speed up the pilot process by having the pilot on standby for the City of Pflugerville.

A designated process engineer will be onsite for commissioning and decommissioning services in addition to the services detailed in the pilot information herein. DuPont has had extensive experience with Pilot Testing based on TCEQ requirements and will support the team in documenting and submitting information based on the pilot results.

Pilot Delivery Schedule

The pilot units can be delivered as early as four (4) to six (6) weeks from the date of mutually executed order. The delivery schedule will be further coordinated with the owner at the time of order. Since the pilot units will be reserved specifically for the City of Pflugerville, should DuPont be favored with an award – these lead times could be improved may be improved upon. This is well ahead of the forty-two (42) days from C listed in the procurement documents.

Submission of Pilot Data Summary Report

A summary of the pilot testing data will be submitted within thirty (30) days after completion of pilot testing. This pilot report will validate membrane design criteria, backwashing and chemical cleaning protocols, and process guarantees.

Pilot Installation

DuPont will contract with a partner to provide the complete installation services of the pilot unit to provide a fully operable pilot facility. DuPont will be responsible for supplying the ancillary pumps, tanks, pretreatment pilot, interconnection piping system, instrumentation, electrical connections and process control for the construction of a complete pilot treatment train to simulate the full-scale treatment process as proposed for the plant expansion. By having a local partner for the installation secured this will enable a seamless pilot study to be conducted on a timely basis.

ABILITY TO MEET FULL SCALE PROJECT SCHEDULE

Design Assistance

Should DuPont be recommended for award of the full-scale project a dedicated team will be assigned to the Pflugerville WTP Expansion Project which will be managed by a dedicated Project Manager who will be the main contact. DuPont will provide submittal documentation to identify the scope and design of the membrane project which will meet the overall project timeline. In addition, DuPont's offer herein includes several submittals to detail the equipment provided for review and approval by the engineer. Submittals will be per the general submittal requirements detailed in Section 01300. Given the complexity, level of detail, and specification requirements associated with this project DuPont is committed to the following submittal schedule.

DELIVERABLE	DELIVERY SCHEDULE
Initial Submittal	4 Weeks
Primary Shop Drawings	10 - 12 weeks
Secondary Shop Drawings	14 - 16 weeks

DuPont will partner with the lead engineer on the project to review drawings and design considerations support the procurement package for the construction contract.

Full Scale Procurement

Should we be selected as an approved membrane manufacturer we have resources in place to respond to the Membrane bid package which will include a detailed proposal for the Pflugerville WTP Expansion project. DuPont is confident that the schedule detailed in the contract documents designates enough time for the full-scale procurement project to put together a design that provides the most robust design at the best value for the City of Pflugerville.

DELIVERABLE	DELIVERY SCHEDULE
Complete Manufacturing and Shipment of Entire Membrane System	180 days from approval of Shop Drawings

Start-up, Commissioning, Testing, and Training

DuPont has included a robust installation, commissioning, testing, and training services herein in order to ensure the successful implementation of the membrane system.

DELIVERABLE	DELIVERY SCHEDULE
Field startup, testing and training services.	30 days from date of issuing "Notice of Completed Installation" for each membrane train by the OWNER.

ULTRAFILTRATION PILOT EQUIPMENT SUPPLIED

DuPont Water Solutions (DuPont) will provide a MEMCOR CSII Pilot Unit with a 0.04um hollow-fiber PVdF membrane with ancillary equipment described below.

QTY	DESCRIPTION
1	MEMCOR® CSII Pilot Unit including PVdF UF membrane module(s), ABS/Nylon/HDPE pipework, one (1) backwash/filtrate storage tank, one (1) lot of automatic valves and actuators, one (1) permeate pump, one (1) feed and one (1) filtrate magnetic flow meter, one (1) feed and one (1) filtrate pressure transmitter, one (1) feed temperature transmitter, one (1) stainless steel frame, one (1) pre-programmed Allen Bradley PLC mounted in NEMA-4X enclosure, and one (1) 200 micron auto-backwashing strainer.
1	Pre-treatment pilot based on the requirements of the procurement bid documents.
1	5-HP Westward/Speedaire air compressor to provide 7.5 cfm @ 175 psi, one (1) 100% process air coalescer and membrane filter assembly, and one (1) air receiver.
1	MEMCOR Pilot Waste Tank including one (1) 0.5-HP submersible pump and hoses.
1	Feed (Hach TU5300) & Filtrate Turbidity (Hach TU5400) monitoring instruments
1	Data logging hardware with access to MEMCOR web-based data monitoring.

Information for the MEMCOR CSII L20 pilot skid(s) is provided below.

PHYSICAL DIMENSIONS	
CSII Pilot Unit: Length x Width x Height Weight	4'-2" x 7'-9" x 9' 2200 lbs
Compressor: Length x Width x Height Weight	3'-5"x 6'-5" x 4'-10" 650 lbs
Waste Tank & Hose Kit: Length x Width x Height Weight	3'-8" x 3'-8" x 3'-4" 300 lbs

FLOW RATES	
Feed	12 – 55 gpm @ 25 – 30 psi
Product	12 – 55 gpm @ < 10 psi
Backwash Waste (Note 1)	~20 gpm (Gravity drain)
CIP Waste	~20 gpm (Gravity drain)

Note 1 *Backwash waste drain to have open discharge.*

UTILITY CONNECTIONS	
CSII Pilot Unit	480 Volt, 3 Phase (25 Amp)
Compressor	480 Volt, 3 Phase (15 Amp)
Waste Tank Pump	110 Volt, 1 Phase (10.5 Amp)

CSII PILOT UNIT TERMINATION POINTS	
Feed Inlet	1 ½” Male Camlock
Compressed Air	3/8” Quick Connect Plug
Drain	2” Male Camlock
Filtrate	1 ½” Male Camlock
Instrument Drain	2” Male Camlock
RO Inlet	1.5” Male Camlock

Instrumentation and Data Logging Capabilities

The CSII pilot unit is a fully automatic unit. A panel door mounted Operator Interface (OIT) is provided on the pilot unit. The OIT provides for a graphical interface for monitoring and full operator control of the pilot unit. The OIT provided is a Siemens SIMATIC PC577 touch panel running Invensys Wonderware software SCADA.

The pilot unit is complete with feed and filtrate flow transmitters, filtrate pressure transmitters, and process thermocouple and temperature transmitters for both the membrane tank and backwash tank. Data logging is provided through SCADA system and with cell coverage available through the proprietary Link2site modem monitory system. Additionally, turbidity meters, particle counters or pH probes may be provided to monitor these water quality parameters.

13 Scope of Supply

13.1 Equipment Scope of Supply

A detailed scope of supply has been provided below. It includes major equipment, valves, actuators, instrumentation and control panels and all other ancillary equipment for a complete membrane operating system. In addition, we have detailed our technical support and services offerings based on the specification requirements. To confirm what is excluded from MEMCOR's scope of supply, a subsequent section is provided on the scope intended to be supplied by others.

SCOPE ITEM	DESCRIPTION
Membrane Equipment	Each of the five membrane tanks will contain 588 L20N membranes. The membranes are deployed in a rack system, with 30 racks installed per tank, each rack capable of holding thirty-two (32) modules in eight (8) clovers. To ensure the recovery requirements are met, ninety-three (93) rack fillers will be deployed in the spare clovers. Racks are supplied with internal tank rack supports, filtrate headers, air headers, connecting hoses, isolation valves, and piping between the racks and the headers.
Membrane System	Membrane support instrumentation and valves for a complete operating membrane tank.
Feed Strainer System	Automatic feed strainers with two (2) duty and one (1) standby including separate strainer backwash pumps, valves, and gauges. Includes feed turbidimeter panel to measure the raw water turbidity.
Filtrate Pumping System	Horizontal end suction centrifugal pumps are used to draw filtrate from the modules. Each train will have a dedicated filtrate pump, valves, instrumentation and turbidimeter panel.
Backwash Pumping System	Horizontal end suction centrifugal pumps are used to for backwashing the modules. One common backwash system will be provided for all trains including one (1) duty pump and on (1) standby.
Backwash Waste System	Submersible wet pit pumps with one (1) duty and one (1) standby to pump waste from the backwash waste pump station.
CIP Pumping System	Horizontal end suction centrifugal pumps are used to for clean in place. There are one duty and one standby CIP pump. The system includes all valves and instrumentation for a complete system.
Membrane Blower System	Positive displacement membrane blowers will provide low pressure air scour to the membrane system. There will be one (1) duty blowers and one (1) standby. Blower includes valves and instruments for a complete system.
Compressed Air System	Compressed air is used for priming, actuator operation and instrumentation. Compressors are supplied by others, DuPont has included air receivers, valves, gauges, and switches.
Controls System	One (1) Master Control Panel with Allen Bradley CompactLogix PLC includes One (1) Remote I/O panel per tank and HMI for complete control of the membrane system.
Manufacturing Services	Commissioning, training, and post commissioning services as per the specifications. Includes manufacturers' services.

1. MEMCOR® CSII Cells

Five (5) MEMCOR CSII Cells including:

QTY (TOTAL)	QTY (PER CELL)	DESCRIPTION	MANUFACTURER
2,940	588	L20N Membrane Modules fabricated of polyvinylidene fluoride (PVDF) membrane material.	MEMCOR
150	30	MEMCOR® CSII MemRack with Eight (8) Clovers Holding Four (4) Modules Each.	MEMCOR
465	93	CSII Nylon Rack Expansion Filler Kits for spare Clovers.	MEMCOR
30	6	Top of Rack Lock Support Bracket, Each Supports Five (5) Racks.	MEMCOR
30	6	Bottom of Rack Lower Guide Support Bracket, Each Supports Five Racks.	MEMCOR
150	30	Air Hose Assembly, One Per CSII MemRack	MEMCOR
150	30	Filtrate Assembly, One Per CSII MemRack	MEMCOR
5	1	Cell Filtrate Header Manifold 36'-0" long from 24" sch.10 stainless steel T316L pipe with thirty nozzles of 3" pipe per header. Includes pipe support brackets.	MEMCOR
5	1	Cell Air Header Manifold: 36'-0" long from 16" sch.10 stainless steel T316 pipe with thirty nozzles of 2" pipe per header. We have allowed for the standard support brackets.	MEMCOR

2. Feed Strainer System

QTY	DESCRIPTION	MANUFACTURER
Three (3)	**Feed Strainer** Fluid Engineering Series 723 Eliminator® Self-Cleaning Strainer Housing Material: Fabricated Carbon Steel Backwash Assy: 316 Stainless Steel O-Ring Material: Buna-N Inlet/Outlet Conn: 30"-150# Rf Flanged Backwash Conn: 4"-150# Rf Flanged Design: 150 PSIG @ 150ºf Paint/Lining: 3m NSF Baked on Epoxy (Interior and Exterior) Straining Element (Included) Slotted Reverse-Rolled Wedge Wire Slot Size: 0.010" (250 Micron) Material: 316 Stainless Steel Electric Drive Motor (Included) Horse Power: 1/3 Hp Rating: 480v 3ph 60hz TEFC Control Panel (Included) Voltage: 480v NEMA Rating: 4x 316 Stainless Steel Special Notes: Plc, Disconnect Switch, Pump Interlock Backwash Valve (Included) Size: 4" Material: Carbon Steel Differential Pressure Switch (Included) Type: Dual Element Material: Brass Or 316ss Pressure Gauge (Included) Strainer Will Be Supplied with separate Backwash Pumps Spares: Three (3) spare screens including packing and O-rings.	Fluid Engineering Series 723
1 Lot	Miscellaneous manual stainless-steel ball valves, with RPTFE seat, full port, and threaded connections.	Apollo / 76F-100-A
Four (4)	Pressure indicating gauge, on strainer suction and discharge.	Ashcroft
One (1)	Laser Turbidimeter with System Check, and RFID, ISO Version, and SC200 Universal Controller Panel Mounted.	Hach TU5300 w SC200 controller

QTY	DESCRIPTION	MANUFACTURER
Six (6)	BAW,24, F1,CI,EPDN-EPDM,150B,DI-S2,AIS*GS-12A-HD20 BAW: Style - DeZurik AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve 24: Size - 24 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing - EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06, Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard surface prep AIS: Option - USA Iron & Steel GS-12A-HD20: Actuator Type - G-Series Worm Gear with Handwheel Operator	DeZurik

3. Cell and Filtrate System Equipment

QTY	DESCRIPTION	MANUFACTURER
Five (5)	Cell filtrate turbidimeter panel, including a laser turbidity meter with controller, flow sensor, automatic cleaning, RFID module and system check. The meter comes pre-piped/pre-wired and installed on a panel with a suitable in-site installation mechanism.	Hach TU5400 w SC200 controller
Five (5)	**Permeate Pump** ITT Goulds Model 3180 12x12-14/5V Capacity Rated 6,112.0 gpm @ 60.0 (Ft) Materials of Construction: Construction All Iron / CD4 (NSF Certified) Casing: Cast Iron St. Box Cover Cast Iron Impeller CD4MCUN - Open Taper Cut Casing Gaskets Aramid Fiber with EDMP Rubber and Silicate Baseplate Feature Fabricated Steel Sealing Method Mechanical Seal: Chesterton 155 1RCO-NSF (Carbon vs Silicon Carbide) - (Cartridge - Single) Flanges: 125# flat face Frame Features: Magnetic Plug, Orion Bearing Protection Devices i-ALERT®2 Bluetooth Smart Equipment Health Monitor Goulds Blue standard painting	ITT Goulds Model 3180 Size: 12x12-14/5V

QTY	DESCRIPTION	MANUFACTURER
	Motor: TEFC, Premium Eff, Inverter duty 125.0 hp (93.2 KW) 3/60 Hz/460, 1800 RPM	
Five (5)	**Permeate Pump Suction Isolation Valve:** BAW,24, F1,CI,EPDN-EPDM,150B,DI-S2,AIS*GS-12-PC10,4V1108-SP-SEH90 BAW: Style - DeZURIK AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve 24: Size - 24 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing - EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06, Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard surface prep AIS: Option - USA Iron & Steel GS-12-PC10: Actuator Type - G-Series with Double Acting Pneumatic Cylinder Operator 4V1108: Accessories - ASCO EF8344G44 Brass Body Solenoid; US Voltage 24VDC; TYPE 3,3S,4,4X,6,6P,7 & 9; 1/4" NPT; 125 Maximum Pressure Rating; Dual Coil SP: Accessories - (2) Speed Controls SEH90: Accessories - (2) Valve Position Indicating Switches; Mechanical; SPDT; 2 Conduit Connections; Enclosure Type 1,3,4,4X,5,6,7,9,12 and 13 DUAL: Sol Action - Used with all Dual Coil Solenoids OP/CL: Switch Action - Switches to Indicate Valve Fully Open & Fully Closed	DeZurik
Five (5)	**Permeate Discharge Isolation Valve:** BAW,20, F1,CI,EPDN-EPDM,150B,DI-S2,AIS*GS-6B-HD24 BAW: Style - DeZURIK AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve 20: Size - 20 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing - EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06, Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger	DeZurik

QTY	DESCRIPTION	MANUFACTURER
	S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy (on Interior and Standard surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard surface prep AIS: Option - USA Iron & Steel GS-6B-HD24: Actuator Type - G-Series Worm Gear with Handwheel Operator	
Five (5)	**Cell Permeate Isolation Valve:** BAW,20, F1,CI,EPDN-EPDM,150B,DI-S2,AIS*TW-7-PC8,4V1108-SP-SEH90 BAW: Style - DeZURIK AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve 20: Size - 20 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing - EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM ; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06, Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard surface prep AIS: Option - USA Iron & Steel TW-7-PC8: Actuator Type - T-Series with Double Acting Pneumatic Cylinder Operator 4V1108: Accessories - ASCO EF8344G44 Brass Body Solenoid; US Voltage 24VDC; TYPE 3,3S,4,4X,6,6P,7 & 9; 1/4" NPT; 125 Maximum Pressure Rating; Dual Coil SP: Accessories - (2) Speed Controls SEH90: Accessories - (2) Valve Position Indicating Switches; Mechanical; SPDT; 2 Conduit Connections; Enclosure Type 1,3,4,4X,5,6,7,9,12 and 13 DUAL: Sol Action - Used with all Dual Coil Solenoids OP/CL: Switch Action - Switches to Indicate Valve Fully Open & Fully Closed	DeZurik
Five (5)	**Cell Backwash Supply to Filtrate Header Isolation Valve:** BAW,24, F1,CI,EPDN-EPDM,150B,DI-S2,AIS*GS-12-PC10,4V1108-SP-SEH90 BAW: Style - DeZURIK AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve 24: Size - 24 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing - EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12	DeZurik

QTY	DESCRIPTION	MANUFACTURER
	Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06, Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger - ASTM A240 S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard surface prep AIS: Option - USA Iron & Steel GS-12-PC10: Actuator Type - G-Series with Double Acting Pneumatic Cylinder Operator 4V1108: Accessories - ASCO EF8344G44 Brass Body Solenoid; US Voltage 24VDC; TYPE 3,3S,4,4X,6,6P,7 & 9; 1/4" NPT; 125 Maximum Pressure Rating; Dual Coil SP: Accessories - (2) Speed Controls SEH90: Accessories - (2) Valve Position Indicating Switches; Mechanical; SPDT; 2 Conduit Connections; Enclosure Type 1,3,4,4X,5,6,7,9,12 and 13 DUAL: Sol Action - Used with all Dual Coil Solenoids OP/CL: Switch Action - Switches to Indicate Valve Fully Open & Fully Closed	
Five (5)	**Cell Air Scour Supply Valve:** BHP,16,L1,S2,TC,S2-S5A-FT-RT,AIS*PR-R2A-PC8,4V1108-SPSEH90 BHP: Style - High Performance Butterfly Valve 16: Size - 16 Inch L1: End Connection - Lugged Drilling; ASME Class 150 S2: Body Material - 316 Stainless Steel TC: Packing - PTFE V-Flex; Temperature to 500° F. S2: Disc - 316 Stainless Steel S5A: Shaft - 17-4PH Stainless Steel FT: Bearing - Stainless Steel with PTFE Fabric Liner 2"-24"; 316 Stainless Steel with PTFE Fabric Liner 30"-48"; to 500° F. RT: Seat Seal - Reinforced PTFE/Titanium; Temperature to 500° F. AIS: Option - USA Iron & Steel PR-R2A-PC8: Actuator Type - PowerRac Cylinder; 8 In Dia 4V1108: Accessories - ASCO EF8344G44 Brass Body Solenoid; US Voltage 24VDC; TYPE 3,3S,4,4X,6,6P,7 & 9; 1/4" NPT; 125 Maximum Pressure Rating; Dual Coil SP: Accessories - (2) Speed Controls SEH90: Accessories - (2) Switches; Mechanical; SPDT; 2 Conduit Conn; Type 1,3,4,4X,5,6,7,9,12 and 13 DUAL: Sol Action - Used with all Dual Coil Solenoids OP/CL: Switch Action - Switches to Indicate Valve Fully Open & Fully Closed	DeZurik
Twenty (20)	**Cell CIP Service Valves:** BAW,16, F1,CI,EPDN-EPDM,150B,DI-S2,AIS*TW-7-PC6,4V1108-SP-SEH90 BAW: Style - DeZURIK AWWA C504 3-72”; C516 78” and larger Rubber Seated Butterfly Valve 16: Size - 16 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B	DeZurik

QTY	DESCRIPTION	MANUFACTURER
	EPDN: Packing - EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06, Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard surface prep AIS: Option - USA Iron & Steel TW-7-PC6: Actuator Type - T-Series with Double Acting Pneumatic Cylinder Operator 4V1108: Accessories - ASCO EF8344G44 Brass Body Solenoid; US Voltage 24VDC; TYPE 3,3S,4,4X,6,6P,7 & 9; 1/4" NPT; 125 Maximum Pressure Rating; Dual Coil SP: Accessories - (2) Speed Controls SEH90: Accessories - (2) Valve Position Indicating Switches; Mechanical; SPDT; 2 Conduit Connections; Enclosure Type 1,3,4,4X,5,6,7,9,12 and 13 DUAL: Sol Action - Used with all Dual Coil Solenoids OP/CL: Switch Action - Switches To Indicate Valve Fully Open & Fully Closed	
Five (5)	**Feed Flow Control Valve:** BAW,24,F1,CI,EPDN-EPDM,150B,DI-S2,AIS*TW-7-PC6,P201-FM-G BAW: Style - DeZURIK AWWA C504 3-72”; C516 78” and larger Rubber Seated Butterfly Valve 24: Size - 24 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing - EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM ; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06, Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard surface prep AIS: Option - USA Iron & Steel TW-7-PC6: Actuator Type - T-Series with Double Acting Pneumatic Cylinder Operator P201: Positioner - Electro-Pneumatic Positioner, VAC Model V200E, 4-20 mA Signal, NEMA 4X and IP66, Double/Single Acting, Arrow Indicator 4-20: Signal Range - 4-20 mA OPEN: Pos Action - Increasing Signal To Open F: Pos Accessory - 4-20mA Transmitter Feedback	DeZurik

QTY	DESCRIPTION	MANUFACTURER
	M: Pos Accessory - Feedback, Mechanical Switch G: Pos Accessory - Gages	
Ten (10)	**Cell Feed and Filtrate Isolation Valves:** BAW,24,F1,CI,EPDN-EPDM,150B,DI-S2,AIS*GS-12-PC10,4V1108-SP-SEH90 BAW: Style - DeZURIK AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve 24: Size - 24 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing – EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06, Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard surface prep AIS: Option - USA Iron & Steel GS-12-PC10: Actuator Type - G-Series with Double Acting Pneumatic Cylinder Operator 4V1108: Accessories - ASCO EF8344G44 Brass Body Solenoid; US Voltage 24VDC; TYPE 3,3S,4,4X,6,6P,7 & 9; 1/4" NPT; 125 Maximum Pressure Rating; Dual Coil SP: Accessories - (2) Speed Controls SEH90: Accessories - (2) Valve Position Indicating Switches; Mechanical; SPDT; 2 Conduit Connections; Enclosure Type 1,3,4,4X,5,6,7,9,12 and 13 DUAL: Sol Action - Used with all Dual Coil Solenoids OP/CL: Switch Action - Switches to Indicate Valve Fully Open & Fully Closed	DeZurik
Twenty (20)	Actuated bleed ball valves for cell feed, filtrate and CIP isolation with stainless steel body, RPTFE seat, full port, and threaded connections. Actuator type: Double acting pneumatic actuator	Flow-Tek (Bray)
Fifteen (15)	Actuated ball valve for Cell integrity test air supply, priming supply and ejector isolation with stainless steel body, RPTFE seat, full port, and threaded connections. Actuator type: Double acting pneumatic actuator	Flow-Tek (Bray)
Five (5)	Dual disc check valves, wafer style for the permeate line, with cast iron body, stainless steel disc, and Buna-N seal.	Val-Matic / 8820
1 Lot	Miscellaneous manual ball valves for cell and filtrate service with stainless steel body, RPTFE seat, full port, and threaded connections.	Apollo / 76F-100-A
Five (5)	Pressure indicating gauge for permeate pump discharge.	Ashcroft
Five (5)	Digital pressure transmitter(s) with capacitive sensor, ceramic membrane and modular transmitter, including ceraphire ceramic, alloy C, 316L, Monel and PVDF wetted parts for the cell filtrate line.	E+H / Cerabar S PMC71

QTY	DESCRIPTION	MANUFACTURER
Five (5)	Electromagnetic flowmeter with hard rubber, polyurethane and PTFE liner, 1.4435 (316L); Alloy C22, 2.4602 (UNS N06022); Tantalum electrodes and flexible engineering sensors with fixed or lap-joint process connections for monitoring the cell filtrate line.	E+H / Promag W 400
Ten (10)	Point level switch with compact vibronic device and module housing concept, 316L and alloy wetted parts for monitoring cell levels.	E+H / Liquiphant FTL51B
Five (5)	Point level switch with compact vibronic device and module housing concept, 316L and alloy wetted parts for monitoring priming levels.	E+H / Liquiphant FTL51B
Five (5)	Level Transmitter for monitoring cell levels.	E+H

4. Backwash System

QTY.	DESCRIPTION	MANUFACTURER
Two (2)	**Backwash Pump** ITT Goulds Model 3180 XI Size: 16x16-19/5V Capacity Rated 9,510.0 gpm @ 35.0 (Ft) Materials of Construction All Iron / CD4 Casing: Cast Iron St. Box Cover Cast Iron Impeller CD4MCUN - Open Taper Cut Casing Gaskets Aramid Fiber with EDMP Rubber and Silicate Baseplate Feature Fabricated Steel Mechanical Seal: Flowserve, ISC2-PX, 5Z4T - (Cartridge - Single) Flanges: 125# flat face Frame Features: Magnetic Plug, Orion Bearing Protection Devices i-ALERT®2 Bluetooth Smart Equipment Health Monitor Goulds Blue standard painting Motor: TEFC, Premium Eff, Inverter duty 125.0 hp (93.2 KW) 3/60 Hz/460, 1200 RPM	ITT Goulds Model 3180 XI Size: 16x16-19/5V
Two (2)	**Backwash Supply Pump Suction Isolation Valve** BAW,30,F1,CI,EPDN-EPDM,150B,DI-S2,AIS*GS-12A-HD30 BAW: Style - DeZURIK AWWA C504 3-72”; C516 78” and larger Rubber Seated Butterfly Valve 30: Size - 30 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing – EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material – EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06, Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger	DeZurik

QTY.	DESCRIPTION	MANUFACTURER
	S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard (SP10) surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard (SP10) surface prep AIS: Option - USA Iron & Steel GS-12A-HD30: Actuator Type - G-Series Worm Gear with Handwheel Operator	
Two (2)	**Backwash Supply Pump Discharge Isolation Valve** BAW,24,F1,CI,EPDN-EPDM,150B,DI-S2,AIS*GS-12A-HD20 BAW: Style - DeZURIK AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve 24: Size - 24 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing – EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" Class 250B) and Grade 80-55-06, Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard (SP10) surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard (SP10) surface prep AIS: Option - USA Iron & Steel GS-12A-HD20: Actuator Type - G-Series Worm Gear with Handwheel Operator	DeZurik
One (1)	**Backwash Supply to Backwash Tank Valve** BAW,24,F1,CI,EPDN-EPDM,150B,DI-S2,AIS*GS-12-PC10,4V1108-SP-SEH90 BAW: Style - DeZURIK AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve 24: Size - 24 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing – EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06, Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger - ASTM A240) S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard (SP10) surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard (SP10) surface prep AIS: Option - USA Iron & Steel	DeZurik

QTY.	DESCRIPTION	MANUFACTURER
	GS-12-PC10: Actuator Type - G-Series with Double Acting Pneumatic Cylinder Operator 4V1108: Accessories - ASCO EF8344G44 Brass Body Solenoid; US Voltage 24VDC; TYPE 3,3S,4,4X,6,6P,7 & 9; 1/4" NPT; 125 Maximum Pressure Rating; Dual Coil SP: Accessories - (2) Speed Controls SEH90: Accessories - (2) Valve Position Indicating Switches; Mechanical; SPDT; 2 Conduit Connections; Enclosure Type 1,3,4,4X,5,6,7,9,12 and 13 DUAL: Sol Action - Used with all Dual Coil Solenoids OP/CL: Switch Action - Switches To Indicate Valve Fully Open & Fully Closed	
Two (2)	Dual disc check valves, wafer style for the permeate line, with cast iron body, stainless steel disc, and Buna-N seal.	Val-Matic / 8824
Two (2)	Pressure indicating gauge for backwash pump discharge.	Ashcroft
One (1)	Electromagnetic flowmeter with hard rubber, polyurethane and PTFE liner, 1.4435 (316L); Alloy C22, 2.4602 (UNS N06022); Tantalum electrodes and flexible engineering sensors with fixed or lap-joint process connections for monitoring the filtrate backwash supply line.	E+H / Promag W 400
One (1)	Temperature transmitter for filtrate line.	E+H
1 Lot	Miscellaneous manual ball valves for backwash service with stainless steel body, RPTFE seat, full port, and threaded connections.	Apollo / 76F-100-A

5. Backwash Waste System

QTY	DESCRIPTION	MANUFACTURER
Two (2)	**Backwash Waste Pumps** Sulzer ABS Model XFP206J CB2 PE350/6 submersible wet pit Pump in all cast iron construction with a 47HP, 1180 RPM, 3/60/460V, PE motor suitable for VFD drive service. Pump is equipped with 49 ft. of cable. 3086 GPM at 35 ft TDH Includes: 8" Dual Rail Guide Rail Assembly w/ integral elbow Hardware Kit - SS SS Upper Guide Bracket 20' 316SS Lifting Chain w/ grab link CA462 Seal Leakage & Temp Relay - 24VDC 2" Sch 40 SS Pipe N/W Performance Test Pump Cooling Jacket Critical Speed Analysis	Sulzer ABS Model XFP206J

6. Clean-In-Place System

QTY	DESCRIPTION	MANUFACTURER
Two (2)	**Clean-in-Place Pump** ITT Goulds Model 3180 M Size: 12x12-14/5V Capacity Rated 4,320.0 gpm @ 35.0 (Ft) Materials Construction: CD4MCuN Casing: CD4MCuN St. Box: CD4MCuN Impeller CD4MCUN - Open Taper Cut Casing Gaskets Aramid Fiber with EDMP Rubber and Silicate Baseplate Feature Fabricated Steel Mechanical Seal: Flowserve, ISC2-PX, 5Z4T - (Cartridge - Single) Flanges: 150# Raised Face Frame Features: Magnetic Plug, Orion Bearing Protection Devices i-ALERT®2 Bluetooth Smart Equipment Health Monitor Goulds Blue standard painting Motor: TEFC, Premium Eff, Inverter duty 50.0 hp (37.3 KW) 3/60 Hz/460, 1200 RPM	ITT Goulds Model 3180 M Size: 12x12-14/5V
Two (2)	**CIP Pump Discharge Isolation Valve** BAW,18,F1,CI,EPDN-EPDM,150B,DI-S2,AIS*GS-6B-HD24 BAW: Style - DeZURIK AWWA C504 3-72”; C516 78” and larger Rubber Seated Butterfly Valve 18: Size - 18 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150	DeZurik

QTY	DESCRIPTION	MANUFACTURER
	CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing – EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06, Type 316 Stainless Steel Seating Edge, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard (SP10) surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard (SP10) surface prep AIS: Option - USA Iron & Steel GS-6B-HD24: Actuator Type - G-Series Worm Gear with Handwheel Operator	
Two (2)	**CIP Pump Suction Isolation Valve** BAW,16,F1,CI,EPDN-EPDM,150B,DI-S2,AIS*GS-6B-HD16 BAW: Style - DeZURIK AWWA C504 3-72”; C516 78” and larger Rubber Seated Butterfly Valve 16: Size - 16 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing - EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06 (54" - 72", Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger - ASTM A240) S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard (SP10) surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard (SP10) surface prep AIS: Option - USA Iron & Steel GS-6B-HD16: Actuator Type - G-Series Worm Gear with Handwheel Operator	DeZurik
Two (2)	Dual disc check valves, wafer style for the permeate line, with cast iron body, stainless steel disc, and Buna-N seal.	Val-Matic / 8816
Five (5)	**CIP Recirculation and Waste Line Valves** BAW,16,F1,CI,EPDN-EPDM,150B,DI-S2,AIS*TW-7-PC6,4V1108-SP-SEH90 BAW: Style - DeZURIK AWWA C504 3-72”; C516 78” and larger Rubber Seated Butterfly Valve 16: Size - 16 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing – EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material – EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12	DeZurik

QTY	DESCRIPTION	MANUFACTURER
	Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06, Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy (NSF Std. 61) on Interior and Standard (SP10) surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard (SP10) surface prep AIS: Option - USA Iron & Steel TW-7-PC6: Actuator Type - T-Series with Double Acting Pneumatic Cylinder Operator 4V1108: Accessories - ASCO EF8344G44 Brass Body Solenoid; US Voltage 24VDC; TYPE 3,3S,4,4X,6,6P,7 & 9; 1/4" NPT; 125 Maximum Pressure Rating; Dual Coil SP: Accessories - (2) Speed Controls SEH90: Accessories - (2) Valve Position Indicating Switches; Mechanical; SPDT; 2 Conduit Connections; Enclosure Type 1,3,4,4X,5,6,7,9,12 and 13 DUAL: Sol Action - Used with all Dual Coil Solenoids OP/CL: Switch Action - Switches To Indicate Valve Fully Open & Fully Closed	
Three (3)	Automatic diaphragm valves for chemical injection isolation, with CPVC body and pneumatic actuator.	Chemline
Four (4)	Corporation stops (Injection quills) with integral check valve, 1” ball valve, 1/2” NPT inlet connection, and 1/2” NPT solution tube, CPVC.	Saf-T-Flow / EB Series
One (1)	**CIP Flow Control Valve** BAW,16,F1,CI,EPDN-EPDM,150B,DI-S2,AIS*TW-7-PC6,P201-FM-G BAW: Style - DeZURIK AWWA C504 3-72”; C516 78” and larger Rubber Seated Butterfly Valve 16: Size - 16 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing – EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06 (54" - 72", Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard (SP10) surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard (SP10) surface prep AIS: Option - USA Iron & Steel TW-7-PC6: Actuator Type - T-Series with Double Acting Pneumatic Cylinder Operator P201: Positioner - Electro-Pneumatic Positioner, VAC Model V200E, 4-20 mA Signal, NEMA 4X and IP66, Double/Single Acting, Arrow Indicator 4-20: Signal Range - 4-20 mA OPEN: Pos Action - Increasing Signal To Open F: Pos Accessory - 4-20mA Transmitter Feedback	DeZurik

QTY	DESCRIPTION	MANUFACTURER
	M: Pos Accessory - Feedback, Mechanical Switch (2 SPDT) G: Pos Accessory – Gages	
1 Lot	Miscellaneous manual ball valves for CIP service with stainless steel body, RPTFE seat, full port, and threaded connections.	Apollo / 76F-100-A
Four (4)	Pressure indicating gauge with diaphragm seal, on CIP pump suction and discharge.	Ashcroft
One (1)	Electromagnetic flowmeter with hard rubber, polyurethane and PTFE liner, 1.4435 (316L); Alloy C22, 2.4602 (UNS N06022); Tantalum electrodes and flexible engineering sensors with fixed or lap-joint process connections for monitoring the CIP recirculation line.	E+H / Promag W 400
One (1)	Temperature transmitter for CIP recirculation line.	Siemens
One (1)	General purpose low resistivity (GPLR) pH glass (0-14 pH) with SMART preamplifier (32’ cable) to measure the pH on the CIP recirculation line.	Rosemount / 3900-01-10
One (1)	Single channel transmitter for the pH sensor with 24 VDC power, 4 alarm relays and analog communication (0/4-20 mA current output).	Rosemount / 1056
One (1)	General purpose low resistivity (GPLR) pH glass (0-14 pH) with SMART preamplifier (32’ cable) to measure the pH on the CIP waste line to neutralization system.	Rosemount / 3900-01-10
One (1)	General purpose platinum ORP sensor with SMART preamplifier, (32’ cable) to measure the oxidation reduction potential on the CIP waste line to neutralization system.	Rosemount / 3900-01-12
One (1)	Shared dual channel transmitter for both the pH and ORP sensors with 24 VDC power, 4 alarm relays and analog communication (0/4-20 mA current output).	Rosemount / 1056

One (1) Lot of Clean-In-Place Tank Components including:

QTY	DESCRIPTION	MANUFACTURER
One (1)	Fiberglass Reinforced Plastic (FRP) Clean-In-Place Hot Water Tank (10,000 gallons) in accordance with the latest edition of ASME RTP-1.	Specified ASME RTP-1 Vendor
One (1)	Clean-In-Place Heater Flange Voltage: 480 Flange Wattage: 188,000 Watt Density: 48.7 B Dimension (Immersed element length): 63.6875 Number of Elements: 24 Elements Electrical Phase configuration: 3 Phase - Delta wiring Number of Circuits: 8 Flange Size: 8 Inch Flange Flange Class: 150 lb. Flange Material: 316 Stainless Steel Flange Sheath Material: Alloy 800 Sheath Passivation? Yes Process Sensor: Type K Thermocouple Hi-Limit Sensor: Type K Thermocouple Includes UL Non-haz Control Panel	Watlow PN: 2224-3127

QTY	DESCRIPTION	MANUFACTURER
One (1)	**CIP Tank Fill Valve** BAW,16,F1,CI,EPDN-EPDM,150B,DI-S2,AIS*TW-7-PC6,4V1108-SP-SEH90 BAW: Style - DeZURIK AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve 16: Size - 16 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing – EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06, Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard (SP10) surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard (SP10) surface prep AIS: Option - USA Iron & Steel TW-7-PC6: Actuator Type - T-Series with Double Acting Pneumatic Cylinder Operator 4V1108: Accessories - ASCO EF8344G44 Brass Body Solenoid; US Voltage 24VDC; TYPE 3,3S,4,4X,6,6P,7 & 9; 1/4" NPT; 125 Maximum Pressure Rating; Dual Coil SP: Accessories - (2) Speed Controls SEH90: Accessories - (2) Valve Position Indicating Switches; Mechanical; SPDT; 2 Conduit Connections; Enclosure Type 1,3,4,4X,5,6,7,9,12 and 13 DUAL: Sol Action - Used with all Dual Coil Solenoids OP/CL: Switch Action - Switches To Indicate Valve Fully Open & Fully Closed	DeZurik
One (1)	**CIP Tank Outlet Valve** BAW,18,F1,CI,EPDN-EPDM,150B,DI-S2,AIS*TW-7-PC8,4V1108-SP-SEH90 BAW: Style - DeZURIK AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve 18: Size - 18 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing - EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06 (54" - 72", Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard (SP10) surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard (SP10) surface prep AIS: Option - USA Iron & Steel	DeZurik

QTY	DESCRIPTION	MANUFACTURER
	TW-7-PC8: Actuator Type - T-Series with Double Acting Pneumatic Cylinder Operator 4V1108: Accessories - ASCO EF8344G44 Brass Body Solenoid; US Voltage 24VDC; TYPE 3,3S,4,4X,6,6P,7 & 9; 1/4" NPT; 125 Maximum Pressure Rating; Dual Coil SP: Accessories - (2) Speed Controls SEH90: Accessories - (2) Valve Position Indicating Switches; Mechanical; SPDT; 2 Conduit Connections; Enclosure Type 1,3,4,4X,5,6,7,9,12 and 13 DUAL: Sol Action - Used with all Dual Coil Solenoids OP/CL: Switch Action - Switches To Indicate Valve Fully Open & Fully Closed	
One (1)	**CIP Tank Drain Valve** BAW,18,F1,CI,EPDN-EPDM,150B,DI-S2,AIS*GS-6B-HD24 BAW: Style - DeZURIK AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve 18: Size - 18 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing – EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06 (54" - 72", Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard (SP10) surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard (SP10) surface prep AIS: Option - USA Iron & Steel GS-6B-HD24: Actuator Type - G-Series Worm Gear with Handwheel Operator	DeZurik
Two (2)	Point level switch with compact vibronic device and module housing concept, 316L and alloy wetted parts for monitoring CIP tank level.	E+H / Liquiphant FTL51B
One (1)	Level Transmitter for monitoring CIP tank level.	Siemens
One (1)	Temperature transmitter for CIP tank.	Siemens

7. Chemical Transfer System Equipment

QTY	DESCRIPTION	MANUFACTURER
1	**Cleaning chemical: 12.5% sodium hypochlorite transfer system** P2_0100_HYPO_PVC_DFBU_PT_LS: 1" PVC/Viton® Primary Backup Skid System Common Inlet / Common Outlet arrangement PP/PE skid for motor driven pumps (84"W x 33"D x 72"H) Allow space for future third pump and piping 1" PVC/Viton socket weld pipe and fittings (1) Wye strainer (1) 10,000ml PVC calibration column (2) Pressure transmitters w/ annular seal (3) Pressure relief valves (2) Ball check valves Lot of PVC/Viton vented ball valves Additional Items: (1) skid mounted control panel (per specification) Quantity: Two (2) Pump: DULCOflex DFBu Peristaltic Pump Flow: 674.6 lph / 178.2 gph Pressure: 8 BAR / 115 PSI Options Included: - speed 245 45 rpm - motor type 3 WD/CD TENV 230-460/3/60 1000:1 - hose material H Hypalon - hydraulic connection F PVDF NPT - base plate 4 base plate, PP - leakage detector R leak detector with full remote - Orientation R right (Standard) - VFD Control 0 Without VFD - special version H chemical version (Halar coated) - discharge pressure 4 115 PSI (max. hose) - approval 01 CE	ProMinent

QTY	DESCRIPTION	MANUFACTURER
1	**Cleaning chemical: 50% citric acid transfer system** P2_0100_CITRIC_PVC_DFBU_PT_LS 1" PVC/Viton® Primary Backup Skid System Common Inlet / Common Outlet arrangement PP/PE skid for motor driven pumps (72"W x 33"D x 72"H) 1" PVC/Viton socket weld pipe and fittings (1) Wye strainer (1) Suction side gauge w/seal (1) 10,000ml PVC calibration column (2) 1393mL Pulsation Dampener (2) Pressure gauge w/seal (2) Pressure relief valves (2) Ball check valves (1) Pressure transmitters w/ annular seal Lot of PVC/Viton ball valves Additional Items: (1) skid mounted control panel (per specification) Quantity: Two (2) Pump: DULCOflex DFBu Peristaltic Pump Flow: 539.8 lph / 142.6 gph Pressure: 8 BAR / 115 PSI Options Included: - speed 236 36 rpm - motor type 3 WD/CD TENV 230-460/3/60 1000:1 - hose material 0 Natural Rubber - hydraulic connection F PVDF NPT - base plate 4 base plate, PP - leakage detector R leak detector with full remote - Orientation R right (Standard) - VFD Control 0 Without VFD - special version H chemical version (Halar coated) - discharge pressure 4 115 PSI (max. hose) - approval 01 CE	ProMinent

QTY	DESCRIPTION	MANUFACTURER
1	**Cleaning chemical: 50% sulfuric acid transfer system** P2_0100_SULFURIC_CPVC_DFBU_PT_LS 1" CPVC/Viton® Primary Backup Skid System Common Inlet / Common Outlet arrangement PP/PE skid for motor driven pumps (72"W x 33"D x 72"H) 1" CPVC/Viton socket weld pipe and fittings (1) Wye strainer (1) Suction side gauge w/seal (1) 10,000ml CPVC/Glass calibration column (2) 1393mL Pulsation Dampener (2) Pressure gauge w/seal (2) Pressure relief valves (2) Ball check valves (1) Pressure transmitters w/ annular seal Lot of PVC/Viton ball valves Additional Items: (1) skid mounted control panel (per specification) Quantity: Two (2) Pump: DULCOflex DFBu Peristaltic Pump Flow: 404.7 lph / 106.9 gph Pressure: 8 BAR / 115 PSI Options Included: - speed 227 27 rpm - motor type 3 WD/CD TENV 230-460/3/60 1000:1 - hose material 0 Natural Rubber - hydraulic connection F PVDF NPT - base plate 4 base plate, PP - leakage detector R leak detector with full remote - Orientation R right (Standard) - VFD Control 0 Without VFD - special version H chemical version (Halar coated) - discharge pressure 4 115 PSI (max. hose) - approval 01 CE	ProMinent

QTY	DESCRIPTION	MANUFACTURER
1	**Neutralization chemical: 50% sodium hydroxide transfer system** P2_0100_CAUSTIC_PVC_DFBU_PT_LS 1" PVC/EPDM Primary Backup Skid System Common Inlet / Common Outlet arrangement PP/PE skid for motor driven pumps (72"W x 33"D x 72"H) 1" PVC/EPDM socket weld pipe and fittings (1) Wye strainer (1) Suction side gauge w/seal (1) 4,000ml PVC calibration column (2) 1393mL Pulsation Dampener (2) Pressure gauge w/seal (2) Pressure relief valves (2) Ball check valves (1) Pressure transmitters w/ annular seal Lot of PVC/EPDM ball valves Additional Items: (1) skid mounted control panel (per specification) Quantity: Two (2) Pump: DULCOflex DFBu Peristaltic Pump Flow: 269.9 lph / 71.3 gph Pressure: 8 BAR / 115 PSI Options Included: - speed 218 18 rpm - motor type 3 WD/CD TENV 230-460/3/60 1000:1 - hose material 0 Natural Rubber - hydraulic connection F PVDF NPT - base plate 4 base plate, PP - leakage detector R leak detector with full remote - Orientation R right (Standard) - VFD Control 0 Without VFD - special version H chemical version(Halar coated) - discharge pressure 4 115 PSI (max. hose) - approval 01 CE	ProMinent

QTY	DESCRIPTION	MANUFACTURER
1	**Neutralization chemical: 38% sodium bisulfite transfer system** P2_050_BISULF_PVC_DFBU_PT_LS 1/2" PVC/Viton Primary Backup Skid System Common Inlet / Common Outlet arrangement PP/PE skid for motor driven pumps (60"W x 34.5"D x 72"H) 1/2" PVC/Viton socket weld pipe and fittings (1) Wye strainer (1) Suction side gauge w/seal (1) 2,000ml PVC calibration column (2) 600mL Pulsation Dampener (2) Pressure gauge w/seal (2) Pressure relief valves (2) Ball check valves (1) Pressure transmitters w/ annular seal Lot of PVC/Viton ball valves Additional Items: (1) skid mounted control panel (per specification) Quantity: Two (2) Pump: DULCOflex DFBu Peristaltic Pump Flow: 119.2 lph / 31.5 gph Pressure: 8 BAR / 115 PSI Options Included: - speed 021 21 rpm - motor type 3 WD/CD TENV 230-460/3/60 1000:1 - hose material 0 Natural Rubber - hydraulic connection F PVDF NPT - base plate 4 base plate, PP - leakage detector R leak detector with full remote - Orientation R right (Standard) - VFD Control 0 Without VFD - special version H chemical version(Halar coated) - discharge pressure 4 115 PSI (max. hose) - approval 01 CE	ProMinent

8. Compressed Air System Equipment

QTY	DESCRIPTION	MANUFACTURER
One (1)	200-gallon vertical control air receiver, manufactured by Samuel Vessel Pressure Group. The receiver is ASME rated 200 psi and is supplied primed outside and powder coated inside for corrosion resistance.	Samuel Pressure Vessel Group
One (1)	2,560-gallon vertical process air receiver, manufactured by Samuel Vessel Pressure Group. The receiver is ASME rated 150 psi and is supplied primed outside and epoxy lined or powder coated inside for corrosion resistance.	Samuel Pressure Vessel Group
Three (3)	Actuated ball valves regulation and control of the compressed air system with stainless steel body, RPTFE seat, full port, and threaded connections. Actuator - Double Acting Pneumatic Actuator	Flow-Tek (Bray)

QTY	DESCRIPTION	MANUFACTURER
1 Lot	Miscellaneous manual ball valves for regulation and control of the compressed air system with brass body, RPTFE seat, full port, and threaded connections.	Flow-Tek (Bray)
One (1)	Swing check valves for control air receiver inlet with cast iron body, bronze mounted, single disc, bronze seat, stainless steel shaft and reinforced Teflon packing.	Val-Matic
Two (2)	Digital pressure transmitter(s) with capacitive sensor, ceramic membrane and modular transmitter, including die-cast aluminum and AISI 316L material housing for monitoring the control and process air receivers.	E+H / Cerabar S PMC71
1 Lot	Pressure indicating gauge(s) for monitoring the control and process air receiver and priming air.	Ashcroft
Three (3)	Control air and priming ejector pressure regulators.	SMC
1 Lot	Process air line pressure regulators.	Fisher (Emerson)
Four (4)	Pressure relief valves to protect the system from over pressurization, brass body with stainless steel ball.	Kingston
Three (3)	Pressure switches to monitor the control and process air lines.	Ashcroft

9. Air Scour Equipment

QTY	DESCRIPTION	MANUFACTURER
Two (2)	**RBS Series Tri-lobe Blowers** 5,933 SCFM, 5.0 psi diff press, 170.2 HP, 1,822 RPM (91% of Max) Blower rated to 10 psi maximum total differential pressure. Positive Displacement blower packages to include: - Gardner Denver RBS Series Tri-Lobe Blower, Oil-splash lubricated - Gardner Denver Blower/Silencer Base - Vibration Isolators - Inlet Filter/Silencer - Removable Discharge Silencer - V-Belt Drive with Guard - Gardner Denver Automatic Belt Tensioner with Indicator - 200 HP TEFC, NEMA Frame Motor, 460/3/60, 1.15 SF, Prem Efficient - Sound Attenuation Enclosure with Access Panels, and auxiliary motor driven Cooling Fan (1 ph, 115/230V) - Spring-Loaded Pressure Relief Valve - Discharge Flap Check Valve - Discharge Pressure Gauge - Filter Monitor Gauge - Air Discharge Temperature Gauge - RTD for Blower Discharge Temperature - AEGIS Grounding Ring mounted to motor. - AEON-PD-XD Lubricant for each unit Spare Parts: Each set includes 1 sets of V-Belts, 2 Inlet filter elements, 1 set of blower bearings, 2 sets of blower gaskets, AEON lubricant (enough for fill of 1 blower)	Gardner Denver IQ-RB155-5p/200 HP

QTY	DESCRIPTION	MANUFACTURER
Two (2)	**Blower Inlet Isolation Valve** BHP,18,L1,S2,TC,S2-S5A-FT-RT,AIS*MG-1216-HD16 BHP: Style - High Performance Butterfly Valve 18: Size - 18 Inch L1: End Connection - Lugged Drilling; ASME Class 150 S2: Body Material - 316 Stainless Steel TC: Packing - PTFE V-Flex; Temperature to 500° F. S2: Disc - 316 Stainless Steel S5A: Shaft - 17-4PH Stainless Steel FT: Bearing - Stainless Steel with PTFE Fabric Liner 2"-24"; 316 Stainless Steel with PTFE Fabric Liner 30"-48"; to 500° F. RT: Seat Seal - Reinforced PTFE/Titanium; Temperature to 500° F. AIS: Option - USA Iron & Steel MG-1216-HD16: Actuator Type - Manual Gear Handwheel; 16 In Dia	DeZurik
Two (2)	**Blower Discharge Isolation Valve** BHP,16,L1,S2,TC,S2-S5A-FT-RT,AIS*MG-1216-HD16 BHP: Style - High Performance Butterfly Valve 16: Size - 16 Inch L1: End Connection - Lugged Drilling; ASME Class 150 S2: Body Material - 316 Stainless Steel TC: Packing - PTFE V-Flex; Temperature to 500° F. S2: Disc - 316 Stainless Steel S5A: Shaft - 17-4PH Stainless Steel FT: Bearing - Stainless Steel with PTFE Fabric Liner 2"-24"; 316 Stainless Steel with PTFE Fabric Liner 30"-48"; to 500° F. RT: Seat Seal - Reinforced PTFE/Titanium; Temperature to 500° F. AIS: Option - USA Iron & Steel MG-1216-HD16: Actuator Type - Manual Gear Handwheel; 16 In Dia	DeZurik
1 Lot	Miscellaneous manual ball valves for regulation and control of the air scour system with brass body, RPTFE seat, full port, and threaded connections.	Flow-Tek (Bray)
One (1)	Thermal air mass flowmeter to monitor the blower discharge air line.	E+H
One (1)	Swing check valves for blower discharge with cast iron body, bronze mounted, single disc, bronze seat, stainless steel shaft and reinforced Teflon packing.	Val-Matic
One (1)	Digital pressure transmitter(s) with capacitive sensor, ceramic membrane and modular transmitter, including die-cast aluminum and AISI 316L material housing for blower common discharge line pressure.	E+H / Cerabar S PMC71
Two (2)	Pressure gauge(s) for blower discharge line pressure.	Ashcroft

10. Neutralization System Equipment

QTY	DESCRIPTION	MANUFACTURER / MODEL
Two (2)	**Neutralization Pump** ITT Goulds Model 3196 XLTi Size: 6x8-13/6V Capacity Rated 1,072.0 gpm @ 40.0 (Ft)	ITT Goulds Model 3196 XLTi Size: 6x8-13/6V

QTY	DESCRIPTION	MANUFACTURER / MODEL
	Materials Construction: 316SS Casing: 316SS St. Box: 316SS Impeller 316SS - Open Casing Gaskets Aramid Fiber with EDMP Rubber and Silicate Fabricated steel with SS drip pan to ANSI B73.1M 1991 D07088A Mechanical Seal: Flowserve, Flowserve, ISC2-PX, 5Z4T - (Cartridge-Single) Flanges: 150# Flat Faced Frame Features: Ductile iron bearing frame, Ductile iron frame adapter, Inpro VBXX-D Hybrid Bearing Isolators, Premium Severe Duty Thrust Bearings Goulds Blue standard painting Motor: TEFC, Premium Eff, Inverter duty 20.0 hp (14.9 KW) 3/60 Hz/460, 1200 RPM	
Two (2)	**Neutralization Pump Suction Isolation Valve** BAW,10,F1,CI,EPDN-EPDM,150B,DI-S2,AIS*GS-6B-HD8 BAW: Style - DeZURIK AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve 10: Size - 10 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing – EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06 54" - 72", Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum (non-stainless steel parts) of Blue DeZURIK Epoxy on Interior and Standard (SP10) surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard (SP10) surface prep AIS: Option - USA Iron & Steel GS-6B-HD8: Actuator Type - G-Series Worm Gear with Handwheel Operator	DeZurik
Two (2)	**Neutralization Pump Discharge Isolation Valve** BAW,8,F1,CI,EPDN-EPDM,150B,DI-S2,AIS*GS-6B-HD8 BAW: Style - DeZURIK AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve 8: Size - 8 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing - EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12	DeZurik

QTY	DESCRIPTION	MANUFACTURER / MODEL
	Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06, Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior and Standard (SP10) surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard (SP10) surface prep AIS: Option - USA Iron & Steel GS-6B-HD8: Actuator Type - G-Series Worm Gear with Handwheel Operator	
Two (2)	**Neutralization Waste Discharge and Recirculation Valves** BAW,8,F1,CI,EPDN-EPDM,150B,DI-S2,AIS*TW-5-PC4,4V1108-SP-SEH90 BAW: Style - DeZURIK AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve 8: Size - 8 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing - EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06, Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum of Blue DeZURIK Epoxy on Interior Standard (SP10) surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard (SP10) surface prep AIS: Option - USA Iron & Steel TW-5-PC4: Actuator Type - T-Series with Double Acting Pneumatic Cylinder Operator 4V1108: Accessories - ASCO EF8344G44 Brass Body Solenoid; US Voltage 24VDC; TYPE 3,3S,4,4X,6,6P,7 & 9; 1/4" NPT; 125 Maximum Pressure Rating; Dual Coil SP: Accessories - (2) Speed Controls SEH90: Accessories - (2) Valve Position Indicating Switches; Mechanical; SPDT; 2 Conduit Connections; Enclosure Type 1,3,4,4X,5,6,7,9,12 and 13 DUAL: Sol Action - Used with all Dual Coil Solenoids OP/CL: Switch Action - Switches To Indicate Valve Fully Open & Fully Closed	DeZurik
One (1)	Swing check valve for neutralization pump discharge with cast iron body, bronze mounted, single disc, bronze seat, stainless steel shaft and reinforced Teflon packing.	Val-Matic
Two (2)	Automatic diaphragm valves for chemical injection isolation, with CPVC body and pneumatic actuator.	Chemline
Two (2)	Corporation stops (Injection quills) with integral check valve, 1" ball valve, 1/2" NPT inlet connection, and 1/2" NPT solution tube, CPVC.	Saf-T-Flow / EB Series
One (1)	General purpose low resistivity (GPLR) pH glass (0-14 pH) with SMART preamplifier (32' cable) to measure the pH on the neutralization recirculation line.	Rosemount / 3900-01-10

QTY	DESCRIPTION	MANUFACTURER / MODEL
One (1)	Single channel transmitter for the pH sensor with 24 VDC power, 4 alarm relays and analog communication (0/4-20 mA current output).	Rosemount / 1056
One (1)	General purpose platinum ORP sensor with SMART preamplifier, (32' cable) to measure the oxidation reduction potential on the neutralization recirculation line.	Rosemount / 3900-01-12
One (1)	Single channel transmitter for the ORP sensor with 24 VDC power, 4 alarm relays and analog communication (0/4-20 mA current output).	Rosemount / 1056
Four (4)	Pressure indicating gauge with diaphragm seal, on neutralization pump suction and discharge.	Ashcroft
One (1)	Flow switch	Flowline

One (1) Lot of Neutralization Tank Components including:

QTY	DESCRIPTION	MANUFACTURER / MODEL
One (1)	Fiberglass Reinforced Plastic (FRP) Neutralization Tank (13,500 gallons) in accordance with the latest edition of ASME RTP-1.	Specified ASME RTP-1 Vendor
One (1)	**Neutralization Tank Drain Valve** BAW,12,F1,CI,EPDN-EPDM,150B,DI-S2,AIS*GS-6B-HD12 BAW: Style - DeZURIK AWWA C504 3-72"; C516 78" and larger Rubber Seated Butterfly Valve 12: Size - 12 Inch F1: End Connection - Flanged, Drilled to ASME B16.1 Class 125/150 CI: Body Material - Cast Iron, ASTM A126 Class B EPDN: Packing - EPDM, Self-Adjusting Multiple V-Ring; -20 to 290°F EPDM: Seat Material - EPDM; -20 to 290°F 150B: Service Class - AWWA Class 150B DI: Disc - Ductile Iron, ASTM A536 Grade 65-45-12 Class 150B/250B, 28" - 72" Class 25A, 75B & 150B & 28" - 48" and Grade 80-55-06, Type 316 Stainless Steel Seating Edge =ASTM A276, 24" and larger S2: Shaft - 316 Stainless Steel, ASTM A276 Coating or Paint: S30SC0 - 8 mils minimum (of Blue DeZURIK Epoxy on Interior and Standard (SP10) surface prep AND Blue DeZURIK Epoxy, and on Exterior with Standard (SP10) surface prep AIS: Option - USA Iron & Steel GS-6B-HD12: Actuator Type - G-Series Worm Gear with Handwheel Operator	DeZurik
Two (2)	Float level switches for monitoring neutralization tank level.	Gems
One (1)	Level Transmitter for monitoring neutralization tank level.	E&H
Four (4)	Stainless steel mixing eductors used to improve mixing efficiency.	Bex

11. CSII Custom Tool Package

QUANTITY	DESCRIPTION
One (1)	Spreader bar to hoist CSII MemRacks for installation and removal.
One (1)	MemRACK removal tool
One (1)	MemRACK lock level tool
One (1)	L20 Module pin repair vessel
One (1)	MEMCOR Standard CSII tool kit including: module collar, outer sleeve, outer sleeve support, rack height setting and sockets.

12. Control System

QUANTITY	DESCRIPTION
1	**Master Control Panel** Allen Bradley CompactLogix PLC, PanelView Plus 1500 HMI and NEMA Type 12, painted-mild steel construction, free standing enclosure. Please find preliminary bill of material below:

SR. NO.	PART NO.	PART DESCRIPTION	MAKE	QTY
1	5069-L330ER	CompactLogix 5380 Controller, 3MB, 31 I/Os, 50 nodes, Standard	ALLEN-BRADLEY CO	1
2	5069-RTB64-SCREW	5069 Compact I/O Power terminal RTB kit	ALLEN-BRADLEY CO	1
3	5069-IB16	5069 Compact I/O 16 Channel 24VDC Sink Input Module	ALLEN-BRADLEY CO	2
4	5069-RTB18-SCREW	5069 Compact I/O 18 pins Screw type terminal block kit	ALLEN-BRADLEY CO	5
5	5069-OB16	5069 Compact I/O16 Channel 24VDC Output Module	ALLEN-BRADLEY CO	1
6	5069-IF8	5069 Compact I/O 8 Channel Voltage/Current Analog Input Module	ALLEN-BRADLEY CO	2
7	1783-BMS20CA	Allen-Bradley 1783-BMS20CA Stratix 5700 Switch, Managed,	ALLEN-BRADLEY CO	1
8	1783-BMS20CGP	Ethernet, 16 Fast Ethernet Ports, 2 Fast Combo Ports, 2 SFP	ALLEN-BRADLEY CO	2
9	2711P-T15C22D9P	MONITOR, HMI PV+7 1500 24VDC 15" TSC;	ALLEN-BRADLEY CO	1
10	700-HB32A1	RLY, 120 VAC Coil 10 Amp 2PDT	ALLEN-BRADLEY CO	As required
11	700-HF32Z24-4	RLY, 24 VDC Coil 10 Amp 2PDT	ALLEN-BRADLEY CO	As required
12	2907918	Surge Arrester	PHOENIX CONTACT INC	1
13	2866323	POWER SUPPLY, QUINT, O/P 24VDC, 10A	PHOENIX CONTACT INC	1
14	2904599	PWR SUPLY, QUINT4 1AC 24VDC 3.8A CLS2	PHOENIX CONTACT INC	2
15	2967060	RLY, 24VDC COIL, 15A DPDT	PHOENIX CONTACT INC	
16	800FM-MT44	SWITCH,PBTN RED EMERG STOP 22 MM;	ALLEN-BRADLEY CO	1
17	800F-X01	SWITCH,CTRL CONT BLC 22MM 1 NC PLSTC;	ALLEN-BRADLEY CO	1
18		WIRE WAY, DIN RAIL, WIRE, FUSES, MISC		1
19		Circuit breaker	SIEMENS/equivalent	1 Set
20	A726016ULP	ENCLOSURE,ELECT 72"HX60"WX16"D TYPE 12	HOFFMAN - PENTAIR INC	1
21	A72P60	Enclosure, fits 72x60, White, Steel	HOFFMAN - PENTAIR INC	1

<table>
<tr><th>QUANTITY</th><th>DESCRIPTION</th></tr>
<tr><td>Five (5)</td><td>CSII Remote I/O Panels
Allen Bradley Flex IO Modules with NEMA Type 4X 316 stainless steel enclosure.
<table>
<tr><th>SR. NO.</th><th>PART NO.</th><th>PART DESCRIPTION</th><th>MAKE</th><th>QTY</th></tr>
<tr><td>1</td><td>1794-AENT</td><td>FLEX, COM ADAPTER E-NET/IP</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>2</td><td>1794-IB16</td><td>FLEX, DI 16PT 24VDC SINK</td><td>ALLEN-BRADLEY CO</td><td>4</td></tr>
<tr><td>3</td><td>1794-OB16</td><td>FLEX, DO 16PT RELAY</td><td>ALLEN-BRADLEY CO</td><td>2</td></tr>
<tr><td>4</td><td>1794-IE8</td><td>FLEX AI 8 PT</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>5</td><td>1794-OE4</td><td>FLEX AO 4 PT</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>6</td><td>1794-CE3</td><td>FLEX, I/O RACK EXTENDER CABLE 3 FT</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>7</td><td>1794-TB3</td><td>FLEX TERMINAL BASE, 3 LEVEL</td><td>ALLEN-BRADLEY CO</td><td>8</td></tr>
<tr><td>8</td><td>A36H3016SS6LP</td><td>Wallmount Hinged with NEMA Clamps Type 4X, 36x30x16, SS Type 31</td><td>HOFFMAN</td><td>1</td></tr>
<tr><td>9</td><td>A36P30</td><td>PANEL BACK 36x30</td><td>HOFFMAN</td><td>1</td></tr>
<tr><td>10</td><td></td><td>Circuit breakers</td><td>Siemenst/standard</td><td>As required</td></tr>
<tr><td>11</td><td></td><td>Terminals</td><td>Phoenix contact/standard</td><td>As required</td></tr>
<tr><td>12</td><td></td><td>Wireways</td><td>Phoenix contact/standard</td><td>As required</td></tr>
<tr><td>13</td><td></td><td>Power supply</td><td>Phoenix contact/standard</td><td>As required</td></tr>
<tr><td>14</td><td></td><td>Cabling</td><td>Lapp/standard</td><td>As required</td></tr>
</table></td></tr>
<tr><td>1</td><td>Clean in Place Remote I/O Panel
Allen Bradley Flex IO Modules with NEMA Type 4X 316 stainless steel enclosure.
<table>
<tr><th>SR. NO.</th><th>PART NO.</th><th>PART DESCRIPTION</th><th>MAKE</th><th>QTY</th></tr>
<tr><td colspan="5">CSII CIP SKID</td></tr>
<tr><td>1</td><td>1794-AENT</td><td>FLEX, COM ADAPTER E-NET/IP</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>2</td><td>1794-IB16</td><td>FLEX, DI 16PT 24VDC SINK</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>3</td><td>1794-OB16</td><td>FLEX, DO 16PT RELAY</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>4</td><td>1794-IE8</td><td>FLEX AI 8 PT</td><td>ALLEN-BRADLEY CO</td><td>2</td></tr>
<tr><td>5</td><td>1794-OE4</td><td>FLEX AO 4 PT</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>6</td><td>1794-TB3</td><td>FLEX TERMINAL BASE, 3 LEVEL</td><td>ALLEN-BRADLEY CO</td><td>5</td></tr>
<tr><td colspan="5">CSII CIP REMOTE IO</td></tr>
<tr><td>1</td><td>1794-AENT</td><td>FLEX, COM ADAPTER E-NET/IP</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>2</td><td>1794-IB16</td><td>FLEX, DI 16PT 24VDC SINK</td><td>ALLEN-BRADLEY CO</td><td>2</td></tr>
<tr><td>3</td><td>1794-OB16</td><td>FLEX, DO 16PT RELAY</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>4</td><td>1794-TB3</td><td>FLEX TERMINAL BASE, 3 LEVEL</td><td>ALLEN-BRADLEY CO</td><td>3</td></tr>
<tr><td colspan="5">CSII AIR SKID</td></tr>
<tr><td>1</td><td>1794-AENT</td><td>FLEX, COM ADAPTER E-NET/IP</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>2</td><td>1794-IB16</td><td>FLEX, DI 16PT 24VDC SINK</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>3</td><td>1794-OB16</td><td>FLEX, DO 16PT RELAY</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>4</td><td>1794-IE8</td><td>FLEX AI 8 PT</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>5</td><td>1794-TB3</td><td>FLEX TERMINAL BASE, 3 LEVEL</td><td>ALLEN-BRADLEY CO</td><td>3</td></tr>
<tr><td colspan="5">ENCLOSURE & ACCESSORIES</td></tr>
<tr><td>1</td><td>A42H3010SS6LP</td><td>Wallmount Hinged with NEMA Clamps Type 4X, 42x30x10, SS Type 316</td><td>HOFFMAN</td><td>1</td></tr>
<tr><td>2</td><td>A42P30</td><td>PANEL BACK 42x30</td><td>HOFFMAN</td><td>1</td></tr>
<tr><td>3</td><td></td><td>Circuit breakers</td><td>Siemenst/standard</td><td>As required</td></tr>
<tr><td>4</td><td></td><td>Terminals</td><td>Phoenix contact/standard</td><td>As required</td></tr>
<tr><td>5</td><td></td><td>Wireways</td><td>Phoenix contact/standard</td><td>As required</td></tr>
<tr><td>6</td><td></td><td>Power supply</td><td>Phoenix contact/standard</td><td>As required</td></tr>
<tr><td>7</td><td></td><td>Cabling</td><td>Lapp/standard</td><td>As required</td></tr>
</table></td></tr>
</table>

QUANTITY	DESCRIPTION
1	**Neutralization Remote I/O Panel** Allen Bradley Flex IO Modules with NEMA Type 4X 316 stainless steel enclosure.

SR. NO.	PART NO.	PART DESCRIPTION	MAKE	QTY
1	1794-AENT	FLEX, COM ADAPTER E-NET/IP	ALLEN-BRADLEY CO	1
2	1794-IB16	FLEX, DI 16PT 24VDC SINK	ALLEN-BRADLEY CO	1
3	1794-OB16	FLEX, DO 16PT RELAY	ALLEN-BRADLEY CO	1
4	1794-IE8	FLEX AI 8 PT	ALLEN-BRADLEY CO	1
5	1794-TB3	FLEX TERMINAL BASE, 3 LEVEL	ALLEN-BRADLEY CO	3
6	2856812	SUPPRESSOR SURGE 120VAC 1PH	PHOENIX	1
7	3SB3202-2KA11	SWITCH SELECTOR, 2 POSITION 1N.O.	SIEMENS	2
8	3SB3210-2DA11	SWITCH SELECTOR, 3 POSITION 1N.O.	SIEMENS	1
9	3RV1 928-1H	TERMINAL BLOCK, CONTACTOR	SIEMENS	1
10	3RH1921-1CA10	AUX CONTACT BLOCK 1 N.O.	SIEMENS	1
11	3RA1125-0DA23-1AK6	MOTOR STARTER COMBINATION .22-.32A	SIEMENS	1
12	1056-01-10-24-32-68	ANALYZER, CHLORINE/PH 1056 Dual Channel Transmitter,	ROSEMOUNT	1
13	2868664	POWER SUPPLY input: 1-phase 120v AC, output: 24 V DC/4.2 A	PHOENIX	1
14	3SB3201-1HA20	PUSHBUTTON EMERGENCY STOP 22.5MM	SIEMENS	1
15	3SB3941-0AD	LEGEND PLATE E-STOP 80MM DIA	SIEMENS	1
16	PT061150005LS	Panel Tran Zone Power Centers - Single Phase, 480 - 120/240V, 5kVA	ACME/EQUIVALENT	1
17	PL112707	Primary Fuse Kit	ACME/EQUIVALENT	1
18	2966184	Relay with L 1 SPST, input voltage 24 V AC/DC	PHOENIX	3
19		WIRE WAY, DIN RAIL, WIRE, FUSES, MISC		1
20	A42H3010SS6LP	Wallmount Hinged with NEMA Clamps Type 4X, 42x30x10, SS Type 316	HOFFMAN	1
24	A42P30	PANEL BACK 42x30	HOFFMAN	1

13. Spare Parts

QUANTITY	DESCRIPTION
1 Lot	<u>CSII Membrane System Spares</u> CSII Spares Module Accessories Kit Including: Spare O-Rings, Clips, Collar, and CSII Center Tube. Five (5) CSII Spares Rack Accessories Kit Including: Spare O-Rings, Clips, Air Droppers, Screws and Rack Manifold. 1 Lot CSII Spare Pins: Nylon Pin Kits for Repairing Modules.
1 Lot	<u>Filtrate Pumps Spares</u> One (1) Spare Mechanical Seal (Mech Seal, Chesterton, NSF) KIT, PUMP REPAIR M PN: R180MPRK Includes: One (1) complete set of gasket and O-rings One (1) set of bearings
1 Lot	<u>Backwash Pumps Spares</u> One (1) spare mechanical (Mech Seal, Flowserve, ISC2) KIT, PUMP REPAIR M PN: R180XLPRK including: One (1) complete set of gasket and O-rings One (1) set of bearings

QUANTITY	DESCRIPTION
1 Lot	<u>CIP Pumps Spares</u> One (1) spare mechanical seal (Mech Seal, Flowserve, ISC2) KIT,PUMP REPAIR M R180MPRK One (1) complete set of gasket and O-rings One (1) set of bearings
1 Lot	<u>Neutralization Pumps Spares</u> One (1) spare mechanical seal (Mech Seal, Flowserve, ISC2) KIT,REPAIR (OIL) XLTI & I17 PN: R196XLRKOZ One (1) complete set of gasket and O-rings One (1) set of bearings
Three (3)	<u>Strainer Spares</u> Spare strainer baskets (one per strainer), complete, including gaskets, for immediate replacement.
Two (2)	<u>Blower Spares</u> Two Sets of Each set includes one (1) set of V-Belts, two (2) Inlet filter elements, one (1) set of blower bearings, 2 sets of blower gaskets, AEON lubricant (enough for fill of 1 blower).
1 Lot	<u>DeZurik Valve Spare Parts</u> Spare Pneumatic Actuator (Actuator only) TW-5-PC4 Actuator TW-7-PC6 Actuator TW-7-PC8 Actuator GS-12-PC10 Actuator PR-R2A-PC8 Actuator Seat Repair Kits (Seats are not field replaceable on the BAW valves 20” and below sizes and the 24” and larger are epoxy retained seats.) 16” BHP Seat Repair Kit 18” BHP Seat Repair Kit Pneumatic Actuator Cylinder Repair Seal Kit TW-5-PC4 Pneumatic Actuator Cylinder Repair Seal Kit TW-7-PC6 Pneumatic Actuator Cylinder Repair Seal Kit TW-7-PC8 Pneumatic Actuator Cylinder Repair Seal Kit GS-12-PC10 Pneumatic Actuator Cylinder Repair Seal Kit PR-R2A-PC8 Pneumatic Actuator Cylinder Repair Seal Kit
1 Lot	<u>Hach Turbidimeter Spares</u> Four wiper blades, calibration and maintenance kits, 1-year calibration solution and 1-year replacement cartridges

<table>
<tr><th>QUANTITY</th><th>DESCRIPTION</th></tr>
<tr><td>1 Lot</td><td><u>Prominent Dosing Pump Spares</u>

(2) Rotor/Roller assy (DFBu 016/019)
(8) Rotor/Roller assy (DFBu 022)
(8) DFBa 022 Hose HYPALON
(4) DFBa 022 Hose NR
(4) DFBa 022 Hose EPDM
(4) DFBa 016 Hose / DFYa HYPALON
(5) DULCOflex Silicon-grease, 8.0 oz. (1 per skid)</td></tr>
<tr><td>2</td><td><u>Pressure Gauge Spares</u>
Ashcroft - Pressure indicating gauge.</td></tr>
<tr><td>2</td><td><u>Pressure Relief Spares</u>

Kingston - Pressure relief valves to protect the system from over pressurization, brass body with stainless steel ball.</td></tr>
<tr><td>1 Lot</td><td><u>Instrument Spares</u>

1 Level Switch, Fork E+H Liquiphant FTL51B
1 Pressure Transmitter E+H Cerabar S PMC71
1 pH Sensor Rosemount Model #3900-01-10
1 ORP Sensor Rosemount Model #3900-01-12
1 Transmitter Rosemount 1056-02-22-38-AN-UL
1 Electromagnetic Flow Sensor E+H Promag W 400, 5W4C3F, DN350 14"
1 Electromagnetic Flow Sensor E+H Promag W 400, 5W4C4H, DN400 16”
1 Electromagnetic Flow Sensor E+H Promag W 400, 5W4C5H, DN500 20"</td></tr>
<tr><td>1 Lot</td><td><u>Controls Spare Parts</u>

<table>
<tr><th>SR. NO.</th><th>PART NO.</th><th>PART DESCRIPTION</th><th>MAKE</th><th>QTY</th></tr>
<tr><td>1</td><td>5069-L330ER</td><td>CompactLogix 5380 Controller, 3MB, 31 I/Os, 50 nodes, Standard</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>2</td><td>5069-IB16</td><td>5069 Compact I/O 16 Channel 24VDC Sink Input Module</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>3</td><td>5069-OB16</td><td>5069 Compact I/O16 Channel 24VDC Output Module</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>4</td><td>5069-IF8</td><td>5069 Compact I/O 8 Channel Voltage/Current Analog Input Module</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>5</td><td>1783-BMS20CGP</td><td>Ethernet, 16 Fast Ethernet Ports, 2 Fast Combo Ports, 2 SFP</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>11</td><td>1794-AENT</td><td>FLEX, COM ADAPTER E-NET/IP</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>12</td><td>1794-IB16</td><td>FLEX, DI 16PT 24VDC SINK</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>13</td><td>1794-OB16</td><td>FLEX, DO 16PT RELAY</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>14</td><td>1794-IE8</td><td>FLEX AI 8 PT</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>15</td><td>1794-OE4</td><td>FLEX AO 4 PT</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
<tr><td>16</td><td>1794-TB3</td><td>FLEX TERMINAL BASE, 3 LEVEL</td><td>ALLEN-BRADLEY CO</td><td>1</td></tr>
</table>
</td></tr>
</table>

13.2 Manufacturer's Engineering Support and Services

The entire execution process, from design to start-up, will be supported by DuPont's experienced engineering team and a Project Management Professional® (PMP) certified project manager.

The following tables details the personal support your MEMCOR CSII project will receive:

Engineering Support

QUANTITY	DESCRIPTION
One (1) Electronic PDF	MEMCOR CPII system submittal per Section 01300 including: The Initial Shop Drawing Submittal including Process and Instrumentation Diagrams (P&IDs), Membrane Cassette/Rack drawings, Electrical One-Line Diagrams and Footprint dimensional drawings of ancillary equipment. The Primary and Secondary Shop Drawing Submittals in accordance with the Specification Schedules shown in Tables 1 and 2 of Section 01300 (as applicable). The remaining drawings listed in Section 00030, Attachment A Contract Time shall be submitted as part of the Primary Shop Drawings submittal.
One (1) Electronic PDF and Six (6) Copies	Operation and maintenance manuals are included. Manuals will conform to Section 01730 Installation, Operation and Maintenance Manuals. This shall include detailed, project-specific manufacturer drawings and cut sheets for major equipment, valves, and instruments. No drawings, except those used internally by consultant/customer, are to be reproduced without the expressed, written permission of DuPont.

Pilot Facility Support

QUANTITY	DESCRIPTION
Five (5) Days with One (1) trips	**Start-Up and Commissioning of Pilot** Start-up support of pilot unit to ensure proper installation and setup prior to units being operated by owner. Includes guidance to owners' operators on pilot operations.
Nine (9) Days with Three (3) trips	**Pilot Technical Support** Technical support with remote troubleshooting of the pilot plant operation as required during the pilot testing program for troubleshooting after start-up and commissioning.
Five (5) Days with One (1) trips	**Decommissioning Technical Support** Decommissioning and removal of all pilot related facilities and equipment.

Manufacturer's Field Service Support

QUANTITY	DESCRIPTION
Fifteen (15) Days Three (3) Trips	**Installation of Membrane Equipment Support** DuPont shall provide an on-site representative during installation of the Equipment. In addition, DuPont shall train the Contractor on details of the installation of the MFSS's Equipment. DuPont shall arrange to provide services of manufacturer's authorized representatives to inspect the completed installations of the following Equipment: 1. Complete membrane filtration system and process trains, including: a. Membrane Trains including cassettes or racks and associated support frames, manifolds and headers, electrical and instrumentation panels, instrumentation and controls and other appurtenances as specified in Section 11900. b. Pumps (permeate pumps, backpulse pumps, backwash waste pumps, Clean-in-Place (CIP) pumps, others). c. Strainers, strainer backwash pumps, and appurtenances. d. Air Scour Blowers and appurtenances. e. Compressed Air Receivers and appurtenances. f. Membrane CIP Tank(s), heater(s) and appurtenances g. Neutralization System Tanks, pumps, appurtenances. h. Membrane CIP Chemical Metering Pumps and appurtenance. 2. Piping, valves and fittings, in MFSS's scope as specified in Section 11900. 3. Pumps and motors for pumps supplied by the MFSS. 4. Process Control System and Instrumentation for the Membrane Filtration system. a. Process Logic Controllers for the membrane Equipment; b. Human Machine Interface for membrane Equipment c. Electrical control panels for the membrane Equipment d. Field mounted instrumentation in the Supplier scope e. Refer to Section 13300 for field commissioning testing requirements. After the installation is complete, the MFSS's on-site representative and the City shall jointly perform a pre-commissioning inspection of the system as specified in Section 01620 Installation of Membrane Equipment.

QUANTITY	DESCRIPTION
Sixty (60) Days Five (5) Trips	**Commissioning of Membrane Equipment Support** Dupont shall provide personnel to serve as the on-site representative during commissioning of equipment. DuPont shall provide instruction and supervision to properly commission the equipment and place it into operation. DuPont shall provide services of manufacturer's representatives to oversee the Commissioning of the following Equipment: 1. Complete membrane filtration system and process trains, including: a. Membrane filtration process trains as specified in Section 11900; b. Membrane integrity testing and monitoring system; c. Compressed air systems; d. Air scour blowers; e. Backpulse water system; f. Clean-in-Place (CIP) equipment, including CIP tanks, heater and CIP chemical metering pumps; g. Neutralization system equipment, including tank and pumps; and h. Backwash drain pumps. 2. Piping, valves and fittings 3. Pumps and motors supplied by DuPont 4. Automatic self-backwashing inline strainers and backwash pumps. 5. Process Control System and Instrumentation a. Process Logic Controllers for the membrane Equipment; b. Operator Interface Terminal (OIT) in the form of a PC for membrane Equipment. c. Electrical control panels for the membrane Equipment d. Field mounted instrumentation in DuPont's scope of supply e. Field commissioning testing 6. Miscellaneous equipment and appurtenances that are provided by Dupont In addition to completing commissioning activities as defined in Section 01660 Commissioning of Membrane Equipment.

<table>
<tr><th>QUANTITY</th><th>DESCRIPTION</th></tr>
<tr><td>Thirteen (13) Days
Three (3) Trips</td><td>Demonstration Testing Period

DuPont shall be present onsite for Train one through five demonstration testing. DuPont will provide the name and phone number of the on-site representative, who will be available by phone to provide assistance whenever the representative is not on-site, and, if required, by the City or Contractor.</td></tr>
<tr><td>Up to 40 Hours</td><td>Overall Monitoring Testing Support

The overall monitoring test shall be performed after the City receives approval from the TCEQ will provide as needed technical support and assist the city with monthly operation report.</td></tr>
<tr><td>Thirteen (13) Days
Three (3) Trips</td><td>Equipment Operation and Maintenance Training

DuPont shall provide the services of factory-trained specialists to train the City’s Personnel in the recommended operation and the preventive maintenance procedures for all Equipment provided by the Procurement Agreement as specified in Section 01715 Equipment Operation and Maintenance Training. Training will include; equipment description, field instrumentation, control panels, detailed component description, preventive maintenance and troubleshooting and be a combination of hands on and classroom training.

The Training shall be provided as follows as a minimum:
<table>
<tr><th>Level of Training</th><th>Specification</th><th>Training (8-hours days)</th></tr>
<tr><td>Membrane System</td><td>11900</td><td>8 days Total: Operations, Maintenance, and Instrumentation and Controls</td></tr>
<tr><td>*Component Equipment</td><td></td><td></td></tr>
<tr><td>Horizontal End Suction Centrifugal Pumps</td><td>11211</td><td>0.5</td></tr>
<tr><td>Chemical Metering Systems</td><td>11241</td><td>0.5</td></tr>
<tr><td>Submersible Centrifugal Pumps</td><td>11312</td><td>0.5</td></tr>
<tr><td>Automatic Self-Cleaning Strainer</td><td>11337</td><td>0.5</td></tr>
<tr><td>Compressed Air Receivers</td><td>11370</td><td>0.5</td></tr>
<tr><td>Positive Displacement Blowers</td><td>11372</td><td>0.5</td></tr>
<tr><td>Other equipment, valves, and devices provided by MFSS</td><td></td><td>2</td></tr>
</table></td></tr>
</table>

TWO YEAR POST-COMMISSIONING SERVICE PLAN

DuPont would like to offer the City of Pflugerville a two-year service plan **at no additional cost to the city.** This will enable the plant operators to get hands on support by a field technician specialized in MEMCOR products at regular intervals after the plant has started up. This will ensure a successful plant for both the City and DuPont.

Find below a description of the comprehensive service plan developed specifically for Pflugerville Texas:

SCOPE	DESCRIPTION
DuPont Service Technician Site Visits	Semi-Annual scheduled service visits with a minimum duration per visit of three (3) Days. Service can be coordinated during cleaning procedures or typical maintenance.
Maintenance Reports	Documentation of maintenance activities performed during the site visits.
24/7 Phone Support	We offer 1-800-MEMCOR4. This is available to all customers of ours, regardless if a service contract is in place.

Scheduled Service Visits

The intent of these site visits will be to perform an in-depth analysis of the Ultrafiltration system performance and operations. Our field service or process engineers will also examine the following while onsite:

- Pretreatment system Condition & Performance (shall require site support)
- Membrane System Operations & Performance
- Membrane Cleaning Process Operations & Performance
- Inspection of membranes after CIP and/or Maintenance Wash while on site.
- Review of Operating Parameters While Onsite
- Troubleshooting and Routine Maintenance
- Supplemental training of staff.

Maintenance Reports

Following each service visit, a representative would submit a report documenting activities and findings to the Owner. This report would include a summary of the actions performed by DuPont staff at the plant during the site visit. Additionally, this report will denote any recommendations to the owner based on the findings during the visit.

24/7 Phone Support

Every MEMCOR customer has access to the 24/7 service line 1-800-MEMCOR4, regardless if an additional service contract is in place. This hotline provides access to an on-call MEMCOR service engineer after typical business hours. During typical business hours, the City of Pflugerville would have telephone access to the MEMCOR field service and process engineering staff at no additional charge.

13.3 Equipment and Services Provided by Others

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

- Unloading, unpacking, storage (according to DuPont's recommendation), installation, assembly and field erection of the MEMCOR membranes.
- Civil works and any and all building modifications or construction to house the MEMCOR membrane filtration system equipment including all concrete work related with construction, grouting of equipment and else as applicable.
- Direct coagulation dosing system including supply of required chemicals. Please consult DuPont to approve of selection of coagulant prior to startup.
- Engineering services other than listed in the MEMCOR scope above including structural, foundation design, design of any civil structures, and hydraulic design of systems.
- Plant pipework and supports including detailed design of interconnecting pipework.
- Appropriate receiving system for backwash waste such as a sewer or backwash holding tank.
- Air Compressors as specified in the procurement documents.
- Platforms; Handrails; Steps; Overhead crane for MemRack removal
- Chemical transfer system, along with the supply and storage of all chemicals required for MEMCOR membrane filtration system cleaning, maintenance, and/or operation.
- Supply and programing of control panels or supervisory control and data acquisition (SCADA) system.
- Supply and installation of all VFDs, motor control centers, and disconnects.
- Supply and installation of all control wiring, power cabling including cabling tray, conduits, fittings and supports as necessary. Including building power, lighting, main disconnect, power distribution.
- PLC/HMI & SCADA software development.
- Project specific drawings and documentation except as defined in this offer.
- Pre-commissioning, Commissioning and Performance Testing
- Overall system commissioning management and site supervision of installation and supporting tradesman.
- Flushing of all piping and tanks and verification of removal of all residual debris from construction.
- Water sampling and laboratory testing.
- Local approvals and other requirements.
- All bonds including payment and performance bonds.
- Any equipment, valves, Instrumentation or spare parts not specifically listed in the MEMCOR scope herein.

17 DBE Compliance & Good Faith Efforts

17.1 Ad Placement for DBE Vendors

Austin American-Statesman

DuPont placed a print and online Legal Advertisement in the **Austin American-Statesman** on November 18, 2021.

A copy of the receipt, the ad proofs as they appeared online and in print, and the newspaper's affidavit are available below.

Statesman MEDIA

Austin American-Statesman austin360 ¡ahora sí!

ADVERTISING INVOICE

BILLED ACCOUNT NUMBER	BILLING DATE	TOTAL AMOUNT DUE	STATEMENT #
107648	11/18/2021	$0.00	
BILLING PERIOD	**TERMS OF PAYMENT**		**PAGE #**
11/18/2021	Upon Receipt		1 of 1
ADVERTISER CLIENT #	**ADVERTISER/CLIENT NAME**		
107648	DUPONT DE NEMOURS, INC. JOHN REILLY		

DUPONT DE NEMOURS, INC. JOHN REILLY
455 FOREST STREET
MARLBOROUGH, MA 01752

For questions concerning this bill call 866-470-7133, Option 2
If paid, please disregard. Thank You

Start/Stop	Newspaper Reference	Product	Description - Other Comments/Charges	Ad Size Billed Units	Times Run	Gross Amount	Net Amount
11/18/2021	P334767		Prepay Order #0000671300- CC #0917				$(545.05)
11/18/2021	I00671300-11182021	Austin American-Statesman	An Equal Opportunity Affirmative Action Employer To: DBE/MBE/WBE and all potential subcontractors This contract is subject to the Environmental Protection Agenc Legals Page C|11	1 x 55 L 55	1	$545.05	$545.05
11/18/2021		**Total Amount Due**					**$0.00**

PLEASE DETACH AND RETURN LOWER PORTION WITH YOUR REMITTANCE

PAYMENT COUPON

STATEMENT #	BILLING DATE	TERMS OF PAYMENT	ADVERTISER CLIENT #	ADVERTISER/CLIENT NAME
	11/18/2021	Upon Receipt	107648	DUPONT DE NEMOURS, INC. JOHN REILLY

Please send your payment to:

AAS Remittance Address
GateHouse Austin - Advertising
Dept. 0661
PO Box 120661
Dallas, TX 75312-0661

107648
DUPONT DE NEMOURS, INC. JOHN REILLY
455 FOREST STREET
MARLBOROUGH, MA 01752

TOTAL AMOUNT	AMOUNT ENCLOSED
$0.00	

Austin American-Statesman
statesman.com

PROOF OF PUBLICATION

STATE OF TEXAS

PUBLIC NOTICE

Before the undersigned authority personally appeared James Mickler, who on oath says that he/she is a Legal Advertising Agent of the Austin American-Statesman, a daily published newspaper that is generally circulated in Bastrop, Bell, Blanco, Burnet, Caldwell, Comal, Coryell, Fayette, Gillespie, Guadalupe, Hays, Kerr, Lampasas, Lee, Llano, Milam, Travis, and Williamson Counties, and State of Texas, and that the attached advertisement was published in said newspaper, to wit: DUPONT DE NEMOURS, INC., first published in issue dated 11/18/2021, last published in issue dated 11/18/2021, published 1 time(s), and that the attached is a true copy of said advertisement.

DUPONT DE NEMOURS, INC.
455 FOREST STREET
MARLBOROUGH, MA 01752

Invoice/Order Number:	0000671300
Ad Cost:	$545.05
Paid:	$545.05
Balance Due:	$0.00

Signed James Mickler
(Legal Advertising Agent)

Sworn or affirmed to, and subscribed before me, this 22nd day of November, 2021 in Testimony whereof, I have hereunto set my hand and affixed my official seal, the day and year aforesaid.

Signed
(Notary)

JALEN CAIN ROCHA
Notary ID #132971284
My Commission Expires
March 12, 2025

Please see Ad on following page(s).

DUPONT DE NEMOURS, INC.
455 FOREST STREET
MARLBOROUGH, MA 01752

Invoice/Order Number:	0000671300
Ad Cost:	$545.05
Paid:	$545.05
Balance Due:	$0.00

An Equal Opportunity Affirmative Action Employer
To: DBE/MBE/WBE and all potential subcontractors
This contract is subject to the Environmental Protection Agency's (EPA) Disadvantaged Business Enterprise (DBE) Program, which includes EPA-approved fair share goals toward procurement of Minority and Women-owned Business Enterprise (M/WBE) businesses. EPA rules require that applicants and prime contractors make a good faith effort to award a fair share of contracts, subcontracts, and procurements to M/WBEs through demonstration of the six affirmative steps.
For more details of the DBE Program and the current, applicable fair share goals, please visit www.twdb.texas.gov/dbe .
Project: City of Pflugerville Water Treatment Plant Expansion, Membrane Filtration System Procurement Package, due 3 December 2021 DuPont Water Solutions is bidding as a prime contractor for this project. The contract consists of membrane supply and associated equipment, SS fabrication items, and chemical dosing skids in items.
We are seeking bids/quotations from business enterprises certified in any or all of the categories listed above for the items listed below. Please submit bids that apply to your trade(s), service(s) or products:
Suppliers of process instrumentation, control panels, control integration, filtrate and air headers, skid fabricators, pumps, blowers, valves, air receivers, and cleaning tanks. Less-than-truckload (LTL) and Full Load Freight Carriers.
Deadline for Submissions to DuPont: 26 November 2021 at 3PM Eastern. A follow-up phone call will be made to ascertain your interest in participating with us on this contract. Thank you for your attention and early reply.
For further information, specifications or assistance, please contact:
Morgan Trefny, Application Engineer, DuPont
Telephone: 508-341-7686 Email: morgan.trefny@dupont.com

11-18/21
0000671300-01

DBEGoodFaith.com

DuPont placed an online advertisement through **DBEGoodFaith.com**. The ad appeared in the online “Focus Journal” and “Trade Journal” from November 9 through December 3, 2021.

A copy of the ad proofs is included herein on the pages below.

DuPont
455 Forest Street
Marlborough, MA 1752
Tel: (351) 215-1519
Fax: (000) 000-0000

Ad Proofs

Project Name: City of Pflugerville, Texas Water Treatment Plant Expansion

Contract/Bid #: F-17004

Awarding Agency: City of Pflugerville, Texas

Focus Journal Ad

Publication: DBE GoodFaith (DBEGoodFaith.com)
Published On: 11/09/2021 @ 12:59:38 PM Pacific
Expired On: 12/03/2021 @ 11:59:59 PM Pacific
Message Notifications Sent To: john.reilly@dupont.com
Published At: https://dbegoodfaith.com/item.php?item_type=ads&ad_adid=52876

DuPont

Is seeking qualified DBEs, MBEs, WBEs, SBA MBEs, WOSBs

Project Name
City of Pflugerville, Texas Water Treatment Plant Expansion

Bid/Contract #
F-17004

Awarding Agency
City of Pflugerville, Texas

Project Location
Pflugerville, Travis County, TX

Bid Date
12/03/2021 at 02:00

Project Details
An Equal Opportunity Affirmative Action Employer
To: DBE/MBE/WBE and all potential subcontractors
This contract is subject to the Environmental Protection Agency's (EPA) Disadvantaged Business Enterprise (DBE) Program, which includes EPA-approved fair share goals toward procurement of Minority and Women-owned Business Enterprise (M/WBE) businesses. EPA rules require that applicants and prime contractors make a good faith effort to award a fair share of contracts, subcontracts, and procurements to M/WBEs through demonstration of the six affirmative steps. For more details of the DBE Program and the current, applicable fair share goals, please visit www.twdb.texas.gov/dbe.
Project: City of Pflugerville WTP Expansion, Membrane Filtration System Procurement Package, due 3 December 2021
DuPont Water Solutions is bidding as a prime contractor for this project. The contract consists of membrane supply and associated equipment, SS fabrication items, and chemical dosing skids in items. We are seeking bids/quotations from business enterprises certified in any or all of the categories listed above for the items listed below. Please submit bids that apply to your trade(s), service(s) or products:
Suppliers of process instrumentation, control panels, control integration, filtrate and air headers, skid fabricators, pumps, blowers, valves, air receivers, and cleaning tanks. Less-than-truckload (LTL) and Full Load Freight Carriers.
Deadline for Submissions to DuPont: 26 November 2021 at 3PM Eastern. A follow-up phone call will be made to ascertain your interest in participating with us on this contract. Thank you for your attention and early reply.

For further information, specifications or assistance, please contact:

Get in Touch

Outreach Coordinator
John Reilly

Telephone
(351) 215-1519

Fax
(000) 000-0000

Address
455 Forest Street
Marlborough, MA 1752

Send a message

Morgan Trefny, Application Engineer, DuPont
Telephone: 508-341-7686
Email: morgan.trefny@dupont.com

N/A

How to get in touch

Outreach Coordinator
John Reilly

Telephone
(351) 215-1519

Fax
(000) 000-0000

Address
455 Forest Street
Marlborough, MA 1752

Send a message

Trade Journal Ad

Publication: DBE Journal (DBEJournal.com)
Published On: 11/09/2021 @ 12:59:38 PM Pacific
Expired On: 12/03/2021 @ 11:59:59 PM Pacific
Published At:
http://dbejournal.com/index.php?show_ad=52876&ad_project_name=City+of+Pflugerville%2C+Texas+Water+Treatment+Plant+Expansion&co_name=DuPont

Outreach Coordinator

John Reilly

Contact Information

455 Forest Street
Marlborough, MA 1752

Telephone

(351) 215-1519

Fax

(000) 000-0000

DuPont

is seeking qualified DBEs, MBEs, WBEs, SBA MBEs, WOSBs

Project Name

City of Pflugerville, Texas Water Treatment Plant Expansion

Bid/Contract #

F-17004

Awarding Agency

City of Pflugerville, Texas

Project Location

Pflugerville, Travis County, TX

Bid Date

12/03/2021 at 02:00

Project Details

An Equal Opportunity Affirmative Action Employer To: DBE/MBE/WBE and all potential subcontractors This contract is subject to the Environmental Protection Agency's (EPA) Disadvantaged Business Enterprise (DBE) Program, which includes EPA-approved fair share goals toward procurement of Minority and Women-owned Business Enterprise (M/WBE) businesses. EPA rules require that applicants and prime contractors make a good faith effort to award a fair share of contracts, subcontracts, and procurements to M/WBEs through demonstration of the six affirmative steps. For more details of the DBE Program and the current, applicable fair share goals, please visit www.twdb.texas.gov/dbe. Project: City of Pflugerville WTP Expansion, Membrane Filtration System Procurement Package, due 3 December 2021 DuPont Water Solutions is bidding as a prime contractor for this project. The contract consists of membrane supply and associated equipment, SS fabrication items, and chemical dosing skids in items. We are seeking bids/quotations from business enterprises certified in any or all of the categories listed above for the items listed below. Please submit bids that apply to your trade(s), service(s) or products: Suppliers of process instrumentation, control panels, control integration, filtrate and air headers, skid fabricators, pumps, blowers, valves, air receivers, and cleaning tanks. Less-than-truckload (LTL) and Full Load Freight Carriers. Deadline for Submissions to DuPont: 26 November 2021 at 3PM Eastern. A follow-up phone call will be made to ascertain your interest in participating with us on this contract. Thank you for your attention and early reply. For further information, specifications or assistance, please contact: Morgan Trefny, Application Engineer, DuPont Telephone: 508-341-7686 Email: morgan.trefny@dupont.com

N/A

Tweet

Published On: 11/09/2021 @ 01:00:19 PM Pacific
Published At: https://twitter.com/dbegoodfaith/status/1458177654721585154
PLEASE NOTE - The image below is a representation of what your tweet may look like. The appearance of your tweet can vary depending on a variety of factors, including the type of device the tweet is displayed on and Twitter's internal settings. For a real-time copy of your tweet, please use the link provided above to view on Twitter.com & print the screen from your browser. You do not need a Twitter account to view or print this tweet.

17.2 Database Searches Conducted for DBE Vendors

DuPont has pursued Good Faith Efforts to request quotations from DBEs for ancillary equipment (e.g., pumps, blowers, valves, air compressors, process instrumentation, PLC, SS fabrication items, chemical dosing skids, etc.) for ultrafiltration membrane systems used to treat water.

We conducted searches for DBE vendors on the following Websites:

1) Texas Procurement and Support Services (TPASS)
https://mycpa.cpa.state.tx.us/tpasscmblsearch/tpasscmblsearch.do

From the site listed above, using the "Centralized Masters Bidders List – HUB Directory Search" database, we retrieved the information of more than 30 DBE businesses whom we thought could be potential subcontractors. After a closer examination, the number was narrowed down to 10. Copies of the 10 solicitations sent to these companies via email are available below.

2) Texas Department of Transportation
https://txdot.txdotcms.com/FrontEnd/SearchCertifiedDirectory.asp?XID=4719&TN=txdot

From the site listed above, using the "Texas Unified Certification Program (TUCP) DBE/ACDBE and TxDOT SBE Directory," we retrieved the information of some 15 DBE businesses whom we thought could be potential subcontractors. After a closer examination, we found that one of these businesses could supply us with the necessary equipment. A copy of the solicitation sent to this company via email is available below.

Pertinent NAICS Codes entered in one or both of the databases listed above are:

- 025 – Air compressors and Accessories
- 175 – Chemical Laboratory Equipment and Supplies
- 180 – Chemical Raw Materials, etc.
- 210 – Concrete and Metal Products, Etc.
- 658 – Pipe, Tubing, and Accessories, not Fittings
- 659 – Pipe and Tube Fittings
- 720 – Pumping Equipment and Accessories
- 830 – Tanks
- 890 – Water Supply, Groundwater, etc.
- 926 – Environmental and Ecological Services

On November 17, 2021, DuPont's Application Engineer, Morgan Trefny, contacted by email message the following 11 DBE/MBE/WBE vendors, whom we thought might be able to supply FilmTec with ancillary equipment for the water treatment project in Pflugerville, Texas. On November 30, Morgan followed up her messages by contacting the vendors by telephone:

- Macaulay Controls Company, Houston, TX
- Tenoch Distribution, LLC, San Antonio, TX
- Moody Bros., Inc., Houston, TX
- J & S Valve, Inc., Huffman, TX
- Harutunian Engineering, Inc., Austin, TX
- Titan Pipe & Supply Co., Inc., Corpus Christi, TX
- LKT & Associates, LLC, Melissa, TX
- The Valve Agency, Inc., Kingwood, TX
- Elite Pumps & Mechanical Services, LLC
- BL Technology, Inc., Tomball, TX
- Medcalf Fabrication, Inc., Houston, TX

Please note: In the interests of brevity, we have included below a copy of only one of the email messages that were sent. DuPont is pleased to provide copies of the other 10 messages upon request. After the email message, the "Telephone Log of Follow-Up Solicitations of DBE/MBE Suppliers" is also included herein.

From: Trefny, Morgan
To: khollway@macaulaycontrols.com
Subject: City of Pflugerville, TX WTP - Components Quote Request
Date: Wednesday, November 17, 2021 6:00:00 PM
Attachments: image001.png

Good Evening,

MEMCOR is seeking bids/quotations from business enterprises qualified as DBEs, MBEs & WBEs for the items listed below.

1. **Horizontal End Suction Centrifugal, SS wetted parts**
    i. Quantity and application:
    1. 5 permeate pumps
    - Design: 4,980 gpm @ 60' TDH
    - Max: 6,112 gpm @ 60' TDH
    2. 2 backwash pumps
    - 9,510 gpm @ 35' TDH
    3. 2 CIP pumps
    - 4,320 gpm @ 35' TDH
    4. 2 Neutralization pumps
    - 1,072 gpm @ 35' TDH

    ii. VAC – 480, 3ph, 60 Hz
    iii. Spare Parts

2. **Chemical Metering Pump Skids**
    i. Fully skidded system
    ii. Pump service for chlorine, acid, and neutralizing chemicals

3. **Positive Displacement blowers**
    i. Quantity and application: (2) Air Scour Positive Displacement Blowers
    ii. Flow: 5,933 SCFM
    iii. Pressure: 5 psig
    iv. Elevation – 640 ft.

4. **Instruments**
    i. Magmeters – 16", 20", 24"
    ii. Level Measurement – Switches, Transmitters
    iii. Pressure Measurement – Switches, Gauges, Transmitters

5. **Valves**
    i. Butterfly Valves – pneumatically actuated and manual
    1. Sizes: 8", 16", 18" 20", 24", 30"
    ii. Ball valves
    1. Various sizes and Materials

6. **Pipe Fabrication**
    i. Stainless Steel Headers
    1. Filtrate – 24”
    2. Air – 16”
    ii. Pinning Station – drawings to be provided on request.

7. **Control Panel**
    i. Master Control Panel
    1. PLC and HMI
    ii. Remote I/O Panels
    iii. Integration into plant SCADA

8. **Fiberglass Tanks**
    i. Clean-In-Place Tank
    1. 10,000 gallons, 12’ diameter
    ii. Neutralization Tank
    1. 13,500 gallons, 12’ diameter

The deadline for quote submissions is **November 29th at 5pm EST**. A follow-up call will be made to verify any interest in participating with us on this opportunity. Thank you for your attention and early reply.

For further information, specifications or assistance, kindly contact:
Morgan Trefny
Application Engineer, DuPont
Telephone: (508) 341-7686
Email: morgan.trefny@dupont.com

Quotations will be discussed with prospective DBE, WBE and MBE vendors.

With best regards,

Morgan Trefny

_____
Cell: (508) 341-7686

TELEPHONE LOG OF FOLLOW-UP SOLICITATIONS OF DBE/MBE SUPPLIERS				
DBE Vendor	**Date Emailed**	**Follow up Call**	**Time Called**	**Notes**
BT Technology, Inc.	17-Nov	30-Nov	12:03	Spoke with Rachel and left a message for sales.
Elite Pumps & Mechanical Services, LLC	17-Nov	30-Nov	12:07	Spoke with Willis and forwarded pump specification and spoke about other applications (pump, repair, rebuild).
The Valve Agency, Inc.	17-Nov	30-Nov	12:14	Called and could not find contact information on directory, left a message.
LKT & Associates, LLC	17-Nov	30-Nov	12:20	Called and left a message.
Titan Pipe & Supply Company, Inc.	17-Nov	30-Nov	12:21	Called and spoke with Darla: no bid.
Harutunian Engineering, Inc.	17-Nov	30-Nov	12:23	Blank line - kept ringing and no message prompt.
Moody Bros., Inc.	17-Nov	30-Nov	12:27	Spoke with Crystal and learned that contact email was no longer valid; resubmitted original request to Chris from sales and Cced support.
Tenoch Distribution, LLC	17-Nov	30-Nov	12:35	Spoke with Paul and resubmitted original request per discussion. Received followup for a no bid based on typical work.
Medcalf Fabrication, Inc.	17-Nov	30-Nov	12:42	Spoke with receptionist who transferred me to VM of sales, but call dropped.

TWDB-0217 : Texas Water Development Board Prime Consultant/Contractor Certification

A copy of the signed TWDB-0217 Form is included herein immediately below.

FOR OFFICE USE ONLY: Commitment #

TWDB-0217
Revised 08/14/2018

TWDB-0217
TEXAS WATER DEVELOPMENT BOARD (TWDB)
PRIME CONSULTANT/CONTRACTOR CERTIFICATION

I. PROJECT INFORMATION

TWDB Project Number	Applicant/Entity Name	Total of TWDB Funding	Program Type (insert "X" for all that apply)	
	City of Pflugerville, Texas		[X]	Drinking Water SRF (DWSRF)
			[ ]	Clean Water SRF (CWSRF)

Prime Consultant/Contractor: FilmTec Corporation

Contract Number: _____ **Contract Amount:** _____

II. GOOD FAITH EFFORT (Applicable to all subcontracts awarded by the prime contractor/consultant)

I understand that it is my responsibility to comply with all state and federal regulations and guidance in the utilization of Minority and Women-owned Businesses in procurement. I certify that I will make a "good faith effort" to afford opportunities for Minority Business Enterprise (MBE), and Women-owned Business Enterprise (WBE) by:

1.	Including qualified MBEs and WBEs on procurement solicitation lists
2.	Soliciting potential MBEs and WBEs
3.	Reducing contract size/quantities when economically feasible to permit maximum participation by MBEs and WBEs
4.	Establishing delivery schedules to encourage participation by MBEs and WBEs
5.	Using the services and assistance of the Small Business Administration, Minority Business Development Agency, U.S. Department of Commerce, and Texas Marketplace
6.	Submitting documentation to the Applicant/Entity to verify good faith effort, steps 1-5.
[ ]	**EXCEPTION**: As the Prime Consultant/Contractor, I certify that I have reviewed the contract requirements and found no available subcontracting opportunities. I also certify that I will fulfill 100 percent of the contract requirements with my own employees and resources. (Check if applicable)

Signature – Prime Consultant/Contractor	Title (print legibly)	Certification Date
Hara Prasad Nanda DocuSigned by: Hara Prasad Nanda A4C52A2A4EA9416...	President and CEO	December 2, 2021

III. PROJECT PARTICIPATION ESTIMATES

The Cost Categories mentioned below are goals. These goals are neither standards nor quotas. Recipients of financial assistance are not required to meet the fair share objectives. They must, however, acknowledge that they are aware of and are actively pursuing the fair share objectives with their procurements.

	Potential **MBE** Participation	Potential **WBE** Participation
Cost Category	**Goal**	**Goal**
Construction	**19.44%**	**9.17%**
Supplies	**25.34%**	**8.82%**
Equipment	**16.28%**	**11.45%**
Services	**20.41%**	**13.66%**

The fair share goals listed above are required by 40 CFR Part 33 Subpart D and are directly negotiated with EPA Region 6. Entities receiving federal financial assistance are subject to the TWDB's goals and may not be substituted with other agency or program goals.

IV. TWDB APPROVAL SIGNATURE

Signature indicates the form meets DBE Requirements.

DBE Coordinator	Approval Date

TWDB-0216 : TWDB-0216 Affirmative Steps Solicitation Report

A copy of the signed TWDB-0216 Form is included herein immediately below.

FOR OFFICE USE ONLY
Commitment #_____

TWDB-0216
Revised 11/13/2017

TWDB-0216
TEXAS WATER DEVELOPMENT BOARD
AFFIRMATIVE STEPS SOLICITATION REPORT

I. PROJECT INFORMATION

TWDB Project Number	Applicant/Entity Name	Total TWDB Funding Request	Program Type (insert "X" for all that apply)	
	City of Pflugerville Water Treatment Plant Expansion - Membrane Filtration System		[X]	Drinking Water SRF (DWSRF)
			[ ]	Clean Water SRF (CWSRF)

Project Name: City of Pflugerville Water Treatment Plant Expansion - Membrane Filtration System Procurement

Solicitation By: [ ] Applicant/Entity OR [X] Prime Contracted Business: FilmTec Corporation

Project Phase: [ ] Prior to Closing [ ] Release of funding for PADs [ ] Construction Contract #_____

II. SOLICITATION METHOD(S) UTILIZED

At least two methods of solicitation are required. Select the method(s) utilized for the solicitation. Copies of the actual postings, direct contact email/phone log, etc. must be attached to this form as support documentation for each method used. Failure to adequately follow these steps will result in the requirement to complete additional steps in order to become compliant.

[ ] Newspaper Advertisements [ ] Meetings or Conferences [ ] Trade Association Publications

[ ] Minority Media [ ] Internet & Web Postings [ ] Other Government Publications

[X] Direct Contact by Phone, Fax, USPS Mail, or Email*

If using direct contact, entities must solicit to a **minimum of 3 businesses/firms (at least one being a DBE) for each category of contract sought (i.e., construction, supplies, equipment, or services) to demonstrate a Good Faith Effort.*

III. PROJECT BIDDERS LIST:

List on the following table, or provide on a separate list, each business entity directly solicited for procurement or that submitted a bid for consideration.

Instructions for Columns 1 - 4	1 - Full business name (line one) & point of contact (line two) 2 - Business address 3 - Telephone number 4 - Email address for the business
Instructions for Column 5	Enter one of the following procurement or contract categories: **CONSTRUCTION – SUPPLIES – EQUIPMENT – SERVICES** *For detailed definitions, review guidance document, TWDB-0210.*
Instructions for Column 6	Enter the type of business: **MBE** - Minority Business Enterprise, **WBE** - Women-owned Business Enterprise, or **OTHER** - Company or firm is Non-MBE or WBE

Notice: Entities receiving State Revolving Fund financial assistance must create and maintain a Bidders List if the entity is subject to, or chooses to follow, competitive bidding. The Bidders List must include all firms that bid or quoted on contracts under EPA assisted projects, including both MBE/WBEs and non-MBE/WBEs. Entities must keep all Bidders Lists until project completion or the recipient is no longer receiving EPA funding under the loan, whichever is later. Entities with loans totaling less than $250,000 during a state fiscal year are exempt from the Bidders List requirement, but must still meet DBE program requirements. The Bidders List requirement also applies to all Prime Contracted Businesses/Firms that make subcontracting.

	Column 1 Business Name & Point of Contact	Column 2 Business Address	Column 3 Telephone Number	Column 4 E-Mail Address	Column 5 Procurement Category	Column 6 MBE/WBE Status
1.						
2.						
3.	(713) 299-4221	(214) 544-0440	(832) 698-8000	(281) 506-7390	(281) 751-8891	(361) 299-2900	(512) 454-2788	(713) 462-8544	(281) 324-3990			
4.						
5.	PO Box 890231, Houston, TX 77289-0231	PO BOx 668 Melissa, TX 75454-0668	1730 SCHERRY ST	TOMBALL, TX 77375-6820	6102 CENTRAL CREST ST	HOUSTON, TX 77092-7012	2261 NORTHARK DR STE 520	KINGWOOD, TX 77339-1744	PO BOX 2684	CORPUS CHRISTI, TX 78403-2684	P.O. BOX 140735	AUSTIN, TX 78714-0735	PO BOX 41042	HOUSTON, TX 77241-1042	2323 1ST ST	HUFFMAN, TX 77336-2015	Hara Prasad Nanda		
6.						
7.						
8.						
9.	Mac aulay Con trols Co.	Jim Holl way Asso cia tes, LLC	LKT & Thomas	Lynda@lkta.com	BLTE CHNOLOGY, INC.	ccampbell@blti.com	Courtney Campbell	willis@elitepumps.net	Elite Pumps & Mech Svcs, LLC	willis@elitepumps.net	THE VALVE AGENCY, INC.	hbw@thevalveagency.com	HEAT HER WRAY	d.brown@titanpesupply.com	Titan Pipe & Supply Co., Inc.	d.brown@titanpesupply.com	Darla B. Brown	anne@heiworld.com	Hart unian Eng inee ring, Inc.	bethm@moodybrothers.com	Takooh y Har utun ian	MOODY BROS., INC.	smb@jandsvalve.com	J & S VALVE, INC.	Stacie Bolander	Vice President and CEO	

Use additional sheets if necessary

Signature – Authorized Representative	Title (print legibly)	Date

IV. TWDB APPROVAL SIGNATURE

Signature indicates the form meets DBE requirements.

DBE Coordinator	Approval Date

FOR OFFICE USE ONLY
Commitment #_____

TWDB-0216
Revised 11/13/2017

TWDB-0216
TEXAS WATER DEVELOPMENT BOARD
AFFIRMATIVE STEPS SOLICITATION REPORT

I. PROJECT INFORMATION

TWDB Project Number	Applicant/Entity Name	Total TWDB Funding Request	Program Type (insert "X" for all that apply)	
	City of Pflugerville Water Treatment Plant Expansion - Membrane Filtration System		[X]	Drinking Water SRF (DWSRF)
			[ ]	Clean Water SRF (CWSRF)

Project Name: City of Pflugerville Water Treatment Plant Expansion - Membrane Filtration System Procurement

Solicitation By: [ ] Applicant/Entity OR [X] Prime Contracted Business: FilmTec Corporation

Project Phase: [ ] Prior to Closing [ ] Release of funding for PADs [ ] Construction Contract #_____

II. SOLICITATION METHOD(S) UTILIZED

At least two methods of solicitation are required. Select the method(s) utilized for the solicitation. Copies of the actual postings, direct contact email/phone log, etc. must be attached to this form as support documentation for each method used. Failure to adequately follow these steps will result in the requirement to complete additional steps in order to become compliant.

[ ] Newspaper Advertisements [ ] Meetings or Conferences [ ] Trade Association Publications

[ ] Minority Media [ ] Internet & Web Postings [ ] Other Government Publications

[X] Direct Contact by Phone, Fax, USPS Mail, or Email*

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List on the following table, or provide on a separate list, each business entity directly solicited for procurement or that submitted a bid for consideration.

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TWDB-0216
Revised 11/13/2017

	Column 1 Business Name & Point of Contact	Column 2 Business Address	Column 3 Telephone Number	Column 4 E-Mail Address	Column 5 Procurement Category	Column 6 MBE/WBE Status
1.	TENOCH DISTRIBUTION, LLC Bertha Venegas	24165 W INTERSTATE 10 STE 217147 SAN ANTONIO, TX 78257-1449	(210) 971-8323	sales@tenochdistribution.com	EQUIPMENT	MBE
2.	Medcalf Fabrication, Inc. Ronald D. Medcalf	1703 Hugh Road Houston, TX 77067	(281) 893-0775	medcalf1@aol.com	EQUIPMENT	MBE
3.						
4.						
5.						
6.						
7.						
8.						
9.						

Use additional sheets if necessary

Signature – Authorized Representative	Title (print legibly)	Date
Hara Prasad Nanda DocuSigned by: Hara Prasad NANDA A4C52A2A4CA9416...	President and CEO	12/02/2021

IV. TWDB APPROVAL SIGNATURE

Signature indicates the form meets DBE requirements.

DBE Coordinator	Approval Date

DocuSign

Certificate Of Completion

Envelope Id: EF48156AF8B44FC7B6A27ADB9558EDEE
Status: Completed
Subject: Please DocuSign: Pflugerville, TX Engineering & Pilot Agreement
Source Envelope:
Document Pages: 124
Signatures: 2
Certificate Pages: 5
Initials: 0
AutoNav: Enabled
EnvelopeId Stamping: Enabled
Time Zone: (UTC-05:00) Eastern Time (US & Canada)

Envelope Originator:
Jonathan Tracy
Attn: Accounts Payable department P.O. BOX 80040
Wilmington, DE 19898-0040
jonathan.tracy@dupont.com
IP Address: 24.2.199.39

Record Tracking

Status: Original
1/19/2022 10:52:00 AM
Holder: Jonathan Tracy
jonathan.tracy@dupont.com
Location: DocuSign

Signer Events	Signature	Timestamp
Hara Prasad NANDA Hara-Prasad.Nanda@dupont.com Vice President & GM Dupont Corporate Security Level: Email, Account Authentication (None)	DocuSigned by: Hara Prasad NANDA A4C52A2A4EA9416... Signature Adoption: Pre-selected Style Using IP Address: 100.14.79.87	Sent: 1/19/2022 11:01:24 AM Viewed: 1/19/2022 5:39:41 PM Signed: 1/19/2022 5:39:51 PM
Electronic Record and Signature Disclosure: Not Offered via DocuSign		
Loriann.Lea-Sharpe@dupont.com Loriann.Lea-Sharpe@dupont.com Security Level: Email, Account Authentication (None)	DocuSigned by: Loriann.Lea-Sharpe@dupont.com 42E2CD421B194C6... Signature Adoption: Pre-selected Style Using IP Address: 165.225.220.96	Sent: 1/19/2022 11:01:24 AM Resent: 1/19/2022 5:39:54 PM Viewed: 1/19/2022 11:02:43 AM Signed: 1/19/2022 5:48:21 PM
Electronic Record and Signature Disclosure: Accepted: 1/19/2022 11:02:43 AM ID: 95eb45b9-d095-4380-89c7-546732e211ef Company Name: DuPont Specialty Products		

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp

Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	1/19/2022 11:01:24 AM
Certified Delivered	Security Checked	1/19/2022 11:02:43 AM

Envelope Summary Events	Status	Timestamps
Signing Complete	Security Checked	1/19/2022 5:48:21 PM
Completed	Security Checked	1/19/2022 5:48:21 PM

Payment Events	Status	Timestamps

Electronic Record and Signature Disclosure

ELECTRONIC RECORD AND SIGNATURE DISCLOSURE

From time to time, DuPont Specialty Products (we, us or Company) may be required by law to provide to you certain written notices or disclosures. Described below are the terms and conditions for providing to you such notices and disclosures electronically through the DocuSign system. Please read the information below carefully and thoroughly, and if you can access this information electronically to your satisfaction and agree to this Electronic Record and Signature Disclosure (ERSD), please confirm your agreement by selecting the check-box next to 'I agree to use electronic records and signatures' before clicking 'CONTINUE' within the DocuSign system.

Getting paper copies

At any time, you may request from us a paper copy of any record provided or made available electronically to you by us. You will have the ability to download and print documents we send to you through the DocuSign system during and immediately after the signing session and, if you elect to create a DocuSign account, you may access the documents for a limited period of time (usually 30 days) after such documents are first sent to you. After such time, if you wish for us to send you paper copies of any such documents from our office to you, you will be charged a $0.00 per-page fee. You may request delivery of such paper copies from us by following the procedure described below.

Withdrawing your consent

If you decide to receive notices and disclosures from us electronically, you may at any time change your mind and tell us that thereafter you want to receive required notices and disclosures only in paper format. How you must inform us of your decision to receive future notices and disclosure in paper format and withdraw your consent to receive notices and disclosures electronically is described below.

Consequences of changing your mind

If you elect to receive required notices and disclosures only in paper format, it will slow the speed at which we can complete certain steps in transactions with you and delivering services to you because we will need first to send the required notices or disclosures to you in paper format, and then wait until we receive back from you your acknowledgment of your receipt of such paper notices or disclosures. Further, you will no longer be able to use the DocuSign system to receive required notices and consents electronically from us or to sign electronically documents from us.

All notices and disclosures will be sent to you electronically

Unless you tell us otherwise in accordance with the procedures described herein, we will provide electronically to you through the DocuSign system all required notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you during the course of our relationship with you. To reduce the chance of you inadvertently not receiving any notice or disclosure, we prefer to provide all of the required notices and disclosures to you by the same method and to the same address that you have given us. Thus, you can receive all the disclosures and notices electronically or in paper format through the paper mail delivery system. If you do not agree with this process, please let us know as described below. Please also see the paragraph immediately above that describes the consequences of your electing not to receive delivery of the notices and disclosures electronically from us.

How to contact DuPont Specialty Products:

You may contact us to let us know of your changes as to how we may contact you electronically, to request paper copies of certain information from us, and to withdraw your prior consent to receive notices and disclosures electronically as follows:
To contact us by email send messages to: julia.a.trice-1@dupont.com

To advise DuPont Specialty Products of your new email address

To let us know of a change in your email address where we should send notices and disclosures electronically to you, you must send an email message to us at julia.a.trice-1@dupont.com and in the body of such request you must state: your previous email address, your new email address. We do not require any other information from you to change your email address.

If you created a DocuSign account, you may update it with your new email address through your account preferences.

To request paper copies from DuPont Specialty Products

To request delivery from us of paper copies of the notices and disclosures previously provided by us to you electronically, you must send us an email to julia.a.trice-1@dupont.com and in the body of such request you must state your email address, full name, mailing address, and telephone number. We will bill you for any fees at that time, if any.

To withdraw your consent with DuPont Specialty Products

To inform us that you no longer wish to receive future notices and disclosures in electronic format you may:

i. decline to sign a document from within your signing session, and on the subsequent page, select the check-box indicating you wish to withdraw your consent, or you may;

ii. send us an email to julia.a.trice-1@dupont.com and in the body of such request you must state your email, full name, mailing address, and telephone number. We do not need any other information from you to withdraw consent.. The consequences of your withdrawing consent for online documents will be that transactions may take a longer time to process..

Required hardware and software

The minimum system requirements for using the DocuSign system may change over time. The current system requirements are found here: https://support.docusign.com/guides/signer-guide-signing-system-requirements.

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