Entity Name:	South Dakota State Government
Event Number:	8662
Event ID:	23RFP8662
Event Name:	Modular Filtration System
Requested By:	Missy Schuetzle
Created By:	Missy Schuetzle
Due By Date:	04/25/2023 05:00 PM Central Time
Q&A Cutoff Date:	04/11/2023 4:03 PM Central Time
Invitation Type:	Invitation Only
Assigned Commodities:	490-43 Laboratory and Scientific Equipment and Supplies (Not Otherwise Classified)
Allow Supplier Terms and Conditions:	No
Public Responses:	No
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Posting Board Status:	Published
Event Status:	Event Under Review

Section #: Name:

1 Section 1 - 23RFP8662

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1 SCOPE

The project will include a modular tangential flow filtration system mounted on a portable skid. This document defines the requirements and deliverables for this system. It describes overall requirements that must be met to produce the specific equipment requested. This document covers the procurement and delivery of the systems, with no required installation.

This URS is the input document for the:

- Equipment procurement purposes.
- Equipment sizing
- Functional and technical specifications.

2 BACKGROUND

The Dakota Bioproducts Innovation Institute is a research facility for the development of high-quality bioproducts. A modular filtration system has been identified as one of the separation technologies that will be available for customer use.

3 PROCESS DESCRIPTION

The modular filtration system will provide a membrane filtration process that can support a wide range of volumes and applications. The system is designed to enable a client to rearrange the hardware to run varying batch sizes and membranes. It will support the use of several membrane sizes and types. Membrane types will include polymeric, tubular, hollow fiber, and ceramic. The system may or may not include recipe-based, fully automated control.

4 Basis of Design

4.1 Capacities

The filtration system should be capable of handling batch volumes up to 2400 L. The membrane feed pump shall be capable of, but not limited to, supplying 30-100 GPM at 25-100 psig.

4.2 Skidded Construction

The filtration system shall be mounted on a portable, steel frame skid. Any control system, electrical panel, and all associated wiring shall be included.

4.3 Health, Safety and Environment (HSE)

The filtration system will satisfy appropriate conformity assessment procedures and the controls shall carry the UL marking. The selected unit shall be constructed per the current ASME BPE standard. It will be designed to protect users from hot surfaces. Pressure relief safety

valves or rupture disks shall be vented to a safe location.

4.4 Operation, personnel and automation

The filtration skid may or may not be fully automated as a standalone unit such that operations personnel will not need to attend to it once it is started and operating. The level of automation will be determined after the equipment proposals for this unit operation have been carefully considered.

4.5 Materials of Construction

All materials of construction must be compatible with ambient and hot water for injection (WFI), and typical chemical cleanings agents such as phosphoric acid, potassium hydroxide, and sodium hydroxide up to 3%. Piping specifications, including all gasket and valve seat material must align with current ASME BPE standards, where applicable.

4.6 Reliability & maintenance

The filtration system will be designed to operate routinely during operations and rated for continuous use. All wear parts shall be easily accessible and replaced on a regular maintenance schedule. Wear parts like gaskets shall be stock items that can be ordered and delivered in a timely manner.

Terms and Conditions

ESM Sourcing Terms
None

General Terms and Conditions
None

Event Specific Terms and Conditions
See attached RFP Document