

SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY

REQUEST FOR PROPOSAL RFP 2023-14

WWTP RBC Replacement

Register for Site Visit	April 7, 2023 (by close of business)
Mandatory Site Visit:	April 12, 2023 (9:00am – 12:00pm)
Questions Submitted:	April 17, 2023 (by close of business)
Questions & Answers Posted:	April 21, 2023 (by close of business)
Proposal Due Date:	May 10, 2023 (by 2:00pm)

1. PURPOSE:

This Request for Proposal (RFP) is issued by the South Dakota Science and Technology Authority (SDSTA) for Construction Services for the Wastewater Treatment Plant (WWTP) Rotating Biological Contactor (RBC) Replacement project. An individual firm will be selected for a fixed price contract based on the total of the quantities and unit costs listed on the project bid sheet, demonstrated competence, and qualifications for the required work. Documents included with this RFP include:

- A. Draft Contract (2023-14) - Agreement for Construction
- B. Draft Construction Agreement - General Conditions
- C. Bid Bond (submitted with proposal)
- D. Payment and Performance Bond (submitted with contract)
- E. SDSTA Bid Sheet
- F. SDSTA Design Documents
 - 1) SDSTA Drawings: WWTP RBC Replacement
Existing concrete basin & RBC demolition and construction of new Moving Bed Biofilm Reactor (MBBR) treatment process with associated basins, blower building, process equipment, process piping, electrical, mechanical and SCADA improvements.
 - 2) SDSTA Specifications: WWTP RBC Replacement
Divisions 1 through 46.
 - 3) Final Geotech Report: WWTP RBC Replacement
- G. ESH Qualification Questionnaire

2. PROJECT BACKGROUND:

The South Dakota Science and Technology Authority (SDSTA) reopened the historic Homestake underground mine to develop a world class underground science research facility, the Sanford Underground Research Facility (SURF). To reopen and operate the underground portion of the

facility, dewatering, water treatment and discharge is required. Homestake Mining Company designed, built, and operated a biological wastewater treatment plant to effectively destruct the residual cyanide, ammonia, remove total suspended solids, and discharge the water to Gold Run and Whitewood Creek. The workhorse of the biological portion of the plant are the Rotating Biological Contactors, (RBC's). Since construction from 1977-1983, the RBC's have been in almost constant use and the WWTP has operated with only minor improvements. As such, much of the WWTP is nearly 40 years old and has exceeded its useful life by nearly 20 years. The estimated cost of this project is between \$3,000,000 and \$3,700,000.

3. EXISTING CONDITIONS:

During this time, the disc portion of the RBC units have gained a significant amount of mineral scale that has added significant weight to each unit. This added weight has caused drive motor and bearing failures which disrupt the treatment process. Along with this issue, biological and carbonate-sulfate sludge has accumulated in the RBC basins reducing the available volume. The RBC units themselves have become obsolete and unsupported from the manufacturer. This creates additional downtime and increased costs for maintenance due to parts only being available in limited supply or special order. Several units have been utilized for spare parts. Because the maintenance parts are becoming more difficult to procure, SDSTA completed a preliminary engineering/technology review report to examine more current, readily available technology. From this report, a Moving Bed Biological Reactor (MBBR) system was selected to replace the RBC's.

4. SCOPE OF WORK:

The construction phase of this project will consist of following major milestones to complete the RBC replacement. All work required will be done in a method allowing the current operating RBC's, in the northwest quadrant, to continue uninterrupted operation during the entire construction and start-up phase of the new MBBR system. Generally described as follows:

- A. Demolish and dispose of the northeast quadrant of RBC's. This consists of 12 RBCs, covers, drive motors, associated concrete basin, electrical and process piping. Construct new MBBR treatment system and concrete basin as outlined in attached plans and specifications. Construct new blower building with all associated appurtenances as outlined in the attached plans and specifications. Furnish and install miscellaneous equipment including but not limited to: process piping, electrical, instrumentation and controls as outlined in attached plans and specifications.

5. TECHNICAL EVALUATION CRITERIA:

A best value selection process will be used to award this contract. The selection criteria are listed below. Selection will be made based on tradeoffs between price and non-price evaluation criteria.

- A. The offeror's total project package including proposed project team and other technical requirements defined in this document.
- B. Specialized experience and technical competence in:

- Working on water or wastewater treatment plants
 - Weathered and slightly weathered schist rock excavation.
 - Concrete treatment basin and process equipment demolition
 - Treatment basin concrete formwork and placement/finishing of concrete floors, walls, and suspended slabs.
 - Compressed air and wastewater process piping
 - Treatment process equipment and instrumentation
- C. Construction safety practices, procedures, and safety record relating to the scope of work.
- D. Qualified professional personnel in the following key areas: Water or Wastewater Treatment Plant construction project management & project supervision, industrial electrical & SCADA equipment.
- E. Past performance on SDSTA, US Department of Energy, State of South Dakota, or other contracts with respect to cost control, quality of work, and compliance with performance schedules.

6. SUBMISSION REQUIREMENTS:

Submission Requirement: General

To be eligible for contract award, a firm must be registered as a business entity with the South Dakota Secretary of State.

Proposals should be provided in digital format as a pdf file with standard letter size format. Note that there is a 50-page limit for proposals. Proposals must contain the following:

- Description of the working relationship between each of the overall team members, including a personnel specific organization chart. Note that the named subcontractors and outside associates or consultants must be used for project execution, and any change must be approved in advance by the SDSTA.
- Primary points of contact for the proposed team.
- Description of the approach to cost and schedule control. What tools are used and how is information to be communicated to the project team and SDSTA.
- Any exceptions to the draft contract, terms and conditions, or other RFP materials.

Submission Requirement: Similar Projects

Describe at least two and up to five similar projects that the Contractor/Subcontractor has installed and commissioned within the past ten years. Example projects should be at least water or wastewater treatment facilities ranging in size of 1 to 5 MGD. Examples should note the customer, location, and date of the project. Additional project details may be requested after submittal.

Submission Requirement: Safety

Provide a description of the safety programs of contractors and subcontractors who would be performing work at SURF under this contract. Demonstrate the firm's understanding and awareness of all ESH issues that will be present on this project. Note that this project allows the

project superintendent to also be the safety officer.

- Include safety records for the past five years (incident/injury records, OSHA 300 logs, and EMR data).

Submission Requirement: Quality Control

Provide a description of the QC programs of contractors and subcontractors who would be performing work under this contract. QC manuals will not count toward the 50-page limit.

Submission Requirement: Qualifications

Provide resumes for key personnel proposed for this project. Include project manager, project superintendent, project safety officer. Resumes should include qualification, certifications, and experience in the specific role proposed with relevant projects.

Submission Requirement: Schedule

The total project shall be Substantially Complete within 450 calendar days of the Notice to Proceed (NTP). Final Acceptance not more than 60 calendar days after Substantial Completion. Note that liquidated damages of \$200/day will be applied for additional schedule days after the approved contract completion date. Refer to section Section 9.3.7 of the General Conditions for additional details.

Submission Requirement: Price

Provide a project pricing breakdown as detailed below.

PRICING:

1. Mob/Demob, Bonds & Insurance, O & P	\$ _____ FFP
2. Demolition & Disposal	\$ _____ FFP
3. Civil Work Including MBBR Basin	\$ _____ FFP
4. Electrical & Controls	\$ _____ FFP
5. Yardney Filter Building Area	\$ _____ FFP
6. Influent Building Area	\$ _____ FFP
7. MBBR Process Equipment & Media	\$ _____ FFP
8. Blower Building & All Equipment	\$ _____ FFP

TOTAL PROPOSAL \$ _____ **FFP**

The offeror's firm fixed price shall constitute full payment for the work, materials, services, quality control testing, other items required, and include all applicable federal, state use, sales, and local taxes, duties, permits, bonding, and all the Subcontractor's other obligations related to such work.

Submission Requirement: Mandatory Site Visit

All offerors are required to attend an onsite pre-proposal conference & site visit April 12, 2023, from 9:00am - 12:00pm MT at the SURF, 630 East Summit Street, Lead South Dakota. Registration is required. Email Benjamin Brack at bbrack@sanfordlab.org by close of business April 7, 2023, to receive instructions and directions. Only companies represented at the pre-proposal conference will be eligible to submit proposals. Contractors' subcontractors are encouraged, but not required, to attend.

7. DELIVERABLES:

Refer to SDSTA Division 1 and other technical specifications for deliverables required after contract award but before the start of work and during project execution. While not a complete list, key deliverables include:

- Safety Plan
- Quality Control Plan
- Environmental Protection Plan
- Construction Schedule
- Schedule of Values/Prices
- Submittal Register
- Shop Drawings
- Contractor Daily Reports
- Test Reports
- As Built Drawings
- O&M Manuals and Warranties
- Equipment labels per applicable codes and standards.

8. PROPOSALS DUE:

Offerors should submit an electronic copy (pdf format) of the proposal no later than 2:00pm on May 10, 2023, to Benjamin Brack, bbrack@sanfordlab.org. Late submissions will not be accepted.

Questions are due by 4:00pm on April 17, 2023.

Questions/Answers will be emailed to all prospective proposals and posted to the sanfordlab.org website no later than April 21, 2023.

The proposal period may be extended at the discretion of SDSTA based on the quantity and/or complexity of questions. Any notices of extension of time to respond will be distributed to all prospective offerors by SDSTA.

All communications regarding this procurement between RFP release and award shall be directed by email to Benjamin Brack. Communications with other SDSTA staff regarding this procurement in advance of the award are not allowed.