US Department of Agriculture (USDA)

"Statement of Work"

Bldg. 154 Cooling Tower Media Replacement

United States Department of Agriculture-National Centers for Animal Health

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Project

Bldg. 154 Cooling Tower Media Replacement

General Information

1.0 Scope of Work

1.1. The scope of this acquisition includes that the contractor shall supply all necessary materials and labor for the replacement of PVC fill material in six (6), two-cell cooling towers as well as the replacement of paneling and other metal work, repair of FRP inner fan cylinder on one cell, and completion of mechanicals PMs that are scoped out below.

1.2. The contractor shall phase these efforts to one tower at a time to maintain facility operations during construction.

2.0 Background

2.1. Campus has six (6), cooling technology institute (CTI) two-cell cooling towers that are approximately 20 years old (installed 2004 and 2007). The PVC fill material in these cooling towers has degraded due to exposure to water, heat, chemicals, contaminants from air, UV light, etc. This degradation has resulted in a fouled, scaled, and brittle material that breaks off and ends up in the condenser water system. The condenser water system then experiences additional wear due to clogged screens and filters and impacted heat transfer tubes. As a result, the system experiences a pressure drop and degraded performance. The fill material, which is considered a wear item, is due for replacement. Additionally, wear and corrosion on the towers has resulted in the need to repair one of the cell's FRP inner fan cylinder and necessitate the replacement of all cells' casing panels and other galvanized steel parts. Finally, there is a need to complete mechanical PMs on all of the towers.

2.2. The Towers are original Marley NC8310H2BM Towers with the following serial numbers. Figure 1 in the attachment depicts the cell locations:

2.2.1. North side: NC8310H2BM-04, Serial number NC-800750 Towers (-B2, -A1, -B1, -C1, -A2, -C2)

2.2.2. South side: NC8311BM-07, Serial number 819071 (Towers -C2, -C1, -B2, -B1, -A2, -A1)

2.3. The per tower cell performance is 2400 gpm 95-85-78

Contractor Requirements

3.0 Technical Requirements / Tasks

3.1. The contractor may take one tower (two cells) down at a time to complete the work. The contractor shall not move on to the next tower until all work is completed on the previous tower. The contractor shall coordinate efforts with the Contracting Officer's Representative (COR) to ensure that campus can maintain cooling operations.

3.2. The finished product and all components shall provide a complete operational and functional system per this Scope of Work and the manufacturer's specifications.

3.3. Upon completion of the work, the towers shall maintain their manufacturer guaranteed thermal performance guarantees, certifications, cooling tower institute (CTI) certification and factory mutual approvals.

3.4. All work must comply with all applicable federal, state & local building/construction codes.

3.5. The Contractor must provide product data submittals including any relevant manufacturing specifications.

The contractor shall furnish all equipment, materials, and labor to complete the following. All hardware and mastic required for installation of all parts and components shall be included.

3.6. Demolish the existing fill and drift eliminators in each cell (12 cells total) and remove material from site.

3.7. Rough clean the tower in preparation for panel replacement and fill installation.

3.8. Remove and replace fill area casing panels (16 panels per cell, 12 cells total) with stainless steel.

3.9. Remove and replace the following with stainless steel across all 12 cells:

3.9.1. Fill Tubes (16 per cell)

3.9.2. U-bolts for intermediate support within hot water basins

3.9.3. Intermediate fill support beams case face to case face as well as tube supports from fill pole to fill pole

3.9.4. Upper and lower (inner) fill area support beams

3.9.5. Mid bay fill tube support bracket (for upper and lower tower sections)

3.9.6. Water deflectors

3.9.7. Drain Trays

3.9.8. Upper and Lower drift eliminator supports and retainers

3.9.9. Water diverters

3.10. Replace the hanging fill of six (6), two-cell towers in accordance with the specifications attached. The selected fill material shall be Marley MX75, or an approved equal, to maintain OEM design. The MX75 fill must have integral louvers, be 15 mil thick, and have a fire rating of ASTM E-84 <25

3.11. Replace the cross-flow drift eliminators in accordance with the specification attached. The selected material shall be Marley TU12X, or an approved equal, to maintain OEM design.

3.12. Contractor shall plan for a 360 degree repairs of the Fiberglass Reinforced Polymer (FRP) inner fan cylinder/air eased inlet. One section is required on Marley NC8310H2BM Tower, Serial Number NC-800750, Cell B2 located on the Northeast end. If all sections are not needed on this tower, or other towers, remaining sections shall be left on site.

3.13. Provide Marley ST short nozzles sized for the flow rate listed. The contractor shall plan for the replacement of 144 nozzles across the 6 towers, with any remaining OEM nozzles turned over to the USDA.

3.14. Provide the parts and labor necessary to complete mechanical PMs, including removing the driveshaft, pulling gearbox hub, removing, containing and disposing of oil, adding a new lube line, refilling with Marley OEM oil/syn/iso 150, checking the oil level, installing new shaft inserts with new hardware kits, aligning shaft within less than 0.005, checking fan pitch, checking tip track, checking tip clearance, providing adjustments as necessary and torque all hardware. Complete a test and adjust further as needed. Re-test as needed. A fan alignment report shall be provided for each fan.

3.15. The contractor shall protect the outlet of the tower to prevent refuse from falling into the sump.

3.16. Upon completion of work, the tower operation test shall show proper flow distribution, fan alignment, and drift control. Documentation shall be provided to the CO and COR.

3.17. The contractor shall be present to receive any materials shipped to site. The USDA will not accept any material without the contractor present. Material may be offloaded by USDA with Contractor present. Material may be stored onsite. The material shall be shipped to the jobsite.

4.0 General Requirements / Tasks

4.1. Pursuant to FAR 52.236-7 Permits and Responsibilities, the Contractor shall obtain all required permits, licenses, and authorizations to perform work under this contract and comply with all the applicable Federal, State, and local laws and regulations.

4.2. The Contractor shall manage the total work effort associated with the services required to meet the objectives and standards. Such management includes but is not limited to planning, scheduling, cost accounting, report preparation, establishing and maintaining records, and quality control. The Contractor shall provide a staff with the necessary management expertise to assure performance objectives and standards are met. The Contracting Officer may at any time require samples, Material Safety Data Sheets (MSDS) or manufacturer's data sheets of materials used in this contract.

4.3. The contractor shall be solely responsible for coordinating work with all subcontractors and ensuring that all items of joint use in conjunction with installations are completed.

4.4. The Contractor is responsible for verifying site conditions, measurements, quantities, and materials needed to complete this project prior to submitting a proposal. The contractor shall carefully examine the entire site and shall make all necessary investigations to become thoroughly aware of the existing conditions and all difficulties involved in the completion of the work in accordance with the contract documents prior to the submission of bid.

4.5. The scope of the project shall be performed in a neat, workmanlike manner and shall be sequenced for efficient workflow and to minimize interruption to the daily activities and ongoing research at the facility to the greatest extent possible.

4.6. The contractor shall coordinate all work with the Contracting Officer's Representative.

4.7. Contractor shall provide all means and methods to protect the facility and its installations from all project activities, including protecting the facility from environmental elements as the improvements are completed.

4.8. The Contractor shall furnish all labor, materials, equipment, supplies, transportation, supervision, safety equipment*, and incidentals for all elements of the work to provide a complete and properly functioning installation in accordance with this Statement of Work.

4.8.1.* Note: Contractor is solely responsible for safety measures and conformance to applicable requirements in accordance with FAR clauses referenced in Solicitation package

4.9. Anything mentioned in the Scope of Work and not shown on the drawings or shown on the drawings and not mentioned in the Scope of Work, shall be of like effect as if shown or mentioned in both.

4.10. The finished product and all components shall provide a complete operational and functional system per this Scope of Work and the manufacturer's specifications.

4.11. Contractor shall provide company Safety policy for review and approval by Contracting Officer's Representative within ten (10) days of the award of the contract.

4.12. Contractor shall provide a quality control plan for review and approval by Contracting Officer's Representative within ten (10) days of the award of the contract.

4.13. The contractor shall dispose of all waste generated by this project in accordance with applicable regulations.

4.13.1. Contractor shall divert project waste to recycle where practical. The Contractor shall track and document the amount of project waste diverted to recycle. Documentation should be submitted at project closeout.

4.13.2. Contractor shall submit documentation on the amount of project waste diverted to recycle as part of project closeout. Contractor shall submit the type and amount of waste that was diverted to recycle, present information in a clear, typewritten format.

4.13.3. If no project waste is diverted to recycle, the Contractor shall submit a letter stating this and why diversion was not practical.

5.0 Special Provisions

5.1. The Contractor must make all necessary provisions to keep the operational part of the Facility safe and cooperate to keep noise, dirt, and other interferences to a minimum. To accomplish this, the Contractor must submit a Construction Plan for review within ten (10) days of award and approval to allow for progression of work with limited impact on the animals and employees. The Contractor must repair all damages caused by construction operations.

5.2. Do not disturb portions of the site beyond areas in which the work is approved. If land is disturbed due to staging or other reasons, the contractor is required to return the condition back to pre-construction condition or better at no cost to the government.

5.3. Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as approved by the Contracting Officer. At the completion of operations, existing work must be in a condition equal to or better than that which existed before new work started.

5.4. Keep driveways, entrances, walkways, and doorways serving premises clear and available to the Government, employees, visitors, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.

5.5. Any damage resulting from the contractor's operation shall be brought to the attention of the Contracting Officer's Representative immediately.

5.6. No building structural members shall be cut or altered without prior approval of the COR.

5.7. Finished surfaces of existing facilities that are affected, marred, scratched, or damaged by the contractor shall be refinished to match original condition.

5.7.1. Patching material shall be of the same type, style, and thickness, and shall be finished to match existing adjacent surface construction in color and texture.

5.7.2. Patching material, paint color, paint material and paint application methods shall be approved in advance by the Contracting Officer's Representative.

5.8. No building structural members shall be cut or altered without prior approval of the Contracting Officer's Representative.

5.9. The contractor shall take all necessary and reasonable measures to keep the work site clean of trash and debris. Work areas shall be cleaned immediately as work in that area is completed, and before moving to a new work area. Place all trash and debris in OSHA approved containers, remove, and dispose of trash off site daily.

5.10. The contractor shall move all materials and equipment, including ladders and scaffolding from the site at the completion of each day's operation unless otherwise approved by the Contracting Officer's Representative. All equipment shall be secured at the end of the day.

5.11. The contractor shall provide proper safety equipment to workmen and ensure a safe environment for employees and the public at all times. The contractor shall work to ensure free, unobstructed, and safe access to and about the work area.

5.12. The Contractor shall ensure that any materials that are delivered by FedEx, UPS, etc. are delivered to the jobsite and NOT to the USDA warehouse dock at Building 24 or to the north warehouse, Building 11. The USDA and/or the COR will not be responsible for receiving any materials for the project. USDA reserves the right to refuse any unscheduled deliveries that arrive at either warehouse or at the main gate.

5.13. The contractor shall provide technical specifications and product information along with the cost proposal.

5.14. An award will not be completed until the product has been determined to be acceptable.

6.0 Government Furnished

6.1. Documents available: site maps, submittal form, request for information (RFI) form, site entry acceptable identifications document, security policy, inclement weather /safety document, and any other requested and approved forms or documents needed for the project.

7.0 Submittals

7.1. Submittals shall be provided within 10 days of award of the contract. Submittals shall include:

- 7.1.1. Hanging Fill
- 7.1.2. Stainless steel components for fill system
- 7.1.3. Drift Eliminators
- 7.1.4. Stainless steel components for drift eliminator
- 7.1.5. Nozzles
- 7.1.6. Stainless Steel Casing/Structural Components
- 7.1.7. Hardware
- 7.1.8. Sealant
- 7.1.9. Joint Compound
- 7.1.10. FRP Inner Fan Cylinder

8.0 Deliverables / Schedule

8.1. The contractor shall submit a project schedule for approval by the COR, reflecting the duration of the project from award to acceptance by the USDA. **Construction Schedule shall be submitted to the COR, copied to CO and EPM no later than ten (10) days after award of the contract.** The contractor's schedule shall include the necessary drying time for the equipment to indicate when LOTO for each tower is needed by the USDA.

Key Deliverables

Item No.	Deliverable / Item Title	Description	Frequency	Reference	Delivery Format	Due By
1	Safety policy	Submit project Safety Plan	Once	Ref. SoW Section 4	Electronic	Within 10 days of award of contract
2	Quality control plan	Submit project Quality Control Plan	Once	Ref. SoW Section 4	Electronic	Within 10 days of award of contract
3	Construction Plan	Submit project Construction Plan	Once	Ref. SoW Section 5	Electronic	Within 10 days of award of contract
4	Submittals	Provide Project Submittals	Once	Ref. SoW Section 7	Electronic	Within 10 days of award of contract
5	Construction Schedule	Submit project schedule	Once	Ref. SoW Section 8	Electronic	Within 10 days of Notice to Proceed
6	Lockout Tagout	Submit company Lockout Tagout program	Once	Ref. SoW Section 14	Electronic	Within 10 days of award of contract

9.0 Regulatory Requirements

9.1. The equipment materials, installation, workmanship, and operation shall conform to the most stringent applicable requirements of the most recent editions of the associated publications, in the below section and in the attached specifications unless otherwise noted:

(a) National Fire Protection Association (NFPA)
(b) NFPA 101 – Safety to Life from Fire in Buildings and Structures.
(c) NFPA 1 – Uniform Fire Code
(d) NFPA 5000 – Building Construction and Safety Code
(e) Environmental Protection Agency (EPA) – Clean Water Act
(f) Environmental Protection Agency (EPA) – Chemical Inventory and Handling
(g) Iowa Department of Natural Resources (Iowa DNR)
(h) ASHRAE
(i) State and Local Building Codes as adopted by the Authority Having Jurisdiction (AHJ).
(j) The Uniform Federal Accessibility Standards (UFAS)
(k) Occupational Safety and Health Administration (OSHA)

(l) Cooling Technology Institute Standards (CTI)
(m) National Institute for Health (NIH)
(n) ARS Policies and Procedures (P&P) 242.1
(o) Equipment Manufacturer Printed Instructions

10.0 Contractor's Key Personnel

10.1. The Contractor shall confirm to the Contracting Officer the List of Key Personnel and their qualifications are provided as part of the proposal. The contractor will provide any additional information requested by the Contracting Officer to certify their qualifications.

10.2. All work must be performed by qualified personnel. Contractor shall have a minimum of 10 years of experience as a Marley Factor Authorized Service entity and shall provide a Marley Factory Authorized Installation crew that has attended Marley's School of Cool.

10.3. The Contractor shall provide experienced, qualified, and capable personnel to perform the work in this contract. Personnel shall be fully knowledgeable of all safety and environmental requirements associated with the work they perform. Competent personnel shall be provided as required.

10.4. OSHA training requirements shall be strictly enforced prior to the commencement of work. The job superintendent must be an OSHA certified "competent person" with 30 hours of training and all other employees working on the project must have a minimum of 10 hours of OSHA training.

10.5. The job superintendent/OSHA certified competent person needs to always be on site when work is ongoing.

10.6. Contractor employees and Subcontractor employees shall conduct themselves in a proper, efficient, courteous and businesslike manner.

10.7. The Contractor shall ensure that all employees present a professional appearance that is appropriate for their position. The Contracting Officer's Representative reserves the right to determine the acceptability of any clothing worn. All Contractor/Subcontractor employees working under this contract shall be identified by a distinctive nameplate, emblem, or patch attached in a prominent place on an outer garment. Employee identification shall not be substituted for required passes or badges.

10.8. The Contractor shall remove from the site any individual whose continued employment is deemed by the Contracting Officer's Representative to be contrary to the public interest or inconsistent with the best interests of USDA.

11.0 Site / Security Requirements

11.1. Access to the construction site is controlled by a security fence and visitor/contractor check-in/check-out system. All contractor/subcontractor employees shall sign-in and out at the main site entrance gate and always wear a contractor/visitor identification badge while on the site. The ID badges will be turned in at the end of the workday. A current government-issued identification with a picture ID is required for entry (REAL ID).

11.2. A minimum of 5 days of advanced registration is required for all personnel entering the site that are foreign nationals and 3 days for all other workers.

11.3. Construction vehicles will be allowed access to the contracted buildings; contractor employees' personal vehicles shall be parked in the facility parking areas designated by the COR. Appropriate vehicle badges shall be displayed at all times while the contractor is on site.

11.4. The Contractor shall use only the service roads and access routes approved by the Contracting Officer's Representative.

11.5. Unless accompanied by a NCAH/USDA employee, the Contractor, subcontractors, and their employees shall not enter buildings or facilities not specifically part of this project. Reasons included, but not limited to, disease control and health requirements.

11.6. The Contractor shall adhere to all Site, ARS, APHIS and USDA security policies and procedures including, but not limited to, Code of Federal Regulations Requirements, Standard Operating Procedures, Security Directives, Security Procedures, General Orders, Post Orders and any applicable Government Policies and Procedures.

11.7. Additional security requirements may be imposed when the Federal Government raises the Homeland Security Alert Level. Additional directions will be provided by the Contracting Officer's Representative if the situation occurs.

11.8. Failure to comply with access requirements shall be adequate grounds for removal of the contractor/ subcontractor employees from the site and barring further site access to individuals.

11.9. Coordinate use of premises under direction of the COR. Contractors shall confine construction equipment, storage of materials and equipment and operations of workers to areas permitted by law, ordinances,

permits, or requirements of Contract Documents, and shall not unreasonably encumber premises with construction equipment or other material or equipment.

11.10. No pets or animals are allowed inside the Security Gate, even if left in a vehicle.

11.11. No firearms or weapons are allowed on site.

11.12. Owner will occupy the facility during entire period of construction for conduct of its normal operations.

11.13. Additional entry requirements may be added prior to the commencement of the project. The COR will advise of any updates during the project kickoff meeting.

12.0 Project Timeline / Hours of Operation

12.1. Contractor shall be given 180 days from the "Notice to Proceed" to complete the project.

12.2. Normal Work hours: Work hours for the site are 7:00AM to 4:00PM, Monday through Friday, excluding government holidays. Requests for exceptions to this schedule shall be made in writing forty-eight (48) hours in advance and approved by the CO and/or COR.

12.3. Work Outside Normal Work Hours: Work scheduled outside regular work hours including late hours, Saturdays, Sundays, and Government holidays requires COR approval in advance. Make application to the COR at least 5 calendar days prior to such work to allow arrangements to be made by the Government for access to the work area and inspection & monitoring arrangements. Requests shall include the exact dates, hours, location, and purpose of the exception. If approved, the COR will coordinate access with the site security office.

12.4. Recognized Holiday: The contractor is not required to provide work on federal holidays, except in emergency situations. 2026 Federal holidays are as follows:

- **New Year's Day:** Thursday, January 1
- **Martin Luther King, Jr. Day:** Monday, January 19
- **Presidents' Day (Washington's Birthday):** Monday, February 16
- **Memorial Day:** Monday, May 25
- **Juneteenth:** Friday, June 19
- **Independence Day (Observed):** Friday, July 3
- **Labor Day:** Monday, September 7
- **Columbus Day:** Monday, October 12
- **Veterans Day:** Wednesday, November 11
- **Thanksgiving Day:** Thursday, November 26
- **Christmas Day:** Friday, December 25

13.0 Temporary Facilities

13.1. The existing USDA utilities at the site may be used by the Contractor for completion of the contract work at no cost to the Contractor. The Contractor shall be responsible for making and removing any utility connections.

13.2. The Contractor shall equip all his/her foremen and work leaders with cell phones as necessary to coordinate the work effort. The Government will not provide any phone service for the project.

13.3. There are no toilet facilities available for use for this contract. The contractor shall furnish and maintain facilities for their employees. Location shall be coordinated with the COR.

13.4. USDA dumpsters and Roll-offs on site are not to be used by the contractor. The contractor shall furnish and maintain waste and recyclable receptacles for the duration of the project. Location of the receptacles shall be coordinated with the COR.

14.0 Lockout /Tagout

14.1. The Contractor and/or subcontractor employees who will be working on the job will apply a lockout/tagout (LOTO) process to control dangerous energy sources.

14.2. The Contractor/subcontractor shall have a LOTO program established and use Contractor LOTO locks, tags, and procedures.

14.3. The Contractor/subcontractor shall submit their LOTO program for review and approval by the COR within 10 days of award of the contract.

15.0 Closeout Submittals / Warranty Documentation / Record Drawings

15.1. A warranty shall be issued in accordance with FAR 52.246.21 (Warranty of Construction). A standard one-year warranty shall be issued for all work.

15.2. The fill material shall be warranted as free from defects in material and workmanship for a period of ~~(12~~) months from the date of installation.

15.3. Manufacturer's documentation for warranty and extended warranty. Include all required documentation that will meet the manufacturer's requirements for executing said warranty.

15.4. Provide a warranty binder containing one (1) signed & dated copy of all warranties of installed materials, devices, components, installed on the project in conformance to the construction drawings and specifications. An electronic copy of the Warranty Binder in a PDF file shall be submitted with the final close-out documentation.

15.5. O&M data submittals for materials, devices, components installed.

Attachments

Specifications