

STATEMENT OF WORK

Project Title: Replace Pumps
Location: Lajes Field, Portugal
Project Number: MQNA 05-1035
Facility: T-925

1. General:

A. The contractor shall provide all plant labor, materials, tools, equipment, transportation, supervision, and personnel necessary to replace water pumps at T-925. Work is located at Lajes Field, Azores, Portugal and shall be performed as described in this Statement of Work (SOW) and project drawings. T-925 is the potable water source for Lajes Field. Contractor shall take all precautions necessary to ensure there is no contamination of the water and that security to building T-925 is maintained at all times.

B. The electrical current at Lajes Field is 50 Hz. The electrical service at building T-925 is 208Y/120 volt, 3-phase, 4-wire.

2. Scope of work:

A. Demolish existing pump number 1, motor, electrical circuit, check valve, gate valve, and any other ancillary items not needed for new pump and motor installation. Repeat same for the connection for pump number 2 although this position has no pump or motor.

B. Demolish the entrance door and frame on the west end of T-925.

C. In accordance with manufacturer's instructions, install new vertical turbine pump, motor (Government furnished), check valve, and outside stem and yoke (OS&Y gate valve, and discharge pressure gauge at position number 1. Pump shall be designed for a total dynamic head (TDH) of 75 feet and a flow of 700 gallons per minute (+/- 5% acceptable). Pump shall have a safety feature to ensure stoppage in the event of low water in the T-925 tank.

D. Repeat paragraph C for pump number 2. Motor will be Government furnished.

E. Install new overcurrent and thermal protection in existing MCC for pumps 1 and 2.

F. Install new electrical circuits to pumps 1 and 2. These shall be installed in conduits in the floor. The existing conduits may be reused if serviceable.

G. Connect the new pumps to the existing Supervisory Control and Data Acquisition (SCADA) system. Make connections to enable control as described in the Sequence of Operations section of this SOW.

H. Install new metal entrance door and frame on the west end of T-925. The new door and frame shall be rated heavy duty. Paint door and frame (same color brown as existing door) with one coat primer and two coats of exterior paint. The door shall include new hardware and lockset (Best compatible). Reinstall existing alarm sensors on new door.

I. Clean and fill holes and spalls in T-925 floor. Prepare, and epoxy coat the entire floor of T-925 in accordance with the epoxy manufacturer's recommendations.

J. The contractor shall take all precautions to ensure the water tank is not contaminated with debris or material during construction and to ensure T-925 remains secure from intruders.

3. Sequence of operations:

A. General: The pumps in building T-925 operate in one of two schemes. In the first scheme, the water plant is bypassed and high-head pumps 3 and/or 4 will pump to the distribution system and fill the elevated tanks T-184, T-185, T-254, and T-255. In the second scheme, the low-head pumps 1 and/or 2 will pump to the raw water tank T-871R, or T-825.

B. Scheme One: Low level sensor in tank T-184 will start pump 3. If the water level continues to drop in tank T-184, a lower level sensor will signal the start of pump 4. Both pumps will shut off when the high level sensor is satisfied.

C. Scheme Two: Low level sensor one in tank T-871R or T-826 will start pump 1. If the water level continues to drop in tank T-871R or T-826 a lower level sensor will signal the start of pump 2. Both pumps will shut off when the high level sensor in tank T-871R is satisfied.

D. HOA Operation: The hand-off-auto switch on the MCC will control the mode of operation. The hand mode will start the pumps at T-925. The off mode will stop the pump. The automatic mode will allow the pumps to either be run in accordance with scheme 1 or scheme 2 or it will allow remote-operator control at the water plant T-825.

4. Submittals:

A. The contractor shall submit the technical data, catalog cuts, operations and maintenance instructions, installation instructions, warranty information, following data and have it approved by the Contracting Officer before the start of construction.

Submittal No.	Item
1	Pumps 1 and 2
2	Gate Valve OS&Y, 6 inch
3	Check valve, 6 inch
4	Motor starter circuit breakers
5	Door and Frame, 36 inch
6	Wire, THWN insulation
7	Epoxy Floor Covering

B. Three copies of each document shall be provided. Materials will be approved based on the manufacturer's published data meeting the requirements listed in the SOW.

C. Underwriter's Laboratories (UL), Inc.: Labels or printed documentation will be accepted as evidence that the materials conform to the applicable standards of the agency. In lieu of the labels or listing, the contractor may submit a statement from a recognized, adequately equipped testing agency indicating that the materials comply with all contract requirements.

D. Non Underwriter's Laboratories (UL), Inc. Requirements: For materials specified to conform to Non UL publications, manufacturer's statement indicating complete compliance with the applicable specifications or standard (Federal Specification, Military Specification, American Society of Testing and Materials Standard, National Electrical Manufacturers Standard, etc.) are acceptable.

5. Government Furnished Materials: Two pump motors. Nameplate data is provided below:

Motor for pumps number 1 and 2 are: Emerson U.S. Electric, 20 Hp, 208 volts, 3 phase, 44 Amps, 63 SF Amps, 1475 Rpm, Model no. 2005698-100.

6. General Information:

A. Hauling: All demolition debris becomes the property of the contractor, unless otherwise stated in the scope of work, and must be disposed of by the contractor in accordance with local and US regulations. All material hauled by the contractor shall be contained, tied, or enclosed to prevent leaking, spilling, or blowing.

B. Transportation routes: The contractor shall ensure all debris or dirt is promptly removed from any transportation route if such debris is spilled, blown, or leaked from hauling equipment and vehicles. All dirt and mud caused by tracks of hauling equipment will be removed by the contractor within one hour of notification by the government.

C. Disposal: All demolition collected by the contractor shall be disposed of in an authorized landfill or transfer station. No disposal is allowed on the site. Materials to be turned over to DRMO will be transported and dropped by contractor upon coordination with Construction Management and Contracting Office.

D. Workmanship: Materials shall be installed in accordance with recommendations of the manufacturer to conform to the contract document. The installation shall be done in accordance with manufacturer's recommendations by personnel qualified to do the work.

E. Warranty: The contractor shall provide a written warranty agreeing to repair or replace materials and services when damages result from poor workmanship within one (1) calendar year to begin at Government acceptance of work.

F. Safety: The contractor shall be responsible for all means and methods as they relate to safety and shall comply with all safety requirements as outlined in the EM-385-1-1 Safety and Health Requirements manual. The contractor shall also abide by any local Portuguese safety requirements if more stringent than the EM-385-1-1.

7. Miscellaneous:

A. Drawings for this project are not to scale. Distances, dimensions, exact location, and other details must be field verified in order to assure proper installation and conformity with applicable standards, prior to ordering materials and/or executing the project.

B. Work shall be conducted with minimum disruption to occupants of existing facility and/or property.

C. Remove or alter existing work in such a manner as to prevent injury or damage to any portions of the existing work which remain.

D. Site restoration: 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 shall be in a condition equal to or better than that which existed before new work started.

8. Reference:

Drawings: 3 (Demolition Plan, New Work Plan, Electrical Panel).

END OF STATEMENT OF WORK