

RESOLUTION 16-28

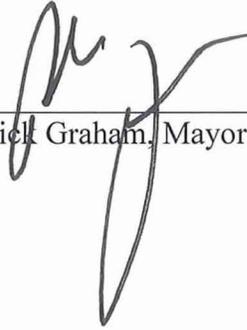
**A RESOLUTION TO AUTHORIZE THE PURCHASE OF A SOLAR
POWERED TANK CIRCULATION SYSTEM FOR THE HARDINS
LANDING TANK**

WHEREAS, to ensure consistent water quality, the City of Spring Hill desires to purchase solar powered water tank circulation equipment for the Hardins Landing tank; and

WHEREAS, this will be a sole source purchase: and

NOW, THEREFORE, BE IT RESOLVED, that the City of Spring Hill Board of Mayor and Aldermen authorizes the purchase and installation of solar powered tank circulation equipment for Hardins Landing Tank in the amount of \$42,570.00 from Medora Corporation, as recommended by the Budget Finance Advisory Committee on March 7, 2016.

Passed and adopted by the Board of Mayor and Aldermen of the City of Spring Hill, Tennessee, on the 21th day of March 2016.



Rick Graham, Mayor

ATTEST:



April Goad, City Recorder

LEGAL FORM APPROVED:



Patrick Carter, City Attorney



REQUEST: *Approval of Resolution 16-28*

SUBMITTED BY: Victor Lay, City Administrator
Caryl A. Giles, Water Plant, Superintendent

DATE: March 3, 2016

RE: Purchase of Solar Powered Tank Circulation System

ATTACHMENTS: Medora Corporation Sole Source Justification

PURPOSE:

To provide thorough mixing of the water storage tank, reducing water age, stagnation, stratification and short circuiting. Thorough mixing not only helps maintain water quality it also maintains chlorine residuals, bacteriological quality and disinfectant by-products.

BACKGROUND:

Buckner Road and Northside Tanks have been equipped with Medora SolarBee solar powered mixers. This will be a single sole source purchase because: vendor is a single sole provider of patented goods. Attached is the justification.

FINANCIAL IMPACT:

Total Cost of the SB1250PWc Solar Powered Mixer is \$42,570.00. (\$27,380 for equipment; \$15,190 for delivery and installation) Excess budgeted funding from City Hall painting project can be reallocated for this purchase.

STAFF RECOMMENDATION:

Favorable Recommendation

ACTION REQUIRED (INCLUDE DEADLINE /PRIORITY):

None

SB1250PWc v18 FEATURES

Technology Description:	Floating, solar powered, circulation equipment for potable water reservoirs. Day/night operation on solar only by utilizing a battery to store excess daytime power for nighttime operation.
Minimum Access Opening / Machine Size/Weight:	Machine can be installed through 24 inch (61 cm) diameter opening in collapsed position. Assembled machine is 10 feet (3.0 meter) in diameter in floating position, weighs 200 pounds (90 kg).
Shipping Size/Weight:	Machine can be crated and shipped in a 4 feet (1.2 m) wide X 6 feet (1.8 m) long X 5 feet (1.5 m) high crate, estimated shipping weight is 500 pounds (225 kg). Hose lengths greater than 40 ft (12m) and pole mount solar panel stands may require additional crating.
Materials of Construction NSF/ANSI Standard 61:	316 stainless steel construction. Foam-filled high-density polyethylene (HDPE) floats. Thermoplastic rubber intake hose. HDPE strainer. SB1250PWc is NSF/ANSI Standard 61 Certified, includes NSF/ANSI 61, Annex G.
Drive System:	High torque, direct drive (no gearbox), low voltage brushless D.C. motor.
Power Supply/Control System:	Photovoltaic (PV) Solar Panel, Battery and Electronic Controller are mounted on rack outside.
PV Solar Panels	80-watt PV solar panel. Battery storage for day/night operation.
Electronic Controller	Digital, solid-state controller, mounted in weather-tight (NEMA 4X) enclosure with internally fused disconnect. SCADA output through RS-232 Serial Communication (Modbus RTU), DB9 male connection point inside enclosure. Wireless options available, not included.
Wiring	Corrosion-resistant, industrial cord with molded watertight connectors that are indexed to prevent improper wiring. Low voltage in reservoir, less than 36 VDC.
Rotating Assembly:	Removable assembly with easy access to impeller and impeller shaft.
Flotation System:	Three floats in triangular pattern with total float buoyancy of 600 pounds (270 kg).
Fluid Intake Assembly:	Intake hose banded to bottom of structural assembly.
Intake Hose	20 to 100+ feet (6 to 30+ m) available in 8-inch (20 cm) diameter X 20 feet (6 m) sections.
Intake Assembly at Bottom of Hose	Rectangular intake with openings around perimeter.
Chlorine Boosting	Chlorine boost hose, accessible at top of reservoir spans down and connects to intake for fast chlorine dispersion during in-reservoir boosting.
Intake Depth Adjustment	No depth adjustment is necessary for fluctuations in water level. Intake draws water in a horizontal layer within 1 inch (2.5 cm) of the tank or reservoir floor.
Minimum Water Depth:	At depths below 2 feet (0.6 meters), the impeller will be out of the water and the machine will stop circulating water. No damage to machine if ran dry in shallow water.
Accessories Available:	(1) Portable Chlorine Boost System, (2) LED RPM Indicator (3) Supplemental Power Kit, and (4) Wireless SCADA Kit
Life/Maintenance/Warranty:	Expect 25-year life, minimal maintenance. Limited 2-year parts and labor warranty. Limited 25 year photovoltaic module manufacturer performance warranty and 10 year motor warranty.

Patent Pending

Subject to change without notice.

March 3, 2016

Ms. Caryl A. Giles
Water Plant Superintendent
Spring Hill Water Plant
4151 Kedron Road
Spring Hill, TN 37174

Dear Ms. Giles,

This letter is to certify that the SolarBee Solar-Powered Circulator, Model SB1250PWc v18, potable water mixing equipment, which the City of Spring Hill is considering purchasing, is available only through Medora Corporation of Dickinson, North Dakota.

Medora Corporation is the sole licensee of this technology and exclusive manufacturer of this equipment, which encompasses more than 13 patents, over 50 patent claims, and additional patents pending. A patent list is available: <http://www.medoraco.com/about>. Also, our unique equipment warranty is far longer than any other in the industry:

In addition, the machines come with the following features:

- The circulation equipment shall operate continuously, all day and all night, during seasons including winter.
- 316 Stainless Steel Construction. Foam-filled high-density polyethylene (HDPE) floats.
- NSF/ANSI Standard 61 Listed includes NSF/ANSI 61, ANNEX G.
- Chlorine boost hose, accessible at top of reservoir spans down and connects to intake for fast chlorine dispersion during in-reservoir boosting.
- LED RPM Indicator available at top of tank as an optional item.
- 2-yr machine warranty, that covers parts and labor w/optional extended warranty.
- V18 machines: 10-yr motor warranty (proprietary brushless motor exclusive to Medora Corporation).
- 25-yr solar panel performance warranty.
- Factory Installation Crews trained for: at heights, over water and confined spaces.

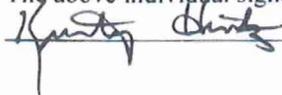
The purchase price presented in the open quotation for this equipment is the same price charged to all U.S. agencies, after allowing for small differences in delivery and installation charges based on quantity and mileage differences from the factory.

Sincerely,


Joel Bleth, President
Medora Corporation



(Notary Seal)

The above individual signed this letter in my presence on March 3, 2016. Attested to by
 _____, Notary Public, Stark County, State of North Dakota.