



**THIS IS NOT
AN ORDER**

REQUEST FOR BIDS/PROPOSALS COVERSHEET
THE UNIVERSITY OF SOUTHERN MISSISSIPPI
Procurement and Contract Services
118 College Drive #5003, Hattiesburg, Mississippi 39406-0001

Date: August 07, 2023

BID No. 24-04

THE UNIVERSITY OF SOUTHERN MISSISSIPPI is considering the purchase of the following item(s). We ask that you submit your bid and retain one copy for your files. Right is reserved to accept or reject any part of your bid. Your quotation will be given consideration if received in Bond Hall, Room 214 on or before:

2:00 p.m. CT

August 22, 2023

Buyer: Amber Floyd

Name: _____

Company: _____

Address: _____

City/State/Zip: _____

TERMS - Bidder should state terms of sale. Our terms are 2% ten days, net 45 days.

These terms will apply per Mississippi law.

AWARDING CONTRACT - Cash terms will not be used as a basis for awarding contracts; however, the University will accept cash discounts when earned.

NOTE: If you cannot quote on the exact material shown, please indicate any exception giving brand name and complete specifications of any alternate. If additional space is required, use a separate sheet or letter of transmittal.

ITEM	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL NET PRICE
		<p>BID 24-04 200m Ocean Glider</p> <p>RFx # 3160006081</p> <p>PROPOSAL MUST BE RETURNED TO THE UNIVERSITY IN ACCORDANCE WITH THE SPECIFICATIONS. RFP NUMBER AND DATE OF BID OPENING MUST BE SHOWN ON THE OUTSIDE OF THE ENVELOPE IF USING THAT METHOD.</p>		

We quote you as above - F.O.B. The University of Southern Mississippi.
Shipment can be made in _____ days from receipt of order. DATE _____
Return quotation to Procurement Services at above address.

Signature Required _____

The University of Southern Mississippi
Request for Bid # 24-04
SPECIFICATION FOR 200m OCEAN GLIDER

I. Background

USM (University of Southern Mississippi) is seeking to purchase two 200-meter ocean glider to assist in ongoing research projects in the Gulf of Mexico. The gliders will be used to characterize oceanographic features in the Gulf of Mexico, as well as support hurricane models.

II. General Performance Specification

The gliders shall perform oceanographic profiling in water depths from 10-200 meters and in water temperature ranging from 0° C to 35° C. The gliders shall have the capability of data transmission in near real-time to a land-based server. In addition, the gliders should be able to receive waypoint commands from remote server. The gliders should be one man deployable/recoverable off a small vessel. One of the gliders will just be for ocean heat content monitoring requiring only Conductivity, Temperature and Depth (CTD), whereas the second glider will require a CTD and Passive Acoustic systems.

III. Required Specification

The following specifications are to ensure that the glider will perform the tasks necessary to satisfy the project's objectives. Any deviation from the following specifications must be explained and justified.

A. Basic Glider

1. Operating Depth shall be 10-200 meters with all sensors having the same depth range.
2. The glider shall use a buoyancy engine for propulsion through the water to allow maximum endurance. This buoyancy engine should be able to compensate for a density change in the water column of at least 8 sigma, dynamically. Buoyancy engine should be capable of achieving speeds of 20-35cm/s.
3. Endurance: The glider shall be capable of autonomously collect data and operate for at least 30 days under normal operating conditions on a single battery pack.
4. The glider should be one man portable and not exceed 2m in length with standard configuration.
5. The glider shall have data storage capability for complete mission, with data transmission capabilities over satellite communications.
6. Powering the glider on and off shall be done without opening the glider.

B. Navigation

The glider should use a 3-axis compass and pressure sensor for dead reckoning navigation. Glider should be equipped with an altimeter for bottom avoidance during navigation.

C. Communications

1. The glider shall have an Iridium satellite communications system for control and location during mission.
2. The glider shall have capabilities for lab communications outside satellite communication, via either cable or line of sight communications.

D. Sensors

The following sensors must be included on the glider and must be time synchronized and spatially referenced with data from other sensors and the positioning/navigational data. The gliders should allow for future sensors to be added.

1. Both gliders should be equipped with scientific sensors capable of measuring Conductivity, Temperature, Depth (CTD) with the sample rate and depths for these sensors should be configurable remotely during the mission.
2. The Second glider should be equipped with a Passive Acoustic Monitoring (PAM) System and the CTD, with 2Hz to 50Khz frequency response. The ability for onboard storage of data and sample rates of at least 200kSPS.

E. Safety Features

1. The glider shall have a means of self-aborting the mission while it is in the water due to abnormal readings or set points from key systems monitored within the glider that will result in immediate surfacing of the glider. Abnormal readings, which lead to a self-abort of the mission, will include water intrusion, low battery, pressure abnormalities, and other erroneous sensor readings.
2. The glider shall have the ability to receive mission commands during the mission while on the surface via satellite communications. Vehicle commands required, but not limited to, are to end mission, navigational corrections, ability to turn sensors on or off, etc.

V. Software

- A. The vendor shall provide 1-year support of mission planning and management software through a secure online cloud server with a web-based GUI interface. The web interface should be able to be accessed by multiple logins from USM.
- B. The vendor will provide a means of reviewing glider performance during the mission. Software must be provided for displaying and assessing glider performance, or the glider logs must be accessible in a documented format such that in-house analysis may be performed.

VII. Warranty Services

At a minimum, the Contractor shall provide Software/Hardware Warranty support for one year from acceptance. Longer warranty periods are preferred.

The Vendor shall agree to repair, adjust, and/or replace (as determined by the University to be in its best interest) any defective materials at the Vendor and/or manufacturers' sole cost. The University will incur no costs for service or replacement of materials during the warranty period.

The Vendor will be the sole point of contact for warranty issues.

VIII. Documentation

The Contractor shall provide Operations and Maintenance manuals to USM.