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IN REPLY REFER
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# JUSTIFICATION AND APPROVAL
# FOR USE OF OTHER THAN FULL AND OPEN COMPETITION

1. Contracting Activity.

Naval Air Warfare Center Weapons Division (NAWC-WD)- China Lake, CA

2. Description of the Action Being Approved.

2. This justification and approval authorizes and approves on a sole source basis a Firm Fixed Price contract with Telemetry & Communication Systems (TCS) for two additional model M1 Antenna Control Units (ACU) for the SKR-1 telemetry antenna systems on San Nicolas Island (SNI) in order to complete the remote site installation of the SNI Telemetry Facility for the NAWCWD Sea Range Telemetry Collection Facility.

3. Description of Supplies/Services.

The ACUs must interface with the existing Sea Range SKR-1 Telemetry (TM) antenna systems installed at SNI. In addition the ACU must meet the following government requirements:

a) Be comprised of field replaceable components including receiver cards, single board computer and antenna control unit operator consoles.
b) Form, fit function replacement for utilization with existing TCS TM antenna systems.
c) Ethernet control interface, including antenna control, health and status query.
d) Intemperate with the existing TCS ACUs.

See Appendix A for Estimated Dollar Value

4. Statutory Authority Permitting Other Than Full and Open Competition.

10 U.S.C. 2304(c)(1), Only one responsible source and no other supplies or services will satisfy agency requirements.

5. Rationale Justifying Use of Cited Statutory Authority.

The ACU being procured is a specialized telemetry antenna controller that is manufactured and distributed only by TCS. NAVAIR currently employs 20+ TCS antenna controllers at the NAWCWD, Pt. Mugu, and China Lake ranges. The SKR-1 TM antenna systems are the only remaining systems at NAWCWD that currently do not employ the TCS model M1 ACU. The new ACU must communicate with the existing TCS model M1 ACUs currently installed at NAWCWD. The TM Antenna Control Center being fielded at Pt.

Mugu at the end of FY 12 utilizes a "virtual" console architecture, where any ACU console can operate and TM antenna system. This allows a single operator to monitor and control up to four TM antenna systems at once, greatly reducing operations cost at the Land and Sea Ranges. From FY08- FY11, the total operating cost of the Sea Range Antenna systems was approximately $192,000 per year (This number was calculated from the average antenna usage rate of 4000 man hours per year at a billing rate of $48 per hour). Once the Sea Range begins utilizing the new "virtual" console architecture where a single operator can control multiple antennas, the man hours required to operate the TM antenna systems will be reduced by approximately 25o/o or $48,000 per year. In order to allow the SKR-1 antenna systems to be incorporated into the TM Antenna Control Center's "virtual" console architecture an ACU that can communicate with the existing TCS Model M1 ACUs must be integrated into the SKR-1 antenna systems. All Government developed/issued documentation for the existing TM antenna systems cite the TCS model M1 antenna control unit. Furthermore, the TCS ACU has been certified for operational use by the Range Department. Incorporation of a new TM ACU would require additional documentation and drawings to be generated by the Government and a recertification of the TM antenna control center at Pt. Mugu. Integration of the TCS model M1 ACU allows for common maintenance procedures and sparing components for all NAWCWD TM antenna systems. Because each TM antenna system ACU is the same,
maintenance personnel can efficiently identify and resolve antenna system failures, reducing antenna down time and increasing the overall reliability of NAWCWD TM Antenna Control Center. Furthermore, fewer spare components are required to be maintained because each antenna system utilizes the same antenna control components.
Operations personnel have been trained to operate/repair and have extensive experience operating/repairing (approximately 3 years) the TCS model M1 ACU at the Pt. Mugu, SNI and China Lake TM facilities. The purchase and integration of new ACU model into the SKR-1 antenna systems would require additional operator training and require operations personnel to maintain two unique antenna control systems.

6. Description of Efforts Made to Solicit Offers from as Many Offerors as Practicable.

The following manufacturers offer a similar switching product: (b)4
Each vendor solution was evaluated to insure it met the government's technical and logistics requirements. While each vendor met the Governments' technical requirements, only the TCS model M1 ACU meets the Government's interoperability requirement allowing for a single ACU to control and monitor multiple TM antenna systems. The existing TCS antenna systems employ TCS's proprietary software interface to control the TM antenna systems. Consequently, only TCS ACUs can interface with the existing TM antenna systems. In order to allow another vendor solution to communicate with the TM antenna systems the ten (10) existing TCS ACUs at the Sea Range would need to be replaced as well.

7. Determination of Fair and Reasonable Cost.

The negotiation and establishment of a fair and reasonable price will be conducted in accordance with FAR 15.4. As stated in FAR 15.402, the Contracting Officer shall purchase all supplies and services at a fair and reasonable price. Based upon historical cost data from previous contracts, the Contracting Officer, Defense Contract Management Agency, and Defense Audit Agency auditors have adequate information and background to determine fair and reasonable price.

In accordance with FAR 15.402, the Contracting Officer shall ensure that all supplies and services provided under this contract are procured at a fair and reasonable price. The Contractor will submit a price proposal with sufficient information to support the accuracy and reliability of the estimate. The TCS proposal will be reviewed by experienced technical analysts, cost analysts, and contract specialists with the aid of necessary field pricing support. The Contracting Officer will utilize cost and price analysis for the basis for negotiating a fair and reasonable price.

8. Actions to Remove Barriers to Future Competition.

NAWCWD is purchasing only the number of antenna controllers (2) needed to complete the upgrade of the SKR-1 TM antenna systems at SNI, and does not anticipate another purchase in the future. NAWCWD does not foresee competing this requirement in the future because it would be cost prohibitive and impractical to procure new (approximately $100,000 each), or modify the existing antenna controllers (approximately $40,000,000 each) for the other TM antenna systems at the Sea Range (10 systems) to maintain inter-operation of the antenna systems.

## Appendix A

**Estimated Dollar Value In Thousands**

| | FY12 | FY13 | FY14 | FY15 | FY16 | FY17 | FY18 | Total |
|---|---|---|---|---|---|---|---|---|
| (b)(2)High | 250 | 0 | 0 | 0 | 0 | 0 | 0 | 250 |
| Total | 250 | 0 | 0 | 0 | | 0 | 0 | $250k |