

**SOLE SOURCE JUSTIFICATION FOR SIMPLIFIED ACQUISITIONS**

1. The MULTIPOL *UHF/VHF Antennas* listed on M02212-13-SU-TE002 are available from only one source and competition is precluded for reasons indicated below. There are no substitutes available.

2. This acquisition is restricted to the following source:

Manufacturer: **TACO ANTENNA**

Manufacturer POC and Phone Number: [REDACTED]  
[REDACTED]

Manufacturer Address: **29 Sharp Road  
Brantford, ON Canada  
N3T 5L8**

Manufacturer's Dealer/Representative: [REDACTED]

Dealer/Representative Address and Phone Number: [REDACTED]  
**29 Sharp Road  
Brantford, ON Canada  
N3T 5L8**  
[REDACTED]

3. Description of the *UHF/VHF Antennas* required, the estimated cost, and required delivery date.

<u>Quantity</u>	<u>Model Number</u>	<u>Description</u>	<u>Unit Price</u>	<u>Total Price</u>
(1)	D2295	UHF/VHF/UHF (Antenna w/lightning rod)	[REDACTED]	[REDACTED]
(2)	D2296	VHF/UHF/VHF (Ob light and Lightning rod)	[REDACTED]	[REDACTED]

4. Specific characteristics of the *Multipole Dipole Collinear Array UHF/VHF Antennas* that limit the availability to a sole source e.g., (unique features, function of the item, etc.). Describe in detail why only this suggested source can furnish the requirements to the exclusion of other sources.

Mr. Daniel Dotter, In-Service Engineer-Air Traffic Control, (ISEA), SPAWARSYCEN-ATLANTIC, has verified that Model 2295-3 and 2296-1, Muldipol Military Antennas specially developed by TACO Antenna Inc., (a division of Wade Antennas) for Ground to Air Traffic Communication are the only authorized antennas to use with the standard ATC Emergency Communication System (ECS) ECS AN/FSC-104 (Independent System providing capability to transmit, receive and record up to ten UHF/VHF channels).

These antennas are specifically designed for monitoring air to ground, ground to ground and ground to air communication for Air Traffic Control systems.

These antennas are high gain, multi-element antennas that ensure coverage without bleed over or frequency interference with minimum channel spacing. Deviation from this standard configuration can only be authorized by the Naval Air Traffic Management Systems Program Office NAVAIR PMA-213.

The antennas consist of Multipole Dipole Collinear Array concept that have been specifically developed for ground-air-ground, air traffic control and associated vehicular and base communications. The Omni directional concept employs a unique method of shielding the feed cables which improves radiation pattern characteristics. The MULTIPOL has a high degree of isolation between discrete elements within a closely spaced array. It is small rugged and easy to install and has a built in lightning rod. This antenna's has a minimum of 30dB isolation between any two antenna elements. This unit has excellent "broadband" half wave dipole characteristics over the entire operating frequencies. The "figure eight" radiation pattern is generally constant throughout the band. The "broadband" suppression of extraneous currents upon the transmission line helps the undesirable "Clover Leaf" pattern be avoided. By design, the outer conductors of both halves of each dipole are at the same DC ground potential.

In addition to specifications and functions listed above the antennas meet the following electrical requirements:

- > Minimum Isolation of 30.0 dB.
- > Vertical Polarization.
- > Omni Directional +0 dB/-1 dB.
- > Azimuth Uniformity
- > VSWR (max.) 2:1

These antennas are necessary for ATC Emergency Communication Systems.

5. Check and fill in all that are applicable:

- The material or service must be compatible in all aspects (form, fit, and function) with existing systems presently installed. Describe the equipment you have now and how the new item/service must coordinate, connect, or interface with the existing system:

The TACO Antennas currently installed have been in service for many years. The extreme temperatures and high winds have weathered the fiber glass antennas. They have begun splintering and the voltage standing wave ratio (VSWR) is increasing, having a detrimental effect. This increase in VSWR limits the antennas communication range. It is vital that antennas be replaced as soon as possible. Further degradation can result in communication outages and loss of range between air to ground. This could lead to flight safety concerns. Loss of air to ground or ground to ground ATC communication could result in shutdown of facility until communication links were re-established.

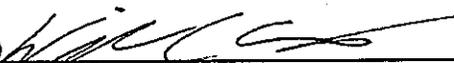
This antenna is the only antenna that meets all of the electrical requirements as per Mr. Daniel Dotter with In-Service Engineering Activity (ISEA), Space and Warfare Systems Command (SPAWAR) for this application. Research revealed that these antennas are no longer available through NSN or other military supply

channels (as verified 13 Dec 2012). MCAS Yuma Air Traffic Control Maintenance Division has been instructed to purchase the NAVIAR PMA-213 approved antennas from TACO Antennas Inc., (see attached e-mail correspondence). Phone conversation with Taco Antenna, Inc. verified antennas are no longer available through the NAVAL supply system. ISEA has found no suitable replacement at this time. Therefore, procurement via Contracting is the only means of requisitioning these antennas.

- A patent, copyright, or proprietary data limits competition. The proprietary data are described as follows:
- These are "direct replacement" parts/components for existing equipment.
- Other information to support a sole-source buy:

**CERTIFICATION**

I certify that statements checked and information provided above are complete and correct to the best of my knowledge. I understand that the processing of this Sole-Source Justification precludes the use of full and open competition.

(Signature)  Date 20121220

Printed Name, Title [Project Officer] WILLIAM C COX CWO3, MAINTENANCE OFFICER

(Signature) CERKA.FRANCES.C.1134612769 Digitally signed by CERKA.FRANCES.C.1134612769  
DN: c=US, o=U.S. Government, ou=DoD, ou=PIA, ou=USMC,  
cn=CERKA.FRANCES.C.1134612769  
Date: 2012.12.20 08:11:09 -0700 Date 20121220

Printed Name, Title [Contracting Officer] Frances Cerka, Contracting Officer