



UNITED STATES MARINE CORPS
MARINE CORPS SYSTEMS COMMAND
2200 LESTER STREET
QUANTICO, VIRGINIA 22134-6050

Code: CT-021ME
J&A Number: 14,934.0

JUSTIFICATION AND APPROVAL (J&A)
FOR USE OF OTHER THAN FULL AND OPEN COMPETITION

JUSTIFICATION

1. Contracting Activity

Marine Corps Systems Command (MARCORSYSCOM)
Program Manager Infantry Weapons (PM IW) Contracts Group
Product Group 13
2200 Lester Street
Quantico, VA 22134-6050

2. Description of the Action Being Approved

The use of other than full and open competition to award a sole-source, firm fixed price type contract for systems, spare parts, replacement parts, and maintenance support for testing equipment required to proceed with production of the M252 81mm mortar cannons. The proposed action will be procured from Laser Techniques Company (LTC), 6742 185th Ave. NE-Suite 300, Redmond, WA, 98052-6714.

3. Description of Supplies/Services

The following is a list of the proposed additional equipment, spare parts and quantities, that once finalized and approved, is anticipated to be procured:

Dynamic Flowform list:

- One (1) Bore Erosion Measurement Inspection System - Tube (BEMIS-T) configured for Eddy Current capability
- Spare and replacement parts through Sept 2014 (850 scans minimum)

Aberdeen Test Center (ATC) Flowform List:

- One (1) BEMIS-T configured for Eddy Current capability
- One (1) LP 4000: A data acquisition and control instrument configured for single channel data acquisition using the LaserViewer software.
- Spare and replacement parts through Sept 2014 (850 scans minimum)

Services to be procured for ATC:

-Reconfigure existing system to segregate operation of current Eddy Current Inspection System to allow for 60mm and 81mm scans independently

Services to be procured for both facilities:

- Maintenance through Sept 2014 (850 Scans minimum) for Installation and Servicing of Spare Parts
- Installation of Systems
- Calibration of All Components Contained in the Inspection System
- Software Updates

Contract (M67854-08-D-1028) was awarded to Dynamic Flowform Corporation, Billerica, MA, on January 16, 2008 for the production of 60mm and 81mm mortar cannon assemblies, sub-components, and calibration tubes. The cannons are being produced using innovative materials and manufacturing process. During the development of the cannon assemblies, it became apparent that traditional inspection/testing equipment and processes could not meet the stringent requirements stated within the Quality Assurance Provision (QAP), First Article Test (FAT) Procedures, and Inspection & Acceptance (I&A) criteria.

Following a joint Government-Industry effort, the procurement of specialized and unique non-destructive test equipment known as an Eddy Current/Laser Bore Mapping System was procured from Laser Techniques Company (LTC) via contract M67854-08-D-1028. All inspection and testing requirements were previously satisfied with this system. However, the new United States Army (USA) design, drawing BL-48888, involves a one-piece 81mm mortar cannon; the Eddy Current system delivered via contract M67854-08-D-1028 did not effectively scan the base of the one-piece cannon. As a result, contract M67854-11-C-1000 was awarded to LTC to develop an Articulated Eddy Current Sensor with a third axis of motion that will meet the measurement and defect assessment requirements for the 81mm cannon.

In order to meet the required delivery schedule, both the cannon manufacturer and the government test facilities will be required to complete one hundred (100) Eddy Current scans per month. This volume of scans necessitates the procurement of additional equipment at both facilities. As the primary means of non-destructive testing for both the cannon manufacturer and the government, a failure of the Eddy Current System to assess the

entire 81mm cannon would cause government inspection and acceptance of the cannons to halt indefinitely which would cause unacceptable delays to this critical program.

The Contract will include a one (1) year base period and three (3) one year options for additional spare parts, replacement parts and for Maintenance support. The estimated period of performance for this requirement will be from the year 2012 to 2015. The maximum estimated cost under this J&A is \$3 million, calculated through the use of the estimated cost of the basic quantities and of the options years quantities. The initial systems and first year of services will be funded with FY11 appropriations.

Estimated Dollar Value				
APPROP	FY11	FY12	FY13	FY14
PMC				
Total				\$3,000,000.00

4. Statutory Authority Permitting Other Than Full and Open Competition

The statutory authority permitting use of other than full and open competition is 10 U. S. C., Section 2304(c) (1) as implemented by the Federal Acquisition Regulation (FAR) 6.302-1(c) (iii) "Only One Responsible Source and No Other Supplies or Services Will Satisfy Agency Requirements."

5. Rationale Justifying Use of Cited Statutory Authority

Laser Techniques Company (LTC) developed the original systems capable of inspecting the 60mm and 81mm Inconel mortar cannons under a development contract issued by the U.S. Army (USA). The United States Marine Corps (USMC) procured the initial BEMIS-T systems on Dynamic Flowform's contract M67854-08-D-1028 under CLIN 0010 for Special Tooling and Test Equipment. The USMC spent \$600,587.50 in FY07 PMC for the systems currently in place at ATC and Dynamic Flowform.

Although Eddy Current inspection technology is not unique to LTC, the integration of this Eddy Current technology into a system capable of detecting a flaw size of length .254mm (.010 in) and depth .127mm (.005in) over the 1282.8mm (50.5 in) length of the 81mm cannon while achieving a signal to noise ratio

greater than 3 to 1 and minimizing sensor lift off is unique to this company.

In going forward with the one piece design of the Inconel 81mm Cannon, LTC integrated a three (3) axis articulating head in order to inspect for flaws of size length 2.55 (.100 in) and depth 1.25mm (.049in) along a curved radius of R15.25 tangent to the bore at the closed breech end of the cannon. This was completed under contract M67854-11-C-1000 for a total of \$280,615.00 in FY11 Procurement.

It is anticipated that the full rate production of the 81mm one-piece Inconel cannons will begin in early FY12. A total of 827 cannons will be delivered on the Dynamic Flowform contract M67854-08-D-1028. All cannons must be invoiced and processed by 30 September 2014 as the FY07 funding expires on that date. In order to meet the schedule constraint, Dynamic Flowform must be capable of producing and inspecting (to include Eddy Current inspection) fifty (50) cannons per month. Additionally, ATC must be capable of inspecting and accepting 50 cannons per month. The one piece design requires two scans utilizing the Eddy Current equipment: one for the cannon walls (technology developed under Army contract) and a separate scan for the curved breech end (technology integrated under M67854-11-C-1000). Once the cannon is set up on the inspection station, each scan takes approximately one (1) hour to complete. Without two BEMIS-T systems in place at each site, a scan of one tube would take 3 hours when considering the sidewall and breech scan plus the stop limit reset time and re-calibration. Having only one BEMIS-T system would allow for 30 systems to be inspected per month when considering cannons that must be scanned more than once. In addition, the Contractor could claim delay cost if the Government did not inspect and accept at a pace for them to meet the delivery schedule. To ensure that the fifty (50) cannons per month requirement is met, Dynamic Flowform and ATC will require additional equipment and services to be purchased from LTC.

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

The Eddy Current/Laser Bore mapping system and the Articulated Eddy Current Sensor are both proprietary items of LTC. On 05 August 2011, a pre-solicitation notice M67854-11-R-1083 was published in NECO to inform the public of the Government's intent to award a sole source contract and to also identify any

potential offerors capable of providing the required parts and services. All interested parties were to respond to the synopsis by 15 August 2011. However, no responses were received. In addition, it was determined through individual inquiries that LTC was the only company with equipment capable of measuring to the precision level required for the current purpose. In late 2010 per a discussion that Representatives of the Program Office had with General Electric (GE), they were the closest competitor in the non-destructive test equipment industry. However, the company does not have a proven non-destructive suite of equipment capable of inspecting mortar cannons. The government would also incur additional expenses by altering the new system to comply with the established testing standards.

7. Determination of Fair and Reasonable Cost

Based on cost or pricing data which will be obtained for this procurement, the contracting officer will utilize historical pricing data from previously awarded government contracts, the Program Office expertise, input from the laboratory personnel that developed the testing processes and procedures to determine a fair and reasonable price as required by FAR Part 15.

8. Actions to Remove Barriers to Future Competition

At this time PM Infantry Weapons has no plans to compete future contracts for this type of supplies and services covered by this document. If another source emerges PM IW will re-evaluate and promote competition when practicable to ensure the best value for the Government.

CERTIFICATIONS AND APPROVAL

TECHNICAL AND REQUIREMENTS CERTIFICATION:

I certify the facts and representation under my cognizance, which are included in this Justification and its supporting acquisition planning documents, except as noted herein, are complete and accurate to the best of my knowledge and belief.

TECHNICAL COGNIZANCE:

Major Christopher Wills Phone: (703) 432-5670 Date 23 Aug 2011
Team Leader, Crew Served Weapons

REQUIREMENTS COGNIZANCE:

Col Andrew D. Bianca Phone: (703) 432-368 Date 23 Aug 2011
Product Group Director

LEGAL SUFFICIENCY REVIEW:

I have determined this Justification is legally sufficient.

Michael S. Martin Phone: (703) 432-3536 Date 23 AUG 2011
Associate Counsel

CONTRACTING OFFICER CERTIFICATION:

I certify that this justification is accurate and complete to the best of my knowledge and belief:

Anita M. Norris Phone: (703) 432-5674 Date 22 Aug 2011
Contracting Officer

Code: CT-021
J&A Number: 14,934.0

COMPETITION ADVOCATE APPROVAL:

Upon the basis of the above justification, I hereby approve, as Competition Advocate, MARCORSYSCOM, the solicitation of the proposed procurement described herein using other than full and open competition, pursuant to the authority of 10 U.S.C. 2304(c)1 as implemented in FAR 6.302-1(c)(iii).

Stephen J. Caracciolo
Competition Advocate

Phone: (703) 432-3919

Date

8/30/2011