



DEPARTMENT OF THE NAVY

CRANE DIVISION
NAVAL SURFACE WARFARE CENTER
300 HIGHWAY 361
CRANE, INDIANA 47522-5001

IN REPLY REFER TO:

J&A Number: 09-116

Code: 0562NH

Solicitation Number: N00164-09-R-JN58

JUSTIFICATION AND APPROVAL TO PROCURE USING OTHER THAN FULL AND OPEN COMPETITION

1. Contracting Activity

The Naval Sea Systems Command, Naval Surface Warfare Center Crane Division, Contracts Division 056.

2. Description of the Action Being Approved

The use of other than full and open competition to solicit an Award of a Firm Fixed Priced (FFP) contract on an other than full and open competition basis in accordance with FAR 6.303-2(a)(2), Unusual and Compelling Urgency to Federal Cartridge Company, 900 Ehlen Drive, Anoka MN, 55303. Procurement quantities are 8,800,240 rounds of Department of Defense Identification Code (DODIC) AB49, Cartridge, Caliber 5.56mm Ball, Carbine, Barrier MK 318 MOD 0 and 1,603,560 rounds of DODIC AB50, Cartridge, Caliber 7.62mm Ball, Rifle, Barrier MK 319 MOD 0. This acquisition is in direct support of Operation Enduring Freedom.

3. Description of Supplies/Services

DODIC's AB49 and AB50 were developed in conjunction with the MK 16 and 17 Special Operation Force Combat Assault Rifle (SCAR) Light for 5.56mm and Heavy for 7.62mm. SCAR carbines are currently being fielded to deploying troops in direct support of Operation Enduring Freedom. The cartridges were designed for improved intermediate barrier performance (auto glass and doors), improved and consistent accuracy (2 minutes of angle (MOA) or better), flash reduced propellant, and improved terminal performance (consistent, rapid fragmentation which shortens the time required to cause incapacitation of enemy combatant).

Given the tremendous increase and consistency of terminal performance of these rounds (i.e. rapid incapacitation of enemy) and low flash signature, this round is also required by other forces (the USMC and Canadian Special Forces (CANSOF)) as well.

It should be noted that the Government anticipates competing, on a full and open competition basis, a firm-fixed price, IDIQ supply type contract for these rounds with award currently projected in the 3rd Quarter of fiscal year 2010. Due to the increase in war-fighter survivability afforded by the performance of these rounds, it is imperative these rounds are placed in the war-fighters' hands as soon as possible.

The MK 318 MOD 0 and MK 319 MOD 0 cartridge designs are a variation of the Federal Trophy Bonded Bear Claw round developed by Federal Cartridge for large game hunting. The Trophy Bonded Bear is a commercial item that can be found in a number of commercial publications such as Cabelas. The design for these rounds have been modified to meet all law and military requirements as required while meeting all performance Key Performance Parameters (KPP's).

Current military 5.56mm Ball (M855) was designed to provide optimum performance when fired from a full length 20 inch barrel found in most M16 family of weapons. The past five years have seen the proliferation of the M4A1 Carbine which has a 14 inch barrel (6 inches shorter than the M16) throughout the military, and especially within USSOCOM. The muzzle velocity required for M855 to be effective is not achieved when this round is fired from the M4A1 Carbine due to its 6" shorter barrel. Not only has the military's primary weapon changed since the time M855 was fielded, so has the threat target. M855 was designed with a Soviet adversary in mind and as such is very effective against a well equipped/protected Soviet-infantry type threat at distances of 500 - 600 yards. The majority of current engagements occur at distances of 100 yards or less, against adversaries wearing nothing more than a single layer of non-protective clothing. The design of the MK 318 MOD 0 and MK 319 MOD 0 cartridges address the following issues:

- Optimized performance for use in Carbine length (14") weapon systems
- Enhanced Intermediate Barrier defeat capability which provided enhanced behind barrier terminal performance (Auto glass & doors)
- Enhanced and consistent accuracy (Not to Exceed 2 MOA)
- Enhanced terminal performance against soft targets, specifically in a Close Quarter Combat (CQC) environment (less than 50 yards)
- Increased effective range
- Flash reduced and temperature stable propellant
- Terminal performance is Not "Yaw" Dependant and is therefore consistent

Both the AB49/AB50 cartridges were designed for today's weapon systems and for today's threat picture found on the current battlefield. AB49 and AB50 requirements were specifically designed to correct all performance deficiencies of our current ammunition thus significantly increasing war-fighter effectiveness and survivability. AB49/50 rounds eliminate the possibility of a round passing through an enemy combatant without causing significant tissue damage known as "Ice Picking" the target. [REDACTED]

[REDACTED] (a 5.56mm projectile only leaves a 0.224 inch wound). This situation occurs frequently and has caused injury and death to our warfighters. The inconsistency of currently fielded ammunition puts the operator in mortal danger especially in close quarter combat which is prevalent on today's battlefield.

The AB49/AB50 round was also designed to provide superior auto glass penetration over currently fielded rounds. This is an important attribute in defeating would be enemy suicide bombers driving explosive-laden vehicles. [REDACTED]

It is imperative that AB49/50, SOST rounds, be available to the war fighter to reduce the risk of an enemy who was wounded, but not incapacitated, with the current round to continue to the fight and thus placing SOF forces at risk from serious injury or death.

as the AB49/AB50 rounds have been proven to expedite incapacitation while having significantly reduced signature.

AB49 and AB50 rounds will be manufactured in accordance with the government's specifications and delivery is required as soon as possible to correct the current shortfall in ammunition capability for troops in combat.

production lead-time on the initial delivery of this item is estimated at 60 days after contract award. Federal Cartridge Company is the incumbent contractor from an earlier sole source solicitation that resulted in contract N00164-08-C-JN08 which sprang from the competitive BAA announcement and initial SOST contract (N00164-06-C-4805). The total estimated value of this procurement is \$6,042,802.00 which was based on a pricing proposal from Federal Cartridge Company for the quantities established for this procurement.

The Government's minimum needs have been verified by the certifying technical and requirements personnel IAW FAR 6.303-2(b).

The estimated value of this procurement is \$6,042,802.00. United States Special Operations Command, United States Marine Corps and Canadian Special Forces Ammunition Procurement funds will be provided for this acquisition.

Estimated Dollar Value

	FY08	FY09	Totals
Defense Procurement	\$943K		\$943K
Defense Procurement		\$1080K	\$1,080K
Foreign Military Sales		\$1711K	\$1,711K
Procurement, Ammunition Navy		\$2289K	\$2,289K
<i>Total</i>			\$6,023K

4. Statutory Authority Permitting Other Than Full and Open Competition

10 U.S.C. 2304(c)(2) as implemented by the Federal Acquisition Regulation FAR 6.302-2, Unusual and Compelling Urgency

5. Rationale Justifying Use of Cited Statutory Authority

The statutory authority permitting other than full and open competition applies to the proposed procurement IAW FAR 6.303-2(a)(5).

The need for these rounds to be procured, and subsequently fielded, on an urgent basis has its genesis in

[REDACTED]

fighters thus the imminent harm to our troops using the current ammunition.

In 2003, the US Army stood up the Joint Service Wound Ballistics Integrated Product Team (IPT) which sprang from a Crane test report in 2002 that detailed the short comings of the current combat rounds. In fiscal year 2005, these AARs and Crane's test report on the ammunition shortcomings prompted USSOCOM to task NSWC Crane to perform a terminal ballistics performance test of all 5.56mm cartridges fielded at that time, along with any COTS items in development that could be fielded rapidly. All rifle projectiles tested (and known) at that time were found to be "Yaw Dependant," meaning the terminal performance exhibited was tremendously affected by the projectile angle of attack at the time of impact with soft tissue, in relationship to its line of flight. In addition, the amount of pitch and yaw of each shot is a variable. The end result was inconsistent terminal performance from shot to shot.

In fiscal year 2006, a broad agency announcement seeking solutions to this ammunition issue was published and Federal Cartridge Company was the sole reply received. Contract N00164-06-C-4805 was issued as a result. Federal Cartridge Company delivered 10,000 rounds of 5.56mm and 7.62mm ammunition in April 2007 for testing. In April 2008, the test report on this ammunition was completed which illustrated these rounds having potential to meet Warfighter combat needs. In September 2008, the second SOST ammunition contract was awarded to Federal Cartridge Company to support further testing and initial fielding of the Special Forces Combat Assault Rifle (SCAR) whose operational requirements document (ORD) required "enhanced ammunition." In May 2009, these issues were brought before the Deputy Assistant Secretary of the Navy (DASN) at a meeting in the Pentagon. At this meeting a discussion of the large \$400M competitive buy and its milestone schedule was described as well as the immediate need for these now proven rounds to be fielded as soon as possible as AAR were still showing

[REDACTED] The DASN suggested a procurement strategy that included an urgent buy for these rounds to fill the void prior to the competitive contract award. As these rounds sprung from the Joint Service Wound Ballistics Integrated Product Team findings and not from an operation requirement document (ORD), monies were not budgeted for this ammunition nor did an unfunded requirement exist to provide a financing method. Thus the requiring activities were forced to scramble to find monies to finance these needed rounds. Monies to finance these items arrived in the late-July and August time frame. At this time the rounds are critically needed in an urgent manner as every day that passes without the rounds is another day the Warfighter is placed in imminent danger of injury or loss of life.

These cartridges were specifically designed to optimize performance even when fired in the shorter barreled carbines, to exhibit consistent and enhanced accuracy, to use much improved temperature stable propellant with flash retardant, for enhanced intermediate barrier defeat capability (such as auto glass and doors), and to enhanced terminal performance against unarmored soft targets. Most importantly; the design of both cartridges causes them to be non-yaw dependant. Not only is the terminal performance

tremendously enhanced, but it is also extremely consistent. The AB49/AB50 rounds are consistently superior in terminal impact to the existing rounds and the rounds addressed herein are needed on an urgent basis to lower the risk to our warfighters. AAR's are classified due to the potential for disclosing operational information our enemy could find useful.

[REDACTED]

[REDACTED]

without the now proven AB49 and AB50 rounds exposes our troops to imminent harm thus the requirement for an urgent procurement of these rounds to bridge the gap until the subsequent large contract is awarded. The urgent process lowers the number of days our troops face imminent harm with [REDACTED] to support their mission requirements.

The 5.56mm and 7.62mm SOST cartridges are highly specialized ammunition for a USSOCOM Acquisition Category (ACAT) III Program. The projectiles used in both cartridges were designed and manufactured by Federal Cartridge Company, specifically to meet the Governments' performance criteria. To award to any other source would require testing of each item submitted which would cost in excess of \$200K for each sample submitted, as well as an additional six to nine months of testing. Although the cost impact to the Government could conceivably be recovered through competition, the six to nine month delay is unacceptable and will put the war-fighter in unnecessary risk/mortal danger as depicted herein.

This procurement is a follow on action which derived from proof of concept cartridges delivered under BAA contract N00164-06-C-4805 and contract N00164-08-C-JN08, early user assessment and Type Classification testing. The proof of concept cartridges is a priority design which was subjected to a costly and lengthy test and evaluation program with very promising results. Under the BAA, ATK/Federal Cartridge Company (a subsidiary of ATK) was the only firm to respond to request for white papers for ammunition optimized for the SCAR. The cartridges procured under N00164-08-C-JN08 were used to develop a TDP suitable for competitive procurement, early user assessment and Type Classification Testing required for full and open fielding. It is imperative that the items procured through this contract be identical to the item procured under N00164-08-C-JN08 that was awarded to ATK/Federal Cartridge Company.

In support of the Global War on Terrorism (GWOT), the type classification and fielding of these cartridges is being accomplished as quickly as possible. A Technical Data Package (TDP) suitable for competitive procurement is being generated from the test results of the item procured under contract N00164-08-C-JN08. While this is being accomplished, the cartridges from this procurement will be subjected to all the lot acceptance testing requirements as specified in the TDP.

If this procurement action is not accomplished as a follow-on contract on a sole source/urgent basis to Federal Cartridge Company then the fielding of these cartridges would be set back by a minimum of one year. A one-year delay to start production of an alternate source is unacceptable to special operation forces that are deployed on global war on terrorism missions. The increase in performance these cartridges will provide the war-fighter with the ability to increased mission success and will allow increased war-fighter survivability. The estimated cost of mission success and the cost of our war-fighters cannot be calculated. The basis for this urgent contract action is to execute the fielding of these rounds as quickly as possible in conjunction with the Limited Rate Initial Production (LRIP) fielding of the MK 16 SCAR weapon system.

The cartridges from this procurement will go directly to the war-fighter for use in both pre-deployment training and directly into combat.

As stated above, if this contract is not executed on an urgent basis, cartridges for deploying units will not be available until the full and open competitive IDIQ contract can be awarded. Due to the size and competitive nature of the planned subsequent procurement, that contract is projected to be awarded in the 3rd Quarter of FY10. These cartridges were designed along with the SCAR weapon system. Initial fielding of the SCAR weapon system began in February of 08. Since these cartridges were designed as ammo/weapon system with the SCAR weapon it is essential that the war-fighter have ammunition assets available in support of the SCAR LRIP fielding. Federal Cartridge Company can provide approximately 450,000 rounds of AB49 60 Days after Contract award and any other vendor's rounds would be subjected to required testing prior to fielding which would take six to nine months to complete.

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

A synopsis of this acquisition was not transmitted to the US government procurement portal at Federal Business Opportunities. The exception listed in FAR 5.202(a)(2) does not require transmission of a synopsis if unusual and compelling urgency precludes competition to the maximum extent practicable, and the Government would be seriously injured if the agency complies with the specified time periods.

7. Determination of Fair and Reasonable Costs

The Contracting Officer has determined that the anticipated cost to the Government for the supplies/ services covered by the J&A will be fair and reasonable in accordance with FAR 15.402, Pricing Policy.

8. Actions to Remove Barriers to Competition

As stated above, a competitive procurement is in process but will not be awarded in time to meet the SCAR LRIP fielding which began in February 2008. There was a major unplanned and unforeseen occurrence which caused a delay of over four months in the SOST ammunition development project. In December 2008, the Army PM, USSOCOM PM and USMC PM all requested the conduct of a comprehensive side-by-side test program be conducted on the AB49, 5.56mm Ball, Carbine, Barrier MK 318 MOD 0 (SOST) and the M855 Lead Free Slug (LFS). This required the generation of a test plan which was approved by all Commands, the movement of test ammunition to and from NSWC Crane and Army Research Lab (ARL) in Aberdeen MD, the procurement of test materials, the scheduling of tests, and the generation of a final test report.

This procurement action is not a replacement for a competitive procurement. It is in addition to which will allow program schedules and objectives to be met in support of the GWOT. As previously stated in this document, a full and open competitive five-year IDIQ with a ceiling of \$400,000,000.00 is currently in its formative stages and is scheduled for award in 3QFY10.

The concurrence of the Competition Advocate, Crane Division (CDCA) was obtained during the processing of this urgent J&A.

TECHNICAL/REQUIREMENTS CERTIFICATION (FAR 6.303-2(b))

I certify that the facts and representations under my cognizance, which are included in this justification and its supporting data, including Acquisition Plan No. NA, except as noted herein, are complete and accurate to the best of my knowledge and belief.

TECHNICAL COGNIZANCE:

_____ Signature	_____ Name (Print) and Title (Code)	_____ Phone No.	_____ Date
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REQUIREMENTS COGNIZANCE:

_____ Signature	_____ Name (Print) and Title (Code)	_____ Phone No.	_____ Date
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LEGAL SUFFICIENCY REVIEW (NMCAG 5206.303(90))

I have determined this justification is legally sufficient.

_____ Signature	_____ Name (Print) and Title (Code)	_____ Phone No.	_____ Date
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CONTRACTING OFFICER CERTIFICATION (FAR 6.303-2(a)(12))

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

_____ Signature	_____ Name (Print) and Title (Code)	_____ Phone No.	_____ Date
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APPROVAL BLOCK (FAR 6.304 for Approving Official)

Upon the basis of the above justification, I hereby approve, as NSWCRANE COMPETITION ADVOCATE the solicitation of the proposed procurement(s) using of other than full and open competition, pursuant to the authority of 10 U.S.C. 2304(c)(1).

_____ Signature	_____ Name (Print)	_____ Date
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TECHNICAL/REQUIREMENTS CERTIFICATION (FAR 6.303-2(b))

I certify that the facts and representations under my cognizance, which are included in this justification and its supporting data, including Acquisition Plan No. NA, except as noted herein, are complete and accurate to the best of my knowledge and belief.

TECHNICAL COGNIZANCE:



Signature	Name (Print) and Title (Code)	Phone No.	Date
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REQUIREMENTS COGNIZANCE:



Signature	Name (Print) and Title (Code)	Phone No.	Date
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LEGAL SUFFICIENCY REVIEW (NMCAG 5206.303(90))

I have determined this justification is legally sufficient.



Signature	Name (Print) and Title (Code)	Phone No.	Date
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CONTRACTING OFFICER CERTIFICATION (FAR 6.303-2(a)(12))


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



Signature	Name (Print) and Title (Code)	Phone No.	Date
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APPROVAL BLOCK (FAR 6.304 for Approving Official)

Upon the basis of the above justification, I hereby approve, as NSWC CRANE COMPETITION ADVOCATE the solicitation of the proposed procurement(s) using of other than full and open competition, pursuant to the authority of 10 U.S.C. 2304(c)(1).





REGGIE W. Joslin

9-24-09

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