Control No.: 12-118
Program/Item: White Phosphorus for M110, 155MM Projectile
Est. Dollar Value: 

Department of the Army
Justification and Approval for Other Than Full and Open Competition

1. **Contracting Agency:** Army Contracting Command - Rock Island (ACC-RI), Rock Island, IL 61299-8000.

2. **Description of Action:** A solicitation restricted to the National Technology and Industrial Base (NTIB) for the production of White Phosphorus (WP) in support of the FY12 US Army M110, 155MM Projectile programs manufactured at Pine Bluff Arsenal (PBA) is proposed for this acquisition. The Government anticipates awarding one firm fixed price contract for 180,000 lbs. Award is projected for 15 Nov 2012. Procurement Appropriation Army (PAA) FY12 funds will be utilized for this procurement. This procurement does not meet the dollar threshold to require an acquisition plan.

3. **Description of Supplies/Services:** The proposed procurement is for a quantity of 180,000 pounds of WP, NSN 1365-00-277-3037, Requisition: W41G26216501BB, End Use: 155MM, M110A2 WP Projectile (1320-01-465-3955-D550). No options will be included on this solicitation. The estimated value of this procurement is $1,000,000.

WP is a main component used in manufacturing artillery and mortar smoke munitions. WP is a highly efficient smoke producing agent, burning quickly and causing an instant bank of smoke that is used in combat to protect US war fighters and other critical targets. WP is the most effective smoke-screening agent known because the smoke cloud does not simply obstruct an image, but thoroughly scrambles both visual and infrared radiation, interfering with infra-red optics and weapon-tracking systems, serving as protection for our military forces from guided weapons such as anti-tank missiles. When WP is exposed to air, it spontaneously ignites and is oxidized rapidly to phosphorus pentoxide. Such heat is produced by this reaction that the element bursts into a yellow flame and produces a dense white smoke. This chemical reaction continues until either all the material is consumed or the element is deprived of oxygen. WP is a poison which can be absorbed through skin contact, ingestion, or breathing. High concentrations of the vapors evolved by burning WP are irritating to the nose, throat, lungs, skin, eyes, and mucus membranes. Because of this, WP is stored in underwater storage tanks at PBA in Pine Bluff, Arkansas.

4. **Authority Cited:** 10 USC 2304(c)(3), Industrial Mobilization; Engineering, Developmental, or Research Capability; or Expert Services as implemented by Federal Acquisition Regulation (FAR) 6.302-3.

5. **Reason for Authority Cited:** As described in FAR 6.302-3(b)(1)(v)(B), full and open competition need not be provided for when it is necessary to create or maintain the required domestic capability for production of critical supplies by limiting competition to items manufactured in the United States, its outlying areas, or Canada.
The Government is aware of only one source, Monsanto, who currently manufactures WP in the US.

b. WP requires specialized technology, skills and processes in its production. These technologies and skills must be protected within the NTIB in the event of a national emergency. Production of WP begins with a mining process, however it is an element which does not occur naturally. The processing of WP requires a tremendous amount of energy. WP handling and processing is a very hazardous process due to its spontaneous combustion when exposed to oxygen.

The WP production process also calls for specific Engineering, Environmental, and Safety skills that are critical in meeting Department of Defense (DoD) production requirements. Specialized training is necessary to acquire the engineering controls to ensure environmental resources are protected, while providing a high purity product (at least 99.99% pure). Due to the volatility of WP, a highly skilled, highly trained production workforce is critical to producing high quality WP. Maintaining these skills within the NTIB is essential if the capability to produce WP is to be preserved.

c. Although it is DoD policy to use reliable foreign suppliers, it is also DoD policy not to accept foreign vulnerability, which poses risks to national security. Award of WP to a producer not located in the U.S. or Canada would pose such a risk. The U.S. and Canada have entered into an Executive Agreement under which Canadian firms producing materials for the U.S. military are bound by the provisions of the Defense Priorities and Allocation System (DPAS). Under DPAS, firms can be compelled to meet military requirements by performing specific defense contracts on a priority basis and by rapidly increasing production to maximum capacity. Further, foreign-sourced WP could be produced at a facility with questionable environmental and human rights practices.
Companies producing within the NTIB provide environmental controls to prevent runoff and contamination of local watersheds.

d. Over the past 20 years, the majority of the manufacturing of WP moved to China and India because of lower costs and the lack of EPA regulations in those countries. In the 1990’s, there were manufacturers capable of manufacturing WP in the United States; because of EPA regulations and foreign price competition, closed their operations. With only one known producer of WP in the NTIB (Monsanto), the Government’s support of this domestic capability is critically important as it reduces the risk to the war fighter in times of national emergency as well as avoiding a potentially dangerous dependency upon a foreign source.

6. Efforts to Obtain Competition: A Sources Sought Market Survey was posted to FedBizOpps 11 Jun 2012. The results of this market research are discussed in paragraph 8 below. Additionally, this action will be synopsized in the FedBizOpps data base to ensure that offers are solicited from all interested potential sources within the NTIB.

7. Actions to Increase Competition: Therefore, it is anticipated that future WP procurements will be restricted to the NTIB.

The Government is aware of only one source, Monsanto, who currently manufactures WP in the US. In the past, Monsanto has had an exclusive distribution agreement with distributor and would not provide WP to the Government directly. As of May 2010, that agreement with expired.

By competing this requirement within the NTIB, the Government anticipates the receipt of offers from various third party distributors. Further market research will also be conducted in the attempt to find a possible second US source.

8. Market Research: A Market Survey was posted to FedBizOpps 11 Jun 2012. No responses were received. All previous market research conducted at least annually from 2004 to 2012, reveals Monsanto is the only producer of WP in the US; no survey results to date have shown otherwise.

In 2007, the Rock Island Contracting Command (RICC), ACC-RI’s predecessor organization, performed a web search on WP and contacted companies listed as manufacturers including stated they do not manufacture WP. In 2008, a second web search was conducted in which a company identified as was found. The contracting office contacted and they too do not manufacture or provide WP.

Past contracts for WP were awarded in 2004, 2006, and 2007 to
A Web search was conducted in July 2010 for possible producers of WP. Companies were found. Another Web search was done in September 2012, however the only producer found was [Company Name]. Market Research is being continuously conducted to determine if other contractors are capable of providing WP to the Government. The Armament Research, Development and Engineering Center - Edgewood Chemical Biological Center (ARDEC-ECBC) office is currently trying to make contact with foreign producers to establish a way White Phosphorus could come from abroad in the future with the same purity level and Environmental protection the US Government requires.

9. Interested Sources: No other sources to date, other than those noted in paragraph 8 above, have expressed a written interest in this acquisition. The notices required by FAR 5.201 will be published and any proposals received from other sources within the NTIB will be considered.

10. Other Factors:

Procurement History: As seen below, the government made multiple sole source urgent buys. These procurements were necessary because During the performance of this contract, the market price of WP went up approximately due to a growing demand for elemental phosphorus, phosphate rock and fertilizers. This firm

Contract: W52P1J-04-C-3018  
Contractor: Mil-Spec Industries  
Award Date: 16 Sep 2004  
Competitive Status: Sealed Bid (IFB)  
Bids Received: One

Contract: W52P1J-06-C-3015  
Contractor: Mil-Spec Industries  
Award Date: 16 Aug 2006  
Competitive Status: Sole Source Urgent Buy  
Bids Received: One

Contract: W52P1J-07-D-3006  
Contractor: Mil-Spec Industries  
Award Date: 09 May 2007  
Competitive Status: Full and Open Competition
Bids Received: Two

Contract: W52P1J-08-M-3038
Contractor: ICL Performance Products
Award Date: 19 Aug 2008
Competitive Status: Sole Source Urgent Buy
Bids Received: One

Contract: W52P1J-10-P-3035
Contractor: ICL Performance Products
Award Date: 19 Apr 2010
Competitive Status: Sole Source Urgent Buy
Bids Received: One

Contract: W52P1J-11-P-5044
Contractor: ICL Performance Products
Award Date: 07 Jun 2011
Competitive Status: Full and Open subject to NTIB
Bids Received: One

Contract: W52P1J-11-P-5077
Contractor: ICL Performance Products
Award Date: 13 Sep 2011
Competitive Status: Sole Source Urgent Buy
Bids Received: One

11. **Technical Certification:** I certify that the supporting data under my cognizance which are included in the justification are accurate and complete to the best of my knowledge and belief.

12. **Requirements Certification:** I certify that the supporting data under my cognizance which are included in the justification are accurate and complete to the best of my knowledge and belief. After reviewing the requirement, and the Office of Management and Budget's July 29, 2009 letter, I hereby certify to the best of my knowledge and belief that there were no alternatives available other than the use of a noncompetitive contract to fulfill this requirement.
13. **Fair and Reasonable Cost Determination:** I hereby determine that the anticipated cost to the government for this contract action will be fair and reasonable based on the continued competition within the NTIB. If no competition is received, the Government will base the determination of fair and reasonableness by requesting submission of certified cost and pricing data and analyzing current market trends.

Name: Marianne Whitmer  
Date: 2 Oct 12

Title: Contracting Officer  
Signature: [signature]

14. **Contracting Officer Certification:** I certify that this justification is accurate and complete to the best of my knowledge and belief. After reviewing the requirement, and the Office of Management and Budget's 29 July, 2009 letter, I hereby certify to the best of my knowledge and belief that there were no alternatives available other than the use of a noncompetitive contract to fulfill this requirement.

Name: Marianne Whitmer  
Date: 2 Oct 11

Title: Contracting Officer  
Signature: [signature]

**APPROVAL**

Based on the foregoing justification, I hereby approve the procurement of 180,000 lbs White Phosphorus, on an other than full and open competition basis pursuant to the authority of 10 USC 2304(c)(3), subject to availability of funds, and provided that the services and property herein described have otherwise been authorized for acquisition.

E-Signed by VANSICKLE.AMY.J.1258024334  
VERIFY authenticity with ApproveIt

Date: 24 Oct 2012  
Signature: 
Amy VanSickle  
Special Competition Advocate