JUSTIFICATION FOR OTHER THAN FULL AND OPEN COMPETITION
NATIONAL NUCLEAR SECURITY ADMINISTRATION
TRITIUM READINESS SUBPROGRAM
DE-SOL-0011113
31 May 2017

I. AGENCY IDENTITY AND CONTRACTING OFFICE

The Office of Tritium and Materials Management (NA-197) of the U.S. Department of Energy (DOE), National Nuclear Security Administration (NNSA) plans to contract for the transportation of irradiated Tritium Producing Burnable Absorber Rods (TPBARS) by means of other than full and open competition. The contracting activity is the NNSA Non-M&O) Contracting Operations Division, Services Acquisition Branch, Field Program Section.

II. NATURE AND/OR DESCRIPTION OF THE ACTION BEING APPROVED

This document sets forth the justification and approval of the use of one of the exceptions to full and open competition allowed under the Competition in Contracting Act (CICA) of 1984 and FAR 6.302-1, “Only one responsible source and no other supplies or services will satisfy agency requirements” It is anticipated that this procurement will result in the award of a 5-year sole source contract. (two-year base period of performance with an option to add an additional three years to the period of performance). NNSA intends to sole source this acquisition to NAC International, 3930 East Jones Bridge Road, Suite 200, Norcross, Georgia 30092, to provide transportation of irradiated TPBARS in support of the Tritium Sustainment Program, to meet national security requirements.

The President’s Nuclear Weapons Stockpile Plan (NWSP) calls for NNSA to produce new tritium to support stockpile and reserve requirements. The subprograms of the Readiness Campaign were authorized in Section 3155 (b) of the National Defense Authorization Act for FY 2001. The Tritium Sustainment Subprogram was specifically codified by the National Defense Authorization Act of FY 2000 and is consistent with the Secretary of Energy’s Record of Decision for Tritium Supply and Recycling of May 1999.

III. DESCRIPTION OF SUPPLIES AND/OR SERVICES

To support the project, NAC, INC. will be required to provide work in a number of distinct areas to include:

- Transportation of irradiated TPBARS from the Tennessee Valley Authority (TVA) to the Savannah River Site (SRS)
- Transportation of selected irradiated TPBARS from TVA to the Pacific Northwest National Laboratory
- Technical Support
- Project Management
• Decontamination of shipping casks
• Meeting all regulatory requirements for shipment of irradiated TPBARs

These efforts will ensure that national security requirements can be maintained at the prescribed level, by producing new tritium to replace that lost to natural radioactive decay. In this program, tritium is produced by irradiating enriched lithium-aluminate pellets with neutrons in one or more commercial nuclear reactors. The TPBARs, similar in dimensions to reactor fuel rods, are manufactured using commercial manufacturers that must meet nuclear industry quality assurance requirements.

The Tritium Sustainment Program consists of two work areas: Tritium Production and Tritium Extraction. Tritium Production is closely associated with the commercial nuclear power industry and the participating facilities and contractors are subject to oversight by the Nuclear Regulatory Commission (NRC); these activities are performed by commercial suppliers, DOE sites not directly associated with the National Nuclear Security Administration (NNSA), and the Tennessee Valley Authority (TVA). Tritium Extraction is performed at SRS.

The program estimated value of this acquisition is: $10,363,977

<table>
<thead>
<tr>
<th>BASE PERIOD OF PERFORMANCE</th>
<th>TPBARs to Ship</th>
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<tbody>
<tr>
<td>YEAR 1 (FY 2018)</td>
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<td>0</td>
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<td>YEAR 5 (FY 2022)</td>
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<tr>
<td>TOTAL</td>
<td>$10,363,977</td>
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</tbody>
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**IV. AUTHORITY**

The statutory authority permitting other than full and open competition is 41 USC 253(c)(1), as implemented by the Federal Acquisition Regulation (FAR) Subpart 6.302-1 entitled “Only One Responsible Source and No Other Supplies or Services Will Satisfy Agency Requirements”.

**V. APPLICATION OF AUTHORITY**

Tritium has a half-life of 12.3 years and any inventory needs to be continually replenished. One of NNSA’s missions is to provide an assured domestic source of new tritium to ensure national security requirements can be maintained at the prescribed level by replacing that lost to radioactive decay. Tritium is produced by irradiating enriched lithium-aluminate pellets with neutrons in a nuclear reactor. The complete lithium-aluminate assembly is the TPBAR. Irradiation occurs over an 18 month cycle. Once the irradiation cycle is completed, the TPBARs are consolidated and placed into a shipping container with over pack. Each shipping container can contain up to 300 TPBARs. NAC, Inc., is a vital source that possesses extensive tritium program experience, knowledge, and expertise with transporting irradiated TPBARs between identified sites. The shipping container currently used is the NAC-Legal Weight Truck (LWT) transport container. The current fleet of LWTs is eight, of which three
are specially modified to transport irradiated TPBARs. The LWT meets weight and physical dimension requirements that are compatible with the TVA Watts Bar and SRS tritium extraction facility (TEF). The LWT is also the only TYPE B package that is certified by the Department of Transportation for shipment of TPBARs. The certificate is USA/9225/B (U) F-96, Revision 60, dated October 18, 2016.

Based on historical information available, the program estimates that it would take two years for a new vendor to develop the ability to support continued shipments. The DOE negotiated a contract with NAC in 2002 to design, modify, obtain a certificate of compliance (CoC), and perform the necessary validation to transport TPBARs. This effort took approximately two years to complete. The contract was executed with NAC to begin engineering and licensing work on December 6, 2002, and the CoC was issued by the Nuclear Regulatory Commission authorizing TPBARs as approved content on January 25, 2005. The negotiated price to perform the safety analysis, obtain the CoC, provide technical support, and modify the NAC-LWT container was $2.6M in 2002 dollars. A new vendor would have to repeat this process, and an important assumption is the use of a pre-existing container such as the NAC-LWT.

The program office has initiated a study to determine requirements, commercial interest, and an acquisition strategy to meet increased quantities of irradiated TPBAR transportation requirements. The current transportation program is unlikely to meet the expected increases after FY 2021. A new shipping container will most likely be required that would be able to transport approximately 1,200 TPBARs in one shipment. The five year period of performance will allow the program time to complete the study, and begin the implementation of a new transportation program to meet future requirements. The intent is that this phase would be competitively bid. NAC, Inc., is currently the only company with the ability to transport irradiated TPBARs. To change contractors and lose a vital supplier’s capabilities would cause a break in shipments, and significantly impact the Tritium Readiness Program’s ability to be prepared to provide new tritium, thereby jeopardizing the defense mission and placing the nation’s security at severe risk in the event of a national emergency.

VI. EFFORTS TO IDENTIFY ADDITIONAL SOURCES

The program office performed an internet search of possible offerors, contacted subject matter experts within the DOE and NNSA, and a sources sought notification was issued on FEDBIZOPPS. The sources sought notification was issued under Reference Number DE-SOL-0011113 (https://www.fbo.gov/index?s=opportunity&mode=form&id=31a384448fbdb5bb373d058ae09866f3eb&tab=core&cview=0).

VII. DETERMINATION OF REASONABLENESS OF COST OR PRICE

A Fixed-Price type contract is anticipated for this effort. It is the determination of the Contracting Officer that the anticipated price will be fair and reasonable based on a price analysis performed utilizing technical experts evaluation and analysis; evaluation of Defense Contract Audit Agency (DCAA) audit results; comparison to the Independent Government Cost Estimate (IGCE); previous historical data (previous component costs, estimates, etc.), and the Price Analyst evaluation and recommendations. Further, certified cost and pricing data will be required from contractor for this sole source award as this action does not meet any of the exceptions outlined in FAR 15.403-1.
VIII. MARKET RESEARCH

Three offerors responded to the sources sought notification that was issued. Two of the three vendors who responded were identified in the internet search and the subject matter expert query. Two of the offerors to the sources sought are small businesses. The third is not, but is the current vendor. A review of the responses indicates that only the current vendor has the necessary resources available to meet program requirements and schedules. The primary concern is that there exists only one type of qualified and certified shipping container. The cost and time necessary for any other vendor to develop an alternate container is outside program requirements. The three offerors were:

- Visionary Solutions, LLC, 2553 Quality Lane, Knoxville, Tennessee 37931
- SECUR, LLC, 409 Broad Street Suite 250, Sewickley, Pennsylvania 15143
- NAC International, 3930 East Jones Bridge Road, Suite 200, Norcross, Georgia 30092

IX. OTHER FACTS

NA

X. INTERESTED SOURCES

A sources sought notification was issued on April 14, 2017, Reference Number DE-SOL-0011113. Only one of the three offerors has the necessary resources to accomplish the required scope of work.

XI. STEPS TO FOSTER COMPETITION

Steps have already been taken by conducting a form of market research, as previously mentioned, via the synopsis which stated that all responsible sources may submit a bid, proposal, quotation or an exception to the intent to procure on a sole source basis, which shall be considered by the agency. However, no interests were shown in this requirement. It is estimated that it will take approximately 4-5 years to transition to another vendor. In addition, the cost to develop an alternate container would be cost prohibitive.

XII. CERTIFICATIONS

Acquisition Initiator/Technical Representative:

I certify that the facts and representations under my cognizance, which are included in this justification and which form a basis for this justification, are complete and accurate.

Curtis A. Chambellan

0/13/2017

Signature Date

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

larry.veltman@nnsa.doe.gov  06-14-2017  Signature  Date

Competition Advocate:

I have reviewed this justification and find it to be accurate and complete to the best of my knowledge and belief. Since this JOFOC does not exceed $13.5M, this review serves as approval.

Signature  6/15/17  Date